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Testing of a Brief Internet Cyberbullying Prevention Program in College Students

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TESTING OF A BRIEF INTERNET CYBERBULLYING PREVENTION PROGRAM IN COLLEGE STUDENTS

by

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ABSTRACT

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Although the prevalence of cyberbullying varies across investigations, studies on adolescents and college students have shown that cyberbullying is associated with a wide range of negative consequences, including emotional distress, substance use, delinquent behavior, and even suicide. Given the frequency and consequences of cyberbullying, effective low-cost cyberbullying prevention programs are needed. Based on a review of the literature, best practices for program development, and earlier work on cyberbullying (e.g., Doane, Kelley, & Padilla, 2011; Doane, Kelley, Cornell, & Pearson, 2008), the goals of the proposed project were to develop a video-based program to increase knowledge about cyberbullying and empathy toward cyberbullying victims, reduce positive attitudes (overall, instrumental, and experiential evaluation) toward cyberbullying, decrease positive injunctive and descriptive norms about cyberbullying, and reduce intentions to cyberbully and cyberbullying behaviors.

One hundred sixty-seven college students participated in the study. The study was evaluated using a pretest/one-month follow-up design. The experimental group also completed an immediate posttest. The cyberbullying prevention program video successfully decreased positive attitudes toward cyberbullying, decreased reports of cyberbullying behavior, and increased cyberbullying knowledge at the one-month follow-up. Although positive injunctive (i.e., perceptions of others' approval of cyberbullying)

and descriptive (i.e., perceptions of others' actual behavior) norms about cyberbullying decreased at the immediate post which took place for the experimental group immediately after viewing the video cyberbullying program, means for injunctive and descriptive norms did not differ between the experimental and control group at the one-month post. The cyberbullying prevention video did not reduce intentions to cyberbully or increase empathy with victims of cyberbullying immediately after viewing the program or at the one-month follow-up.

The goal of this research was to develop a cyberbullying prevention program that can be provided to university students. These findings suggest that a brief cyberbullying video targeting college students is capable of improving norms about cyberbullying temporarily, and can change attitudes toward cyberbullying, engagement in cyberbullying, and cyberbullying knowledge for at least one month.

This research is the first step toward developing a video-based program that may be modified for use with middle and high school students. This program may be used as a model for future cyberbullying prevention programs.

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I wish to thank Scott Harrison for providing contact and demographic information about the freshman and sophomore classes for the study. In addition, I greatly appreciate the extensive help Peggy Kinard gave me with recruiting participants, collecting data, paperwork, and distributing gift cards. Thank you to Justin Patchin for reading the video scripts and for his encouragement. I would also like to express gratitude to Carter Perry with the Video Group for filming and creating a high-quality video product. In addition, I would like to give many thanks to the actors and actresses who volunteered to participate in the video: Amber Champ, Kendell Cobb, Amber Coponiti, Tyrice Deane, Ethan Dandridge, Daniel Foster, Joanna Gomez, Joshua Gray, Lauren Henry, Otis Johnson, Zachary Milletich, Ryan Lee, Courtney Wall, Elliott Ward and Alexa Ziegler. I would also like to give thanks to Sarah Edwards for helping recruit the actors and actresses.

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CHAPTER I

INTRODUCTION

Cyberbullying, defined as "willful and repeated harm inflicted through the use of computers, cell phones, and other electronic devices" (Hinduja & Patchin, 2009, p. 5), has been a frequent topic in the media over the past few years. Reports have shown that teenagers, such as Megan Meier (Michels, 2008), Phoebe Prince (De Nies, Donaldson, & Netter, 2010) and Alexis Pilkington (Yaniv, 2010), have committed suicide after being cyberbullied. Despite growing media attention to the issue of cyberbullying, at present, no theoretically-based prevention programs for cyberbullying have been published.

The prevalence and consequences of cyberbullying in both adolescents and college students demonstrate the strong need for a cyberbullying prevention program. The goal of this research was to develop and test a cyberbullying prevention program for college students. Based on previous cyberbullying research, the theory of reasoned action, and successful violence prevention programs, the proposed project developed a video-based prevention program designed to increase knowledge about cyberbullying and empathy toward cyberbullying victims, reduce positive attitudes (overall, instrumental, and experiential evaluation) toward cyberbullying, decrease positive injunctive and descriptive norms about cyberbullying, and reduce intentions to cyberbully and cyberbullying behaviors. Program success was evaluated using a controlled pre-post outcome design.

Cyberbullying Prevalence

The vast majority of studies that have examined the prevalence of cyberbullying have assessed middle school and high school students. Due in part to the lack of a

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The format for this work has been adopted from *Developmental Psychology*.

consistent measure of cyberbullying, cyberbullying victimization and perpetration rates have varied across studies. In a review paper on cyberbullying, Tokunaga (2010) indicated that an average of 20-40% of youth have reported that they have been cyberbullied. Lenhart (2007) found that 32% of adolescents had experienced cyberbullying at least once (i.e., private messages were made public, a rumor was spread about the participant online, the person was threatened online, or an embarrassing picture of the participant was posted online). Li (2007) used a single yes/no question to assess cyberbullying (i.e., "I have cyber-bullied others") in a study of seventh grade students in Canada. Li found that 24.9% of the participants had been cyberbullied, and 14.5% reported having cyberbullied others. In their study of middle school students, Kowalski and Limber (2007) found that 11% of students had been victims only, 4% had been bullies only, and 6.8% had been both bullies and victims of cyberbullying in the "past couple of months." In an Internet-based survey, Patchin and Hinduja (2006) asked youth under age 18,"Have you ever been bullied online?" and "Have you ever bullied others while online?" Of the 384 youth surveyed, 29% reported being cyberbullied and 11% reported cyberbullying others. Wolak, Mitchell, and Finkelhor (2007) found that 9% of youth between the ages of 10 and 17 reported being harassed on the Internet in the past year (i.e., felt worried, threatened, or embarrassed because someone either harassed or bothered them or a message was posted about them where other people could see it). Although the prevalence of cyberbullying behavior has varied across studies, each study has demonstrated that cyberbullying is a significant problem among adolescents.

Although not as extensive as research on youth, a few studies have examined college students' experiences of cyberbullying. In a sample of 131 college students in the

United States, 11% reported having been cyberbullied at their university and 54% indicated they knew someone who had experienced cyberbullying (Walker, Sockman, & Koehn, 2011). In addition, Finn (2004) found that approximately 1 in 10 college students in a sample of 339 students at the University of New Hampshire had experienced repeated harassment, insults, or threats via e-mail or instant messaging. Although Finn focused on repeated incidents of harassment via two specific forms of Internet communication, Aricak (2009) and Dilmaç (2009) asked college students in Turkey to indicate the frequency with which they had experienced cyberbullying in their lifetimes. In their separate studies, Aricak and Dilmaç gave participants a definition of cyberbullying and then asked "Have you ever been exposed to cyberbullying?" and "Have you ever engaged in cyberbullying before today?" Responses were "Never," "One time," "Between two-four times," and "Five or more times." Aricak and Dilmaç found that about half (54.4% and 55.3%, respectively) of college students reported being a victim of cyberbullying at least once. In addition, approximately one-fifth (19.7% and 22.5%, respectively) of the participants reported cyberbullying others at least once.

In a recent survey on 639 college students at the participating university, Doane, Kelley, and Padilla (2011) asked how often participants had been cyberbullied and how often participants had cyberbullied others both in their entire life and in the last year. Responses were "Never," "Seldom," "Sometimes," "Fairly often," "Often," and "Very often." During their lifetime, 29.7% had been cyberbullied seldom or more often and 22.6% had cyberbullied others seldom or more often. In the past year, 16.3% had been cyberbullied seldom or more often and 13.2% had cyberbullied others seldom or more often.

In a separate sample of 538 college students at the same university, Doane et al. (2011) asked respondents how often they engaged in 21 cyberbullying behaviors toward others in the previous year. The percentage of college students who engaged in each behavior in the previous year at least "less than a few times a year" or more frequently is presented in Table 1. Given the frequency with which cyberbullying occurs among college students, clearly, cyberbullying is an issue for college students that deserves research attention. Because college students may cyberbully other students, this is a matter that may also be of concern to university administrators.

Table 1

College Students' Frequency of Cyberbullying Others in the Last Year

Item	%
Have you cursed at someone electronically.	68.1
Have you been mean to someone electronically.	58.7
Have you called someone mean names electronically.	55.9
Have you sent a rude message to someone electronically.	54.4
Have you made fun of someone electronically.	51.6
Have you teased someone electronically.	47.3
Have you pretended to be someone else while talking to someone electronically.	46.8
Have you lied about yourself to someone electronically.	37.3
Have you posted an embarrassing picture of someone electronically where other people could see it.	30.8
Have you sent an inappropriate message to someone electronically.	30.5
Have you posted a picture electronically of someone doing something illegal.	24.1
Have you posted a picture of someone electronically that they did not want others to see.	22.2
Has someone shared personal information with you electronically when you pretended to be someone else.	16.4
Have you tried to get information from someone you talked to electronically that they did not want to give.	11.0
Have you asked a stranger electronically about what they are wearing.	10.3
Have you sent an unwanted sexual message to someone electronically.	8.6
Have you tried to meet someone in person that you talked to electronically who did not want to meet you in person.	7.6

Table 1 (Continued)

Item	%
Have you sent a message to a person electronically that claimed you would try to find out where they live.	7.3
Have you sent an unwanted pornographic picture to someone electronically.	7.1
Have you sent an unwanted nude or partially nude picture to someone electronically.	5.8
Have you sent a message electronically to a stranger requesting sex.	5.4

College Students' Vulnerability to Violence

To date, nearly all evidence-based violence prevention programs have been tested in primary and secondary schools; however, empirically tested violence prevention programs (Conyne, 2010) as well as bullying prevention programs (Chapell et al., 2004; Martin, 2008) at colleges and universities are lacking. However, according to Conyne (2010), freshmen college students, who are entering a new environment, may be at-risk for victimization of all forms of violence because they lack self-protection strategies. For instance, research has shown that college women are at greater risk for rape than non-college women (Fisher, Cullen, & Turner, 2000; Koss, Gidycz, &Wisniewski, 1987). College students are also at-risk for hazing, which is a common form of bullying in a college environment, particularly in fraternities and sororities as well as athletic teams (Denmark, Klara, & Baron, 2008).

A number of factors increase risk for being cyberbullied in college freshmen. Freshmen meet many new peers on campus, in the new community, and online.

Furthermore, college students typically receive no parental monitoring, and they experience new freedom, peer pressure, and attempt to establish their identities (Roark, 1987). Being able to interact with many new acquaintances may increase risk for bullying (Denmark et al., 2008).

Consequences of Cyberbullying

Compared to research on the prevalence of cyberbullying, less research has examined the consequences of cyberbullying. Moreover, much of the available research is limited by its correlational nature. However, cyberbullying is associated with emotional distress (Ybarra & Mitchell, 2004a) that includes anger and sadness (Beran & Li, 2005), as well as frustration, embarrassment, or fear (Hinduja & Patchin, 2009). Compared to non-victims, youth who were harassed via the Internet were more likely to be depressed (Wolak et al., 2007; Ybarra, 2004) and report social problems (Wolak et al., 2007). After controlling for traditional bullying and victimization, Perren, Dooley, Shaw, and Cross (2010) found that cyberbullying was a significant positive predictor of depressive symptoms. Also, Hinduja and Patchin (2009) found that cyberbullying victims had significantly lower self-esteem than non-victims.

In contrast to those who have not been cyberbullied, victims of cyberbullying are at greater risk for school difficulties (Hinduja & Patchin, 2007), substance use, and delinquent behavior (Ybarra & Mitchell, 2004b). Ybarra, Diener-West, and Leaf (2007) found that youth who reported being harassed on the Internet were more likely to report being suspended/receiving detention and skipping school than respondents who had not been harassed. In addition, youth who had been harassed were eight times more likely to carry a weapon to school than other youth. Furthermore, compared to students who were

not harassed, students who had been frequently harassed were nine times more likely to use alcohol and 10 times more likely to use other drugs when adjusting for sex, race, ethnicity, Internet use, type of school (private versus public), grade in school, and income. In extreme cases, cyberbullying experiences have resulted in suicide, called cyberbullicide by Hinduja and Patchin (2009). In a study of middle school students, Hinduja and Patchin (2010) found that compared to students who had not been involved in cyberbullying, students who experienced cyberbullying either as a victim or a perpetrator were more likely to have had suicidal thoughts and to have attempted suicide.

In a study of college students, Aricak (2009) examined differences in psychiatric symptoms among students not involved in cyberbullying, students identified as only cyberbullies (i.e., pure-bullies), students identified as only victims of cyberbullying (i.e., pure-victims), and students identified as both cyberbullies and cyberbullying victims (i.e., bully-victims). Compared to college students not involved in cyberbullying, pure-victims reported higher somatization, phobic anxiety, paranoid ideation, and anxiety as well as more obsessive-compulsive and depression symptoms. In addition, bully-victims reported higher somatization, anxiety, hostility, and paranoid ideation, as well as more psychotic symptoms than college students not involved in cyberbullying. No differences between pure-bullies and the other groups were reported. Furthermore, Aricak examined psychiatric symptoms as predictors of cyberbullying perpetration and victimization. Hostility and psychoticism positively predicted cyberbullying perpetration, whereas interpersonal sensitivity and psychoticism negatively predicted cyberbullying victimization. Given the prevalence and potential seriousness of cyberbullying among

adolescents and college students, prevention programs that increase awareness of cyberbullying and reduce these behaviors are clearly warranted.

Types and Modes of Cyberbullying

Cyberbullying varies widely in types of behavior and severity. In a sample of elementary and secondary school students, Vandebosch and Van Cleemput (2009) found that the most frequent types of cyberbullying included: insulting or threatening others, deceiving others, gossiping about others, and changing another person's computer password. Juvonen and Gross (2008) found that name-calling or insults were the most frequent forms of cyberbullying in a sample of 154 12- to 17-year-olds. In an interview study of college students, being teased/insulted, being deceived, receiving an inappropriate message, and having an embarrassing photograph posted were the most frequently reported types of cyberbullying (Doane, Kelley, Cornell, & Pearson, 2008). Teasing, lying and deceiving, posting embarrassing pictures, and sending inappropriate messages or pictures were all forms of cyberbullying reported in an anonymous survey of college students (Doane et al., 2011). Overall, insulting others appears to be the most common form of cyberbullying.

The most common modes of electronic communication used for cyberbullying have varied across studies. Among adolescents, Raskauskas and Stoltz (2007) found that the most frequent way to have experienced cyberbullying was via text messaging, which was followed by the Internet and then picture phones. Picture phones were used to take compromising photographs of youth (e.g., in the bathroom) and distribute the pictures to others. Kowalski and Limber (2007) identified instant messaging as the most common mode used in cyberbullying, followed by e-mail and websites. Similarly, Juvonen and

Gross (2008) found instant messaging to be the most frequently used mode for cyberbullying. Most recently, Doane et al. (2008) found that the most common mode of Internet harassment was via MySpace, which was followed by instant messaging. In a survey of 114 middle school students, MySpace and cell phones were the most frequently reported modes through which both victims and bullies experienced cyberbullying (Wright, Burnham, Inman, & Ogorchock, 2009). The present video-based prevention program was intended to educate and illustrate the most common modes of cyberbullying.

