ABSTRACT

THE EFFECTIVENESS OF AN INTERACTIVE CYBERBULLYING INTERVENTION ON UNDERSTANDING, AWARENESS, AND ACTION POTENTIAL OF SIXTH GRADE STUDENTS

by Jennifer R. Ewing

The current study examined the effectiveness of an interactive cyberbullying intervention on the understanding, awareness and action potential of 96 sixth graders. A within subjects, pre-post research design was employed. Methods of data analyses included a repeated measures MANOVA and Chi-squared tests of analyses. These analyses were used to (1) determine the effectiveness of the intervention, (2) examine the relationships between the dependent variables, (3) identify gender differences between responses, and (4) explore qualitative data in the form of open-ended responses. While results indicate no significant difference in the students' understanding of cyberbullying, there were significant differences for awareness and action potential. In addition, gender differences appeared inconsistent across items, while qualitative data provided a greater depth of information. Results are discussed within the context of current research on cyberbullying. Study limitations and directions for future research are also included.

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A Thesis

Submitted to the

Faculty of Miami University

in partial fulfillment of

the requirements for the degree of

Specialist of Education

Department of School Psychology

by

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2013

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The effectiveness of an interactive cyberbullying intervention on the understanding, awareness, and action potential of sixth grade students

Current educators and administrators in the educational field are facing increasing challenges. Among these challenges is finding a balance with constantly changing technology. Technology provides easier accessibility for homework completion, training and intervention programs, music and movie downloads, and the social networks. Classrooms have immediate access to World Wide Web for "at-the-minute" news and a wide range of information from around the world. While improved technology has led to advancements in education, first supported by President Bill Clinton who decreed that every classroom in American be equipped with computers and have access to the information world, technology presents certain drawbacks.¹ One such negative aspect of increased technological capabilities is the rise of cyberbullying among American students.

Growing numbers of school-aged children have readily available access to technology, in the form of cell phones, smart phones, and laptops. Current research suggests that virtually all middle and high school students with a computer at home or school use the Internet.² This statistic expresses a swift escalation in usage compared to previous decades. Cyberbullying is closely associated with technology; and, with many students possessing phones and computer-access both in and out of school, it is not surprising that cyberbullying numbers are also on the rise. Cyberspace is a new territory in which students may harass one another.³ In fact, it is estimated that an enormous number of students have been cyberbullied.⁴ According to a study conducted by national law enforcement leaders, approximately thirteen million school-aged children have been targets of cyberbullying. The ages range from as young as six to as old as seventeen.⁵

As it is new territory, school administrators and parents struggle to find the best solutions to challenge the issue. It is nearly impossible to ban communication between students, and they have the ability to bully without adults' knowledge. While traditional bullying can be easily detected as it often occurs in face-to-face scenarios, bullying in cyberspace may go undetected without the unrealistic constant supervision by parents and schools. Successful interventions are multi-dimensional, targeting different aspects of cyberbullying. It takes the cooperation and involvement of school administration, teachers, parents, and the active involvement of peers to develop a program that successfully addresses the issue of cyberbullying. Interventions should also address gender differences, as males and females experience bullying in greatly varied ways.⁶ Similarly, with a majority of bystanders unwilling to become involved in a cyberbullying

¹ Clinton, W. J. (1996). State of the Union address, January 23, 1996. Archived at the University of Oklahoma Law Center, http://www. law. ou. edu/hist/state96. html.

² McQuade III, S. C., & Sampat, N. (2008). Survey of internet and at-risk behaviors. Report of the Rochester Institute of Technology. Rochester, NY: Rochester Institute of Technology. Retrieved January, 16, 2009.

³ Strom, & Strom. (2005). Cyberbullying by adolescents: A preliminary assessment. The educational forum (Vol. 70, pp. 21–36).

⁴ Crime, F. (2007). Invest in Kids.(2006). Retrieved January, 24.

⁵ Crime, F. (2007). Invest in Kids.(2006). Retrieved January, 24.

⁶ Li, Q. (2006). Cyberbullying in Schools. School Psychology International, 27(2), 157–170.

scenario, interventions can also target the bystander effect.⁷ Efficient interventions consume the least, but necessary, amount of a teacher's instructional time. As there is a lack of available interventions that successfully address all of these issues, the current study examined the effect of an interactive, sustainable, participant-driven cyberbullying intervention on the understanding, awareness, and action potential of sixth graders.

The number of students who are cyberbullied is increasing at rapid rates due to the increased availability of technology.⁸ There are very few effective and manageable interventions available for schools to use to prevent cyberbullying. The aim of the study was to determine whether an interactive, sustainable, and participant-driven cyberbullying intervention can increase the following three aspects of cyberbullying resistance in sixth grade students. In this study, several issues were examined. First, whether the intervention can increase an understanding of the definition of cyberbullying and examples that fall into the category of cyberbullying; second, if the intervention can increase an awareness of the prevalence of cyberbullying occurrences in the students' school and at home; and finally, whether the intervention can increasingly lead students' to choose the appropriate actions to fight cyberbullying. To understand the current research study, it is important to know the definition of cyberbullying, the varied forms it takes, the large number of students it affects in the form of victims, bullies, and bystanders, and the negative impact it has on these students. In addition, highlighting the differences between traditional bullying and cyberbullying and the effective strategies used in previous studies will elicit a need for an effective, interactive intervention that teaches students the appropriate way to respond to cyberbullying situations. This study was designed to analyze the awareness and understand of and improve behavior of students in dealing with cyberbullying.

Literature Review

Cyberbullying

There are many specific definitions used to describe the actions that qualify as cyberbullying. An overall, general definition that is widely accepted in research describes cyberbullying as "willful and repeated use of electronic communication devices to harass and threaten others."⁹ Cyberbullies torment their peers with cell phones and computers.¹⁰ Specifically, cyberbullies send threatening texts on cell phones and smart phones, post harmful material on social networking sites like Facebook and MySpace, write hurtful e-mails, and harass peers in chat rooms. Considering cell phone usage, forty-five percent of children aged 12-17 own a cell phone, with a third of the students capable of sending texts.¹¹ The ease with which students can access this technology and the internet creates a wide variety of outlets available to a cyberbully. In fact, a study conducted to measure internet usage among American youth found

- ¹⁰ Patchin, J. W., & Hinduja, S. (2006). Bullies move beyond the schoolyard. Youth Violence and Juvenile Justice, 4(2), 148.
- ¹¹ Lenhart, A., Madden, M., Hitlin, P., & Project, P. I. & A. L. (2005). Teens and technology: Youth are leading the transition to a fully wired and mobile nation.

⁷ Li, Q. (2006). Cyberbullying in Schools. School Psychology International, 27(2), 157–170.

⁸ Li, Q. (2006). Cyberbullying in Schools. School Psychology International, 27(2), 157–170.

⁹ National Conference of State Legislatures. (2010). Cyberbullying Enacted Legislation: 2006-2010. NCSL.org. Retrieved from http://www.ncsl.org/issuesresearch/educ/cyberbullying.aspx

that nearly 21 million school-aged children use the internet, an increase of 4 million since the year 2000.¹² This statistic indicates that nearly nine out of ten students use the internet. In addition, nearly half the youth report daily internet usage, reflecting growth in comparison to the previous year's study.¹³ The combination of increased students using phones and accessing the internet provides a greater likelihood for cyberbullying exposure.

Types. A main discrepancy in cyberbullying research involves the specific types of cyberbullying. Many researchers use seven categories to distinguish between different cyberbullying actions. These include flaming, harassment, cyberstalking, denigration, masquerade, outing/trickery, and exclusion.¹⁴ Flaming involves sending angry, rude, and vulgar messages, while harassments include repeatedly sending a person offensive messages.¹⁵ Cyberstalking includes threats of harm that are highly intimidating.¹⁶ Denigrations, also called "put-downs," happen when a cyberbully sends or posts harmful, untrue, or cruel statements about a person to other people.¹⁷ The definition of masquerading is pretending to be someone else and sending or posting material that makes the imitated person look bad and can cause potential danger.¹⁸ A cyberbully partakes in outing or trickery when he or she sends or posts material about a person that contains sensitive, private, or embarrassing information.¹⁹ It can also involve forwarding private messages, text and emails, to other people without the victim's consent.²⁰ Finally, exclusion encompasses specifically and intentionally excluding a person.²¹ There is another method that utilizes seven subcategories of cyberbullying. However, the type of technology used during the cyberbullying determines the divisions. Smith, Mahdavi, Carvalho, and Tippett divided cyberbullying into text message bullying, picture/video clip bullying, phone call bullying, email bullying, chat room bullying, bullying through instant messaging, and

¹² Lenhart, A., Madden, M., Hitlin, P., & Project, P. I. & A. L. (2005). Teens and technology: Youth are leading the transition to a fully wired and mobile nation.

¹³ Lenhart, A., Madden, M., Hitlin, P., & Project, P. I. & A. L. (2005). Teens and technology: Youth are leading the transition to a fully wired and mobile nation.

¹⁴ Willard, N. E. (2007). Cyberbullying and cyberthreats: Responding to the challenge of online social aggression, threats, and distress. Research Pr Pub.

¹⁵ Willard, N. E. (2007). Cyberbullying and cyberthreats: Responding to the challenge of online social aggression, threats, and distress. Research Pr Pub.

¹⁶ Willard, N. E. (2007). Cyberbullying and cyberthreats: Responding to the challenge of online social aggression, threats, and distress. Research Pr Pub.

¹⁷ Willard, N. E. (2007). Cyberbullying and cyberthreats: Responding to the challenge of online social aggression, threats, and distress. Research Pr Pub.

¹⁸ Willard, N. E. (2007). Cyberbullying and cyberthreats: Responding to the challenge of online social aggression, threats, and distress. Research Pr Pub.

¹⁹ Willard, N. E. (2007). Cyberbullying and cyberthreats: Responding to the challenge of online social aggression, threats, and distress. Research Pr Pub.

²⁰ Willard, N. E. (2007). Cyberbullying and cyberthreats: Responding to the challenge of online social aggression, threats, and distress. Research Pr Pub.

²¹ Willard, N. E. (2007). Cyberbullying and cyberthreats: Responding to the challenge of online social aggression, threats, and distress. Research Pr Pub.

bullying via web sites.²² The current study will involve many of these cyberbullying definitions representing both methods.

Prevalence. As mentioned before, many school-aged students can easily access internet and communication devices in the form of cell phones, laptops, desktops, and smart phones. The accessibility is available both at home and in schools. As the number of students accessing the internet grows, so too does the number of students participating in cyberbullying as the bully and victim. In a study of 1,498 students between the ages of ten and seventeen, twenty-four percent sent e-mails with hateful material about another person.²³ In a study conducted by the National Center for Missing and Exploited Children, nine percent of students were harassed online in the previous year, 28% of the youth made "rude or nasty comments to someone on the internet" and nine percent used the internet to embarrass or harass someone they were mad at.²⁴ These statistics reflect a significant increase compared to the original study conducted five years prior. Other studies have found similarly significant numbers of students who either cyberbully or are victims of cyberbullying. For example, Patchin and Hinduja found twenty-nine percent of 384 surveyed students were online victims.²⁵ The researchers also found eleven percent cyberbullied others, twenty percent experienced threats, and nearly half witnessed a cyberbullying occurrence.

Another important statistic, beyond whether school-aged children are experiencing cyberbullying, is how often the youth repeatedly suffer cyberbullying. A study involving 177 seventh grade students found that nearly sixty percent of students were cyberbullied one to three times.²⁶ Nearly twenty three percent of the seventh graders were cyberbullied over ten times, while eighteen percent were cyberbullied four to ten times. Regarding cyberbullies, 43% of the bullies reported cyberbullying less than four times.²⁷ One-third of the cyberbullies did so four to ten times and finally, over a quarter of them cyberbullied over ten times. The prevalence of students involved in cyberbullying, victim, bully, and bystander, are high. While the number of students experiencing cyberbullying a single time should elicit a need for interventions, the commonness of youth repeatedly experiencing the cyberbullying should make the necessity even greater. The current study is important to further the research in a subject that is affecting many of America's youth.

- ²³ Ybarra, M. L., & Mitchell, K. J. (2004). Online aggressor/targets, aggressors, and targets: a comparison of associated youth characteristics. Journal of Child Psychology and Psychiatry, 45(7), 1308–1316.
- ²⁴ Wolak, J., Mitchell, K., Finkelhor, D., (US), N. C. for M. & E. C., Center, U. of N. H. C. A. C. R., Justice, U. S. O. of J., & Prevention, D. (2006). Online victimization of youth: Five years later.
- ²⁵ Patchin, J. W., & Hinduja, S. (2006). Bullies move beyond the schoolyard. Youth Violence and Juvenile Justice, 4(2), 148.
- ²⁶ Li, Q. (2007). New bottle but old wine: A research of cyberbullying in schools. Computers in human behavior, 23(4), 1777–1791.
- ²⁷ Li, Q. (2007). New bottle but old wine: A research of cyberbullying in schools. Computers in human behavior, 23(4), 1777–1791.

