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The Effect of Cyber Harassment and Sex on Self-Esteem and Depression

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Running head: CYBER HARASSMENT, SEX, SELF-ESTEEM AND DEPRESSION

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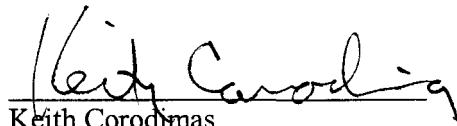
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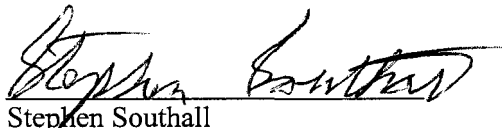
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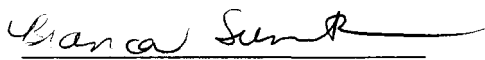
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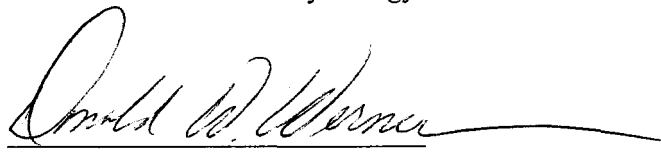
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Abstract

The current study aimed to investigate the effects of cyber harassment status and sex on self-esteem and depression levels. Participants consisted of 136 college-age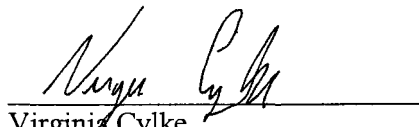d students. It was expected that instigators of cyber harassment would have the lowest self-esteem levels and victims would have higher depressive symptoms. It was hypothesized that females would show lower self-esteem and higher depressive symptoms than males. It was also expected that the victims of cyber harassment would report higher levels of depressive symptoms. Consequently, it was hypothesized that females who were victims would report more depressive symptoms than others. The data was analyzed by two-way ANOVA's. The findings did not show a significant relationship between cyber harassment and sex on depression, however there were significant findings for the self-esteem variable.

The Effect of Cyber Harassment and Sex on Self-Esteem and Depression

Physical and verbal harassment, or bullying, is a problem for many individuals in a number of different social environments such as school, family and work. Studying bullying is important because it has the potential to directly and indirectly impact many people in our society. Bullying is often characterized as a normal part of childhood development, yet there are often serious consequences associated with bullying. Over the past 30 years much research has been conducted about the characteristics of bullies, their victims and also those who are considered both bullies and victims (Casa et al., 2006; Christie-Mizell, 2003; Crick et al., 2006; Espelage & Swearer, 2003; Pelligrini & Barini, 2000; Simpson & Cohen, 2004; Veenstra et al., 2005; Whitted & Dupper, 2005; Raskauskas & Stoltz, 2004; Seals & Young, 2003).

Bullying is defined as a repeated and unprovoked aggression in which one or more persons intend to harm or disturb another person physically, verbally, or psychologically (Batsche & Koff, 1994; Boulton & Underwood, 1992; Nansel et al., 2001; Olweus, 1978; 1993; Wolke et al., 2001). Often, the bullies are attempting to gain power, prestige or goods (Espelage & Swearer, 2003). Those who are bullies use indirect or direct aggression towards their victims. Indirect aggression includes such things as rumor spreading and name-calling where a third party is involved. A similar form of bullying using indirect methods is relational aggression which was introduced by Crick and colleagues as aggression directed at damaging a relationship (Crick & Grotpeter, 1996). Direct aggression includes physical fighting and verbal threatening behavior in a

face-to-face confrontation (Crick et al, 2006; Espelage & Swearer, 2003; Whitted & Dupper, 2005; Ormel, 2005).

Those who study bullying focus on three groups of individuals. These three groups include the bully, the victim and the bully-victims (also called aggressive victims) (Espelage & Swearer, 2003; Mouttapa et al., 2004; Ormel, 2005; Patchin & Hinduja, 2006; Seals & Young, 2003; Smokowski & Kopasz). The bullies are those who physically, verbally or emotionally harm another person over time. Bullies represented 7-15% of school-aged population according to Pelligrini (1998). According to the National Child Care Survey bullies are overly aggressive, and they enjoy being the superior over others (Pelligrini, 1998). The victims are the targets of aggressive and insensitive actions from the bullies, and they usually do not defend themselves. Most victims appear to have rather quiet and submissive personalities. Between 2-10% of the student population is comprised of victims (Pelligrini, 1998), who are characterized by their quiet and reserved attitudes. The bully-victims or aggressive victims are those who bear the brunt of the bullies' aggression but also engage in bullying others. Pelligrini (1998) found that bully-victims make up 2-10% of the student population. These individuals tend to be restless and aggressive.