Overlap between Traditional Bullying and Cyberbullying

Research on traditional bullying may help facilitate our understanding of cyberbullying. In fact, research has shown that traditional bullying and cyberbullying are related. Raskauskas and Stoltz (2007) examined the relationship between both traditional and electronic bullying perpetration, and the relationship between being bullied and experiencing cyberbullying in adolescents. Those who reported being a "traditional bully" were more likely to report being a cyberbully, and "traditional victims" were more likely to report being the victim of cyberbullying. Moreover, Internet bullies were likely to participate in all forms of traditional bullying in school (e.g., physical bullying, teasing, starting rumors, and excluding others). Vandebosch and Van Cleemput (2009) also examined traditional and cyberbullying among elementary and secondary school students. Similar to Raskauskas and Stoltz, they found a significant relationship between the two types of bullying, such that traditional bullies were likely to be cyberbullies and traditional bullying victims were likely to be cyberbully victims. In addition, cyberbullying victimization was associated with cyberbullying perpetration. Furthermore,

Ybarra and Mitchell (2004a) found that 56% of Internet aggressor/victims, 49% of Internet aggressors-only, and 44% of Internet victims-only were also bullied offline. Thus, given the overlap between cyberbullying and traditional bullying, traditional bullying prevention programs should expand to include cyberbullying prevention to target both forms of bullying.

Traditional Bullying Prevention Programs

In an extensive meta-analysis of school-based bullying prevention programs, Ttofi, Farrington, and Baldry (2011) found that the most successful programs for preventing traditional bullying were based on the Olweus Bullying Prevention Program (OBPP). The primary goals of this program are to reduce bullying in and out of schools and to prevent new bullying problems from occurring (Olweus, 1993a). According to Olweus, the school-based intervention occurs at three levels: school (e.g., PTA meetings, school staff conference, supervision during lunch and recess, teacher meetings), class (e.g., class rules, bullying clarification, class meetings), and individual (e.g., talking to the victims and bullies directly, information for parents of bullies and victims). In a large-scale study evaluating the effectiveness of the OBPP on approximately 21,000 students in over 100 schools in Norway, Olweus (2005) found that being bullied was reduced between 32% and 34% and bullying others was reduced between 37% and 49%. Although school-based programs have been successful in reducing traditional bullying, the present study seeks to test a smaller-scale cyberbullying program that may be used on its own or perhaps integrated with components of successful traditional bullying programs so that this alternative form of bullying is addressed.

Ttofi et al.'s (2011) school-based traditional bullying prevention program meta analysis also identified components of traditional bullying programs that were related to victimization and bullying effect sizes. They found that the most important components for decreasing victimization included "parent training/meetings, improved playground supervision, disciplinary methods, classroom management, teacher training, classroom rules, a whole-school anti-bullying policy, school conferences, information for parents, and cooperative group work" (p. 41). For decreasing victimization, Ttofi and colleagues found that the most important program components were "disciplinary methods, parent training/meetings, videos, and cooperative group work" (p. 42). Thus, if videos are one of the most important components for decreasing traditional victimization, cyberbullying videos may be successful in reducing cyberbullying victimization.

Theory of Reasoned Action

The proposed study was guided by the theory of reasoned action (see Figure 1). The theory of reasoned action is comprised of one's attitude toward a behavior and subjective norms influencing intention (Ajzen, 1985). In turn, attitudes and subjective norms are believed to influence behavior. If people do or do not intend to perform a behavior, they are expected to act accordingly. Based on this theory, decreasing positive attitudes toward a behavior and decreasing positive subjective norms about a behavior are expected to decrease intentions to perform the behavior. Finally, reducing intentions to perform a behavior should reduce the likelihood of performing the behavior.

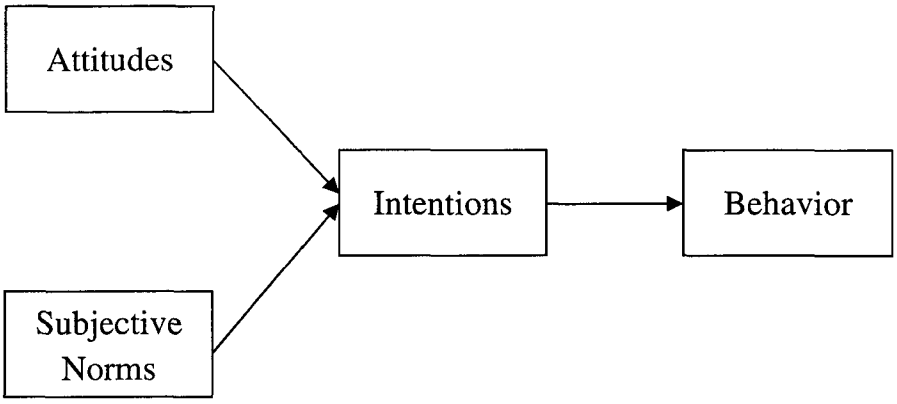

Figure 1. Theory of reasoned action.

The first predictor of intentions is attitudes toward behavior, which involves how positively or negatively a person evaluates the behavior (Ajzen, 1985). According to Ajzen (2006), evaluation consists of instrumental (e.g., harmful-beneficial) and experiential (e.g., enjoyable-unenjoyable) components. In addition, Ajzen recommends assessing overall evaluation attitudes (e.g., good-bad). According to Olweus (1993a), bullies tend to have more positive attitudes toward violence and its use and typically have low empathy toward bullying victims. Therefore, Olweus recommends that bullying interventions focus on changing the attitudes and behaviors of bullies (1993b) and having students empathize with victims (1993a). This goal is important because bullies are not always aware of how their actions harm victims. In addition to measuring behavior change, violence prevention researchers have argued for the need to assess attitude change (e.g., Limber, Nation, Tracy, Melton, & Flerx, 2004; Weisz & Black, 2001).

The second predictor of intentions, subjective norms, is the degree to which individuals perceive that others apply pressure to engage in the behavior (Ajzen, 1985). Norms may be characterized by the perception of others' disapproval or approval of a

behavior (i.e., injunctive norms) or the perception that others actually perform the behavior themselves (i.e., descriptive norms; Ajzen, 2006). Williams and Guerra (2007) found that believing bullying and bystander behavior (i.e., encouraging others to engage in bullying behaviors) is morally acceptable significantly predicted both traditional and Internet bullying. Based on these findings, Williams and Guerra suggest that prevention efforts target normative beliefs about accepting bullying in general. Founded on the theory of reasoned action, the present study aimed to decrease positive attitudes (overall, instrumental, and experiential evaluation) toward cyberbullying and reduce positive injunctive and descriptive norms about cyberbullying. It was predicted that decreasing positive attitudes (overall, instrumental, and experiential evaluation) toward cyberbullying and positive injunctive and descriptive norms about cyberbullying would decrease cyberbullying intentions and behaviors.

Prevention Program Characteristics

Using Video in Prevention Programs. One important consideration for prevention programs is the format in which the program is presented. Videos have been used in a variety of prevention programs, including programs targeting problems such as workplace violence (e.g., Peek-Asa, Casteel, Mineschian, Erickson, & Kraus, 2004), substance abuse or tobacco use (e.g., Ferketich, Kwong, Shek, & Mae, 2007; Ramirez, Gallion, Espinoza, & Chalela, 1999), pathological gambling (e.g., Doiron & Nicki, 2007) and eating disorders (e.g., Heinze, Wertheim, & Kashima, 2000; Withers, Twigg, Wertheim, & Paxton, 2002; Withers & Wertheim, 2004). For instance, Pacifici, Stoolmiller, and Nelson (2001) tested a sexual coercion prevention program for teenagers which included video, role play, and discussion as well as an interactive video. For the

more at-risk teenagers (i.e., students with higher coercive sexual attitudes prior to the program), the prevention program was successful in reducing coercive attitudes. In a study of Italian youth, Baldry and Farrington (2004) evaluated a bullying and victimization intervention program which consisted of three videos, a booklet, role-playing, and discussions. The first video involved children and adolescents discussing their views of and experiences with bullying. The second video in combination with the booklet discussed the effects of witnessing domestic violence on bullying behavior. The third video, which was intended to illustrate the cycle of violence, showed how experiencing violence when younger can affect how one responds to and engages in violent behavior as an adult. Youth who were ages 14-16 reported significantly less bullying and victimization after the intervention compared to before the intervention.

Importantly, video-based prevention programs have been shown to be effective in changing attitudes and increasing empathy toward victims. For instance, an eating disorders prevention program for seventh grade girls that used a 22-minute videotape was successful in reducing drive for thinness attitudes and intention to diet following the intervention (Withers et al., 2002). Furthermore, the intervention increased knowledge over a longer period of time, as compared to an assessment-only control group. In addition, Foubert and Cowell (2004) assessed male fraternity members' and male student athletes' perceptions of a rape prevention program. The program included presentations of an overview and explanation of rape followed by a video depicting a male-on-male rape incident. The program was effective in increasing men's empathy with rape victims and changing planned behavior. Moreover, participants rated the video aspect of the program as the most powerful part of the program. Similarly, O'Donohue, Yeater, and

Fanetti (2003) evaluated a rape prevention program presented to male college students. The students were randomly assigned to either a newly developed experimental video-based condition or an alternative informational video intervention (an older, more traditional rape prevention approach) which served as the control group. The experimental group viewed a professionally made video that aimed to manipulate three components: clarifying rape myths, victim empathy (i.e., through victim testimonials, visualizing a loved one being raped, and imagining themselves being raped by another man), and outcome expectancies (i.e., testimonials of male perpetrators of rape and imagining the effect that being charged with rape would have on their family members or friends). As compared to the control group, the experimental program resulted in significantly more of an increase in self-efficacy, more of a decrease in attraction to sexual aggression, more of a decrease in adversarial sexual beliefs, and more of an increase in rape victim empathy. These results suggest that video-based prevention programs can be successful in changing attitudes and increasing empathy for victims of violence.

In traditional bullying prevention programs, Olweus (1993a) recommends using videos of bullying examples to clarify bullying behaviors. The video commonly used in the school-based OBPP is 11 minutes in length and consists of four bullying situation vignettes (Olweus, Limber, & Mihalic, 1999). In addition to providing bullying information, the bullying video "elicits emotional, 'gut feeling' reactions from the audience" (p. 28).

Internet-Based Prevention. In addition to video-based prevention techniques, the Internet is now being used to administer prevention programs. Internet-based prevention

programs have been used to target many areas, including smoking (see Walters, Wright, & Shegog, 2006 for a review), HIV (e.g., Bowen, Williams, Daniel, & Clayton, 2008; Roberto et al., 2008), drug abuse (e.g., Schwinn, Schinke, & di Noia, 2010), and depression (e.g., van Voorhees et al., 2009). Conn (2010) recommends increasing the use of Internet-based health prevention programs due to their lower cost, higher consistency, increased accessibility (i.e., both temporally and with physical location), and the ability for program participants to remain anonymous. Extrapolating from the results of previous prevention studies, a video-based cyberbullying prevention program that contains brief informational segments combined with short depictions of common cyberbullying incidents that show victim responses, peers commenting on the inappropriateness of these actions, and so forth, may be effective in reducing positive cyberbullying attitudes and behaviors. Moreover, the technology currently exists to widely disseminate this type of program at low cost.

Present Study

Based on the theory of reasoned action and previous research, the project developed and tested a cyberbullying prevention program with a sample of freshman and sophomore college students. The first goal of the project was to develop a video-based program to increase knowledge, reduce positive attitudes (overall, instrumental, and experiential evaluation) toward cyberbullying, decrease positive injunctive and descriptive norms about cyberbullying, and reduce intentions to cyberbully and cyberbullying behaviors. The second goal of the proposed study was to pilot test the efficacy of this program using a controlled pre-post outcome design to evaluate program success.

It was hypothesized that compared to baseline, positive attitudes (overall, instrumental, and experiential evaluation) toward cyberbullying, positive injunctive and descriptive norms concerning cyberbullying, and intentions to cyberbully would be significantly lower and cyberbullying knowledge and cyberbullying victim empathy would be significantly higher for the experimental group immediately after completing the program. In addition, it was hypothesized that at 1-month follow-up, positive attitudes (overall, instrumental, and experiential evaluation) toward cyberbullying, positive injunctive and descriptive norms concerning cyberbullying, intentions to cyberbully, and cyberbullying perpetration would be significantly lower and cyberbullying knowledge and cyberbullying victim empathy would be significantly higher for the experimental group as compared to the control group after controlling for baseline scores.

CHAPTER II

METHOD

Participants

All freshmen (n = 3,187) and sophomores (n = 3,128) at a large university in southeastern Virginia who were traditional college age (i.e., 18- to 23- years old) were invited via e-mail to participate in the study (see Appendix A). The gender distribution of the traditional-aged freshman and sophomore population was approximately equal (50.5% female). Race in the larger population of traditional-aged students was 54.0% White and 30.1% African American. The mean age of traditional-aged freshmen and sophomores at the university was 19.12 (SD = 1.11).

Participants were randomly assigned to either an Internet-based cyberbullying prevention program or no prevention program (assessment-only). Three hundred seventy-five students participated in the initial part of the study (baseline). Of the 375, 167 students (68.7% females, 31.3% males) ranging in age from 18 to 23 (M = 19.02, SD = .91) completed both study time points (baseline and one-month follow-up). Most were White (62.9%) or African American (18.0%). Compared to the larger population of traditional-aged freshman and sophomore classes at the university, participants who completed both baseline and one-month follow-up surveys were more likely to be female and White. However, the average age of the invited students and the subgroup who participated did not differ.

As an incentive to participate, all students were entered into a raffle for a $25 Amazon.com gift certificate for completing the first assessment. For completing the second assessment, participants were entered into a total of 31 raffles (one $50 Amazon.com gift certificate and 30 $15 gift certificates for Amazon.com, Starbucks,

Walmart, iTunes, or Subway). In addition, students enrolled in Psychology courses were offered research credit for their participation in each assessment. Participants received e-mail reminders to complete the follow-up surveys. This research was approved by the university Institutional Review Board prior to data collection. The informed consent form is presented in Appendix B.

Program Development and Content

A video-based cyberbullying program was developed for students in the experimental group to view during the online prevention program. During the development phase of the study, a cyberbullying researcher, faculty members, and graduate students reviewed the video content and actor scripts and made suggestions. Once the scripts were finalized, young actors from the participating university were recruited and assigned parts. The author supervised practices and the identified appropriate set designs. The video-based program was directed, filmed, edited, and the final product developed by the award-winning video production team at the participating university.

The cyberbullying prevention video alternated between 1) four brief flashes in which actual news stories were summarized about teenagers who were cyberbullied and eventually committed suicide; 2) brief attention-grabbing informational slides with voiceovers that presented key information about cyberbullying (e.g., definition of cyberbullying, the different types of cyberbullying, the modes used for cyberbullying, common outcomes associated with cyberbullying, and the prevalence of cyberbullying); and 3) six short, memorable, realistic vignettes that consisted of narration and depictions of common cyberbullying events (e.g., receiving mean text messages). These experiences

are based on actual cyberbullying events and common cyberbullying events identified in previous research.

To target decreasing positive attitudes, four vignettes are from the victims' point-of-view (to promote victim empathy) and involve common modes of electronic communication used for cyberbullying (e.g., instant messaging, MySpace). These scripts illustrate how upsetting cyberbullying can be. For instance, one video segment shows a female actor sitting at her laptop in her dorm room with multiple instant message windows open with hurtful messages from other people. She then describes how upset she becomes when she receives these messages.

To target decreasing positive injunctive norms, five actors discussed how cyberbullying is unacceptable and not "cool." The rationale for including young actors discussing the inappropriateness of cyberbullying is that 1) students may think that their peers believe cyberbullying is unacceptable, and 2) they may perceive that their peers' frequency of cyberbullying behavior is lower. In other words, the video may decrease injunctive norms and descriptive norms about cyberbullying behavior. For example, one scenario shows a cyberbully perpetrator posting an embarrassing picture of another student in a dorm hallway. A female approaches the cyberbully and expresses her disapproval of what he is doing. Another video involves a group of students sitting around and talking about their friends' experiences, and how cyberbullying is stupid and immature. The video scripts are presented in Appendix C.