²² Smith, P., Mahdavi, J., Carvalho, M., & Tippett, N. (2006). An investigation into cyberbullying, its forms, awareness and impact, and the relationship between age and gender in cyberbullying. Research Brief No. RBX03-06. London: DfES.

Bystander Effect. Cyberbullying affects many students. Often students are either the cyberbully or the victim. However, a student can also experience cyberbullying as a bystander. Research shows that many school-aged children are aware of cyberbullying in their schools. In a study of 264 seventh to ninth grade students found half of the students had been cyberbullied, over half knew someone currently being cyberbullied, and forty percent did not know the identity of their bully.²⁸ In fact, over half of 177 students knew someone who was being cyberbullied.²⁹ These numbers not only show that cyberbullying directly affects students as victims and bullies, but that many students are in a bystander situation. While the statistics themselves are important, the actions that bystanders take are even more important in the fight against cyberbullying. A study that looked at students' own perspectives about cyberbullying found that school-aged children do not know the correct or helpful way of responding to cruel internet behavior.³⁰ Similarly, other research found a majority of students do not even report incidents of cyberbullying.³¹ Many researchers concentrate on the involvement and education of bystanders as a way to combat the increasing levels of cyberbullying at home and in schools.³²³³³⁴³⁵ Many students indirectly experience cyberbullying as a bystander, rather than directly as a bully or victim. Therefore, interventions need to concentrate on teaching the importance of effectively responding to cyberbullying situations even if they are not directly involved.

Relationship between Traditional Bullying and Cyberbullying. Researchers use many different words to describe traditional bullying. According to the National Conference of State Legislatures, traditional bullying is "systematically and chronically inflicting physical hurt or psychological distress on one or more students."³⁶ Similar to cyberbullying, traditional bullying takes many different forms. There are two main types of bullying, direct and indirect.³⁷ Direct bullying involves physical (e.g. hitting, tripping, shoving), verbal in the form of threats, name

- ²⁸ Li, Q. (2006). Cyberbullying in Schools. School Psychology International, 27(2), 157–170.
- ²⁹ Li, Q. (2007). New bottle but old wine: A research of cyberbullying in schools. Computers in human behavior, 23(4), 1777–1791.
- ³⁰ Agatston, P. W., Kowalski, R., & Limber, S. (2007). Students' perspectives on cyber bullying. Journal of Adolescent Health, 41(6), S59–S60.
- ³¹ Li, Q. (2007). New bottle but old wine: A research of cyberbullying in schools. Computers in human behavior, 23(4), 1777–1791.
- ³² Li, Q. (2006). Cyberbullying in Schools. School Psychology International, 27(2), 157–170.
- ³³ Willard, N. E. (2007). Cyberbullying and cyberthreats: Responding to the challenge of online social aggression, threats, and distress. Research Pr Pub.
- ³⁴ Agatston, P. W., Kowalski, R., & Limber, S. (2007). Students' perspectives on cyber bullying. Journal of Adolescent Health, 41(6), S59–S60.
- ³⁵ Li, Q. (2007). New bottle but old wine: A research of cyberbullying in schools. Computers in human behavior, 23(4), 1777–1791.
- ³⁶ National Conference of State Legislatures. (2010). Cyberbullying Enacted Legislation: 2006-2010. NCSL.org. Retrieved from http://www.ncsl.org/issuesresearch/educ/cyberbullying.aspx
- ³⁷ Quiroz, H. C., Arnette, J. L., & Stephens, R. D. (2006). Bullying In Schools: Fighting the Bully Battle, Bullying Fact Sheet Series. National School Safety Center. Retrieved June, 16, 2006.

calling, insults, violent acts like stabbing and choking, and demands for money, property and service. Indirect bullying includes exclusion and isolation, ranking and humiliation, manipulation of friendships, writing hurtful e-mails and posting on web sites, and blackmailing and dangerous dares.

With such a large population of students experiencing cyberbullying through a variety of manners, it is expected that a similarly large number of school-aged children also experience traditional bullying. Research supports this expectation. In a survey of 15,686 sixth to tenth grade students, thirty percent reported involvement in bullying.³⁸ The involvement included thirteen percent participating as the bully and over ten percent as the victim. Interesting, over six percent had acted as the bully in addition to being the victim. It is important to note that the study also concluded that students in grades six to eight reported higher levels of bullying as compared to students in ninth and tenth grade.³⁹ Bullying, similar to cyberbullying, occurs across many different ages, starting at a very young age.

Researchers have just begun to study the relationship between more traditional forms of bullying, often associated with a physical environment, and that of cyberbullying. Studies conclude that the factors influencing cyberbullying and bullying in the overt and relational sense are not related.⁴⁰ On the other hand, students often are victims in both online and real world.⁴¹⁴² Similarly, further research shows that those who are bullies in the cyber world are more likely to be bullies in the traditional environment.⁴³ Nevertheless, in a review of cyberbullying and traditional bullying literature, Dooley, Pyzalski, and Cross found no research to support that aggressive actions taken in the cyber world are comparable with acts of aggression in the real world.⁴⁴ While there are many similarities between traditional bullying and cyberbullying, the number of differences makes it questionable as to whether the same intervention used for bullying can apply to cyberbullying. Research suggests that because traditional bullying is face-to-face and cyberbullying involves the anonymous bullying through technology, then each type

- ⁴⁰ Dempsey, A. G., Sulkowski, M. L., Nichols, R., & Storch, E. A. (2009). Differences between peer victimization in cyber and physical settings and associated psychosocial adjustment in early adolescence. Psychology in the Schools, 46(10), 962–972.
- ⁴¹ Vandebosch, H., & Van Cleemput, K. (2009). Cyberbullying among youngsters: profiles of bullies and victims. New Media & Society, 11(8), 1349.
- ⁴² Erdur-Baker, Ö. (2010). Cyberbullying and its correlation to traditional bullying, gender and frequent and risky usage of internet-mediated communication tools. New Media & Society, 12(1), 109.
- ⁴³ Vandebosch, H., & Van Cleemput, K. (2009). Cyberbullying among youngsters: profiles of bullies and victims. New Media & Society, 11(8), 1349.
- ⁴⁴ Dooley, J. J., Pyżalski, J., & Cross, D. (2009). Cyberbullying Versus Face-to-Face Bullying. Zeitschrift für Psychologie/Journal of Psychology, 217(4), 182–188.

³⁸ Nansel, T. R., Overpeck, M., Pilla, R. S., Ruan, W., Simons-Morton, B., & Scheidt, P. (2001). Bullying behaviors among US youth. JAMA: the journal of the American Medical Association, 285(16), 2094.

³⁹ Nansel, T. R., Overpeck, M., Pilla, R. S., Ruan, W., Simons-Morton, B., & Scheidt, P. (2001). Bullying behaviors among US youth. JAMA: the journal of the American Medical Association, 285(16), 2094.

of bullying needs its own specific intervention.⁴⁵ Therefore, there is a need for effective interventions to prevent cyberbullying.

Gender Differences. While research suggests an overlap between victims of bullying and cyberbullying, the relationship only exists for males. There is no correlation between females being cyberbullied and being bullied in the physical environment, though research does show that females are more likely to be involved in bullying, as victim or bully, when compared to male students.⁴⁶⁴⁷⁴⁸ With regard to cyberbullying, more females experience cyberbullying through text messages and phone calls compared to cyberbullied boys.⁴⁹ On the other hand, males have a greater likelihood of being victims and bullies in both the cyber and physical worlds than female students.⁵⁰ Boys also report participating in bullying and cyberbullying both in school and away from school more than girls report.⁵¹ Empathy, an important characteristic to fight bullying and cyberbullying, appears to differ based on gender. Concerning empathy levels, girls have similar scores on a cyberbullying scale whether they have high or low cognitive empathy.⁵² Males with low cognitive empathy score higher on the cyberbullying scale than those boys who have high cognitive empathy.

Whether it involves traditional bullying or cyberbullying, it is important for school-aged children to share with adults. However, there appears to be gender differences when it comes to reporting incidents. Females report occurrences to adults and parents more often than boys who are involved in the incidents.⁵³⁵⁴ This is true for both cyberbullying and traditional bullying situations. In addition, a review of longitudinal studies suggests that bullying leads to suicide

- ⁴⁷ Nansel, T. R., Overpeck, M., Pilla, R. S., Ruan, W., Simons-Morton, B., & Scheidt, P. (2001).
 Bullying behaviors among US youth. JAMA: the journal of the American Medical Association, 285(16), 2094.
- ⁴⁸ Li, Q. (2006). Cyberbullying in Schools. School Psychology International, 27(2), 157–170.
- ⁴⁹ Smith, P., Mahdavi, J., Carvalho, M., & Tippett, N. (2006). An investigation into cyberbullying, its forms, awareness and impact, and the relationship between age and gender in cyberbullying. Research Brief No. RBX03-06. London: DfES.
- ⁵⁰ Erdur-Baker, Ö. (2010). Cyberbullying and its correlation to traditional bullying, gender and frequent and risky usage of internet-mediated communication tools. New Media & Society, 12(1), 109.
- ⁵¹ Li, Q. (2006). Cyberbullying in Schools. School Psychology International, 27(2), 157–170.
- ⁵² Ang, R. P., & Goh, D. H. (2010). Cyberbullying Among Adolescents: The Role of Affective and Cognitive Empathy, and Gender. Child Psychiatry & amp; Human Development, 41(4), 387 397.
- ⁵³ Kapatzia, A., & Syngollitou, E. (2007). Cyberbullying in middle and high schools: Prevalence, gender, and age differences. Unpublished manuscript based on master's thesis of A. Kapatzia, University of Thessaloniki, Greece.
- ⁵⁴ Li, Q. (2006). Cyberbullying in Schools. School Psychology International, 27(2), 157–170.

⁴⁵ Campbell, M. A. (2005). Cyber bullying: An old problem in a new guise? Australian Journal of Guidance and Counselling, 15(1), 68–76.

⁴⁶ Erdur-Baker, Ö. (2010). Cyberbullying and its correlation to traditional bullying, gender and frequent and risky usage of internet-mediated communication tools. New Media & Society, 12(1), 109.

though it differs by gender.⁵⁵ Females, repeatedly victimized, are more likely to commit suicide than when compared to any other influencing factor. Bullied males are only at a great risk for suicide when in conjunction to conduct problems.⁵⁶ The research shows that male and female students can experience cyberbullying in slightly different manners. Thus, it is important that interventions address gender differences so that students can successfully relate to the message.

Effects of Cyberbullying. Cyberbullying has many serious, negative impacts on everyone, regardless of age, gender, or ethnicity. Indeed, the negative effects are especially true for school-aged children. Children who are cyberbullied report experiencing feelings of frustration, sadness, and anger.⁵⁷ In that same study, a third of cyberbullying victims felt negatively impacted. In addition, victims of on-line harassment report feelings of fear.⁵⁸ Students influenced by cyberbullying also exhibit low self-esteem and insecurities.⁵⁹ Victims report being socially isolated and unpopular compared to the bystanders and bullies.⁶⁰ While these emotions by themselves should elicit a significant unease from the adults surrounding the victims even greater concerns exist. A major concern for schools and families of victims is depression and suicidal thoughts.⁶¹

Similarly, traditional bullying often elicits many different types of feelings. These include anxiety, loneliness, sadness, over compliance and insecurities.⁶² Victims also have few friends and have poor social skills with peers.⁶³ While there are many psychological effects on a victim of bullying, the effects of bullying can manifest into behavioral issues. For example, victims of bullying often withdraw themselves from school, both from the actual school day and

- ⁵⁵ Brunstein, K. A., Sourander, A., & Gould, M. (2010). The association of suicide and bullying in childhood to young adulthood: a review of cross-sectional and longitudinal research findings. Canadian journal of psychiatry. Revue canadienne de psychiatrie, 55(5), 282.
- ⁵⁶ Brunstein, K. A., Sourander, A., & Gould, M. (2010). The association of suicide and bullying in childhood to young adulthood: a review of cross-sectional and longitudinal research findings. Canadian journal of psychiatry. Revue canadienne de psychiatrie, 55(5), 282.
- ⁵⁷ Patchin, J. W., & Hinduja, S. (2006). Bullies move beyond the schoolyard. Youth Violence and Juvenile Justice, 4(2), 148.
- ⁵⁸ Beran, T., & Li, Q. (2007). The relationship between cyberbullying and school bullying. Journal of Student Wellbeing, 1(2), 15–33.
- ⁵⁹ Diamanduros, T., Downs, E., & Jenkins, S. J. (2008). The role of school psychologists in the assessment, prevention, and intervention of cyberbullying. Psychology in the Schools, 45(8), 693–704.
- ⁶⁰ Diamanduros, T., Downs, E., & Jenkins, S. J. (2008). The role of school psychologists in the assessment, prevention, and intervention of cyberbullying. Psychology in the Schools, 45(8), 693–704.
- ⁶¹ Beran, T., & Li, Q. (2007). The relationship between cyberbullying and school bullying. Journal of Student Wellbeing, 1(2), 15–33.
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- ⁶³ Diamanduros, T., Downs, E., & Jenkins, S. J. (2008). The role of school psychologists in the assessment, prevention, and intervention of cyberbullying. Psychology in the Schools, 45(8), 693–704.

school activities.⁶⁴ The avoidance of school can eventually result in completely dropping out of school. This avoidance of school does not apply to cyberbullying to the same extent. That may be because of the anonymity of the cyberbullying.⁶⁵ Often, victims do not know the identity of their bully.⁶⁶⁶⁷ A cyberbully can harass from another school, state, or country. Therefore, the positive result of skipping school to avoid a bully is lost. In addition, due to the increased importance of the internet on everyday life, it is hard to separate oneself from technology.⁶⁸ A student may be constantly bombarded by the cyberbullying, and have no knowledge of how to create distance between the victim and bully. These dangerous feelings emoted by cyberbullying are a great concern for parents, school administrators, and the community. Therefore, the importance of effective cyberbullying interventions is even greater to prevent students from experiencing thoughts about depression and suicide.