Although the exact prevalence of bullying is difficult to pinpoint, many studies suggest that bullying is common for a variety of age groups from preschool through adulthood (Espelage & Swearer, 2003). Crick and colleagues (2006) observed preschool aged children behaving relationally and physically aggressive in a longitudinal study over a period of 18 months suggesting even 3-5 year olds are victimizing their peers. Bullying has been shown to increase from primary to secondary school and then decrease again

with age (Beran & Li, Borg, 1999 2005; Pelligrini & Bartini, 2000;Pelligrini & Long, 2002). A recent study surveyed close to 16,000 students in grades 4-6, 25% of those students admitted to bullying another student within 3 months prior to taking the survey (Nansel, Haynie & Simons-Morton, 2001). Results of Pelligrini and Bartini's (2000) study are relevant to students who are in primary school and middle school. Bullying behavior increased from the end of fifth grade through the fall of sixth grade and then declined. Based on these findings, they suggest that children use bullying as a strategy to establish dominance. The students are establishing dominance by using bullying behavior more so when they enter a new school environment in their transition from 5th grade (elementary school) to 6th grade (middle school). A similar study investigated the prevalence of bullying and victimization in 7th and 8th graders in which 24% of those participants reported being involved in bullying. Of this 24%, 10% reported bullying others, 13% were victimized and 1% characterized themselves as bully-victims. For this age group, results suggested that males were more involved in bullying than females (Seals & Young, 2003). Although not much research has been conducted using high school and college students regarding the prevalence of bullying, there is an implication that this behavior still occurs beyond the school aged years. A study done to examine the prevalence of bullying in college by students suggested that there is still a substantial amount of bullying occurring amongst students the collegiate level (Chapell, Casey, De la Cruz, Ferrell, Forman, & Lipkin, 2004). Results showed that over 60% of the students reported having observed a student being bullied by another student. These results do not follow theories claiming that bullying decreases with age, but instead it supports the concept of bullying being consistently common throughout all ages even into adulthood.

Researchers that have focused on bullying in the workplace, demonstrated that bullying continues well into adulthood (Simpson & Cohen, 2004).

Researchers have also examined sex differences in cases of bullying and victimization. In general, it has most often been reported that males are more likely to be victims of traditional bullying (Casa et al, 1998; Li, 2006; Mouttapa et al, 2004; O'Moore & Smith, 1997). Although, most studies have results which show males are more likely to be victims of bullying, there are some studies with different results. For instance, results from Seals and Young (2003) study show that males made up only 43.6% of victims, which means more females were victims of bullying. A more unique finding on sex differences was exposed by Craig and Pepler (2003), their results state that in general boys and girls reported being victimized at relatively similar rates, suggesting that sex might not be a risk factor for victimization of bullying.

Most of the studies on traditional bullying claim males are also more likely to be bullies than females (Chapell et al, 2004; O'Moore, Kirkham, & Smith, 1997; Seals and Young, 2003). Results of Crick and colleagues (2006) suggested that girls are more relationally aggressive than their male peers, while males are more physically aggressive than the females. A study comparing bullies, victims, and bully-victims as well as those preadolescents who did not engage in bullying behavior conducted by Veenstra, Siegwart, Oldenhinkel, Winter, Verhulst, & Ormel (2005) found very unique results as to the sex differences in the frequency of bullying behaviors. They found significant differences in bullying frequency between boys and girls as well as according to the students' bullying status. Results showed that boys were 2.5 times more likely to be bully-victims and girls were almost 2 times more likely to be victims of bullying. It has

also been found that females are more involved in the indirect, covert forms of bullying such as relational aggression. Relational aggression often times is used to damage relationships by starting rumors or name-calling. Males are more likely to use physical aggression, such as pushing, hitting or even fighting (Li, 2006).

Many parents, school administrations and doctors have a strong interest in how bullying affects those involved, taking into consideration the possible negative consequences of traditional bullying. It has been said that bullying is linked to such things as depression, criminal behavior, anxiety and low self-esteem (Beran & Li, 2005; Chapell et al., 2004; O'Moore & Kirkham, 2001; Seal & Young, 2003; Smokowski & Kopasz, 2005; Veenstra et al., 2005). Self-esteem refers to ones over all impression of him or herself (Rosenburg, 1975). The link between bullying behavior and self-esteem levels has been evaluated by several researchers who have varying results as to how bullying effects ones self-esteem.