Measures

All study measures are presented in Appendix D. Cyberbullying knowledge was assessed by a 5-item multiple choice quiz and was based on video content.

Cyberbullying behavior was assessed using the perpetrator scale of the Cyberbullying Experiences Survey (Doane et al., 2011). The perpetration scale consists of 21 items. All items are answered on a 6-point scale ranging from "Never" to "Everyday/Almost Everyday." Concurrent validity with Ybarra, Diener-West, and Leaf's (2007) measure of Internet harassment has been established (r = .55). Cyberbullying behavior composite scores are found by summing across all 21 items. Scores range from 0 to 105. Empathy toward cyberbullying victims was measured by asking if the participant feels sorry for a person who has experienced each of the same 21 cyberbullying behaviors used in the CES. For example, "I feel very sorry for a person who has been [teased by others electronically]" was answered on a 6-point scale ranging from "Does not apply at all" to "Applies exactly." Total empathy scores range from 0 to 105. One of the 12 empathy items developed by Endreson and Olweus (2001) was adapted for the cyberbullying victim empathy items.

Based on suggestions by Ajzen (2006), in combination with the 21 perpetration behaviors identified in our perpetration scale, participants were asked questions that assess attitudes toward cyberbullying, perceived norms concerning cyberbullying, and intentions to cyberbully (see Appendix A). Each set of items used the 21 perpetration behaviors from perpetration scale of the Cyberbullying Experiences Survey (Doane et al., 2011). According to Ajzen, attitude toward a behavior involves evaluating the performance of the behavior. In addition, evaluation consists of two components: instrumental and experiential. Ajzen recommends that adjective scales representing both components as well as overall evaluation be included. Therefore, to assess attitudes toward cyberbullying, the item "For me, to [tease someone electronically] in the

forthcoming month is" was repeated for all 21 behaviors and answered on three 6-point scales ranging from "good" to "bad" (i.e., overall evaluation), "harmful" to "beneficial" (i.e., instrumental evaluation) and "enjoyable" to "unenjoyable" (i.e., experiential evaluation). Perceived norms regarding cyberbullying was measured via one injunctive norms scale and one descriptive norms scale. To measure injunctive norms, the item "My peers would _____ of my [teasing someone electronically] in the forthcoming month," was repeated for each behavior and was answered on a 6-point scale ranging from "approve" to "disapprove." To measure descriptive norms, the item "My peers [tease others electronically]" was asked for each behavior. Responses were scored on a 6-point scale from "completely true" to "completely false." To measure intention to cyberbully, the item "I intend to [tease someone electronically] within the next month" was answered on a 6-point scale ranging from "extremely likely" to "extremely unlikely" for all 21 perpetration behaviors. Total scores for attitudes (overall, instrumental, and experiential evaluation), injunctive norms, and descriptive norms each ranged from 0 to 150.

Pilot Study

Prior to testing the program, a pilot study was conducted to determine if the cyberbullying video appeared effective in facilitating the study goals (i.e., to reduce positive attitudes and norms regarding cyberbullying, and to decrease future intentions to cyberbully). The cyberbullying prevention video was piloted on 57 college students. Results of the pilot test revealed positive attitudes toward cyberbullying, positive injunctive norms about cyberbullying, and intentions to cyberbully were significantly lower and cyberbullying knowledge and empathy toward victims were significantly

higher immediately after viewing the video compared to baseline. Descriptive norms did not change after viewing the video.

Evaluation Design

The prevention program was evaluated using a controlled pre-post outcome design. In the spring of 2011, all freshmen and sophomores enrolled at the participating university who were traditional college age (i.e., 18- to 23-years-old) were invited to participate via their university e-mail address which included a link to the study. Both the cyberbullying prevention group and the control group completed electronic surveys that assessed cyberbullying knowledge, cyberbullying attitudes (overall, instrumental, and experiential evaluation), injunctive and descriptive norms regarding cyberbullying, intentions to cyberbully, cyberbullying behaviors, and empathy toward cyberbullying victims at baseline and one month after baseline. To assess immediate effects of the program, *only* the experimental group completed the measures of knowledge, cyberbullying attitudes (overall, instrumental, and experiential evaluation), injunctive norms, descriptive norms, intentions to cyberbully, and cyberbullying victim empathy immediately after completing the video-based prevention program. Cronbach's alphas for all scales are presented in Table 2.

Table 2

Cronbach's Alpha for Scales

Scale	Baseline	One-Month Post
Behavior	.93	.96
Empathy	.98	.99
Attitudes (Overall)	.89	.95
Attitudes (Instrumental)	.95	.95
Attitudes (Experiential)	.93	.93
Injunctive Norms	.97	.97
Descriptive Norms	.97	.97
Intentions	.95	.96

CHAPTER III

RESULTS

The following steps were conducted for the analyses. First, all preliminary analyses (i.e., missing data, demographics comparisons, and assumptions) are addressed. Second, descriptives for all study variables are included in a table and in graphs. Third, repeated measures *t* tests examining the immediate effects of the program on the experimental group only are reported. Finally, ANCOVAs testing the differences between the experimental and control groups at one-month post controlling for baseline are reported.

Preliminary Analyses

Missing data were computed for participants for each scale separately. If participants were missing more than 15% of the items from a scale, they were excluded from any analyses including that variable. For those who had less than 15% missing data, EM imputation was used to replace missing data. Less than 1% of the data was imputed.

Participants who completed all assessments ($n = 167$) were compared to participants who did not complete all assessments ($n = 208$) on demographic characteristics (age, gender, and ethnicity) and all study variables [attitudes (overall, instrumental, and experiential evaluation), injunctive norms, descriptive norms, intentions, behavior, knowledge, and empathy toward victims]. Those who completed only the first assessment ($M = 19.08$, $SD = 1.09$) did not differ significantly on age from those who completed both assessments ($M = 19.02$, $SD = .91$), $t(369) = .56$, $p = .575$. Moreover, gender and number of completed assessments [$\chi^2(1) = 1.12$, $p = .291$] as well as ethnicity and number of completed assessments [$\chi^2(6) = 4.64$, $p = .591$] were found to

be independent. In addition, the experimental group and control group were compared on age, gender, and ethnicity. The experimental group (M = 19.14, SD = .98) and control group (M = 18.92, SD = .86) did not significantly differ in age, $t(163) = 1.49$, $p = .137$. Likewise, gender and condition [$\chi^2(1) = .04$, $p = .852$] as well as ethnicity and condition [$\chi^2(5) = 1.40$, $p = .924$] were found to be independent.

To be robust against the assumptions (i.e., outliers, normality, and homogeneity of variance) of the analyses comparing participants who completed all assessments to participants who completed only the first assessment on all study variables, bootstrapping using 1000 samples was used. All bootstrap results were evaluated using percentile-based 95% confidence intervals (CIs). The participants who completed only the first assessment did not differ significantly from those who completed both assessments on overall attitudes toward cyberbullying (M_D = 1.26, *Bias* = .002, *SE* = .96, *95% CI*: [-.41, 3.36]), instrumental attitudes toward cyberbullying (M_D = -.27, *Bias* = -.014, *SE* = 1.09, *95% CI*: [-2.40, 1.72]), experiential attitudes toward cyberbullying (M_D = .26, *Bias* = .030, *SE* = 1.44, *95% CI*: [-2.40, 3.05]), perceived injunctive norms about cyberbullying (M_D = .05, *Bias* = -.111, *SE* = 1.80, *95% CI*: [-3.44, 3.53]), perceived descriptive norms about cyberbullying (M_D = .49, *Bias* = -.120, *SE* = 2.27, *95% CI*: [-4.08, 4.77]), intentions to cyberbully others (M_D = 1.13, *Bias* = -.003, *SE* = 1.20, *95% CI*: [-1.17, 3.50]), cyberbullying behavior (M_D = 2.07, *Bias* = -.026, *SE* = 1.32, *95% CI*: [-.55, 4.74]), cyberbullying knowledge (M_D = -.04, *Bias* = .005, *SE* = .11, *95% CI*: [-.24, .18]), or empathy toward cyberbullying victims (M_D = -6.00, *Bias* = .083, *SE* = 3.21, *95% CI*: [-12.19, .26]).

Prior to hypothesis testing, the assumptions for the analyses were tested. The assumptions (i.e., outliers, normality, and homogeneity of variance) were violated for the majority of the study variables. For instance, several variables [attitudes (overall, instrumental, and experiential evaluation), injunctive norms, descriptive norms, intentions, and behavior] were highly positively skewed and empathy toward victims was highly negatively skewed. In addition, outliers were problematic, particularly for the experimental group's one-month post intentions, empathy, and attitudes (overall, instrumental, and experiential evaluation) scores. To be robust against the assumptions of the analyses (i.e., outliers, normality, and homogeneity of variance), bootstrapping using 1000 samples was employed for all study analyses. All bootstrap results were evaluated using percentile-based 95% CIs. The ratio of the bias values and *SE*s were found to be within acceptable ranges (< .25, Efron & Tibshirani, 1998) for parameter estimates to be unbiased. All reported means and unstandardized regression coefficients are the original parameter estimates.

Descriptives

The means and *SE*s for each time point are displayed in Table 3. For ease of interpretability, graphs displaying the means for each variable across all three time points (baseline, immediate post, and one-month post) are displayed in Figures 2-10.

Table 3

Descriptives for the Control and Experimental Conditions at Baseline, Immediate Post, and One-Month Post

	Baseline				Immediate Post				One-Month Post			
Variable	*M*	*SE*	*Min*	*Max*	*M*	*SE*	*Min*	*Max*	*M*	*SE*	*Min*	*Max*
Overall Attitudes												
Control	2.94	.69	0	47	--	--	--	--	4.27	1.10	0	53
Experimental	2.70	.68	0	36	.79	.43	0	21	1.34	.63	0	40
Instrumental Attitudes												
Control	4.48	1.31	0	77	--	--	--	--	4.62	1.18	0	62
Experimental	4.21	.96	0	40	.99	.44	0	20	2.10	.72	0	37
Experiential Attitudes												
Control	6.12	1.28	0	67	--	--	--	--	5.54	1.15	0	56
Experimental	5.57	1.46	0	55	2.63	1.26	0	63	2.54	1.03	0	53
Injunctive Norms												
Control	11.69	1.93	0	90	--	--	--	--	12.06	1.82	0	72
Experimental	10.79	2.07	0	76	5.46	1.81	0	79	7.75	1.99	0	105

Table 3 (Continued)

	Baseline				Immediate Post				One-Month Post			
Variable	*M*	*SE*	*Min*	*Max*	*M*	*SE*	*Min*	*Max*	*M*	*SE*	*Min*	*Max*
Descriptive Norms												
Control	20.50	2.45	0	99	--	--	--	--	19.56	2.35	0	89
Experimental	17.21	7.72	0	98	11.21	2.57	0	105	15.66	2.72	0	105
Intentions												
Control	4.85	1.23	0	66	--	--	--	--	5.30	1.39	0	84
Experimental	1.82	.60	0	31	1.39	.77	0	38	1.61	.52	0	21
Behavior												
Control	8.08	1.29	0	69	--	--	--	--	7.93	1.47	0	77
Experimental	5.33	.87	0	31	--	--	--	--	3.01	.76	0	43
Knowledge												
Control	2.13	.11	0	4	--	--	--	--	2.23	.10	0	5
Experimental	1.95	.12	0	5	3.42	.16	0	5	2.77	.13	0	5
Empathy												
Control	80.99	2.93	0	105	--	--	--	--	80.39	3.22	0	105
Experimental	84.60	3.42	0	105	91.93	3.43	0	105	84.53	3.71	0	105

Note: All *SE*s are bootstrapped.

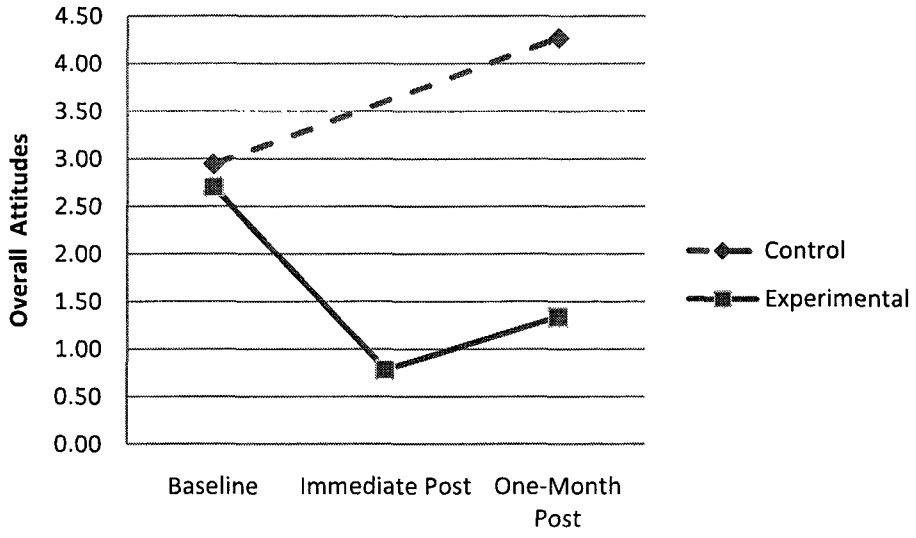

Figure 2. Means for overall attitudes toward cyberbullying for the control and experimental groups for baseline, immediate post, and one-month post.

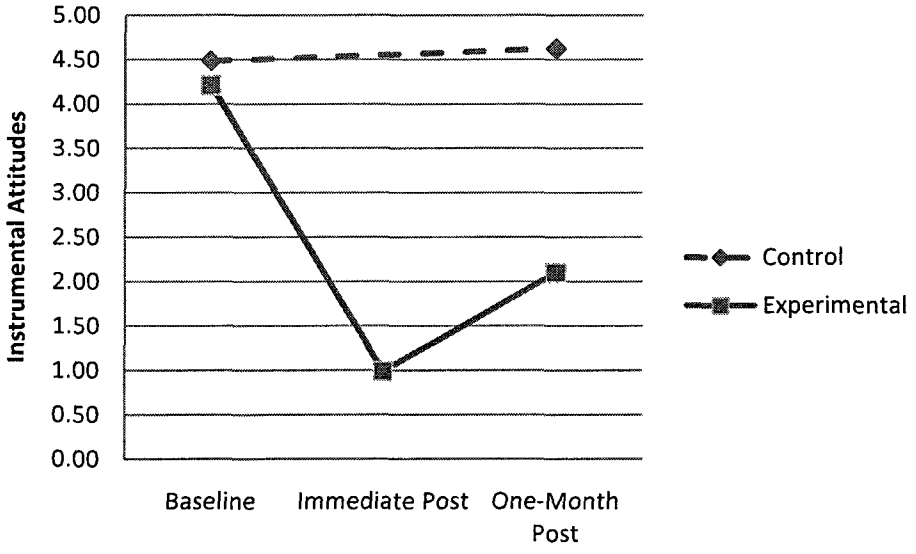

Figure 3. Means for instrumental attitudes toward cyberbullying for the control and experimental groups for baseline, immediate post, and one-month post.