Appropriate Actions. As with traditional bullying, it is important for students to be aware that certain actions are appropriate and effective and that others are inappropriate. There are many steps to stop cyberbullying. The National Association of School Psychologists recommends that victims can first confront the cyberbully and ask him or her to stop, block the communication, show a physical copy of the harassment and get help from a trusted adult.⁶⁹ Most literature available to prevent cyberbullying stressed the importance of adult involvement.⁷⁰ The adult can be a parent or family member, a teacher or school personnel, or just a trusted adult in the child's life. Victims and bystanders should be reporting incidences to adults.⁷¹⁷²⁷³⁷⁴ While students should seek their guardians when a cyberbullying scenario arises, responsibility also falls to the guardian to discuss cyberbullying and internet usage with the children. While it is important to have a balance between trusts in the students and taking precautions to prevent

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- ⁶⁸ Beran, T., & Li, Q. (2007). The relationship between cyberbullying and school bullying. Journal of Student Wellbeing, 1(2), 15–33.
- ⁶⁹ Feinberg, T., & Robey, N. (2009). Cyberbullying: intervention and prevention strategies. National Association of School Pschologists: Communique, 38(4).
- ⁷⁰ Willard, N. E. (2007). Cyberbullying and cyberthreats: Responding to the challenge of online social aggression, threats, and distress. Research Pr Pub.
- ⁷¹ Feinberg, T., & Robey, N. (2009). Cyberbullying: intervention and prevention strategies. National Association of School Pschologists: Communique, 38(4).
- ⁷² Smith, P. K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S., & Tippett, N. (2008). Cyberbullying: its nature and impact in secondary school pupils. Journal of Child Psychology and Psychiatry, 49(4), 376–385.
- ⁷³ Beale, A. V., & Hall, K. R. (2007). Cyberbullying: What school administrators (and parents) can do. The Clearing House, 81(1), 8–12.
- ⁷⁴ Willard, N. E. (2007). Cyberbullying and cyberthreats: Responding to the challenge of online social aggression, threats, and distress. Research Pr Pub.

⁶⁴ Beran, T., & Li, Q. (2007). The relationship between cyberbullying and school bullying. Journal of Student Wellbeing, 1(2), 15–33.

⁶⁵ Beran, T., & Li, Q. (2007). The relationship between cyberbullying and school bullying. Journal of Student Wellbeing, 1(2), 15–33.

⁶⁶ Willard, N. E. (2007). Cyberbullying and cyberthreats: Responding to the challenge of online social aggression, threats, and distress. Research Pr Pub.

cyberbullying, parents can monitor internet usage by checking the history after the student finishes using a computer.⁷⁵ Schools need to determine how to monitor internet usage in each classroom.⁷⁶ In a study that surveyed over five hundred school-aged children, only fifteen percent of victims told their parents or guardians.⁷⁷ An even smaller number, eight, told school personnel about the cyberbullying. These statistics may be so small because many students feel that telling anyone about the cyberbullying may actually result making the situation even worse.⁷⁸ In other words, a punished bully may result in the bully or friends of the bully harassing the victim even more. Furthermore, some victims fear that by speaking out, some parents may respond by taking away their means of communication and technology.⁷⁹

Other cyberbullying prevention literature emphasizes the importance of internet safety. Schools and parents should teach protection of personal information over the internet, especially to strangers.⁸⁰ Strangers include adults as well as peers that the student may meet in chat rooms or social networking sites. Similarly, it is important for students to learn good decision-making skills such that they can stop and walk away from the situation, especially from a website.⁸¹⁸² "Blocking" features, which allow students to prevent unwanted people from contacting them online, are also a good addition that can be useful in harassment scenarios.

Cyberbullying Interventions

As cyberbullying is a recent development in the education field, the available interventions are limited. A basic intervention to combat cyberbullying focuses on three aspects. The first is to address school administrations' policies regarding bullying in the cyber world. According to the National Association of School Psychologists, the most effective policy is Zero Tolerance.⁸³ In other words, schools must suspend students proven to be cyberbullies. School

- ⁷⁷ Smith, P. K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S., & Tippett, N. (2008). Cyberbullying: its nature and impact in secondary school pupils. Journal of Child Psychology and Psychiatry, 49(4), 376–385.
- ⁷⁸ Beran, T., & Li, Q. (2007). The relationship between cyberbullying and school bullying. Journal of Student Wellbeing, 1(2), 15–33.
- ⁷⁹ Beran, T., & Li, Q. (2007). The relationship between cyberbullying and school bullying. Journal of Student Wellbeing, 1(2), 15–33.
- ⁸⁰ Willard, N. E. (2007). Cyberbullying and cyberthreats: Responding to the challenge of online social aggression, threats, and distress. Research Pr Pub.
- ⁸¹ Patchin, J. W., & Hinduja, S. (2006). Bullies move beyond the schoolyard. Youth Violence and Juvenile Justice, 4(2), 148.
- ⁸² Agatston, P. W., Kowalski, R., & Limber, S. (2007). Students' perspectives on cyber bullying. Journal of Adolescent Health, 41(6), S59–S60.
- ⁸³ Brown, K., Jackson, M., & Cassidy, W. (2006). Cyber-bullying: Developing policy to direct responses that are equitable and effective in addressing this special form of bullying. Canadian Journal of Educational Administration and Policy, 57, 38–46.

⁷⁵ Willard, N. (2005). Educator's guide to cyberbullying: Addressing the harm caused by online social cruelty. Retrieved July, 19, 2005.

⁷⁶ Willard, N. (2005). Educator's guide to cyberbullying: Addressing the harm caused by online social cruelty. Retrieved July, 19, 2005.

administrations should have a way for students to make anonymous reports.⁸⁴⁸⁵ Similar to traditional bullying, victims of cyberbullying fear greater retaliation when they report harassment. Schools should also increase supervision in computer labs and hallways to stem the places where students have more unsupervised freedom.⁸⁶⁸⁷ Education of all school personnel is also a significant step to preventing cyberbullying from happening on school grounds.⁸⁸ School staff and faculty should be able to recognize cyberbullying and the signs that a student may be a victim. The second aspect to target is peers. In focusing on students' education about cyberbullying, it is important to teach students to identify examples of cyberbullying, both in school and away from school grounds.⁸⁹ It is also necessary to discuss different methods for reporting cyberbullying instances, discuss the school policies and consequences that can happen to a student found guilty of cyberbullying.⁹⁰ Some cyberbullying lessons recommend that students act out cyberbullying scenarios and discuss the situations.⁹¹ It is also important to work on effective social skills and decision-making skills in classrooms.⁹²⁹³ Finally, it is important to include parents in the fight against cyberbullying. Parents should monitor internet usage, discuss the topic of cyberbullying with their children and stress an open communication between parents and students.⁹⁴ However, there needs to be a balance of safety and trust so that students are not afraid that sharing information will result in parents forbidding all forms of communication.

Effective and Ineffective Interventions. As with any intervention, there are certain aspects that research has found to be effective or ineffective in preventing cyberbullying occurrences. Research supports the need for a multidimensional intervention that targets not only bullies and

- ⁸⁴ Smith, P. K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S., & Tippett, N. (2008). Cyberbullying: its nature and impact in secondary school pupils. Journal of Child Psychology and Psychiatry, 49(4), 376–385.
- ⁸⁵ Beale, A. V., & Hall, K. R. (2007). Cyberbullying: What school administrators (and parents) can do. The Clearing House, 81(1), 8–12.
- ⁸⁶ Willard, N. E. (2007). Cyberbullying and cyberthreats: Responding to the challenge of online social aggression, threats, and distress. Research Pr Pub.
- ⁸⁷ Beale, A. V., & Hall, K. R. (2007). Cyberbullying: What school administrators (and parents) can do. The Clearing House, 81(1), 8–12.
- ⁸⁸ Smith, P. K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S., & Tippett, N. (2008). Cyberbullying: its nature and impact in secondary school pupils. Journal of Child Psychology and Psychiatry, 49(4), 376–385.
- ⁸⁹ Chibbaro, J. S. (2007). School counselors and the cyberbully: Interventions and implications. Professional School Counseling, 11(1), 65–68.
- ⁹⁰ Beale, A. V., & Hall, K. R. (2007). Cyberbullying: What school administrators (and parents) can do. The Clearing House, 81(1), 8–12.
- ⁹¹ Willard, N. E. (2007). Cyberbullying and cyberthreats: Responding to the challenge of online social aggression, threats, and distress. Research Pr Pub.
- ⁹² Chibbaro, J. S. (2007). School counselors and the cyberbully: Interventions and implications. Professional School Counseling, 11(1), 65–68.
- ⁹³ Willard, N. E. (2007). Cyberbullying and cyberthreats: Responding to the challenge of online social aggression, threats, and distress. Research Pr Pub.
- ⁹⁴ Beale, A. V., & Hall, K. R. (2007). Cyberbullying: What school administrators (and parents) can do. The Clearing House, 81(1), 8–12.

victims, but also their families, teachers, bystanders, and the larger community.⁹⁵ When intervening with the bully, school personnel should work on increasing their empathy for the victim, awareness of consequences of their actions, and problem solving and anger management skills.⁹⁶ Victims may need help with assertiveness and self-concept. They also should concentrate on positive behavior practice.⁹⁷ Similarly, interventions should target not only what happens on the school ground, but also what happens at home or the time between those two places; unlike traditional bullying, cyberbullying can happen in any place.⁹⁸

In addition, interventions are most effective when teachers and school administrators recognize at a basic level, that cyberbullying is a problem and that they want to change this situation.⁹⁹ At the beginning of the year, teachers should also outline what is appropriate and inappropriate behavior regarding technology.¹⁰⁰¹⁰¹ The issue of cyberbullying will not be resolved if the school only partially implements an intervention. Some of the effective and ineffective strategies for cyberbullying interventions also apply to bullying interventions. However, research supports the need for cyberbullying interventions that are separate from bullying interventions as the two involve aspects that are completely different between the two occurrences.¹⁰²

Interactive Interventions. While on one hand, increased technology has created cyberbullying, it also has generated creative interventions that effectively work. FearNot! is an anti-bullying intervention that utilizes an interactive virtual learning environment.¹⁰³ Students used autonomous agents to interact with other characters across settings. Students interacted with other characters that embodied victims, bullies, bystanders, and defenders. The research concluded that students experienced emotions through the intervention and were able to communicate empathy with other characters in the game.

- ⁹⁵ Beale, A. V., & Hall, K. R. (2007). Cyberbullying: What school administrators (and parents) can do. The Clearing House, 81(1), 8–12.
- ⁹⁶ Chibbaro, J. S. (2007). School counselors and the cyberbully: Interventions and implications. Professional School Counseling, 11(1), 65–68.
- ⁹⁷ Chibbaro, J. S. (2007). School counselors and the cyberbully: Interventions and implications. Professional School Counseling, 11(1), 65–68.
- ⁹⁸ Beale, A. V., & Hall, K. R. (2007). Cyberbullying: What school administrators (and parents) can do. The Clearing House, 81(1), 8–12.
- ⁹⁹ Campbell, M. A. (2005). Cyber bullying: An old problem in a new guise? Australian Journal of Guidance and Counselling, 15(1), 68–76.
- ¹⁰⁰ Mason, K. L. (2008). Cyberbullying: A preliminary assessment for school personnel.
 Psychology in the Schools, 45(4), 323–348.
- ¹⁰¹ Beale, A. V., & Hall, K. R. (2007). Cyberbullying: What school administrators (and parents) can do. The Clearing House, 81(1), 8–12.
- ¹⁰² Smith, P. K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S., & Tippett, N. (2008). Cyberbullying: its nature and impact in secondary school pupils. Journal of Child Psychology and Psychiatry, 49(4), 376–385.
- ¹⁰³ Watson, S., Vannini, N., Davis, M., Woods, S., Hall, M., Hall, L., & Dautenhahn, K. (2007).
 FearNot! an anti-bullying intervention: Evaluation of an interactive virtual learning environment. Artificial Intelligence and Simulation of Behaviour (AISB), April, 2–4.