Having low self-esteem could negatively affect a person in many ways. O'Moore and Kirkham (2001) studied self-esteem and its relationship to bullying behavior and found that the bully-victims of all ages had the lowest self-esteem out of all three subgroups in the study. These results provide evidence that there is a difference in the self-esteem between bullies, victims and bully-victims in cases of traditional face-to-face bullying. (O'Moore & Kirkham, 2001). Seal and Young (2003) had contradictory findings, and concluded that there were no significant differences between groups in terms of self-esteem and traditional bullying statuses. The results did show a slight difference in the level of self-esteem for the bullies, non-bullies, and the victims however the differences were not statistically significant (Seals and Young, 2003).

were in the freshman class, 30% sophomore class, 21% junior class and 8% were in the senior class. In return for their participation in the current study, students were given 4 extra credit points.

Design and Procedure

The current study consisted of group sessions held at various times throughout each weekday in a classroom setting. Approximately 5-10 students attended each testing session. Upon arrival, experimenters thanked participants for attending and gave them two copies of the informed consent form. One copy was for the participant to keep and the other was signed and returned. At this time, the experimenter distributed the packet of measures to each participant. The packet contained demographic questions, a cyber harassment measure, self-esteem scale, and a depression measure. After receiving the packet the participants completed the first two pages of questions then stopped and waited for further directions from the experimenter. The experimenter pointed out that depending on the participants' response to some cyber-harassment questions some of the participants would skip several items because those questions are not applicable and others will continue to the next question. After making sure the participants understood, the experimenter told them to complete the remainder of the measures. Upon completion of the survey the participants gave the finished packet to the experimenter and then received an extra credit slip for their instructor. The entire testing session lasted approximately 40-45 minutes.

Materials

A set of measures first asked 11 demographic questions such as age, gender, sexual preference, and socioeconomic status as well as other general questions about

harm others. The problem of cyberbullying has evolved as a result of the technological revolution. According to Nua Internet Surveys more than half a billion people worldwide have Internet access (Beran & Li, 2005). The Internet is rapidly becoming more available in homes, schools, and the workplaces all around the world. Another instance of this rapid growth in technology is the increase in cell phone use. In 2003, one-third of children in the United States had their own mobile phones, compared to only one-half of children in Europe who had their own cell phones (Beran & Li, 2005). This increase in technological ways of communicating with one another has opened up a new avenue for bullying. Cyberbullying, or cyber harassment, is defined as the repeated and intentional use of cell phones, email, and websites by individuals or group to harm others (Beran & Li, 2005; Li, 2006; Patchin & Hinduja, 2006; Ybarra & Mitchell, 2004). Cyber harassment and traditional face to face bullying are similar in that the bullies in both cases have the same intent of being cruel and trying to create a power differential between themselves and their victim; however in cyberbullying anonymity comes into play.

Because the problem of cyber harassment is a relatively new phenomenon it has not been studied much. Those few studies that have been conducted contain results which are very broad and generally focused on understanding the characteristics of those who choose to cyber harass others, the prevalence of cyber harassment, and the means in which cyber harassment occurs (Beran & Li, 2005; Finn, 2004; Li, 2005; Patchin & Hinduja, 2006; Ybarra & Mitchell, 2004).

In 2005, Beran and Li studied Canadian students in grades 7 through 9, 66% of participants reported hearing about incidents of cyber harassment, 25% were actually

harassed themselves, and 25% reported actually using this technique of cyber harassment to harm others. Similar results were found more recently by Patchin and Hinduja (2006), 60% of respondents said they were affected by online behaviors either at school, at home or with friends and 30% of these adolescents reported being victims of cyber harassment. Furthermore, Finn (2004) conducted an exploratory study of college students and found that 1 in 10 participants reported cyber harassment- such as experiencing threats, insults or harassment resulting through email or Instant Messenger.

Similar to traditional bullying, cyber harassment appears to be harmful more often to males than females (Li, 2005). On the other hand, there are studies which claim gender does not play a role in prevalence of being cyber harassed or being a cyber harasser due to the anonymity effect (Finn, 2006). Although cyber harassment and traditional bullying have similar qualities, there are also some key differences. In cyber harassment, there is a new twist; the victims of cyber-bullying may not know the identity of who is harassing them. The Internet, cell phones and email open up the doorway to this anonymity effect, which is not the case in traditional face-to-face bullying.