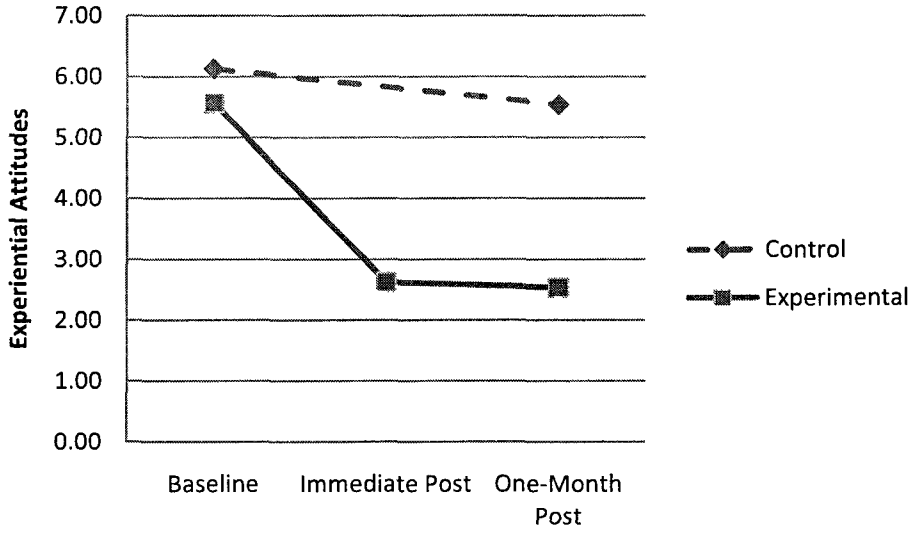

Figure 4. Means for experiential attitudes toward cyberbullying for the control and experimental groups for baseline, immediate post, and one-month post.

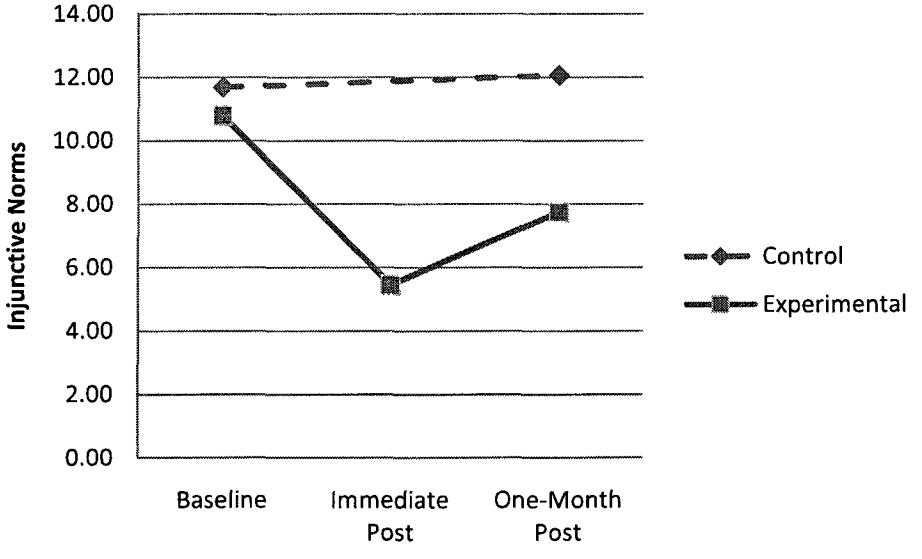

Figure 5. Means for injunctive norms about cyberbullying for the control and experimental groups for baseline, immediate post, and one-month post.

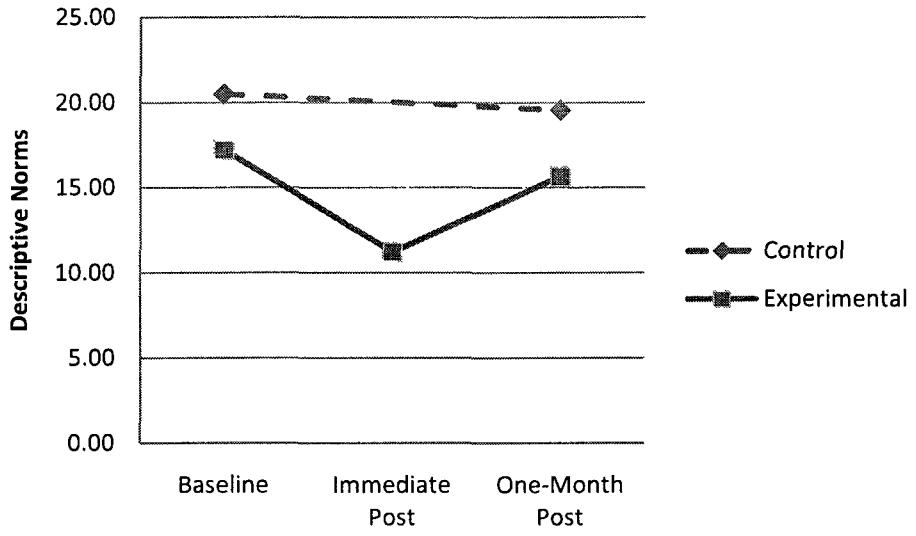

Figure 6. Means for descriptive norms about cyberbullying for the control and experimental groups for baseline, immediate post, and one-month post.

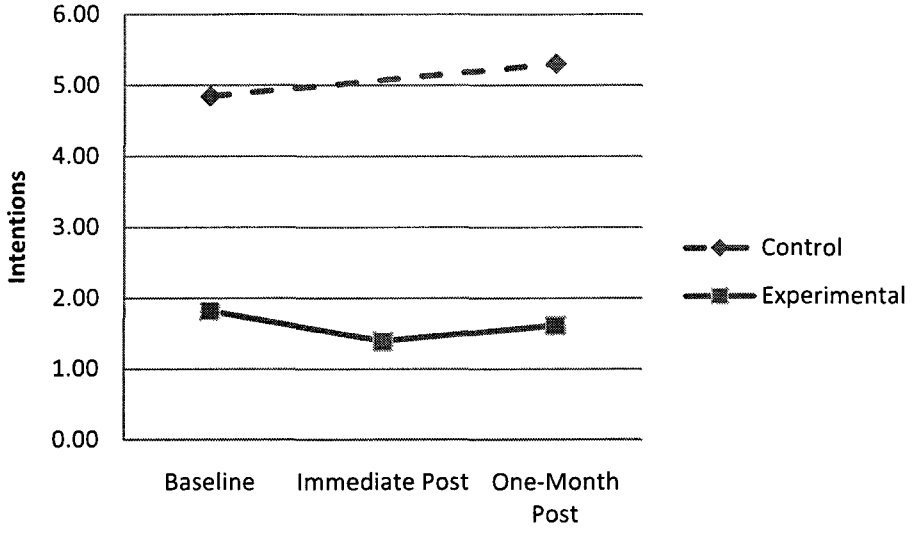

Figure 7. Means for intentions to cyberbully for the control and experimental groups for baseline, immediate post, and one-month post.

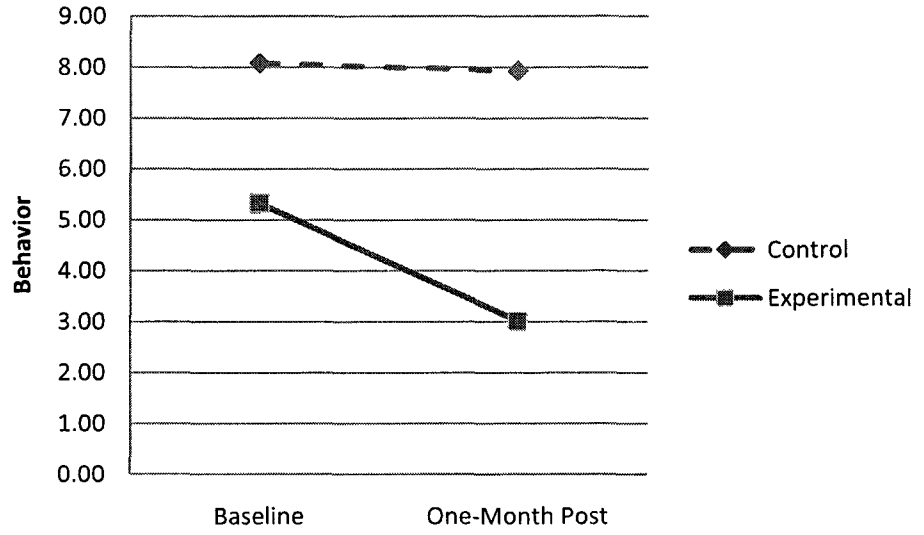

Figure 8. Means for frequency of cyberbullying behavior for the control and experimental groups for baseline and one-month post.

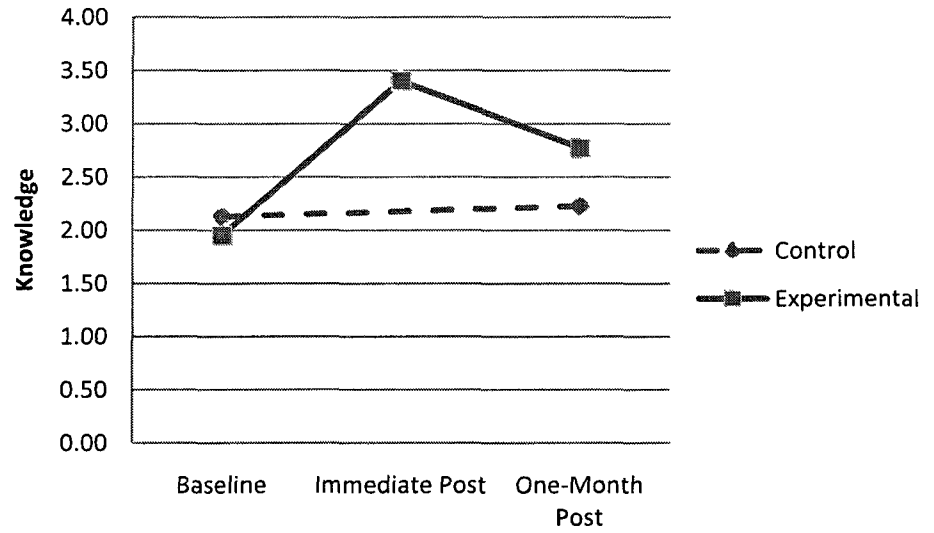

Figure 9. Means for knowledge of cyberbullying for the control and experimental groups for baseline, immediate post, and one-month post.

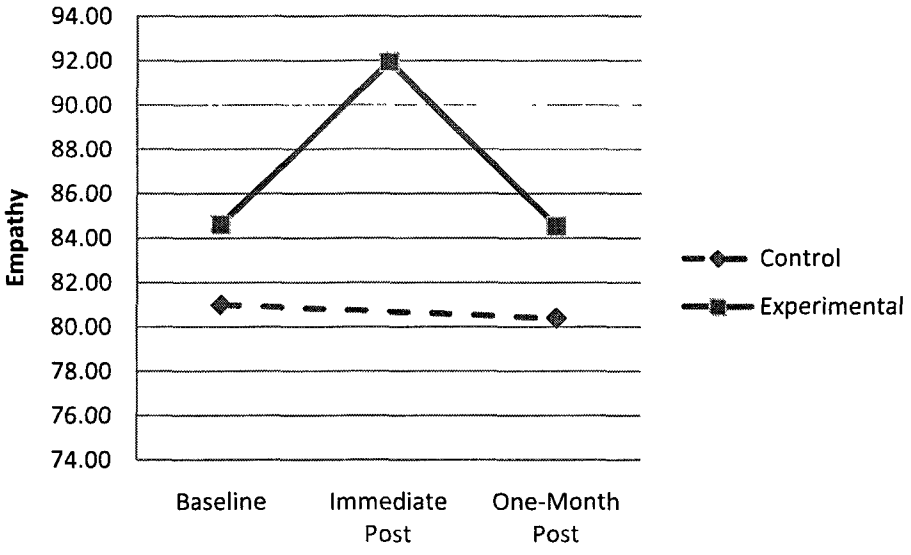

Figure 10. Means for empathy toward cyberbullying victims for the control and experimental groups for baseline, immediate post, and one-month post.

Immediate Effects of Cyberbullying Prevention Program

To test the immediate effects of the program on the experimental group, repeated measures *t* tests with bootstrapping comparing the pre and immediate post assessments [attitudes (overall, instrumental, and experiential evaluation), injunctive norms, descriptive norms, intentions, knowledge, and empathy toward victims] were conducted. Only the experimental group participants who completed all parts of the study (baseline, immediate post, and one-month follow-up) were included. For two of the three types of positive attitudes toward cyberbullying examined, responses were significantly less favorable by the immediate post assessment. Specifically, overall evaluation (bad-good; M_D = -1.60, *Bias* = .009, *SE* = .46, *95% CI*: [-2.59, -.75]) and instrumental evaluation (harmful-beneficial; M_D = -2.88, *Bias* = .016, *SE* = .57, *95% CI*: [-4.05, -1.80]) of cyberbullying behavior significantly decreased immediately after the program. Thus, cyberbullying behavior was viewed as worse (i.e., "more bad") and more harmful after

viewing the video. In addition, injunctive norms (i.e., perception of others' approval of cyberbullying scores; M_D = -4.91, *Bias* = .029, *SE* = 1.46, *95% CI*: [-8.07, -2.32]) and descriptive norms (i.e., perception of others' frequency of engagement in cyberbullying behavior scores; M_D = -5.30, *Bias* = .047, *SE* = 1.70, *95% CI*: [-9.16, -2.33]) significantly decreased immediately after the program. Moreover, cyberbullying knowledge (M_D = 1.44, *Bias* = -.007, *SE* = .17, *95% CI*: [1.09, 1.75]) significantly increased immediately after the program. However, experiential evaluation attitudes (unenjoyable-enjoyable; M_D= -2.32, *Bias* = -.021, *SE* = 1.27, *95% CI*: [-4.75, .36]), empathy toward cyberbullying victims (M_D = 6.43, *Bias* = -.063, *SE* = 3.85, *95% CI*: [-1.50, 13.63]), and intentions to cyberbully (M_D = .13, *Bias* = .014, *SE* = .64, *95% CI*: [-.85, 1.57]) did not significantly change immediately after the program.

Baseline and One Month Follow-up Comparisons for Cyberbullying Prevention Program

In addition to testing the immediate effects of the program on the experimental group, ANCOVAs were conducted examining the differences in attitudes (overall, instrumental, and experiential evaluation), injunctive norms, descriptive norms, intentions, behavior, knowledge, and empathy toward cyberbullying victims between the experimental group and control group one month after the program while controlling for baseline scores. To test the homogeneity of regression assumption, interactions between each independent variable (condition) and covariate (baseline scores) were tested (see Table 4). None of the independent variable x covariate interactions were significant. Therefore, the homogeneity of regression assumption was met for all analyses.

Table 4

Homogeneity of Regression Assumption Tests (IV x CV Interaction Results)

				95% CIs	
Variable	*B*	*Bias*	*SE*	*LL*	*UL*
Attitudes (Overall)	.47	-.066	.48	-.60	1.23
Attitudes (Instrumental)	.30	-.072	.24	-.37	.59
Attitudes (Experiential)	.36	-.028	.19	-.12	.62
Injunctive Norms	.31	-.022	.22	-.25	.64
Descriptive Norms	.14	-.014	.21	-.28	.53
Intentions	.01	.007	.29	-.53	.55
Behavior	.23	.005	.21	-.19	.59
Knowledge	-.10	-.016	.18	-.48	.23
Empathy	.27	.007	.21	-.12	.68

Note: All *SE*s and confidence intervals are bootstrapped.

Because homogeneity of regression could be assumed, the ANCOVAs were conducted without the interactions (see Table 5). Effect sizes based on the original (i.e., non-bootstrapped) correlations are reported, as the bias to *SE* ratios were within acceptable ranges for all correlations (< .25, Efron & Tibshirani, 1998).