Other research supports the finding that interactive interventions can have significant results on school-aged children. For example, another study found that a virtual learning intervention had short-term effects on students.¹⁰⁴ Specifically, students who were identified as victims prior to the intervention had increased feelings of being able to escape victimization. While this number was much higher for the identified victims, all students who participated in the study showed increased feelings of being able to escape victimization. Multimedia is another important characteristic to consider when developing an intervention. A study looked at the effect of multimedia intervention on self-reported bullying and victimization for urban third graders.¹⁰⁵ The researchers concluded that the multimedia intervention significantly reduced bullying and victimizations scores. Specifically, use of a CD-ROM is more effective than a video for reducing bullying scores. The study also concluded that the multimedia intervention was better at reducing victimization scores than a teacher or counselor session.¹⁰⁶

Another study found that Transformational Play is the key to effectively immersing students in gaming characters such that the students experience the situations as if they are the characters.¹⁰⁷ Transformational play involves students in the intervention becoming the protagonist and using their own knowledge and skills to make decisions for each situation. This type of play not only increases interest but also allows students to engage even further with the content of the lesson. In a study where one class of students used a program containing transformational play and another class only learned the curriculum as normal, those students using the transformational play learned significantly more about the concepts than those students learning the traditional curriculum.¹⁰⁸ The students also showed greater engagement and increased intrinsic motivation. Even more importantly, after a delayed period, the students using transformational play remembered more than the students who did not play. Since nearly 97% of surveyed youth report that they play videogames, it seems important to integrate this appealing aspect into interventions.¹⁰⁹

Current Study

The purpose of this study was to add to the current knowledge about effective cyberbullying interventions by using the successful interactive aspect found in previous studies and applying it to sixth grade students. The current study also provided a sustainable

- ¹⁰⁴ Sapouna, M., Wolke, D., Vannini, N., Watson, S., Woods, S., Schneider, W., Enz, S., et al. (2010). Virtual learning intervention to reduce bullying victimization in primary school: a controlled trial. Journal of Child Psychology and Psychiatry, 51(1), 104–112.
- ¹⁰⁵ McLaughlin, L., Laux, J. M., & Pescara-Kovach, L. (2006). Using multimedia to reduce bullying and victimization in Third-Grade Urban Schools. Professional School Counseling, 10(2), 153.
- ¹⁰⁶ McLaughlin, L., Laux, J. M., & Pescara-Kovach, L. (2006). Using multimedia to reduce bullying and victimization in Third-Grade Urban Schools. Professional School Counseling, 10(2), 153.
- ¹⁰⁷ Barab, S. A., Gresalfi, M., & Arici, A. (2009). Why educators should care about games. Educational Leadership, 67(1), 76–80.
- ¹⁰⁸ Barab, S. A., Gresalfi, M., & Arici, A. (2009). Why educators should care about games. Educational Leadership, 67(1), 76–80.
- ¹⁰⁹ Barab, S. A., Gresalfi, M., & Ingram-Goble, A. (2010). Transformational Play. Educational Researcher, 39(7), 525.

intervention that can be easily accessed and run, while remaining inexpensive with regard to paying for the program and the time consumed by teachers' class time. The proposed intervention was complementary to other more formal, holistic cyberbullying interventions, including classroom lessons.

Research Question: The current study planned to determine whether an interactive cyberbullying intervention could positively affect sixth grade students. First, whether the intervention could increase general knowledge of the definition of cyberbullying and examples that fall into the category of cyberbullying; second, if the intervention could increase students' perspective of the prevalence of cyberbullying occurrences in the students' school and at home; and finally, whether the intervention could increasingly lead students to choose the appropriate behaviors to stop cyberbullying. It was hypothesized that all three aspects could be impacted when comparing data from the pretest to data in posttest. In addition, a delayed posttest would be similar to the original posttest, showing a sustained effect of the program. Finally, there would be a difference in the data when comparing the experimental group, students who experience the intervention, and those that were in the control group, who did not see the intervention.

Due to restrictions placed on the experimenter by the participating school, changes were made to the study design. While the original design involved only two classes, one as the experimental group and one as the control group, the principal thought it would be a positive experience for all students to participate. Therefore, all sixth grade students participated in the study. Students who were present completed a pretest survey, the computer program implementation, and a posttest survey. Therefore, there was no experimental or control groups. In addition, it was not possible to attempt a staggered intervention as the principal wished all students to experience the intervention on the same day. In addition, students did not complete a delayed posttest survey. There was no additional time available for all students to complete the delayed posttest after additional time was given for the entire grade to complete the program and miss instructional time.

Methods

Subjects

The current study consisted of 178 students from the sixth grade of one suburban school located in a Midwestern city. A pilot study consisted of five sixth grade students. Of the 178 sixth grade students who participated in the study, 96 students completed all three components, which are described in detail below. Incomplete data were not included in data analysis. Of the 96 students, there were 51 male students and 45 female students. The average age of the students was 11.53 years, with a range from 11 to 13 years old. Parent consent and child assent were obtained for each participant before they could participate in the study (See Appendix <u>A</u> & <u>B</u>).

Materials

The researcher used an adaptive version of Patchin & Hinduja's *Cyberbullying and Online Aggression Survey* to measure students' understanding, awareness, and action potential of cyberbullying in a pretest and posttest.¹¹⁰ The survey included 29 items given in a paper and

http://www.cdc.gov/violenceprevention/pdf/BullyCompendiumBk-a.pdf

¹¹⁰ BullyCompendiumBk-a.pdf. (n.d.). . Retrieved from

pencil format (See Appendix E). The second section is from the original *Cyberbullying and* Online Aggression Survey, while the first and third sections were created for the study. Specifically, the second section of the adapted format utilized the Cyberbullying Victimization Scale (alpha=0.74) and Cyberbullying Offending Scale (alpha=0.79) to measure students' experiences with cyberbullying and their awareness of cyberbullying occurring around them. The answers were measured on a 5-point Likert scale with "a" meaning never and "e" meaning every day. Sample questions included "In the last 30 days, have you been made fun of in a chat room?" and "In the last 30 days have you lied about your age while online?" The first section of the adapted survey included basic demographics such as age and gender. It also included questions that measured the students' understanding of cyberbullying and its forms, for example, "Which of the below are examples of cyberbullying?" and open-ended questions such as "What is (the definition of) cyberbullying?" Finally, the third section of the adapted Cyberbullying and Online Aggression Survey included short scenarios that allowed students to respond in an openended format. For example, "Jimmy got a text from someone in his class that said, 'No one likes you. You should move away.' What should Jimmy do?" The pretest and posttest consisted of all three sections to measure the students' understanding, awareness, and action potential. The understanding variable was comprised of a total score for items 3 through 11. The awareness variable was comprised of a total score for items 12 through 27. Finally, the action potential variable was comprised of a total score for items 28 and 29.

Students' answers were coded based on the type of question. Items 3 and 4 were openended questions that required students to write down their definitions of bullying and cyberbullying. The responses were coded based on the number of components that were mentioned in each student's answer. The three required components necessary for a perfect score for item 3, what is the definition of bullying, included occurs repeatedly, is an action taken by one person against another, and is an unwanted, negative, or aggressive action. The four required components necessary for a perfect score for item 4, what is the definition of cyberbullying, included: use of technology, occurs repeatedly, is an action taken by one person against another, and is an unwanted, negative, or aggressive action. Students' scores were based on the number of components mentioned for each question. Mentioning none of required components resulted in a score of 0. Listing one component resulted in a score of 1, two resulted in a score of 2, etc. Item five was multiple-choice which asked students to select from a list examples that qualified as cyberbullying. Two choices were correct examples. Students who selected both correct options received a score of 1. Those who did not received a score of 0.

Item six asked students to list two devices that are used in cyberbullying. Students received a score of 0 for two incorrect answers, one for one correct device, and two for two correct devices. Correct examples included phone, smartphone, laptop, iPad, Android, computer, etc. Item 7 required students to list three physical places where cyberbullying can happen. Students received 0 for three incorrect places, 1 for one correct place, 2 for two correct places, and 3 for three correct physical places. Examples of correct answers include home, school, bus, mall, friend's house, etc. Similarly, students answered two ways that cyberbullying can effect someone their age for item 8. Students received zero for incorrect ways, 1 for one correct way, and two for two correct ways. Examples of correct responses greatly varied, but included: grades drop, suicide, self-harm, hurt others, emotionally, feelings of anger or sadness, etc. Items nine through eleven were true-false. Students received scores of zero for answering incorrectly and one for answering correctly.

Items 12 through 27 utilized a 5-point Likert scale. A, or never, was coded as one, b, or once or twice, was coded as two, c, a few times, was coded as three, d, many times, was coded as four, and e, every day, was coded as five during data analysis. Students received a score for each of the items.

Items 28 and 29 were open-ended questions that included short scenarios where participants had to decide on the appropriate action for the character to take. Answers were coded such that an incorrect answer or the response "do nothing" was given a score of zero. Answers that included talking to the cyberbully were given a score of one, while responses that included report the incident or talk to an adult received a score of two.

Intervention Design. The current study utilized an interactive, sustainable, and participant-driven cyberbullying intervention called The Cyberbullying Challenge. The Cyberbullying Challenge is an internet-based program designed by the researcher in which students answered the call of 6th grade characters who were in need of help. The interface of the program included a yellow background setting with large green option buttons of "A," "B" and "C," and large "Next" and "Recap" buttons (See Appendix F, G). The interface remained, as the slides that included pictures or text were replaced for each scenario. An introduction explained cyberbullying facts, the purpose of the lesson, and how long it would take. Following the introduction, students practiced using the buttons to ensure they had the capability to complete the lesson. Specifically, students practiced using the "A," "B," and "C" buttons, which they would use to select their answers after each scenario. The "Next" button allowed students to continue to the next screen, while the "Recap" button was available when students needed to hear the scenario again. After successfully completing the introduction section, students met Matt who was their lead male character. He explained his need for help and that he would be "calling" the students of the study to ask what they would do in his situation. In addition, students also met Sally, the female main character, who would call the students for advice.

There were nine scenarios. In each scenario, the characters appeared acting out the scene through pictures as they verbally explained what happened (See <u>Appendix H</u>). After each scenario, "What would you do?" appeared on the screen with three options: do nothing, talk to the cyberbully, and talk to an adult (See Appendix I). A narrator read the interactive page where students selected their option and recited the result of their choices. Students then selected their option on the screen and immediate feedback was given as to whether or not their choice was the best option. The scenarios included texting, social networks such as Facebook, and emailing. Scenarios ranged in intensity from mean jokes where the only wrong answer was "do nothing", to more intense cyberbullying, where the wrong answers were "do nothing" and "talk to the cyberbully."

Students began The Cyberbully Challenge as Anti-Cyberbully Beginners. After each successfully completed scenario, the students earned new titles in the form of a merit incentive program. The order of the titles included: Anti-Cyberbully Beginner, Anti-Cyberbully Rookie, Anti-Cyberbully Ranger, Anti-Cyberbully Boss, Anti-Cyberbully Leader, Anti-Cyberbully Champ, Anti-Cyberbully Pro, Anti-Cyberbully Superior, Anti-Cyberbully Ace, and Anti-Cyberbully Expert. This name appeared at the top of the screen (see <u>Appendix G</u>).

Students helped guide the characters through the tough cyberbullying situations, where they were either the victim or bystander. Some of the scenarios involved the main character directly experiencing the cyberbullying as a victim. However, Matt and Sally also experienced it secondhand as a bystander. Students who answered correctly would continue in the hopes of becoming an Anti-Cyberbully Expert. Those students who did not answer correctly, would then be asked to repeat that specific scenario. Students could only continue to the next scenario after choosing the correct answer. After students successfully reached the end of The Cyberbullying Challenge, they were congratulated and given a certificate for their accomplishment (See <u>Appendix J</u>).

Procedure

Research Design. Both studies were implemented using a pretest posttest design. The dependent variables were understanding, awareness, and action potential as measured using the three survey sections.

The study was implemented using a pretest posttest design. After consent was received, the researcher administered the *Cyberbullying and Online Aggression Survey* pretest to collect baseline data. It was administered one week prior to the implementation of the intervention. The Pretest included all three sections of the survey. A posttest was administered one week after the intervention.

Pilot Study. A pilot study was conducted to ensure the validity and reliability of measurements. A group of five students participated in the pilot study. Students volunteered to participate during part of their lunch session. Students followed the same procedure as the current study, completing the pretest survey, The Cyberbullying Challenge, and posttest survey. Students provided feedback about the survey in addition to The Cyberbullying Challenge upon completion of the pilot study. Students received school store credit for participating.

Treatment Integrity. In order to ensure that all steps were carried out successfully, the experimenter created a treatment integrity checklist (See <u>Appendix K</u>). The experimenter recorded whether or not each predetermined step of the procedure was followed. Due to changes made prior to the start of the study, a new checklist was created to include the adaptations. There was strong treatment integrity for both the pilot study and current study (See <u>Appendix L</u>). The original version included sections about control and experimental groups, pretest surveys passed out two weeks prior to The Cyberbullying Challenge, an immediate posttest, and the delayed posttest handed out two weeks after completion of The Cyberbullying Challenge. The adapted version was created to fit the study's new design and excluded these sections.