Since there are limited resources currently available focusing on the characteristics, prevalence, and negative consequences of cyber-harassment, often times the effects are estimated or hypothesized based on expectations of traditional bullying. Beran and Li (2005) reported that more than half of students who were victims of cyber harassment, also reported victimization by another type of harassment showing that there may be a link between traditional bullying and cyber harassment. Perhaps then, this new method of harassment is also associated with some of the same negative consequences,

such as low self-esteem and depression, which are correlated with traditional face-to-face bullying.

The current study evaluated cyber harassment in college students. The main reason and importance of choosing this age group as participants is due to the high level of Internet and computer exposure that college students experience while in college. Also, understanding the prevalence of cyber harassment and negative effects it may have on those involved would be beneficial information for college campuses. If more is known about cyber harassment, then more steps can be taken to stop it from occurring.

The primary goal of the current study was to investigate the effects of cyber harassment status and sex on self-esteem and depression levels. The cyber harassment statuses were the instigators of online harassment, the victims of online harassment, the control group which is not involved in online harassment at all, and the instigator-victims who are both instigators and victims of online harassment.

According to previous research, the more children engaged in bullying others, the lower their self-esteem levels (O'Moore and Kirkham, 2001). Assuming that traditional bullying and cyber harassment will provide similar findings it was hypothesized that the instigators of online harassment would have lower self-esteem than victims or instigator-victims. When considering sex and self-esteem scores it has been shown in earlier studies that girls who had low self-esteem were associated with risky behaviors, but the same was not shown for boys (Wild et al, 2004). Thus, it was hypothesized that females would have lower self-esteem than the male participants. The interaction effect of cyber harassment status and sex on self-esteem may show that there is in fact an interaction effect between sex and cyber harassment status. Research findings showed that the

greater the frequency with which the children and adolescents were victimized the lower

their self-esteem levels were (O'Moore & Kirkham, 2001). Because of these results

claiming that adolescents exhibited this effect it is hypothesized that with college-aged

participants the women victims would report the lowest self-esteem score.

Ybarra (2004) conducted a study evaluating the linkages between depressive

symptomatology and Internet harassment among young regular Internet users and found

that victims of Internet harassment are significantly more likely to also show depressive

symptoms. Also, in general studies suggest females are more likely to be depressed than

males beginning in adolescence. Therefore, it was hypothesized that those with the cyber

harassment status of victim will report the highest levels of depression. Craig (1998)

found higher depression levels for girls in comparison to boys who were victimized;

however, these results do not claim that others involved in bullying behavior were not

showing depressive symptoms as well. It was hypothesized that females would report

higher levels of depression. Moreover, females who are victims would report the highest

level of depression compared to other harassment groups.

<div align="center">Method</div>

Participants

Participants were 102 female and 45 male undergraduate students at a small

liberal arts college. Participants ranged in age from 18-38 years old, with the mean age

being 20. Approximately 89% of the participants reported being Caucasian, 7% African

American, 2 % Hispanic and 2% were other (including Asian). Fifty-one percent of

participants reported being in the middle class, 46% upper-middle class, and 3% of the

participants comprised the lower and upper class. Forty-one percent of the participants

were in the freshman class, 30% sophomore class, 21% junior class and 8% were in the senior class. In return for their participation in the current study, students were given 4 extra credit points.

Design and Procedure

The current study consisted of group sessions held at various times throughout each weekday in a classroom setting. Approximately 5-10 students attended each testing session. Upon arrival, experimenters thanked participants for attending and gave them two copies of the informed consent form. One copy was for the participant to keep and the other was signed and returned. At this time, the experimenter distributed the packet of measures to each participant. The packet contained demographic questions, a cyber harassment measure, self-esteem scale, and a depression measure. After receiving the packet the participants completed the first two pages of questions then stopped and waited for further directions from the experimenter. The experimenter pointed out that depending on the participants' response to some cyber-harassment questions some of the participants would skip several items because those questions are not applicable and others will continue to the next question. After making sure the participants understood, the experimenter told them to complete the remainder of the measures. Upon completion of the survey the participants gave the finished packet to the experimenter and then received an extra credit slip for their instructor. The entire testing session lasted approximately 40-45 minutes.

Materials

A set of measures first asked 11 demographic questions such as age, gender, sexual preference, and socioeconomic status as well as other general questions about

participants.   General Internet usage was evaluated next.   Questions were targeted at

evaluating the amount of time participants spend using email, instant messenger, and

their overall confidence in their ability to use the Internet.   Finally, participants

completed a measure assessing cyber harassment, a self-esteem scale, and a measure of

depressive symptoms.