Table 5

Analysis of Covariance for Condition (IV) and Baseline Scores (CV) on One-Month Post Prevention Scores

				95% CIs		
Variable	*B*	*Bias*	*SE*	*LL*	*UL*	*partial* r^2
Attitudes (Overall)						
Condition	2.76	-.094	1.06	.65	4.80	.035
Baseline	.47	-.024	.14	.09	.65	.278
Attitudes (Instrumental)						
Condition	2.45	-.130	1.18	.06	4.76	.024
Baseline	.47	-.024	.14	.09	.65	.289
Attitudes (Experiential)						
Condition	2.77	-.096	1.25	.09	5.08	.032
Baseline	.52	.004	.10	.34	.73	.405
Injunctive Norms						
Condition	3.78	-.154	2.11	-.59	7.54	.019
Baseline	.60	.012	.10	.44	.83	.394
Descriptive Norms						
Condition	1.64	-.130	2.74	-4.12	7.11	.002
Baseline	.69	.009	.09	.51	.86	.479
Intentions						
Condition	1.31	.023	.83	-.18	3.00	.007
Baseline	.78	.011	.22	.38	1.22	.498

Table 5 (Continued)

Variable	*B*	*Bias*	*SE*	*95% CIs*		*partial* r^2
				LL	*UL*	
Behavior						
Condition	2.92	.031	1.21	.68	5.39	.026
Baseline	.73	-.011	.10	.50	.88	.445
Knowledge						
Condition	-.60	-.005	.16	-.91	-.30	.083
Baseline	.32	.005	.09	.17	.50	.100
Empathy						
Condition	-2.10	.176	4.05	-9.77	5.68	.002
Baseline	.57	-.003	.10	.36	.75	.278

Note: Condition was coded as 0 = control group, 1 = experimental group.

The raw and adjusted means are reported in Table 6. Graphs of the adjusted means for the control and experimental group are presented in Figures 11-13. Controlling for overall evaluation, instrumental evaluation, and experiential evaluation attitudes scores (respectively) at baseline, positive overall evaluation, instrumental evaluation, and experiential attitudes scores one month after the program were significantly lower for the experimental group compared to the control group. Thus, the experimental group viewed cyberbullying behavior as worse (i.e., "more bad"), more harmful, and less enjoyable than the control group one month after the cyberbullying prevention program. Reports of the frequency of cyberbullying behavior one month after the program was also

significantly lower for the experimental group compared to the control group after controlling for baseline cyberbullying behavior. Furthermore, controlling for cyberbullying knowledge at baseline, cyberbullying knowledge one month after the program was significantly higher for the experimental group than the control group. However, injunctive norms, descriptive norms, intentions, and empathy toward cyberbullying victims were not significantly different at one-month follow-up for the experimental and control groups after controlling for baseline scores.

Table 6

Raw and Adjusted Means for One-Month Follow-Up Scores by Condition

Variable	*N*	*Raw Mean*	*SE*	*Adjusted Mean*	*SE*
Attitudes (Overall)					
Control	88	4.27	1.10	4.19	1.00
Experimental	71	1.34	.63	1.43	.61
Total	159	2.96	.68	2.81	.64
Attitudes (Instrumental)					
Control	87	4.67	1.16	4.62	1.03
Experimental	70	2.10	.73	2.17	.77
Total	157	3.53	.73	3.93	.70
Attitudes (Experiential)					
Control	88	5.60	1.16	5.47	.99
Experimental	71	2.54	1.04	2.70	1.01
Total	159	4.23	.79	4.08	.78
Injunctive Norms					
Control	94	12.06	1.82	11.83	1.57
Experimental	73	7.75	1.99	8.05	1.89
Total	167	10.18	1.36	9.94	1.38
Descriptive Norms					
Control	94	19.56	2.35	18.57	1.99
Experimental	73	15.66	2.72	16.93	2.48
Total	167	17.86	1.68	17.75	1.78

Table 6 (Continued)

Variable	*N*	*Raw Mean*	*SE*	*Adjusted Mean*	*SE*
Intentions					
Control	94	5.30	1.39	4.27	1.05
Experimental	73	1.61	.52	2.95	.72
Total	167	3.69	.83	3.61	.80
Behavior					
Control	94	7.93	1.48	7.06	1.23
Experimental	73	3.02	.76	4.14	.83
Total	167	5.78	1.91	5.60	.86
Knowledge					
Control	94	2.23	.10	2.20	.10
Experimental	73	2.77	.13	2.80	.13
Total	167	2.47	.08	2.50	.08
Empathy					
Control	94	80.39	3.22	81.28	2.89
Experimental	73	84.54	3.94	83.38	3.56
Total	167	82.20	2.49	82.33	2.53

Note: Adjusted means in the model are evaluated at the following baseline scores: attitudes (overall) = 2.84, attitudes (instrumental) = 4.36, attitudes (experiential) = 5.88, injunctive norms = 11.29, descriptive norms = 19.06, intentions = 3.53, behavior = 6.87, knowledge = 2.05, empathy = 82.57. All *SE*s are bootstrapped.

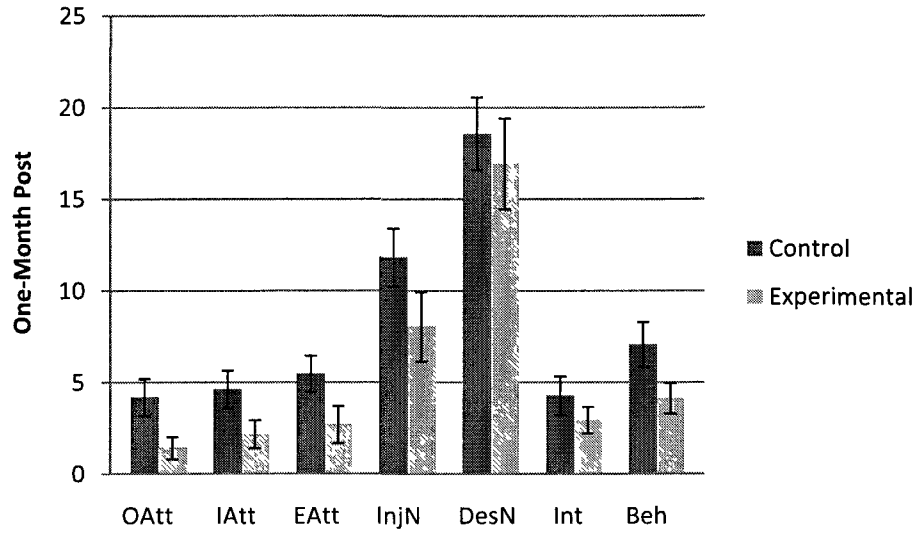

Figure 11. Adjusted means for the control and experimental groups at one-month post. *Note*: OAtt= overall attitudes, IAtt = instrumental attitudes, EAtt = experiential attitudes, InjN= injunctive norms, DesN= descriptive norms, Int = intentions, Beh = behavior.

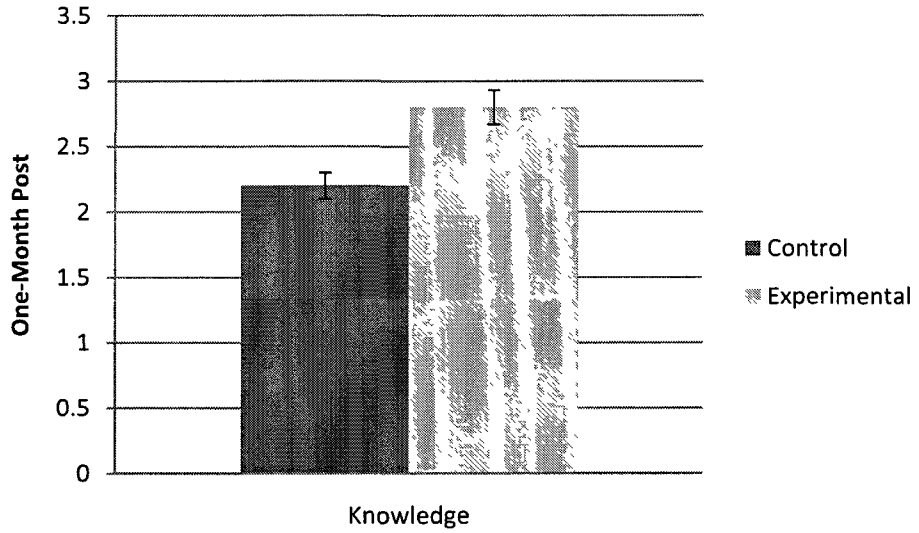

Figure 12. Adjusted cyberbullying knowledge means for the control and experimental groups at one-month post.

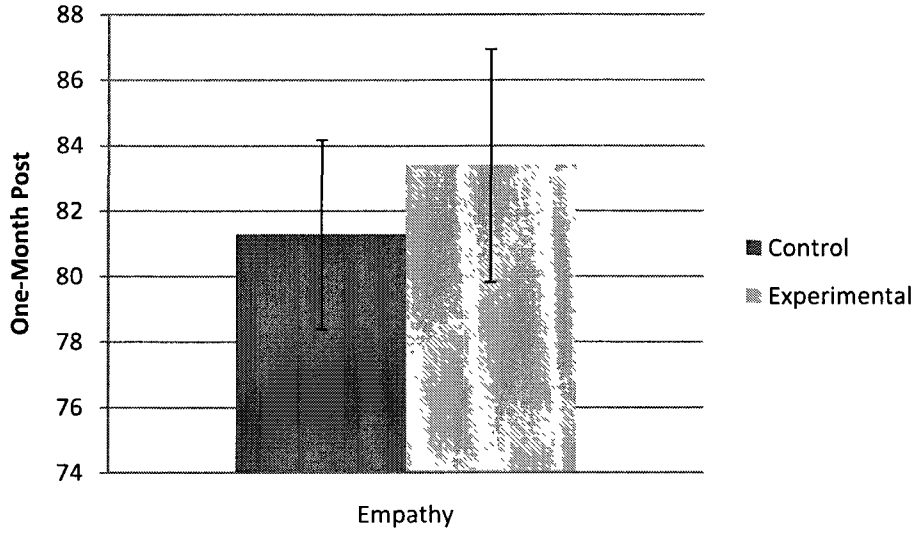

Figure 13. Adjusted cyberbullying victim empathy means for the control and experimental groups at one-month post.

CHAPTER IV

DISCUSSION

The purpose of the present study was to develop a cyberbullying prevention program for college students. It was hypothesized that positive attitudes (overall, instrumental, and experiential evaluation) toward cyberbullying, positive injunctive and descriptive norms concerning cyberbullying, and intentions to cyberbully would significantly decrease and cyberbullying knowledge and empathy toward cyberbullying victims would significantly increase for the experimental group immediately after viewing the cyberbullying prevention program as compared to baseline. In addition, it was hypothesized that positive attitudes (overall, instrumental, and experiential evaluation) toward cyberbullying, positive injunctive and descriptive norms concerning cyberbullying, intentions to cyberbully, and cyberbullying perpetration would be significantly lower and cyberbullying knowledge and empathy toward cyberbullying victims would be significantly higher for the experimental group as compared to the control group at one-month follow-up after controlling for baseline scores.

Attitudes Toward Cyberbullying Behavior

According to the Theory of Reasoned Action, attitudes toward a behavior should influence the behavior (Ajzen, 1985). In addition, bullying (Olweus, 1993a) and violence prevention researchers (Limber et al., 2004; Weisz & Black, 2001) have recommended including assessments of changes in attitudes. Therefore, the cyberbullying video was targeted to decrease favorable attitudes toward cyberbullying behavior in three areas: overall (good-bad), instrumental (beneficial-harmful), and experiential (enjoyable-unenjoyable). To decrease positive attitudes toward cyberbullying, a series of clips in the

video illustrated a variety of cyberbullying incidents as actors portraying victims narrated. These actors discussed how hurtful and upsetting their cyberbullying experiences had been. In addition, four news stories about actual teens who committed suicide after being cyberbullied were interspersed throughout the video.

Partial support was found for decreasing positive overall, instrumental, and experiential attitudes. As compared to their baseline overall and instrumental evaluations, the experimental group reported both significantly less overall favorable attitudes toward cyberbullying and reported that cyberbullying caused more harm immediately after viewing the cyberbullying prevention video.

Importantly, the condition effects were significant for all three attitudes variables (i.e., overall, instrumental, and experiential) when controlling for baseline attitudes. That is, compared to the control group, the experimental group reported more negative overall attitudes toward cyberbullying (i.e., cyberbullying was "more" bad), that cyberbullying was more harmful, and that cyberbullying was less enjoyable at the one-month follow-up assessment. It is important to note that the effect sizes for the difference between the control and experimental group were small for overall attitudes (*partial* r^2 = .035), instrumental attitudes (*partial* r^2 = .024), and experiential attitudes (*partial* r^2 = .032). In addition, the patterns of means showed that the effect of the program on the experimental group eroded from immediate post to one-month post for both overall and instrumental attitudes such that that the effects demonstrated at the one-month post assessment were significant, but not as strong as the immediate post assessment (see Figures 2-3).

Although means scores were tested in the analyses above, average total scores for attitudes toward cyberbullying at baseline at one-month post were low (i.e., 1.34-6.12 out

of possible summed scores of 105); therefore, the magnitude of the effects are more easily demonstrated by examining the proportion of participants who selected "0" on a scale from 0 to 5 ranging from bad-good, harmful-beneficial, and enjoyable-unenjoyable for each of the 21 behaviors that assessed the three types of attitudes. However, it is important to note that no analyses were conducted examining these proportions. In regards to overall attitudes, the frequency of experimental group participants who had summed scores of 0 (on a scale from bad-good) increased from 56.2% at baseline to 78.1% at one-month post (+21.9%) compared to an increase from 52.1% to 61.7% (+9.6%) for the control group. The percentage of participants who had 0 summed scores for instrumental attitudes (harmful-beneficial) increased from 46.6% at baseline to 68.5% one month later (+21.9%) for the experimental group compared to an increase from 52.1% to 56.4% (+4.3%) for the control group. For experiential attitudes, the percentage of respondents in the experimental group who had total scores of 0 increased from 53.4% to 65.8% (+12.4%) compared to an increase from 45.7% at baseline to 54.3% at one-month post (+8.6%) for the control group.

Collectively, these results indicate that a short, video cyberbullying prevention program has the ability to reduce favorable attitudes toward cyberbullying. Moreover, these results support previous research demonstrating the effectiveness of video-based prevention programs for eating disorders (Withers et al., 2002) and rape (O'Donohue et al., 2003). More specifically, Withers et al. found that a 22-minute eating disorders prevention video successfully reduced seventh grade girls' drive for thinness attitudes. Similarly, O'Donohue et al. found that their video intervention decreased adversarial sexual beliefs.

Although some initial decrease in experiential attitudes took place immediately after the program, this decrease was not significant. However, the favorable experiential attitudes reported by the experimental group were significantly lower compared to the control group at one-month post. Upon examining the means (see Table 3 and Figure 4), the immediate change in experiential attitudes for the experimental group was in the predicted direction, but was not significant. There was only a slight decrease from immediate post to one-month post in experiential attitudes, but this small decrease was enough to find a significant difference as compared to the control group. It is possible that the difference between the types of analyses used (repeated measures *t* versus ANCOVA) for the immediate post compared to the one-month follow-up assessments may explain the difference in these results.