Baseline. Both the pilot study and current study had baseline data collected using the adapted form of the *Cyberbullying and Online Aggression Survey*. The pretest scores were collected, coded, and entered into SPSS.

The Cyberbullying Challenge. Students participated in The Cyberbullying Challenge one week after completion of the Pretest. Students were seated at a computer that was preloaded with the internet program. Each student individually completed through the lesson. Upon conclusion, students received a paper certificate of completion and counselors were available to all the students.

Posttest. One week after the program ended, students were given a posttest *Cyberbullying and Online Aggression Survey.*

Data Analysis

Statistical analyses were conducted using SPSS. First, the researcher gathered and coded data for each individual's items. Of the 178 students, there was only complete data for 96 students. The incomplete data sets were excluded from data analysis.

A repeated measures multivariate analysis of variance (MANOVA) was conducted to determine if there was any statistically significant difference between the pretest and posttest. In addition, paired samples t-tests were conducted to compare each of the three dependent variables: understanding, awareness, and action potential. Data were analyzed to determine if there was a significant difference between pretest and posttest responses for each variable. Furthermore, chi-squared tests of analysis were conducted to compare individual items across the tests.

To determine if gender played a role in the study, chi squared tests of analyses were conducted. Data were analyzed to determine if there were significant gender differences for each variable and for each individual item including open-ended responses. Moreover, chi square analyses were performed to examine the relationship between pretest open-ended responses and posttest open-ended responses. To gather qualitative data, responses to open-ended items were coded into general categories and more specific subcategories to provide greater depth of information. Furthermore, Pearson product-moment correlation coefficients were computed to determine the presence and strength of relationships between the three variables, understanding, awareness, and action potential. Finally, descriptive statistics were examined to determine the frequency of responses for individual items.

Results

Hypothesis 1:

Below are results from the first research question that was analyzed. The first hypothesis suggested scores would increase across the three variables when comparing pretest results with posttest results.

A repeated measures multivariate analysis of variance (MANOVA) was conducted to explore changes in students' responses to items between pretest and posttest. The MANOVA measured across the three variables of understanding, awareness, and action potential. Results revealed a significant multivariate main effect for test (pre and post), Wilks' λ = .747, *F* (3, 93) =10.52, *p*<.001, partial eta squared= .253. Power to detect the effect was .998. Thus, it was confirmed that there was a significant difference between pretest responses and posttest responses.

Given the significance of the overall test, the univariate main effects were examined. Insignificant univariate main effect for test was obtained for understanding, F(1, 95) = .055, p <= .815, partial eta squared=.001, power=.056. Overall, results from the understanding section indicate that students responded similarly to items 3 through 11 on both the pretest (M=13.73, SD=2.06) and posttest (M=13.68, SD=2.14). However, significant univariate main effects for test were obtained for awareness, F(1, 95) = 17.95, p < .001, partial eta squared=.159, power=.987; and action potential, F(1, 95) = 10.56, p=.002, partial eta squared=.10, power= .895. These results from the awareness section suggest that students scored significantly higher on the pretest responses (M=20.61, SD=7.52) than the posttest responses (M=19.32, SD=6.27) for items 12 through 27. Finally, students chose more appropriate actions for responding to cyberbullying scenarios on the posttest responses (M=3.49, SD=1.15) compared to the pretest responses (M=2.99, SD=1.50) in the action potential section.

Understanding

Chi-squared tests of analysis indicated significant differences for individual items on the dependent variable of understanding. There was a significant difference in pretest and posttest responses on a task that required students to define cyberbullying, x^2 (16)=159.55, p<.001. The responses were coded based on the number of components that were mentioned in each student's answer. Over eighty percent of students fulfilled three of the four components on the pretest. Eight percent listed two correct components and slightly more than 9% of students listed all four components. Posttest results showed an equivalent number of students listed two (8%) and four components (9%). However, slightly fewer students listed three components (79%). Two percent of students listed only one component compared to the pretest (1%).

There was a significant difference for item 5 that had students identify all correct examples of cyberbullying, x^2 (1)=33.58, p<.001. On the pretest, 80% of students did not select the correct answers while 20% chose the correct answer. Posttest results were similar, with 82% of students choosing incorrect answers and 18% selecting the correct answers.

In addition, results indicated a significant difference in pretest and posttest responses for item 6 where students listed two devices that could be used in cyberbullying, x^2 (4)=32.18, p<.001. Pretest responses revealed 92% of students listed two or more correct devices. Five percent listed one correct device and 3% listed zero. Posttest results indicate fewer students listed two correct devices (89%) and a greater number listed incorrect devices (6%).

Students pretest and posttest responses were significantly different for item 7, which had students list three physical places where cyberbullying can happen, x^2 (9)=41.38, *p*<.001. Of the pretest responses, seventy percent of responses included three correct places, while 15% listed two correct places, 2% listed one correct place, and 14% listed zero correct places. Responses on the posttest showed improvement with a similar of students providing three places (70%) and one correct place (3%). However, a much greater number listed two correct places (21%) and fewer listed zero correct places (6%).

In addition, there were significant differences for pretest and posttest responses on item 8, x^2 (4) =21.39, *p*<.001. Item 8 required students to list at least two ways that someone their age would be affected by cyberbullying. Pretest results showed 77% of students correctly listed two ways, 16% listed one correct way, and 7% listed zero correct ways. Slightly fewer students listed two correct ways (73%) on the posttest. A greater number listed one way (19%) and incorrect ways (8%)

Items 9 through 11 were true-false statements where students circled the correct answer. Item nine stated, "Only 2 people are involved in a cyberbullying situation- the person who bullies and the person who is bullied." Results show a significant difference in pretest and posttest responses, $x^2(1) = 8.45$, p=.004. Eighty-five percent of students selected the correct response, false, on the pretest. Posttest results reveal only 79% of students answered correctly. This is a change of 6%.

Item 10 consisted of the statement "Cyberbullying can only occur through the Internet." Students responses were significantly different between pretest and posttest, $x^2(1) = 9.51$, p = .002. Seventy-five percent of students chose the correct response, false, on the pretest. On the posttest, 77% of students answered correctly, an increase of 2% from the pretest. Finally, there was no significant difference in pretest and posttest responses for true-false item 11 "Students who are cyber bullied often don't want to go to school," $x^2(2) = 3.17$, p=.20. Over 92% of students chose the correct response, true, on the pretest. Similarly, 96% of students answered correctly on the posttest.

Awareness

Chi-squared tests of analysis were conducted to determine the relationship between pretest and posttest responses for awareness. There were significant differences between multiple pretest and posttest responses. Results concluded a significant difference between pretest response and posttest response for item 12, $x^2(9) = 61.24$, p < .001. Regarding pretest responses, sixty-seven percent of students responded they or someone they know have never been sent a mean text, while 19% responded once or twice, 10% responded a few times, and 2% responded many times. On the posttest survey, more students responded never (74%), while fewer students responded once or twice (13%) and a few times (8%). However, more students answered many times (5%).

A significant difference was also found for item 13, $x^2(9) = 64.49$, p < .001. Of the pretest responses, eighty-three percent of students responded they or someone they knew had never received an email that made them upset or uncomfortable, while five percent responded once or twice. Seven percent of students had received the emails a few times and four percent responded many times. Posttest results indicated a similar number of students responded never (82%) while more students responded once or twice (9%). However, fewer students responded a few times (6%) and many times (2%).

Responses for item 14 were significantly different, $x^2(9) = 67.54$, p < .001. On the pretest, 90% of students responded never to having received email from an unknown person that made them upset. Five percent responded once or twice, 2% responded a few times, and 3% responded many times. With regard to the posttest survey, similar numbers responded to never (90%) and a few times (2%). However, more students chose once or twice (7%) and fewer students responded to many times (1%).

Results indicated a significant difference between pretest and posttest responses for item 15, $x^2(12) = 61.64$, p < .001. Pretest responses specified that 74% of students responded they had never had anything posted on Facebook that made them upset. However, 11% responded once or twice, 5% a few times, 8% many times, and 1% every day. With regard to the posttest survey, more students responded never (81%) while fewer students responded once or twice (10%), a few times (4%), many times (4%), and every day (0%).

Similarly, a significant difference was found for item 16, x^2 (6) =42.81, p<.001. On the pretest, eighty-four percent of students responded they had never had anything posted on a website that made them feel uncomfortable or upset. Eleven percent responded once or twice and 4% responded many times. Posttest results indicated similar levels of response for never (85%), once or twice (9%), and many times (4%). In addition, 1% of students responded a few times.

There was a statistically significant difference between responses for item 17, x^2 (6) =46.87, *p*<.001. Of the pretest responses, 77% of students responded they had never received an instant message that made them upset while 15% responded once or twice, 5% responded a few times, and 3% responded many times. Students' responses on the posttest showed a greater number of students chose never (84%), while fewer students answered once or twice (12%), a few times (4%), and many times (0%).

Results indicated a statistically significant difference between pretest and posttest responses for item 18, $x^2(16) = 49.52$, p < .001. Exploring pretest responses, 75% of students answered they have never been bullied or picked on while online. However, 13% responded once or twice, 3% responded a few times, 7% responded many times, and 2% responded every day. On the posttest survey, more students answered never (80%) and once or twice (15%). Fewer students chose many times (1%) and every day (1%) while similar levels chose a few times (3%).

In addition, results suggested a significant difference for item 19, $x^2(12) = 77.87$, p < .001. On the pretest, 91% of students responded they never felt afraid to go on the computer. Four percent responded once or twice, 2% responded a few times as well as many times, and 1% responded every day. There were similar results on the posttest survey for never (92%), once or twice (3%), and every day (1%). However, more students responded a few times (4%).

Results indicated a statistically significant difference for item 20, $x^2(12) = 72.39$, p < .001. Pretest responses showed that 87% of students never had anything posted online that they did not want others to see. Six percent responded once or twice, 4% responded a few times, 2% responded many times, and 1% answered every day. Pertaining to the posttest results, students responded similarly to all categories, never (89%), once or twice (7%), a few times (3%), and many times (1%).

There was a significant difference in responses for item 21, x^2 (12) =135.44, p<.001. Pretest results showed that 87% of students have never posted something online to make others laugh. Eight percent indicated once or twice, 3 % a few times, 1% said many times and every day. Posttest results indicated slightly fewer responded never (85%) and a few times (1%). However, more students responded once or twice (12%) and many times (2%).

Results showed a significant difference for item 22, $x^2(9) = 65.89$, p < .001. On the pretest, 85% said they have never sent an angry text to another person. Eight percent said once or twice, 5% a few times, and 1% many times. Students responded similarly on the posttest, 88% for never, 7% once or twice, 4% a few times, and 1% many times.

A statistically significant difference was found between pretest and posttest responses for item 23, $x^2(6) = 38.87$, p < .001. With reference to the pretest, 85% of students said they had never sent an angry email to another person while 2 % responded once or twice and 3% said a few times. Posttest survey showed more students responded never (95%) and many times (2%) while fewer students selected once or twice (1%) and a few times (2%).

Pretest and posttest responses were significantly different for item 24, x^2 (9) =63.70, p<.001. On the pretest survey, 90% of students said they had never posted anything on someone's Facebook page to make them upset or make fun of them. Seven percent responded once or twice, 1% said a few times, and 2% said many times. A greater number of students chose never on the posttest (95%), while fewer students answered once or twice (3%) and many times (1%). However, 1% responded every day and zero students selected a few times.

Item 25 pretest and posttest responses were significantly different, $x^2(2) = 30.79$, p < .001. Of the 96 pretest responses, 92% of students answered they had never posted a picture of another person without his or her permission. Five percent said once or twice and 3% responded a few times. A slightly greater number of students responded never (94%) and once or twice (6%) on the posttest survey. However, no students answered a few times.

Results showed a statistically significant difference between pretest and posttest responses for item 26, $x^2(12) = 99.45$, p < .001. On the pretest, 79% of students said they have never known someone who has cyberbullied someone else in their school. Thirteen percent said

once or twice, 4% responded a few times, 3% answered many times and 1% said every day. With regard to posttest results, 84% of students selected never, an increase from the pretest. Fewer students responded a few times (1%), many times (2%) and every day (0%), while a similar number chose once or twice (13%).

Results concluded a significant difference between responses for item 27, x^2 (12) =91.89, p < .001. Pretest survey results showed 72% of students have never known someone who has been cyberbullied in their school. Seventeen percent of students responded once or twice, 5% said a few times, and 3% of students responded many times and every day. On the posttest survey, more students selected never (85%) while fewer students chose the alternative answers: once or twice (10%), a few times (1%), many times (3%), and every day (0%).

Action Potential

Items 28 and 29 were open-ended questions that posed a scenario where students had to decide what the character should do. Though there was no significant difference for item 28, there was a significant difference between pretest responses and posttest responses for item 29, $x^2(4) = 14.61$, p=.006. Considering the 96 pretest responses, 27% said do nothing or ignore it, 6% listed talk to the cyberbully, and 67% stated report it or tell an adult. Of the 96 posttest responses, 12% said do nothing, 6% stated talk to the cyberbully, and 82% said report it or tell an adult. Results indicated that responses increased from pretest to posttest for reporting or telling an adult and decreased for do nothing.