Subjective Norms About Cyberbullying

In addition to one's own attitudes toward a behavior, according to the Theory of Reasoned Action, one's subjective norms about a behavior should also affect behavior (Ajzen, 1985). In addition, Williams and Guerra (2007) suggested targeting normative beliefs about accepting bullying in bullying prevention programs. Therefore, another goal of the video was to decrease positive subjective norms about cyberbullying. Both injunctive (i.e., perception of others' approval of cyberbullying scores) and descriptive (i.e., perception of others' frequency of engagement in cyberbullying behavior scores) norms were targeted in the cyberbullying prevention program. Specifically, actors in the video commented that cyberbullying was "stupid" and "immature." One vignette involved an actor intervening in a cyberbullying situation and expressing her disapproval of the behavior. In addition, in one of the information slides that was interspersed in the

video, the prevalence with which cyberbullying has been found to occur in college students was reported.

Partial support for decreasing injunctive and descriptive norms was found. As compared to their baseline scores, the experimental condition reported significantly lower injunctive and descriptive norms scores immediately after viewing the video. That is, they reported less approval by their peers immediately after viewing the cyberbullying prevention program (i.e., a reduction in injunctive norms). In addition, as demonstrated by the lower means from baseline to the assessment that took place immediately after viewing the cyberbullying prevention program, perceptions of the frequency with which others' engage in cyberbullying decreased (i.e., a reduction in descriptive norms). Thus, it appears that these forms of addressing injunctive (i.e., perceptions of others' approval of cyberbullying) and descriptive (i.e., perceptions of the frequency with which college students' engage in cyberbullying) norms resulted in short-term changes in participants' beliefs about these aspects of cyberbullying. Similar to the results of the present study, a safe-sex intervention for adolescents successfully changed subjective norms (i.e., others' perceptions of carrying condoms when going out in the evening) immediately after the safe-sex intervention (Armitage & Talibudeen, 2010).

Although similar studies of cyberbullying have not been conducted, alcohol studies have decreased descriptive norms about drinking levels by informing students of others' actual drinking levels which is typically overestimated by students (e.g., DeJong & Linkenbach, 1999; LaBrie, Hummer, Grant, & Lac, 2010). Although the author did not assess participants' estimate of the prevalence of cyberbullying at baseline, it is possible

that participants initially believed the prevalence of cyberbullying was higher than actual estimates of cyberbullying.

Although the video-based cyberbullying program showed important immediate effects on injunctive and descriptive norms, there was no significant difference between the control group and the experimental group on injunctive or descriptive norms at the one-month post assessment after controlling for baseline scores. Although participants in the experimental group may have temporarily believed their peers were less approving of and less likely to engage in cyberbullying immediately after viewing the program, it is possible that perceptions of others' approval and engagement in cyberbullying are less memorable than attitudes toward cyberbullying. Perhaps showing the video more than once or exposing students to additional anti-cyberbullying messages from their peers throughout the school year would result in longer-term effects on injunctive and descriptive norms about cyberbullying.

Cyberbullying Intentions and Behavior

The video-based cyberbullying prevention program was also expected to decrease cyberbullying intentions and behavior. Although the Theory of Reasoned Action states that intentions to engage in a behavior should be related to engagement in the behavior (Ajzen, 1985), results for intentions to cyberbully and cyberbullying behavior differed. Specifically, intentions to cyberbully others did not significantly decrease immediately after viewing the program for the experimental group or as compared to the control group at the one-month post assessment after controlling for baseline intentions to cyberbully others. Conversely, after controlling for baseline cyberbullying behavior scores,

cyberbullying behavior was significantly lower one month after viewing the video for the experimental group as compared to the control group.

Unlike video-based eating disorders (Withers et al., 2002) and rape (Foubert & Cowell, 2004) prevention programs that successfully reduced intentions to diet and men's planned behavior to help rape survivors, respectively, the cyberbullying prevention program did not change behavioral intentions. However, there are some notable differences between the present program and the previous programs. The rape prevention program differed from the present study in that the video was followed by a brief in-person presentation with additional information. In addition, behavioral intentions were assessed during focus groups and the planned behavior (helping rape survivors) was positive. It is possible that the lack of reduction in cyberbullying intentions at the immediate post or one-month follow-up in the present study versus the success in changing planned behavior to help rape survivors after the rape prevention program may be due to the additional in-person information. In addition, it is possible that the nature of data collection may have affected the results. Specifically, social desirability may have increased reported intentions to engage in a positive behavior (i.e., helping rape survivors) because of the face-to-face nature of focus groups.

Another reason why intentions to cyberbully and cyberbullying behavior results may have differed is that for both the experimental and control groups, the means for intentions to cyberbully were lower than cyberbullying behavior. Therefore, it appears that students do not report intentions to cyberbully others as much as they report actually cyberbullying others. That is, few participants report that they plan to engage in behaviors that constitute cyberbullying. Due to social desirability, participants may be

more reluctant to admit they intend to cyberbully others in the future than admitting they have cyberbullied others in the past. Perhaps if reported intentions to cyberbully others were closer to actual cyberbullying behavior, there would be more opportunity for intentions to cyberbully others to decrease. On the other hand, as predicted, cyberbullying behavior was significantly lower for the experimental group than the control group one month after viewing the video after controlling for baseline behavior. Thus, the video prevention program did result in short-term changes to actual cyberbullying behavior.

Mean scores for cyberbullying behavior at baseline and one-month follow-up were low (i.e., 3.01-8.08 out of possible summed scores of 105). Therefore, as with attitudes towards cyberbullying behavior, the magnitude of the effects are illustrated by examining the proportion of participants who endorsed "0" on a scale from 0 to 5 ranging from "never" to "everyday/almost everyday" for each of the 21 behaviors that assessed cyberbullying behavior. The percentage of experimental group participants who had a total score of 0 ("never" for all 21 behaviors) increased from 34.3% at baseline to 56.2% at one-month post (+21.9%) compared to an increase from 26.6% to 34.0% (+7.4%) for the control group.

To the author's knowledge, this video is the first cyberbullying prevention program that established short-term empirical support for decreasing cyberbullying behavior. Although cyberbullying decreased after the program for the experimental group, the effect size for the difference between the control and experimental groups was small (*partial* $r^2 = .026$). Incorporating the video into a larger scale cyberbullying prevention program with additional components (e.g., presentations, role-playing) may increase the effect of the program.

Cyberbullying Knowledge

Another aim of the cyberbullying prevention program was to increase cyberbullying knowledge. Withers et al. (2002) found at one-week follow-up and one-month follow-up that their video-based eating disorders prevention program significantly increased knowledge of the eating disorders information presented in the video. In addition, Boulton and Flemington (1996) found students ages 11 to 14 had more knowledge of bullying definitions (i.e., previous definitions were expanded to include additional types of behavior) after viewing an anti-bullying video.

Similar to these previous studies, the cyberbullying prevention program significantly increased knowledge of cyberbullying both immediately after the video and one month later. Specifically, the immediate post-program knowledge of cyberbullying scores increased as compared to baseline scores for the experimental group. In addition, the experimental group had significantly higher cyberbullying knowledge compared to the control group one month after the programafter controlling for baseline knowledge. The average total knowledge score (total number of questions correct out of 5) for the experimental group increased from 1.95 to 2.77, whereas for the control group only changed from 2.13 to 2.23.The effect size associated with the differences in knowledge between the control group and experimental group was small (*partial* r^2 = .083). Another concern is that the pattern of means indicated that the effect of the program on knowledge eroded from immediate post to one-month post. Although the effect of the program was still significant at one-month follow-up, the experimental group's mean decreased compared to the immediate post assessment (see Figure 9). In order to increase and

sustain the effect of the program on knowledge, reminder messages of important cyberbullying facts could be reiterated.

Knowledge and awareness of cyberbullying is an important initial step to addressing the issue of cyberbullying. Although cyberbullying research has been limited, the definition of cyberbullying, estimates of cyberbullying prevalence, common modes of cyberbullying, common types of cyberbullying, and cyberbullying consequences were identified based on the literature and my earlier work on cyberbullying and included as information segments in the cyberbullying prevention video. It is likely that students have heard of cyberbullying, but unlikely given the recent identification of this new form of bullying that students know much about it. It is especially important that students become aware of the seriousness cyberbullyingconsequences. When powered with this knowledge, students may spread the word to others and may be less inclined to perpetrate cyberbullying behavior.

Empathy with Cyberbullying Victims

An additional goal of the video was to increase empathy with cyberbullying victims. In contrast to previous video-based prevention programs for rape (Foubert & Cowell, 2004; O'Donohue et al., 2003), the cyberbullying prevention video did not change empathy toward cyberbullying victims immediately after the program or at one-month post. Although both the video used in O'Donohue et al.'s rape prevention program and the video used in the present cyberbullying prevention program included victim testimonials, the video in the rape prevention program included additional components aimed at creating empathy for victims that involved viewers putting themselves either closer to or in the victim's situation (i.e., picturing a loved one being raped and imagining

themselves being raped). Similarly, Foubert and Cowell may have increased victim empathy by including a male-on-male rape incident in their video. It may be easier for male viewers to relate to this type of scenario. It is possible that including portions of the video that have students imagine themselves being cyberbullied in addition to seeing other people in cyberbullying situations might improve their empathy with cyberbullying victims. In addition, empathy with cyberbullying victims may improve if students can relate more to the victims in the video. Perhaps they may be asked to imagine themselves as the person in the video with whom they most identify. If the video was integrated into an on-campus cyberbullying prevention program, having in-person speakers that have been cyberbullied talk about their experiences may also increase empathy toward cyberbullying victims.

Student Comments About the Video

At the end of the immediate post survey for the experimental group, an open-ended question, "Do you have any other comments about the video?" was included. Many participants commented that the video was powerful. Some examples of these comments were, "I thought it was well done, and the facts regarding actual people who had been cyberbullied was very powerful," "it deeply impacted the way I think about cyberbullying," "it just kind of hit me hard that so many people had taken their own lives as a result of cyberbullying," "it hurts to see children that are just 13 years of age killing themselves! It's so sad," and "very touching." Perhaps the promising comment on the effectiveness of the video came from a self-proclaimed perpetrator of cyberbullying: "This video opened up my eyes to a lot of bad habits I have participated in via electronic devices. I have been an administer of cyberbullying and after watching this video, I

immediately contacted the victim and sincerely apologized." Although the majority of the comments were positive, a few students had negative comments about the video. These included, "some of the circumstances were a little dramatic and therefore hard to sympathize with," "a few didn't sound genuine," and "too scripted." Several students had suggestions for changes to the video. Examples of these suggestions are including a scene about "multiple people posting obscene comments on someone's wall on Facebook," that the video would be "more effective by focusing more on actual cases of cyberbullying," and that "adding information about support services would be a good idea."

Limitations

Several limitations must be noted. The participants were volunteers, and only a small portion (2.6%) of the freshmen and sophomores invited to participate in the study actually completed the study. Although the sample of students who participated were similar in age to the larger group of invited freshmen and sophomores, females and White students were more likely to be in the study compared to the larger population from which the sample was recruited. Furthermore, only 44.5% of students who completed the initial part of the study completed the one-month follow-up. All data were based on self-report. As such, social desirability could be a factor. For instance, students may have underreported their actual frequency of cyberbullying behavior, intentions to cyberbully, and positive attitudes toward cyberbullying and overreported their empathy toward victims. Moreover, the effect sizes were small for all of the results. Although significant results were found at the one-month follow-up, the pattern of the means indicated there was an erosion of the positive effects between the immediate post and one-month follow

up post. Without additional follow-up data, it cannot be determined whether these means would continue to erode or whether the effects continue beyond one month. Furthermore, the Theory of Reasoned Action has not been used before in cyberbullying research. It is possible that a feedback loop occurs in which people's cyberbullying behavior influences their attitudes toward cyberbullying and perceived norms about cyberbullying. These "reverse" relationships are not predicted by the Theory of Reasoned Action.

Future Research

There are many directions for future research on cyberbullying prevention programs with a video component. The video may be modified to have viewers imagine themselves as a cyberbullying victim to promote empathy toward cyberbullying victims. Alternatively, the program could be presented in a university setting (e.g., at freshman orientation) with additional program components. In addition, resources for victims including tips for prevention and information on seeking help when cyberbullied could be added to the video. Integrating the video as part of a larger scale on-campus cyberbullying prevention program may strengthen the effects of the program. Increased exposure to anti-cyberbullying messages throughout the school year may increase the effectiveness of the program. In addition, longer-term follow-up assessments should be included.

Furthermore, the video may be potentially modified for use with middle and high school students. For example, middle and high school aged actors would be needed, and the scripts could be modified to represent types of cyberbullying common to younger students in settings that are more familiar to them. For instance, bedrooms that look more like children's and adolescents' bedrooms as well as middle and high school classrooms

and hallways could replace scenes with dorm rooms and dorm hallways. In addition, harsh language should be removed so that the scripts would be approved by school administrators.

CHAPTER V

CONCLUSION

Based on a review of the literature, earlier work on cyberbullying, the best practices identified for reducing violence, and using the theory of reasoned action, the present study developed a cyberbullying prevention program that successfully decreased positive attitudes toward cyberbullying, decreased cyberbullying behavior, and increased cyberbullying knowledge for at least one month. Although positive injunctive and descriptive norms about cyberbullying decreased immediately following the video, this effect was not present one month later. The cyberbullying video also failed to change intentions to cyberbully and empathy toward cyberbullying victims either immediately or one month after the program. Collectively, these findings suggest that a brief cyberbullying video targeted to college students is capable of decreasing injunctive and descriptive norms about cyberbullying temporarily, and can change attitudes toward cyberbullying, engagement in cyberbullying, and cyberbullying knowledge for at least one month. Integrating the cyberbullying prevention video with a larger scale bullying program for college students may be more successful in changing intentions to cyberbully and empathy with cyberbullying victims. However, it is important to note that despite the lack of change in cyberbullying intentions and empathy with cyberbullying victims, cyberbullying behavior still decreased during the month after viewing of the video.

The program is appropriate and relevant for young adults and has the ability to be universal. A brief, Internet format for a cyberbullying prevention program is a low-cost option that would increase accessibility across a wide variety of settings and target populations as compared to traditional prevention programs. Increased awareness of

cyberbullying is an important factor in cyberbullying prevention. Another reason for conducting the study was to demonstrate its effectiveness and in turn, develop a program that could serve as a model for future cyberbullying prevention programs that may change attitudes toward cyberbullying and reduce cyberbullying behavior.

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APPENDIX A

Recruitment E-mail

Dear Student,

All incoming freshmen between the ages of 18 and 23 at Old Dominion University are being asked to participate in this study. Your participation is voluntary. If you begin to answer the questions or view the video and decide that you want to stop participating, you can stop the study by closing your browser. You will not be penalized by stopping the study. You can also choose to skip questions.

Study Part 1.

You will be asked to complete a brief online survey about your negative communication experiences through computers or other electronic devices. The online survey will take about 20 minutes. Next, you may or may not be asked to watch a 10 minute video presentation designed for college students about negative communication experiences through computers or other electronic devices. It is very important that you NOT discuss the content of the video with other students. Finally, you may or may not be asked to complete an additional 20 minute survey.

Study Part 2.

In about one month, you will be asked to complete a second online survey about negative communication experiences through computers or other electronic devices. The second online survey will be e-mailed to your ODU student email account with a link to the survey. The second online survey will take about 20 minutes to complete.

Study Part 3.

Approximately 5 months after completing part 2, you will be invited to participate in part 3. The third and final online survey will be e-mailed to your ODU student e-mail account with a link to the survey. The third and final online survey will take about 20 minutes to complete.

As an incentive to participate, you will have the option to enter a series of raffles for Amazon.com gift certificates. One student who participates in the study will be randomly selected to receive a $25 Amazon.com gift certificate for completing part 1, one student who participates in part 2 will receive a $50 Amazon.com gift certificate, and one participant who completes the final survey will receive a $50 Amazon.com gift certificate. Your survey responses will NOT be connected to your raffle entry information. Instead, the information you provide on the surveys will be completely anonymous (we will not know who you are).