Gender Differences

Data were examined to determine if there were any gender differences for individual item responses. Very few items showed gender differences. However, a chi-squared analysis for pretest item 9 indicated a significant difference, $x^2(1) = 6.99$, p=.008. Item nine was a true-false statement that states, "Only 2 people are involved in a cyberbullying situation- the person who bullies and the person who is bullied." Ninety five percent of female students answered correctly, stating it was false. However, only 76% of male students answered it correctly. The gender difference held true for the posttest, $x^2(1) = 4.85$, p=.028. Eighty nine percent of female students answered the item correctly on the posttest compared to the pretest, fewer female students received credit for the posttest compared to the pretest.

In addition, a chi-squared analysis for pretest item 10 demonstrated a significant gender difference, $x^2(1) = 8.72$, p = .003. Item 10 was a true-false statement that stated, "Cyberbullying can only occur through the Internet." Sixty three percent of male students answered correctly that the statement was false, while eighty nine percent of female students answered correctly. A chi-squared analysis indicated a significant difference for pretest item 18, $x^2(4) = 9.50$, p = .05. Item 18 is on a Likert scale from a-e, with a meaning never and e meaning every day that stated, "In the last 30 days, have you or someone you know been bullied or picked on by another person while online?" Nineteen percent of male students reported once or twice. Six percent of female students reported a few times while 0 % of male students reported a few times. Three percent of male students reported many times while 11% of female students reported many times.

A significant gender difference was found for pretest item 25, $x^2(2) = 8.39$, p = .015. Item 25 stated, "In the last 30 days, have you or someone you know taken a picture of someone and posted it online without their permission?" Eleven percent of female students responded once or

twice compared to the 0 % of males who responded once or twice. Five percent of male students responded a few times while 0 % of female students responded a few times.

Posttest item five showed gender differences, $x^2(1) = 4.67$, p = .031. Item five asked students to select examples from a list that qualified as cyberbullying. Ninety percent of male students correctly answered the question compared to seventy three percent of female students who answered the question correctly. Posttest item 8 demonstrated a significant gender difference, $x^2(2) = 8.13$, p = .017. Item eight asked students to list two ways cyberbullying could affect someone their age. Eighty seven percent of female students listed two correct ways while only 61% of males answered two correct ways. Eleven percent of male students listed zero correct ways while 4 % of female students listed zero correct ways.

Answers to open ended questions were coded and the data analyzed. Gender differences were observed for posttest open-ended item 8, $x^2(6) = 15.47$, p=.017. Students listed ways that cyberbullying could affect someone their age. The responses were coded into general categories before being subdivided into specific categories. Sixteen percent of male students responded incorrectly compared to 8 % of female students. For male students, 10 percent listed physical to self, 43 % mentioned emotional, 10 % said mental, zero percentage listed physical to others, 18 % mentioned academic, and 4 % stated social. For female students, 33% mentioned physical to self, 29% mentioned emotional, 0% stated mental, 2 % listed physical to others, 14% mentioned academic, and 14% listed social effects.

Gender differences were also observed for the specific responses for posttest open-ended item 8, $x^2(8) = 16.26$, p=.039. Ten percent of males listed suicide while 27% of female students mentioned suicide. Thirty nine percent of males mentioned self-esteem while 27% of females mentioned self-esteem. No male students mentioned self-harm or hurting others, while 6% and 2% of females mentioned self-harm and hurting others. Eighteen percent of males mentioned skipping school while 14% of females mentioned it. Ten percent of males mentioned mental health while zero female students mentioned it. Four percent of males mentioned social isolation and feelings of sadness or anger, while 2% of females mentioned both.

Open-Ended Responses

Chi square analyses were performed to examine the relationship between pretest openended responses and posttest open-ended responses. Item results showed a significant difference between pretest open ended specific responses and posttest open ended specific response for item 8, x^2 (88)= 145.96, p<.001. Each of the 96 participants was asked to list two ways cyberbullying could affect someone their age. As each student listed two possible ways, there was a total of 192 responses for this item. Of the 192 pretest responses, 29 % were incorrect, 6 % mentioned suicide, 21% mentioned self-esteem, 3% mentioned self-harm, 2% listed others would join in, 1.5 % stated the victim would begin to believe it, 8% said they would not come to school, 6% mentioned mental health, 8 % included social isolation, 1 % grades would drop, 4% listed trust issues, 9% mentioned sadness and anger, .5% said move away and 1% said hurt others. Concerning the 192 posttest responses, 24% were incorrect responses, 10% mentioned suicide, 19% included self-esteem consequences, 3% listed self-harm, 1% others would join in, 19% said they would not come to school, 6% stated mental health, 5% included social isolation, 2.5% said grades would drop, 2.5 % reported trust issues, 6% said anger and sadness, 1% reported move away, .5% said hurt others, and .5% stated the victim would begin to believe it. The number of incorrect responses decreased. In addition, responses for self-esteem, others would join in,

victim believes it, social isolation, trust issues, and sadness and anger decreased. On the other hand, the number of responses for suicide, not come to school, and dropping grades increased.

Similarly, a significant difference was found for pretest open ended general responses and posttest open ended general responses for item 8, $x^2(30)=54.02$, p=.005. Of the 192 general pretest responses, 29% were incorrect, 8% mentioned they could be physical towards themselves, 32% said emotional, 6% listed mental, 9% states academic effects, 15% included social, and 1% said physical towards others. Of the 192 general posttest responses, 24% were incorrect, 13% mentioned physical effects towards self, 25% said emotional, 6% listed mental effects, 21% listed academic effects, 10% said social. The number of incorrect responses, emotional, mental, and social decreased, while physical towards self and academic increased.

In addition, results indicated a significant difference for pretest and posttest responses for item 28, $x^2(16) = 58.77$, p<.001. A significant difference was also found for item 29, $x^2(20)$ =134, p < .001. Item 28 and 29 were short cyberbully scenarios where students must decide the best course of action the main character should take. Responses were coded and analyzed. Of the 96 pretest responses for item 28, 2.1% responded to get back at the person, 77.1% stated report it to an adult, 3.1% said talk to the cyberbully, 16.7% said do nothing or ignore it, and 1 % said move away. Results for the item 28 posttest responses indicate 1% said they should get back at the person, 87.5% said report to an adult, 1% stated talk to the cyberbully, 9.4% listed do nothing or ignore, and 1% said move away. Results indicated that responses decreased from pretest to posttest for get back at the person, talk to the cyberbully, and do nothing or ignore. Responses increased for report to an adult. Of the 96 pretest responses for item 29, 1% said get back at the person, 67.7% said report it to an adult, 4.2% stated talk to the cyberbully, 8.3% listed do nothing or ignore, and 18.8% said report it to Facebook. Of the 96 posttest responses for item 29, 1% said get back at the person, 84.4% said report it to an adult, 4.2% mentioned to talk the cyberbully, 5.2% listed do nothing or ignore, 1% said move away, and 4.2% stated report it to Facebook. Overall, results show report to an adult and move away increased from pretest to posttest. However, talk to the cyberbully, do nothing, and report it to Facebook decreased.

Relationships between Variables

Pearson product-moment correlation coefficients were computed to determine the presence and strength of relationships between the three variables, understanding, awareness, and action potential. There was no correlation between pretest understanding and pretest awareness (r=.026, n=96, p=.80). In addition, there was no correlation between pretest understanding and pretest action potential (r=.104, n=96, p=.31). However, there was a positive correlation between pretest understanding and posttest understanding (r=.466, n=96, p<.001). Overall, there was a moderate, positive correlation between pretest understanding and posttest understanding. Higher scores on the pretest understanding section were correlated with higher scores on the posttest understanding section. No correlation existed between pretest awareness and pretest action potential (r=.004, n=96, p=.97). However, there was a strong, positive correlation between pretest awareness and posttest awareness (r=.92, n=96, p<.001). Higher scores on the pretest awareness section were correlated with higher scores on the posttest awareness section. Furthermore, a negative correlation exists between pretest awareness and posttest action potential (r=.23, n=96, p=.03). A higher score on the pretest awareness section was correlated with a lower score on the posttest action potential section. There was a moderate, positive correlation between pretest action potential and the posttest action potential (r=.38, n=96, p<.001). A higher score on the pretest action potential section was correlated with a higher score on the posttest

action potential section. Finally, there appears to be a moderate, negative correlation between posttest awareness and posttest action potential (r=-.33, n=96, p=.001). A higher score on the posttest awareness section was correlated with a lower score on the posttest action potential section.

Discussion

Hypothesis 1: Summary of results

This study yielded a number of important findings, cautions, and procedural implications in using cyberbullying interventions with sixth grade students. The first hypothesis suggested scores would increase across the three variables when comparing pretest results with posttest results.

Understanding

Data analysis revealed there was no overall significant difference in pre-test and posttest scores for understanding. While there were some significant differences between pretest and posttest responses for individual items, overall, students responded similarly to the pretest as the posttest.

The results suggested the cyberbullying program did not increase students' general understanding of cyberbullying. For example, only nine percent of students listed the four components of cyberbullying when asked for a definition. This was true on the pretest and posttest. Even after the cyberbullying program, two percent of students could list just one component that comprised the definition of cyberbullying. At least one percent of students could list zero components of the cyberbullying definition on the pretest and the posttest. In addition, there was very little improvement in students' ability to select cyberbullying examples from pretest to posttest. However, this may be because the program focused more on teaching the appropriate action to take when faced with cyberbullying than focusing on basic facts. It is important to emphasize multiple parts of cyberbullying, facts and appropriate actions, as research suggests.¹¹¹

There were times when students did worse on the posttest than on the pretest. For example, fewer students could list two correct devices on the posttest compared to the pretest. This was also the case when listing two ways cyberbullying can affect someone their age. Fewer students listed two correct ways, while a greater number could list one way on the posttest than on the pretest. On a true-false item regarding those involved in a cyberbullying situation, there was a significant number of students who answered incorrectly on the posttest compared to the pretest. An explanation for this effect is unknown.

On the other hand, a greater number of students could correctly list two places where cyberbullying can happen on the posttest than on the pretest. In fact, there were fewer students listing incorrect places on the posttest than on the pretest. In addition, a greater number of students correctly answered the true-false statement that cyberbullying only occurs through the Internet on the posttest than on the pretest.

It can be concluded that while no great improvement was made in students' understanding of cyberbullying; it can also be argued the program had no negative impact on

¹¹¹ Chibbaro, J. S. (2007). School counselors and the cyberbully: Interventions and implications. Professional School Counseling, 11(1), 65–68.

their understanding. Overall, a majority of students had a general understanding about cyberbullying prior to the beginning of the cyberbullying program. However, there were a few who struggled to give an accurate definition of cyberbullying. It is suggested that students need to be educated on basic cyberbullying facts before they can learn the appropriate steps to take when faced with a situation .¹¹² It is important that students are aware of what constitutes cyberbullying and the negative effects it can have on individuals. In addition, results suggested that a more direct approach to teaching the definitions and basic facts of cyberbullying may be a more effective method.

Awareness

There was a significant difference between pretest awareness responses and posttest awareness responses. Each item utilized a 5-point Likert scale. A, or never, was coded as one during data analysis, and e, every day, was coded as four. A higher score on the pretest suggested students selected responses that designated greater frequencies of cyberbullying during the pretest than on the posttest. This held true for all items in the second section of the survey. One explanation for these results may be that students had an inaccurate understanding of cyberbullying prior to the start of the program. Therefore, their answers to questions in the survey reflected the knowledge. Students may have believed that some experiences were cyberbullying, when in reality they were not. After completing The Cyberbullying Challenge, students have improved their knowledge and have altered their frame of mind about cyberbullying. They are better able to apply this knowledge of cyberbullying to their own experiences. Consequently, they may be more accurately reporting their experiences based on this information, such that the numbers decreased from pretest responses to posttest responses. This may account for the discrepancies between pretest and posttest results for awareness and possibly understanding.

Action Potential

Survey results indicated a significant difference for the behavior variable. Students scored significantly higher on the posttest survey than on the pretest survey. Specifically, a greater number of students chose to tell an adult or report a cyberbullying situation on the posttest than on the pretest. Significantly fewer students responded, "Do nothing" on the posttest than on the pretest. However, a similar number of students decided that talking to the cyberbully was the best option on both the pretest and posttest. The results suggest that students' have a better understanding of the appropriate behavior to take when faced with a cyberbullying situation. Research suggests that students can either talk to the cyberbully or, in best-case scenario, report the incident.¹¹³ It also indicates that students may prefer to have multiple means for reporting incidents, which is supported by research.¹¹⁴ As the focus of The Cyberbullying Challenge was behavior, it is unsurprising that action potential greatly improved from pretest to posttest.

¹¹² Chibbaro, J. S. (2007). School counselors and the cyberbully: Interventions and implications. Professional School Counseling, 11(1), 65–68.

¹¹³ Feinberg, T., & Robey, N. (2009). Cyberbullying: intervention and prevention strategies. National Association of School Pschologists: Communique, 38(4).