If you choose to participate, please click on the link below. It is important that you not forward this link to others.

If you have any questions, please contact Ashley Doane at adoane@odu.edu.

Sincerely,

Ashley N. Doane, Doctoral Candidate in Applied Experimental Psychology
Department of Psychology
250 Mills Godwin Building
Old Dominion University
Norfolk, VA 23529

APPENDIX B

Informed Consent – Experimental Group

OLD DOMINION UNIVERSITY

PROJECT TITLE: Project Cyber

RESEARCHERS

Responsible Project Investigator: Michelle L. Kelley, Ph.D., Professor of Psychology, Department of Psychology, College of Sciences, Old Dominion University.
Study Investigators: Ashley N. Doane, M.S., Doctoral student in the Applied Experimental Psychology Program (Ph.D. program), Old Dominion University.

DESCRIPTION OF RESEARCH STUDY

The purpose of the present study is to gain knowledge about college students' negative communication experiences through computers or other electronic devices and perceptions of those experiences over time. Participation is completely voluntary. If you choose to participate, in part 1, you will be asked in an online survey about various negative communication experiences through computers or other electronic devices (e.g., e-mail, instant messaging, MySpace/Facebook) that you may have had as well as your perceptions about certain negative electronic experiences. In addition, you will be asked to view a 10 minute video. You can stop the questionnaire or video at any time with no penalty. You can decline to answer any specific questions. The time required to participate in part 1 of this study is approximately 50 minutes. Approximately one month after completing part 1, you will be invited to participate in part 2. In part 2, you will be asked additional online survey questions, which will take approximately 20 minutes. Approximately 5 months after completing part 2, you will be invited to participate in part 3, which will consist of an online survey that will take approximately 20 minutes to complete. The potential number of participants is 2,166.

EXCLUSIONARY CRITERIA

You are eligible to participate if you are a freshman or sophomore at Old Dominion University and are 18- to 23-years-old.

RISKS

It is possible that reporting on negative experiences that you have had through electronic devices will be minimally upsetting. You may choose not to answer any questions that you find stressful. If you feel uncomfortable answering questions about negative communication experiences through computers or other electronic devices, please skip to the background questions. If you would like to talk with someone about your experiences, the counseling center on campus is available to students and can be reached at 757-683-4401. If you choose to enter responses on a network supported computer than you have the risk that the responses may be monitored.

BENEFITS

There is no direct benefit to participating. However, you may gain a better understanding of any negative communications you may have had through e-mail or other forms of electronic communication that you may have had.

COSTS AND PAYMENTS

As an incentive to participate, you will have the option to enter a series of raffles for Amazon.com gift certificates. One participant will be randomly selected to receive a $25 Amazon.com gift certificate for completing part 1, one participant will receive a $50 Amazon.com gift certificate for completing part 2, and one participant will receive a $50 Amazon.com gift certificate for completing part 3. Your survey responses and raffle entry information will not be connected or cross referenced.

In addition, psychology students participating through SONA will receive 1 research credit for their participation in part 1. If part 2 is completed approximately one month later, an additional .5 research credit will be granted. Finally, if part 3 is completed approximately 6 months later, an additional .5 research credit will be granted if the student is enrolled in a psychology course.

CONFIDENTIALITY

The results of this study may be used in reports, presentations and publications, but you will remain anonymous.

WITHDRAWAL PRIVILEGE

It is OK for you to stop participating. If you would like to stop participating, simply close your browser.

COMPENSATION FOR ILLNESS AND INJURY

If you chose to complete the survey, this does not waive any of your legal rights. However, in the event of harm arising from this study, neither Old Dominion University nor the researchers are able to give you any money, insurance coverage, free medical care, or any other compensation for such injury. In the event that you suffer injury as a result of participation or have any questions about this research project, you may contact Dr. Michelle Kelley at 757-683-4459 at Old Dominion University, who will be glad to review the matter with you.

VOLUNTARY CONSENT

By continuing to the next page, you are saying several things. You are saying that you have read this description of the survey and that you are satisfied that you understand the survey and its risks and benefits. If you have any questions later on, then the researchers should be able to answer them: Dr. Michelle Kelley: mkelley@odu.edu, 737-683-4459 and Ashley Doane: adoane@odu.edu. Additionally, you may contact George Maihafer, IRB chairperson: 757-683-4520 and the Office of Research: 757- 683-3460.

Informed Consent – Control Group

OLD DOMINION UNIVERSITY

PROJECT TITLE: Project Cyber

RESEARCHERS

Responsible Project Investigator: Michelle L. Kelley, Ph.D., Professor of Psychology, Department of Psychology, College of Sciences, Old Dominion University.
Study Investigators: Ashley N. Doane, M.S., Doctoral student in the Applied Experimental Psychology Program (Ph.D. program), Old Dominion University.

DESCRIPTION OF RESEARCH STUDY

The purpose of the present study is to gain knowledge about college students' negative communication experiences through computers or other electronic devices and perceptions of those experiences over time. Participation is completely voluntary. If you choose to participate, in part 1, you will be asked in an online survey about various negative communication experiences through computers or other electronic devices (e.g., e-mail, Instant messaging, MySpace/Facebook) that you may have had as well as your perceptions about certain electronic experiences. You can stop the questionnaire at any time with no penalty. You can decline to answer any specific questions. The time required to participate in part 1 of this study is approximately 20 minutes. Approximately one month after completing part 1, you will be invited to participate in part 2. In part 2, you will be asked additional survey questions, which will take approximately 20 minutes. Approximately 5 months after completing part 2, you will be invited to participate in part 3, which will consist of a questionnaire that will take approximately 20 minutes to complete. The potential number of participants is 2,166.

EXCLUSIONARY CRITERIA

You are eligible to participate if you are a freshman or sophomore at Old Dominion University and are 18- to 23-years-old.

RISKS

It is possible that reporting on negative experiences that you have had through electronic devices will be minimally upsetting. You may choose not to answer any questions that you find stressful. If you feel uncomfortable answering questions about your negative communication experiences through computers or other electronic devices, please skip to the background questions. If you would like to talk with someone about your experiences, the counseling center on campus is available to students and can be reached at 757-683-4401. If you choose to enter responses on a network supported computer than you have the risk that the responses may be monitored.

BENEFITS

There is no direct benefit to participating. However, you may gain a better understanding of any negative communications you may have had through e-mail or other forms of electronic communication that you may have had.

COSTS AND PAYMENTS

As an incentive to participate, you will have the option to enter a series of raffles for Amazon.com gift certificates. One participant will be randomly selected to receive a $25 Amazon.com gift certificate for completing part 1, one participant will receive a $50 Amazon.com gift certificate for completing part 2, and one participant will receive a $50 Amazon.com gift certificate for completing part 3. Your survey responses and raffle entry information will not be connected or cross referenced.

In addition, psychology students participating through SONA will receive 1 research credit for their participation in part 1. If part 2 is completed approximately one month later, an additional .5 research credit will be granted. Finally, if part 3 is completed approximately 6 months later, an additional .5 research credit will be granted if the student is enrolled in a psychology course.

CONFIDENTIALITY

The results of this study may be used in reports, presentations and publications, but you will remain anonymous.

WITHDRAWAL PRIVILEGE

It is OK for you to stop participating. If you would like to stop participating, simply close your browser.

COMPENSATION FOR ILLNESS AND INJURY

If you chose to complete the survey, this does not waive any of your legal rights. However, in the event of harm arising from this study, neither Old Dominion University nor the researchers are able to give you any money, insurance coverage, free medical care, or any other compensation for such injury. In the event that you suffer injury as a result of participation or have any questions about this research project, you may contact Dr. Michelle Kelley at 757-683-4459 at Old Dominion University, who will be glad to review the matter with you.

VOLUNTARY CONSENT

By continuing to the next page, you are saying several things. You are saying that you have read this description of the survey and that you are satisfied that you understand the survey and its risks and benefits. If you have any questions later on, then the researchers should be able to answer them: Dr. Michelle Kelley: mkelley@odu.edu, 737-683-4459 and Ashley Doane: adoane@odu.edu. Additionally, you may contact George Maihafer, IRB chairperson: 757-683-4520 and the Office of Research: 757- 683-3460.

APPENDIX C

Video Scripts

Parts: Male 1-5; Female 1-7; Jim (Male)

Montage of information on suicide victims

Present brief summary of each story; black background, white lettering, statements fade in and out slowly; the name and age will fade in by itself with no sound, then the information below it will fade in and be read.

Phoebe Prince, age 15

Phoebe, an immigrant from Ireland, was new at her high school. She dated a football player, which made some of the other girls jealous. After three months of receiving mean messages through Facebook and text messages and being bullied at school, Phoebe hanged herself in January 2010. Nine teenagers were charged with various crimes connected to the suicide. Three of these students were expelled from school. –ABC News, March 29, 2010 *(http://abcnews.go.com/Technology/TheLaw/teens-charged-bullying-mass-girl-kill/story?id=10231357)*

Information slide

Cyberbullying is defined as intentionally and repeatedly harming others through the use of electronic devices, such as computers or cell phones (Hinduja & Patchin, 2009).

Script 1:

Female 1 is looking at her cell phone; multiple text messages keep coming with hurtful messages (flash text across bottom of screen as she receives each one: You're such a slut! You are a total bitch! Lose some weight, cow!) She reads the messages and starts looks hurt.

Female 1 is then being interviewed about her experiences with cyberbullying via text messaging and how it makes her feel:

Female 1: I get texts like this all the time. I don't understand why people are doing this to me. I don't even know who they are! I even had to call my phone company to block the numbers but they just keep coming from more and more people. It just… (long pause, chokes back tears) it just really hurts sometimes. I just wish they would stop. How would they feel if someone did this to them?

Information slide

Cyberbullying occurs via a number of electronic modes of communication. The most common ways to cyberbully others include instant messaging (IM; e.g., Kowalski & Limber, 2007), MySpace (e.g., Wright, Burnham, Inman, & Ogorchock, 2009), and text messaging (e.g., Raskauskas & Stoltz, 2007).

Script 2:

Female 2 Interview:

Female 2 (*narrating all the way through*): I got an IM from someone I thought was this guy in my English class. We had talked a few times before and after class and in study group a couple of times.

(IM from pops up on AIM window).

Female 2: In the IM he told me how much he liked me so I told him how I really liked him too but that I was just too shy to say anything.

(Female 2 smiling and typing on computer, giggling and occasionally biting her lip or some other nervous/excited motion)

Female 2: I was so happy that he felt the same about me.

(Transitions to school hallway or most convenient set, Male 1 is standing with a friend and talking)

Female 2: When I saw him the next day I walked up to him to say "hi" and give him a little hug.

(Female 2 walks up to Male 1 smiling, says "hi", and tries to give him a small hug as he dodges and gives a strange look while his friends start laughing.)

Female 2: He looked at me like I was crazy while his friends couldn't stop laughing.

(Female 2 walks off fighting back tears of frustration and confusion).

Female 2: I found out later that the person I "thought" I was talking to was his friend. He was just pretending to be the guy I liked. I felt so stupid and hurt. For a while, I was depressed. It took me so long to get over it, and our friendship just wasn't the same after that.

Ryan Halligan, age 13

Ryan had been bullied in school and online frequently while growing up. In one of many cyberbullying incidents, a pretty girl at school pretended to like Ryan while talking to him online over the summer. When Ryan returned to school in the fall, he discovered the girl had only pretended to like him so he would share personal information that she then shared with others. In October 2003, Ryan committed suicide. - www.ryanpatrickhalligan.org

Script 3:

Male 2 and Male 3 Interview (both sitting together in dorm living room):

Male 2: Yeah I've had a few bad experiences on the internet.

(One at a time, forming a collage, show a few photos of male at a bar holding a beer bottle, while looking drunk. For effect, add photo-taking sound as each photo is shown.)

(Transition to a dorm room where Male wakes up in bed looking rough and hungover. Male picks up laptop and puts it in his lap to check his Facebook.

Male 2: (*narrating*): I knew I was in trouble as soon as I saw those pictures come up on Facebook. Some guy I barely know posted them and tagged me in them.

Male 2 (*narrating*): My whole family is on Facebook. On top of that, I just turned 19. I took them down as fast as I could, but before I could un-tag them, my sister had already seen them. She showed the picture to my parents and they were really pissed. They almost wouldn't let me live on campus anymore. I know I screwed up but I couldn't believe that someone would do this to me. Now my parents don't trust me. They worry about me all the time. It sucks.

Male 3:
Man, that really does suck. (*pause*) I've had people insult me on MySpace constantly. They have posted comments like "What is a loser like you doing on MySpace, you don't have any friends," and "Nice picture, did you fall from the ugly tree and hit every branch on the way down?" I try to act like it doesn't bother me, but it's upsetting. Other people see these comments and I wonder if they believe them. Sometimes even more people join in. *(pause.)*I know they probably just think it's funny, but it really makes me feel bad about myself.

Information slide

Research has shown that some of the most common forms of cyberbullying include insulting others (such as name calling; e.g., Juvonen & Gross, 2008), deceiving others (e.g., Vandebosch & Van Cleemput, 2009), and posting an embarrassing picture of

someone (e.g., Doane, Kelley, Cornell, & Pearson, 2008). Additional common types of cyberbullying include gossiping about others, changing another person's computer password, threatening others, and sending inappropriate messages.

Script 4

Female 3 *(narrating)*: I saw a guy I know cyberbullying someone in my dorm.

(A male (Jim) is walking down a dorm hallway posting flyers with an embarrassing picture of a guy taken in a bathroom; the picture will be of a guy's feet in a bathroom stall with his pants around his ankles.)

Female 3 *(walks up to Jim)*: Hey Jim, what are the flyers for? Is there a party coming up?
Jim *(with confidence)*: No, no party. But check this out *(hands female a copy; zoomed image of flyer shown)*. It's that dork on the second floor. I took the picture with my cell phone. I posted it on Facebook but he untagged himself, so now I'm posting them around the dorm. Help me put some up.

Female 3 *(narrating)*: I couldn't believe he just assumed I would help him. Like it was no big deal.

Female 3 *(looks at the flyer, then looks at Jim with a look of disapproval)*: And this is supposed to be funny?
Jim *(still confident)*: Well, yeah. That's the point! It's freakin' hilarious!
Female *(rolls eyes)*: This isn't funny, it just makes you look dumb. I'm not going to put these up, no way. You should take these down before someone sees them. *(Shakes head and walks away)*

Female 3: I quit talking to him after that. It would be a waste of my time to hang out with people like that.

Megan Meier, age 13

A 16-year-old boy on MySpace named Josh Evans initially befriended and flirted with Megan. He eventually ended the relationship and told her the world would be better off without her. In October 2006, minutes after receiving the message from Josh, Megan hanged herself. It was later discovered that "Josh Evans" was a fictional person created by an adult, her daughter, and her assistant as an attempt to spy on Megan. -ABC News, November 26, 2008
(http://abcnews.go.com/TheLaw/Technology/story?id=6338498&page=1)

Script 5

A group of male and female friends are sitting around outside talking about cyberbullying.

Female 4: I don't really know anyone who has been cyberbullied. Or at least no one talks about it if they do.

Male 4: I know someone that has gotten text messages saying things like "Hey loser enjoying the party you didn't get invited to?" and messages calling her hideous and stuff. It got pretty bad and she had to change her number.

Female 5: People who do that stuff are immature. It's like they are still in middle school. I've seen people get called names like fat ass or ugly bitch...It's like they think they can say whatever they want because they have the luxury of hiding behind a computer screen.

Male 5: Yeah, those people make themselves look stupid. They're the only ones that think that what they do is cool. All they really do is make other people feel miserable about themselves.

Information slide

A recent study of college students found that 16% had been cyberbullied and 13% had cyberbullied others in the past year (Doane & Kelley, 2010).

Script 6

Female interview 6

Female 6: One day I forgot to log out of MySpace before leaving my dorm room.

(Female 6 steps away from laptop and grabs purse, leaves MySpace open, and exits the room; her roommate, Female 7 then enters and starts using her laptop)

Female 6: While I was gone, my roommate changed my status to say "Whore for hire, gone to work." It was up several hours before I realized it.

(Female 6 returns to room, sets down her purse, and sits back down at her computer. She looks upset as she discovers the message)

Female 6: I found out later that she posted weird messages on other people's pages from my account, including my coordinator at my internship site. She thought it was funny, but I was pretty upset about it. My reputation was almost ruined. I really wanted a recommendation from my internship director. Now I feel really weird asking her for a rec letter but I really need it. I'm starting to look for jobs at the end of the semester.

Information slide (Consequences)

Victims of cyberbullying often feel angry, sad (e.g., Beran & Li, 2005), depressed (e.g., Ybarra, 2004), and report low self-esteem (Hinduja & Patchin, 2009). Victims of cyberbullying are also at greater risk for school-related problems (Hinduja & Patchin, 2007), alcohol and drug use, and delinquent behavior (Ybarra & Mitchell, 2004). In fact, one study showed that victims of cyberbullying were more likely to have suicidal thoughts and to attempt suicide (Hinduja & Patchin, in press).

Tyler Clementi, age 18

In September 2010, Tyler's college roommate and another student broadcasted two sexual encounters between Tyler and another man via webcam. The day after the second broadcast, Tyler committed suicide by jumping off the George Washington Bridge. The two students are facing criminal charges and could serve time in prison. –CBS News *(http://www.cbsnews.com/8301-504083_162-20018088-504083.html)*

APPENDIX D

Measures

Knowledge

1) Cyberbullying is best defined as:
A. Offending or harming others online
B. Intentionally and repeatedly harming others through the use of computers or cell phones
C. Using electronic devices such as computers or cell phones to play jokes on others
D. Severely harassing of others through computers or cell phones

2) Three of the most common ways to cyberbully others are:
A. MySpace, Twitter, and instant messaging (IM)
B. text messaging, chat rooms, and MySpace
C. instant messaging (IM), MySpace, and text messaging
D. chat rooms, Facebook, and instant messaging (IM)

3) Which of the following is NOT one of the most common forms of cyberbullying?
A. Sending an unwanted sexual message to others
B. Deceiving others
C. Posting embarrassing pictures of others
D. Insulting others

4) In a recent survey of college students, what percentage of college students had cyberbullied others in the past year?
A. 5%
B. 13%
C. 33%
D. 42%

5) Which of the following are individuals who have been cyberbullied at greater risk for?
A. School related problems
B. Alcohol and drug use
C. Attempted suicide
D. All of the above
E. A and C only

Behavior

Cyberbullying Experiences Survey (Perpetrator Scale; Doane & Kelley, 2010)

Response scale:
(5) Everyday/almost everyday
(4)
(3)
(2)
(1)
(0) Never

In the past month:

1. I have cursed at someone electronically.
2. I have been mean to someone electronically.
3. I have called someone mean names electronically.
4. I have sent a rude message to someone electronically.
5. I have made fun of someone electronically.
6. I have teased someone electronically.
7. I have pretended to be someone else while talking to someone electronically.
8. I have lied about myself to someone electronically.
9. I have posted an embarrassing picture of someone electronically where other people could see it.
10. I have sent an inappropriate message to someone electronically.
11. I have posted a picture electronically of someone doing something illegal.
12. I have posted a picture of someone electronically that they did not want others to see.
13. Someone has shared personal information with me electronically when I pretended to be someone else.
14. I have tried to get information from someone I talked to electronically that they did not want to give.
15. I have asked a stranger electronically about what they are wearing.
16. I have sent an unwanted sexual message to someone electronically.
17. I have tried to meet someone in person that I talked to electronically who did not want to meet me in person.
18. I have sent a message to a person electronically that claimed I would try to find out where they live.
19. I have sent an unwanted pornographic picture to someone electronically.
20. I have sent an unwanted nude or partially nude picture to someone electronically.
21. I have sent a message electronically to a stranger requesting sex.

Attitudes

Response scales:

(5) Good	(5) Beneficial	(5) Enjoyable
(4)	(4)	(4)
(3)	(3)	(3)
(2)	(2)	(2)
(1)	(1)	(1)
(0) Bad	(0) Harmful	(0) Unenjoyable

1. For me to curse at someone electronically in the forthcoming month is
2. For me to be mean to someone electronically in the forthcoming month is
3. For me to call someone mean names electronically in the forthcoming month is
4. For me to send a rude message to someone electronically in the forthcoming month is
5. For me to make fun of someone electronically in the forthcoming month is
6. For me to tease someone electronically in the forthcoming month is
7. For me to pretend to be someone else while talking to someone electronically in the forthcoming month is
8. For me to lie about myself to someone electronically in the forthcoming month is
9. For me to post an embarrassing picture of someone electronically where other people could see it in the forthcoming month is
10. For me to send an inappropriate message to someone electronically in the forthcoming month is
11. For me to post a picture electronically of someone doing something illegal in the forthcoming month is
12. For me to post a picture of someone electronically that they do not want others to see in the forthcoming month is
13. For me to have someone share personal information with me electronically while I pretend to be someone else in the forthcoming month is
14. For me to try to get information from someone electronically that they do not want to give in the forthcoming month is
15. For me to ask a stranger electronically about what they are wearing in the forthcoming month is
16. For me to send an unwanted sexual message to someone electronically in the forthcoming month is
17. For me to ask electronically to meet someone in person who does not want to meet me in person in the forthcoming month is
18. For me to send a message to a person electronically that claims I will try to find out where they live in the forthcoming month is
19. For me to send an unwanted pornographic picture to someone electronically in the forthcoming month is
20. For me to send an unwanted nude or partially nude picture to someone electronically in the forthcoming month is
21. For me to send a message electronically to a stranger requesting sex in the forthcoming month is

Perceived Norms

Injunctive Norms

Response scale:
(5) Approve
(4)
(3)
(2)
(1)
(0) Disapprove

1. My peers would _____ of my cursing at someone electronically in the forthcoming month
2. My peers would _____ of my being mean to someone electronically in the forthcoming month
3. My peers would _____ of my calling someone mean names electronically in the forthcoming month
4. My peers would _____ of my sending a rude message to someone electronically in the forthcoming month
5. My peers would _____ of my making fun of someone electronically in the forthcoming month
6. My peers would _____ of my teasing someone electronically in the forthcoming month
7. My peers would _____ of my pretending to be someone else while talking to someone electronically in the forthcoming month
8. My peers would _____ of my lying about myself to someone electronically in the forthcoming month
9. My peers would _____ of my posting an embarrassing picture of someone electronically where other people could see it in the forthcoming month
10. My peers would _____ of my sending an inappropriate message to someone electronically in the forthcoming month
11. My peers would _____ of my posting a picture electronically of someone doing something illegal in the forthcoming month
12. My peers would _____ of my posting a picture of someone electronically that they did not want others to see in the forthcoming month
13. My peers would _____ of my having someone share personal information with me electronically while I pretend to be someone else in the forthcoming month
14. My peers would _____ of my trying to get information from someone electronically that they do not want to give in the forthcoming month
15. My peers would _____ of my asking a stranger electronically about what they are wearing in the forthcoming month
16. My peers would _____ of my sending an unwanted sexual message to someone electronically in the forthcoming month
17. My peers would _____ of my asking electronically to meet someone in person who does not want to meet me in person in the forthcoming month

18. My peers would _____ of my sending a message to a person electronically that claims I will try to find out where they live in the forthcoming month
19. My peers would _____ of my sending an unwanted pornographic picture to someone electronically in the forthcoming month
20. My peers would _____ of my sending an unwanted nude or partially nude picture to someone electronically in the forthcoming month
21. My peers would _____ of my sending a message electronically to a stranger requesting sex in the forthcoming month

Descriptive Norms

Response scale:
(5) Completely true
(4)
(3)
(2)
(1)
(0) Completely false

1. My peers curse at others electronically
2. My peers are mean to others electronically
3. My peers call others mean names electronically
4. My peers send rude messages to others electronically
5. My peers make fun of others electronically
6. My peers tease others electronically
7. My peers pretend to be someone else while talking to others electronically
8. My peers lie about themselves to others electronically
9. My peers post embarrassing pictures of others electronically where other people can see it
10. My peers send inappropriate messages to others electronically
11. My peers post pictures electronically of others doing something illegal
12. My peers post pictures of others electronically that they do not want others to see
13. My peers have others share personal information with them electronically while pretending to be someone else
14. My peers try to get information from others electronically that they do not want to give
15. My peers ask strangers electronically about what they are wearing
16. My peers send unwanted sexual messages to others electronically
17. My peers ask electronically to meet others in person who does not want to meet them in person
18. My peers send messages to others electronically that claim they will try to find out where they live
19. My peers send unwanted pornographic pictures to others electronically
20. My peers send unwanted nude or partially nude pictures to others electronically
21. My peers send messages electronically to strangers requesting sex

Intentions

Response scale:
(5) Extremely likely
(4)
(3)
(2)
(1)
(0) Extremely unlikely

1. I intend to curse at someone electronically within the next month
2. I intend to be mean to someone electronically within the next month
3. I intend to call someone mean names electronically within the next month
4. I intend to send a rude message to someone electronically within the next month
5. I intend to make fun of someone electronically within the next month
6. I intend to tease someone electronically within the next month
7. I intend to pretend to be someone else while talking to someone electronically within the next month
8. I intend to lie about myself to someone electronically within the next month
9. I intend to post an embarrassing picture of someone electronically where other people could see it within the next month
10. I intend to send an inappropriate message to someone electronically within the next month
11. I intend to post a picture electronically of someone doing something illegal within the next month
12. I intend to post a picture of someone electronically that they do not want others to see within the next month
13. I intend to have someone share personal information with me electronically while I pretend to be someone else within the next month
14. I intend to try to get information from someone electronically that they do not want to give within the next month
15. I intend to ask a stranger electronically about what they are wearing within the next month
16. I intend to send an unwanted sexual message to someone electronically within the next month
17. I intend to ask electronically to meet someone in person who does not want to meet me in person within the next month
18. I intend to send a message to a person electronically that claims I will try to find out where they live within the next month
19. I intend to send an unwanted pornographic picture to someone electronically within the next month
20. I intend to send an unwanted nude or partially nude picture to someone electronically within the next month
21. I intend to send a message electronically to a stranger requesting sex within the next month

Empathy with Cyberbullying Victims

Response scale:
(5) Applies exactly
(4)
(3)
(2)
(1)
(0) Does not apply at all

1. I feel very sorry for a person who has been cursed at by others electronically.
2. I feel very sorry for a person who has had others be mean to them electronically.
3. I feel very sorry for a person who has been called mean names by others electronically.
4. I feel very sorry for a person who has received rude messages from others electronically.
5. I feel very sorry for a person who has been made fun of by others electronically.
6. I feel very sorry for a person who has been teased by others electronically.
7. I feel very sorry for a person who has had others pretend to be someone else while talking to them electronically.
8. I feel very sorry for a person who has had others lie about themselves to the person electronically.
9. I feel very sorry for a person who has had others post embarrassing pictures of them electronically where other people could see it.
10. I feel very sorry for a person who has received inappropriate messages from others electronically.
11. I feel very sorry for a person who has had others post pictures electronically of them doing something illegal.
12. I feel very sorry for a person who has had others post pictures of them electronically that they did not want others to see.
13. I feel very sorry for a person who has shared personal information with others electronically and then found out they were not who the person thought they were.
14. I feel very sorry for a person who has talked to others electronically who tried to get information from them that they did not want to give.
15. I feel very sorry for a person who has had strangers ask electronically about what they are wearing.
16. I feel very sorry for a person who has received unwanted sexual messages from others electronically.
17. I feel very sorry for a person who has had others try to meet them in person that they talked to electronically who they did not want to meet in person.
18. I feel very sorry for a person who has received messages from others electronically that claimed they would try to find out where the person lives.
19. I feel very sorry for a person who has received unwanted pornographic pictures from others electronically that were not spam.
20. I feel very sorry for a person who has received unwanted nude or partially nude pictures from others they were talking to electronically.

21. I feel very sorry for a person who has received messages electronically from strangers requesting sex.

Demographic Questions

What is your current age?

What is your gender?
_____ Male
_____ Female

What is your race/ethnicity?
_____ African-American
_____ Mexican/Hispanic American
_____ White, non-Hispanic
_____ Pacific Islander
_____ Asian-American
_____ Multicultural
_____ Other _____

What semester did you become a student at Old Dominion University?
_____ Fall 2010
_____ Spring 2011
_____ Other _____

What year are you in school?
_____ Freshman
_____ Sophomore
_____ Junior
_____ Senior
_____ Post-graduate

What is your marital status?
_____ Single, never married
_____ Divorced
_____ Married
_____ Living together
_____ Separated

Where do you live during the school year?
_____ With my parent(s)/guardian(s)
_____ On campus
_____ Off campus but not with parents/guardians

Does a parent/guardian monitor your use of computers?
_____ Yes
_____ No

Does a parent/guardian monitor your use of electronic devices (e.g., cell phone) other than a computer?
_____ Yes
_____ No

What is the highest level of education your mother completed?
_____ Some high school
_____ High school
_____ Some college
_____ Completed college (e.g., B.S., B.A.)
_____ Some courses toward a masters degree
_____ completed masters degree (e.g., M.S., M.A., M.S.W.)
_____ completed Ph.D., M.D., etc.

What does your mother do for a living (please be specific)?

What is the highest level of education your father completed?
_____ Some high school
_____ High school
_____ Some college
_____ Completed college (e.g., B.S., B.A.)
_____ Some courses toward a masters degree
_____ completed masters degree (e.g., M.S., M.A., M.S.W.)
_____ completed Ph.D., M.D., etc.

What does your father do for a living (please be specific)?

What is your parents' total or approximate yearly income before taxes?

Additional Items for Immediate Post Survey Only (Experimental group only)

Do you have any other comments about the video?

VITA

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Education

Ph.D. 2011	Ph.D. in Applied Experimental Psychology Old Dominion University
M.S. 2009	M.S. in Psychology Old Dominion University
B.S. 2007	B.S. with Honors in Psychology Old Dominion University

Publications

Kelley, M. L., **Doane, A. N.**, & Pearson, M. R. (2011). Single Military Mothers in the New Millennium: Stresses, Supports, and Effects of Deployment. In S. M. MacDermid Wadsworth & D. Riggs (Eds.), *Risk and Resilience in U.S. Military Families*, Westport, CT: Praeger Press.

Milletich, R. J., Kelley, M. L., **Doane, A. N.,** & Pearson, M. R. (2010). Exposure to interparental verbal and physical aggression and childhood physical and emotional abuse as related to physical aggression in undergraduate dating relationships. *Journal of Family Violence, 25,* 627-637.

Kelley, M. L., Klostermann, K., **Doane, A. N.**, Mignone, T., Lam, W. K. K., & Fals-Stewart, W. (2010). The case for examining and treating the combined effects of parental drug use and interparental violence on children in their homes. *Aggression and Violent Behavior, 15,* 76-82.

Select Teaching Experience

Spring 2011	Psychology 317: Quantitative Methods (Course and Laboratory Instructor) Old Dominion University
Summer 2010, Fall 2010, Summer 2011	Psychology 351: Child Psychology (Course Instructor) Old Dominion University