¹¹⁴ Beale, A. V., & Hall, K. R. (2007). Cyberbullying: What school administrators (and parents) can do. The Clearing House, 81(1), 8–12.

Hypothesis 2 and 3: Summary of Results

Changes in the current study's design made it impossible to test both hypotheses two and three. No delayed posttest was given to the students and all students were exposed to the cyberbullying intervention. Therefore, there was no comparison between posttest and delayed posttest results or results between the control and experimental groups.

Gender Differences: Summary of Results

Data analysis was conducted to determine if any gender differences existed for each variable and individual item. Results conclude no significant gender differences across the three variables of understanding, awareness, and action potential. However, as described in great detail in the previous section, there were significant differences in responses for male and female students on specific items. Nevertheless, the differences were inconsistent and very few conclusions can be drawn.

True-false item 9, "only 2 people are involved in a cyberbullying situation-the person who bullies and the person who is bullied," indicated a greater number of females answered the question correctly compared to males. This held true for both the pretest and posttest, though the degree of difference decreased on the posttest. True-false item 10, "cyberbullying can only occur through the internet," specify that a greater number of female students correctly responded compared to male students, though only on the pretest. It appears that on right-wrong items where there was significant gender differences, females were more likely to answer correctly than males.

Two items' responses from the awareness variable showed significant gender differences. On the pretest, item 18 "In the last 30 days, have you or someone you know been bullied or picked on by another person while online?" indicated a greater number of male students chose once or twice, while a greater number of females selected a few times and many times. Item 25 "In the last 30 days, have you or someone you know taken a picture of someone and posted it online without their permission?" show a greater number of female students chose once or twice while a greater number of male students responded a few times with regard to the pretest. It appears the main difference between the items is experiencing it as a victim and as the perpetrator. More females chose higher frequency for being cyberbullied while a greater number of males selected a higher frequency for partaking in a form of cyberbullying. However, as this only occurred for two of the fifteen items, a strong argument cannot be made.

Posttest results suggested a significant difference for item 5, which asked students to select correct examples from a list that qualified as cyberbullying. A significantly greater number of male students correctly identified all possible responses compared to female students. Finally, item eight, which asked students to list two ways cyberbullying could affect someone his or her age, revealed a greater number of females listed two correct answers compared to males. The results for gender differences on closed-ended items were varied and inconsistent. It is difficult to draw strong, clear conclusions about how male and female students understand and experience cyberbullying. However, while research suggests clear differences between how girls and boys approach bullying, the same pattern may not be true for cyberbullying.

In addition, gender differences were explored for all coded responses to open-ended questions. The responses were coded into general categories before being subdivided into more specific subcategories to provide greater detail. A significant difference between male and female responses only occurred for item 8 on both the general categories and the specific subcategories. A greater number of male students answered incorrectly and indicated emotional, mental, and academic effects. A greater number of female students responded with physical to self and others, and social. Results of the specific subcategories for item eight indicated a greater number of female students responded with suicide, self-harm, and hurting others. A greater number of male students indicated self-esteem, skipping school, mental health, social isolation, and feelings of sadness or anger. Though the many effects of cyberbullying can be experienced by both genders, research does support that females are more likely to commit suicide than males when bullied.¹¹⁵ Though long-term studies have not been conducted to demonstrate this with cyberbullying, it is interesting to note that females responded with suicide more than males.

Open-Ended Responses: Summary of Results

As previously mentioned, open ended responses were coded into general categories and more specific subcategories. Responses were compared between pretest to posttest. Pertaining to item 8, how cyberbullying can affect someone his or her age, the number of incorrect responses decreased from pretest to posttest. The number of responses decreased from pretest to posttest for self-esteem, others would join in the cyberbullying, the victim will begin to believe what has been said, social isolation, trust issues, and feelings of sadness or anger. The number of responses increased for suicide, not come to school, and grades dropping. A large number of students were aware of the cyberbullying on fellow students. While incorrect answers were listed for both pretest and posttest, the number decreased. The introduction shared some basic effects of cyberbullying, which may have impacted this response. In addition, while students were aware of the short-term, less drastic effects, many sixth graders knew that suicide could be a result of cyberbullying.

Item 28 and 29 included short scenarios where students had to decide on the appropriate action for the character to take. Results from item 28 indicated that responses decreased from pretest to posttest for getting back at the person, talking to the cyberbully, and do nothing or ignore it. A greater number selected report it or tell an adult. Overall, results from item 29 showed that report to an adult and move away increased from pretest to posttest. However, talk to the cyberbully, do nothing, and report it to Facebook decreased.

Many students of a variety of ages use the internet on a regular basis. This includes social networking sites like Facebook. However, despite knowing that cyberbullying can happen on Facebook, very few students indicated that reporting situations to Facebook was the best option. This may be because they are unaware of the option, as it might not be advertised very publicly, or that they feel it is ineffective.

Relationships between Variables: Summary of Results

Data analysis indicated relationships between pretest and posttest variables. For instance, higher scores on the pretest understanding section were correlated with higher scores on the posttest understanding section. In addition, a higher score on the pretest action potential section was correlated with a higher score on the posttest action potential section. This is to be expected as the questions remained the same between tests and the goal was for answers to increase on the posttest. A similar relationship was found for pretest awareness section and posttest awareness

¹¹⁵ Brunstein, K. A., Sourander, A., & Gould, M. (2010). The association of suicide and bullying in childhood to young adulthood: a review of cross-sectional and longitudinal research findings. Canadian journal of psychiatry. Revue canadienne de psychiatrie, 55(5), 282.

section. Moreover, a higher score on the pretest awareness section is correlated with a lower score on the posttest action potential section. Similarly, a higher score on the posttest awareness section is correlated with a lower score on the posttest action potential section. Students who responded with greater frequencies of experiencing cyberbullying directly or knowing someone who had in the pretest or posttest awareness section tended to give incorrect answers for the posttest action potential section. Students who have faced greater number of cyberbullying situations may not know or choose to respond with the appropriate action to take in those incidents. On the other hand, students who have not experienced many cyberbullying confrontations may know the appropriate steps to take and are therefore not vulnerable to confrontations.

Limitations

There were some limitations to the current study. Due to uncontrollable complications that arose during the completion of the study, the original design could not be implemented. As all students received The Cyberbullying Challenge, there were no control and experimental groups. Therefore, the researcher cannot determine causality. In addition, the circumstances made it impossible to gather delayed posttest results, such that long-term effects could not be measured. It is unknown if any knowledge gained during the study remained with the students longer than a period of one week. In addition, as the posttest was given one week after completion of the program, results may not be an accurate representation of what students learned. It is possible students forgot some of the information they learned during the lesson.

Based on the survey nature of the study, the researcher relied on the honest answers of the students. The gathered data may not be an accurate representation of students' understanding of cyberbullying. Students may have been hesitant to report experiences with cyberbullying. In addition, there was the possibility of reactivity since students received the pretest prior to the completion of The Cyberbullying Challenge with no deception involved. However, as there was no significant increase in students' scores from pretest to posttest on most sections of the survey, this is unlikely.

Students had two weeks between completing the pretest and the posttest. It is impossible to rule out any confounding variables that could have influenced the results in that time period. Students may have talked about their answers, teachers may have held discussions, or parents may have discussed the topic at home.

Furthermore, the researcher was only utilizing sixth graders from one school during a three-week period, which limits the generalization of the study's findings. The students' experiences in this area may not be reflective of other schools in the surrounding districts or the country at large.

Finally, access to greater resources might have improved the quality of the computer program and may have resulted in significant differences between pretest and posttests. While there is no evidence that suggests students used this information in a negative manner, it is possible that students could proceed through the program at a faster rate by choosing answer "C," or tell an adult, each time without reading the options or focusing on each scenario.

Future Research and Conclusions

Data partially supported the original hypotheses. While there was no significant difference in understanding, there were significant differences between students' awareness and action potential on the pretest and posttest. Results indicated many students might be unaware

of basic facts about cyberbullying, including the definition and examples. Students might benefit from increased exposure to these facts. The lessons could be connected to the classroom with role-playing scenarios so that students may practice what they learned. However, the method of delivery is very important. During a short pilot study, a focus group revealed that those who had greater knowledge of cyberbullying were eager to share the information and experiences with the others. The computer program focused more on teaching appropriate actions to take when faced with cyberbullying than facts about cyberbullying. Future programs may want to place greater emphasis on teaching the facts before discussing scenarios. Programs should also provide more background information, increase the interactivity, and have greater applications to other scenarios and environments. Future studies should also consider varying answer options, which would require students to slow down and carefully consider the options at each scenario.

A majority of students reported not experiencing cyberbullying, though there were cases that experienced it every day. It is important that efforts be made to end the cyberbullying even if only one student is experiencing it rather than the majority. Victims should be empowered and taught strategies to avoid cyberbullying situations and methods for handling the psychological impact of cyberbullying. As most students had no personal experience with cyberbullying as the bully or victim, it is important to focus on the bystander. Interventions need to empower the bystander by emphasizing the importance of reporting. While individual school policies should target cyberbullying instances, it is also important to focus on school culture. Teachers, administration, and school psychologists can work together to create a positive school culture that emphasizes respect for selves and others. Schools could implement "secret" peer monitors who work "undercover" with the school's resource officer to note any cyberbullying that happens. Schools should emphasize to students to make a connection to at least one adult in the building they feel they trust. Staff should encourage open discussions and problem-solving situations with all students. Schools can also present information to parents about cyberbullying, the warning signs, how to monitor usage, and steps that can be taken to prevent or deal with cyberbullying during an after-school conference. Schools should provide training to all staff about the warning signs, how to monitor usage, and school policies for dealing with cyberbullying. The school policies should be system-wide so that as students transition from elementary to junior high to high school, expectations and consequences are consistent.

Though many students acknowledge the appropriate response to take when faced with cyberbullying, report it to an adult, a significant number chose to do nothing. However, when asked about a situation that involved cyberbullying on Facebook, some individuals suggested blocking or reporting the incident to the site. Students might be more willing to use this action rather than go to an adult. Schools may benefit by providing students with multiple ways to report an incident, including anonymous tips. The researcher's main goal for this study was to add information to the growing field of cyberbullying. Although the study cannot determine causality and two of the variables did not improve from pretest to posttest, obtained data may be useful for both the individual school and future research.

Protection of Human Subjects

Approval from the Institutional Review Board (IRB) was received before beginning the recruitment of students and data collection activities. Consent and assent were obtained from parents of the children and the children involved before beginning the study. These forms were kept separately from other documents. No deception was used with the students of the study, and no harm to the students was anticipated. However, since cyberbullying could be a sensitive topic, students were informed that school counselors and psychologists were available after completion of the posttest. Confidentiality of the students' names and information will be maintained throughout the study. Finally, there was no penalty for opting out of the program and the students were free to end participation at any time without adverse effects.

Timeline of the Research

Objective	Projected Completion
Submit Proposal to IRB	August 2011
Propose Thesis to Committee	August 2011
Revise/Resubmit Proposal to Committee/IRB	October 2011
Recruit Schools to Participate in Program	August 2011
Data Collection	January-March 2012
Data Analysis	May-June 2012
Thesis First Draft submitted to Committee	July 2012
Final Draft submitted and defended	August 2012

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Appendix A: Parent/Guardian Consent Form for the sixth grade students

Dear Parent:

My name is Jennifer Ewing and I am currently a 2nd year Graduate Student in Miami University's School Psychology program. I am currently conducting research under the supervision of Dr. Darrel Davis, a member of the Educational Psychology Department, as part of a graduation requirement for my thesis. The current study is about cyberbullying interventions for school-aged children.

Your child is invited to participate in a research study about cyberbullying. An overall, general definition that is widely accepted in research describes cyberbullying as willful and repeated use of electronic communication devices to harass and threaten others. The current study plans to determine whether an interactive cyberbullying intervention can influence the understanding, awareness and action potential of sixth grade students. The purpose of the study is to add to the current knowledge about effective cyberbullying interventions. By assenting, your child will be asked to complete three surveys. The surveys will cover three areas and take about 15 minutes to complete for each survey. The first asks questions that determine the students' general knowledge of cyberbullying. It includes questions about definitions and examples of cyberbullying. The second section measures the students' perception of the prevalence of cyberbullying around them. The third section measures the students' behavioral response when faced with cyberbullying situations. The student will then participate in a thirty-minute interactive computer program in which the main characters are experiencing cyberbullying situations. The student decides what they, as the characters, would do in these situations. The lesson includes nine scenarios. In the end, the student will receive a certificate for completing the lesson. Students' answers will be recorded to measure the number of incorrect and correct responses. There will be a two-week period between the pretest and the intervention/posttest and another two-week period between the intervention and the delayed posttest. Students will participate only during study hall periods. Therefore, they should not miss any academic instruction while participating in the research. All of the activities listed above are for research and not considered part of normal instruction.

Your student's participation is completely voluntary. There will be no consequences from the school, teacher, or researcher if you or your child decide not to participate at any point in time. The student will be reminded of the voluntary nature of the study before each survey and before the computer program starts. All the student needs to do is to raise his or her hand for the researcher to come over and share that he or she no longer wishes to participate. His or her data will then be omitted from the study.

The current study is designed to see if there is improvement between the first survey and last survey given to the student. The students will be assigned a random number letter combination that is formed from their birth date and month and the first initial of their mother's name, which will allow the researcher to track the student's response without identifying the student by his or her name. After the connection between the first survey and last survey is made, the data will be destroyed. Data will not be able to be connected to an individual student in the class. No identifiable data, such as ethnicity, will be collected. Data from the surveys will be entered into a secure computer and paper copies will be destroyed. Data from the computer program will be collected on each computer and then transferred to the same secure computer. Data will only be seen by the primary investigator and her advisors.

It is not expected for the students to be exposed to risks beyond those of everyday life. However, it is understood that cyberbullying can be a sensitive topic. Therefore, school counselors and school psychologists will be made available upon students' completion of the intervention. It is important to note that any information shared by the student to the researcher or other faculty members during the study is confidential, unless it means a risk to the student or to other students. At this point, the information will then have to be shared with other school personnel.

The benefit of the study is to help understand more about effective components for cyberbullying interventions to help fight against the rapid increase in cyberbullying cases in the United States. Approximately two classes of sixth graders will be included in the current study. The generalized results may be presented at professional conferences or published in articles describing the results of the research. The study will begin on February 15th and will finish on February 29th. All components will be completed in the students' school, in either the study hall classroom or the computer lab.

If you have any further question about this study, please contact Jennifer Ewing (317-371-4702, <u>ewingjr@muohio.edu</u>), or my faculty advisor (Dr. Darrel Davis, (513) 529-0255, <u>davisdr@muohio.edu</u>. If you have questions about your rights as a research participant, please contact the Office of the Advancement of Research and Scholarship at 513-529-3600 or email humansubject@muohio.edu

Thank you for your participation. We are very grateful for your help. You may keep this portion of the page.

Cut at the line, keep the top section and return the bottom section.

I agree to give permission for my child, ______, participate in the study of cyberbullying. I understand my child's participation is voluntary.

Parent's signature

Date: _____

Appendix B: Student Assent Form

Dear Student,

I am working on a project about understanding what students know about cyberbullying. Cyberbullying is repeatedly bullying using an electronic device, like a phone or computer, to harass and hurt others. In this study you will be trying out a new computer program called Cyberbullying Challenge. In the Cyberbullying Challenge, you will meet some main characters who are faced with a cyberbully problem. You will then decide what you would do in their situation. When you are completing the Cyberbullying Challenge, I will be collecting information about which options you choose. There is no right or wrong answer. I would really like your help and I hope you will enjoy the program.

If you agree to be in my study I will ask you to answer some questions three different times. I will ask you to participate in the program for 30 minutes on one day during your study hall. The project is designed to help students better understand cyberbullying.

You can ask questions about this study at any time. If you decide at any time not to finish, you can ask us to stop. There will be no penalty if you decide to stop. Your answers to the project are confidential. However, if you share anything that may place you or other students at risks, then that information will no longer be confidential.

If you sign this paper, it means that you have read this and that you want to be in the study. If you do not want to be in the study, do not sign this paper. Being in the study is up to you, and no one will be upset if you do not sign this paper or if you change your mind later.

Your signature:	Date
Your printed name:	Date

Appendix C: Student Debriefing Form

The effectiveness of an interactive cyberbullying intervention on the understanding, awareness and action potential of sixth grade students

Debriefing Form

Cyberbullying is a serious problem along all age groups, especially school-aged children. The number of cyberbullying cases appears to be on the rise in connection to technological advances. Improving the effectiveness of interventions can have a positive impact on preventing cyberbullying situations. The surveys you answered included three parts. The first was to determine your knowledge of cyberbullying, including definitions and examples. The second involved your perception of how often it happens to you and those around you. Finally, the third part measured your ability to make the right decision when faced with a cyberbullying scenario. The purpose of this study is to determine whether the Cyberbullying Challenge computer program impacted sixth graders' responses to the survey. Of the two sixth grade classes used, one class was randomly assigned to the control group (only filled out the surveys) and the other participated in the Cyberbullying Challenge and filled out surveys. It is the goal of the study to see if the cyberbully program impacted the students answers on the surveys when compared to the students in the control group.

It can be difficult to answer these types of questions, and your willingness to participate in this study is greatly appreciated. Your input will help contribute to the advancement of the field of cyberbullying research.

If you have any complaints, concerns, or questions about this research, please feel free to contact, Jennifer Ewing at (317) 371-4702 <u>ewingjr@muohio.edu</u> or Dr. Darrel Davis at (513) 529-0255 <u>davisdr@muohio.edu</u>.

If you are interested in this area of research, you may wish to read the following references:

- Li, Q. (2006). Cyberbullying in Schools. School Psychology International, 27(2), 157–170.
- Watson, S., Vannini, N., Davis, M., Woods, S., Hall, M., Hall, L., & Dautenhahn, K. (2007). FearNot! an anti-bullying intervention: Evaluation of an interactive virtual learning environment. Artificial Intelligence and Simulation of Behaviour (AISB), April, 2–4.
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Thank you very much for participating!

Appendix D: Parent/Guardian Debriefing Form

The effectiveness of an interactive cyberbullying intervention on the understanding, awareness and action potential of sixth grade students

Debriefing Form

Cyberbullying is a serious problem along all age groups, especially school-aged children. The number of cyberbullying cases appears to be on the rise in connection to technological advances. Improving the effectiveness of interventions can have a positive impact on decreasing cyberbullying situations. The surveys your child answered included three measures. The first was to determine your child's knowledge of cyberbullying, including definitions and examples. The second involved your child's perception of cyberbullying instances prevalence around the student, both in school and away. Finally, the third part measured your child's ability to make the right decision when faced with a cyberbullying scenario. The purpose of this study is to determine whether a cyberbullying intervention with interactive, sustainable, and participant-driven characteristics can effectively impact sixth grade students. Of the two sixth grade classes used, one class was randomly assigned to the control group (only filled out the surveys) and the other participated in the intervention and filled out surveys. It is the goal of the study to see if the intervention program impacted the students answers on the surveys when compared to the students in the control group.

It can be difficult to answer these types of questions, and your willingness to give your permission for your child participate in this study is greatly appreciated. Your child's input will help contribute to the advancement of the field of cyberbullying research.

If you have any complaints, concerns, or questions about this research, please feel free to contact, Jennifer Ewing at (317) 371-4702 <u>ewingjr@muohio.edu</u> or Dr. Darrel Davis at (513) 529-0255 <u>davisdr@muohio.edu</u>.

If you are interested in this area of research, you may wish to read the following references:

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- Watson, S., Vannini, N., Davis, M., Woods, S., Hall, M., Hall, L., & Dautenhahn, K. (2007). FearNot! an anti-bullying intervention: Evaluation of an interactive virtual learning environment. Artificial Intelligence and Simulation of Behaviour (AISB), April, 2–4.
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Thank you very much for participating!

Name:	Date of Birth:
	Section I:
1. My 10	Age is (circle age) 11 12 13
2. My Fem	gender is (circle gender) nale Male
3. What	at is (the definition of) bullying?
4. Wha	at is (the definition of) cyberbullying?
5. Whi a b c d e 6. List	 ich of the below are examples of cyberbullying?(circle all that apply) a. Sending mean texts to someone repeatedly b. Posting a mean comment about another person on Facebook one time c. Sending someone a text that says, "Have a great day!" d. Spreading rumors about someone through texts and Facebook e. All of the above t two devices that are used in cyberbullying.

Appendix E: Adapted Form of Cyberbullying and Online Aggression Survey

7. List three physical places where cyberbullying ca	n happen.			
8. List at least two ways that cyberbullying can affe	ct someone your age?			
TRUE/FALSE (circle either true or false for each state	ment)			
9. Only 2 people are involved in a cyberbullying situ	ation- the person who			
bullies and the person who is bullied				
TRUE	FALSE			
10.Cyberbullying can only occur through the Internet	et.			
TRUE	FALSE			
11. Students who are cyber bullied often don't want to go to school.				
TRUE	FALSE			

	Section II:					
	How often in the last 30 days have you experienced the following?	Never	Once or Twice	A few times	Many times	Every day
12.	In the last 30 days, have you or someone you know been sent a mean text?	a	b	с	d	е
13.	In the last 30 days, have you or someone you know received an email from someone you know that made you really mad?	a	b	с	d	e
14.	In the last 30 days, have you or someone you know received an email from someone you didn't know that made you really mad? This does not include "spam" mail.	a	b	с	d	e
15.	In the last 30 days, has someone posted something on your or a friend's Facebook or Twitter account that made you upset or uncomfortable?	a	b	с	d	e
16.	In the last 30 days, has someone posted something on another web page that made you or a friend upset or uncomfortable?	a	b	c	d	e
17.	In the last 30 days, have you or someone you know received an instant message that made you upset or uncomfortable (on Facebook chat, Gmail Chat, etc.)?	a	b	c	d	e
18.	In the last 30 days, have you or someone you know been bullied or picked on by another person while online?	a	b	с	d	e
19.	In the last 30 days, have you or someone you know been afraid to go on the computer?	а	b	с	d	е
20.	In the last 30 days, has anyone posted anything about you or someone you know online that you didn't want others to see?	a	b	с	d	e
	How often in the last 30 days have you done the following?	Never	Once or Twice	A few times	Many times	Every day
21.	In the last 30 days, have you or someone you know posted something online about someone else to make others laugh?	a	b	с	d	e
22.	In the last 30 days, have you or someone you know sent someone a text message to make them angry or to make fun of them?	a	b	с	d	e
23.	In the last 30 days, have you or someone you know sent someone an email to make them angry or to make fun of them?	a	b	с	d	e

24.	In the last 30 days, have you or someone you know posted something on someone's Facebook, MySpace, or Twitter page to make them angry or to make fun of them?	a	b	с	d	e
25.	In the last 30 days, have you or someone you know taken a picture of someone and posted it online without their permission?	a	b	с	d	e
26.	In the last 30 days, have you known someone who has cyberbullied someone else in your school?	a	b	с	d	e
27.	In the last 30 days, have you known someone who has been cyberbullied in your school?	а	b	с	d	e

Section III:

28. Jimmy got a text from someone in his class that said, "No one likes you. You should move away." What should Jimmy do?

29. Christine saw someone had posted mean comments about a picture of her on Facebook. What should Christine do?

Appendix F: Screen Shot Home Screen



Appendix G: Screen Shot Welcome Screen



Appendix H: Screen Shot Scenario





Appendix I: Screen Shot What Would You Do Screen

Appendix J: Certificate of Completion Template



Appendix K: Treatment Integrity Checklist-First Edition

Date:_____

Treatment Integrity Checklist Items	Yes	No	Comments
Experimenter mails out and receives signed consent forms from parents of all the 6 th grade students (included is a letter explaining the purpose of the study). Experimenter randomly assigns one class to experiment and one to control.			
Experimenter is introduced to 6 th grade classrooms by each teacher as a visitor who is interested in learning about the students' opinions.			
Experimenter introduces herself and passes out pre-test surveys (all 3 sections) 2 weeks prior to intervention implementation (see script).			
Experimenter enters data from pre-test into data collection system.			
Two weeks after the pre-test, experimenter explains to the 6 th grade experimental class what they will be doing during the intervention (see script).			
At the same time, experimenter explains to the 6 th grade control class about the post-test (see script)			
Experimenter instructs students in experiment class to begin the intervention and answers questions when students ask.			
After each student in experiment class completes the intervention, the experimenter hands out the immediate post-test (sections I and III).			
After completion of the post-test, students in experiment class are handed a printed certificate for their success.			

The experimenter explains to the students in the experiment class that adults will be available if they want to talk about the intervention topic (see script)		
Data is collected from the post-test and intervention program errors.		
Two weeks after intervention implementation, the experimenter returns to hand out the delayed post- test (all three sections) (see script) to both classes.		
After completion, students are debriefed and adults are available (see script)		
Data is collected from the delayed post-test.		
The experimenter gathers and analyzes the data.		

Appendix L: Treatment Integrity Checklist-Updated Edition with Changes

Date:_____5/28/2012_____

Treatment Integrity Checklist Items	Yes	No	Comments
Experimenter sends out and receives signed consent forms from parents of all the 6 th grade students (included is a letter explaining the purpose of the study).	\boxtimes		
Pretest surveys are passed out 1 week prior to intervention implementation.	\boxtimes		
Experimenter enters data from pretest into data collection system.	\boxtimes		
One week after the pretest, experimenter explains to the 6 th graders what they will be doing during the intervention.	\boxtimes		
Experimenter instructs students to begin the intervention and answers questions when students ask.	\boxtimes		
After completion of the program, students are handed a printed certificate for their success.	\boxtimes		
The experimenter explains to the students in the experiment class that adults will be available if they want to talk about the intervention topic	\boxtimes		
One week after intervention implementation, the experimenter returns to hand out the posttest.	\boxtimes		
After completion, students are debriefed and adults are available.	\boxtimes		
Data is collected from the posttest.	\boxtimes		
The experimenter gathers and analyzes the data.	\boxtimes		