Cyber harassment.   Cyber-harassment was assessed by 43 questions that focused

on evaluating the participants' frequency of being cyber harassed, cyber harassing others,

what mediums were used when cyber harassment occurred, etc. (See Appendix A)   This

measure was created from Quing Li's (2006) original measure of cyber-bullying among

children and it was added to and modified.   Li's original measure was used with young

children, and for the purpose of the current study many changes were made in order to

make the measure more appropriate for college-age students as well as to expand on the

assessment of cyber harassment.   Most of the questions in the cyber harassment measure

used a 5 point Likert scale.   An example question would be, " Indicate how frequently

you have experienced any harassment via Internet, text message, etc in the past year?"

The answers that the participants are gave ranged from 1 (never) to 5 (almost every day).

In order to analyze findings from this measure a total cyber victimization value was

calculated based upon the participants' response to 6 items asking about frequency of

experiencing various types of cyber harassment.   A total score of instigating cyber

harassment was also calculated using 6 items which asked about participants' frequency

of instigating each of the different types of cyber harassment. Using these total scores, or

sums, the individuals were categorized based upon their overall experience of cyber

harassment. Scores of 7 and below indicated participants never experienced or instigated

any type of cyber harassment and these individuals were categorized as neither, or control group. A total score of 9 or more indicated that participants experienced or instigated cyber harassment multiple times in the past year. Based upon these scores all participants were either categorized as victims only, instigators only, or instigator-victims.

Self Esteem. Participants' self-esteem was measured using the Rosenberg Self Esteem Scale (Rosenberg, 1965). See Appendix B for the complete measure. The RSE is a 10-item measure of global self-esteem. Five of the items are positively worded and the other five are negatively worded, each has answers that are rated on a 4-point Likert scale ranging from strongly disagree to strongly agree. Examples from the measure include: " On the whole, I am satisfied with myself," and "At times, I think I am no good at all." This measure of self-esteem was used in the current study to evaluate self-esteem due to its proven validity and reliability in numerous past studies.

Depression. The measure used to evaluate the participants' level of depressive symptoms was the Center for Epidemiologic Studies Depression Screening Scale (Radloff, 1977). (See Appendix C) It is a 20-item depression scale developed for the general population. The questions asked about feelings and behaviors participants may have experienced within the past week. The answer choices given were on a 4-point Likert scale where 1 signified rarely or none of the time and 4 represented most or all of the time. Some examples of the questions are: "I talked less than usual," or "I felt I was just as good as other people." This depression screen was chosen because it has been proven reliable in previous studies and the results can be scored easily. Scores can range from 0-60 and any score over 16 is considered depressed.

Results

A total of 2 two-way analyses of variance were performed. The first two-factor ANOVA was conducted in order to evaluate the effect of harassment status and sex on participants' self-esteem as well as evaluating the interaction between these two independent variables. The second two-way ANOVA evaluated the effect of the same two independent variables: harassment status and sex on the participants' levels of depression as well the interaction between the two independent variables.

The initial hypotheses of the current study included an instigator-only group. However, this group was not included in the analyses of this study because only 3 participants fit into that category. Due to the small sample size, the instigator-only group could not be used for comparison, and is not included at all in the statistical results. Therefore only three of the original four harassment status groups were used in the analyses of data; they are: control group, victim-only group, and instigator-victims group.

The first main effect analyzed was the effect of harassment status on self-esteem. It was hypothesized that the instigator group would have the lowest self-esteem out of all of the harassment statuses. The mean self-esteem score for the control group was 22.39 (SD= 4.90, N=46), while the mean self-esteem score for the victim-only group was 22.13 (SD=6.10, N=31). The last status group evaluated was the instigator-victim group with a mean self-esteem score of 20.38 (SD=4.88, N=45). Results did reveal a significant difference in self-esteem scores between the different cyber harassment groups F (2, 116)= 4.71, p< .05. See Figure 1. Therefore, these results do not support the original hypothesis because the instigator group was not used in the analyses of data.

The next main effect analyzed was the effect of participants' sex on self-esteem scores. It was hypothesized that female participants would have lower self-esteem scores

than males. The mean self-esteem score for females was 21.18 (SD=5.03, N=90), while the mean self-esteem score for males was 22.72 (SD=5.80, N=32). The results revealed a marginal difference, but not significant difference in the self-esteem scores between males and female participants, F (1, 116)= 3.35, p=. 07. Therefore this hypothesis was not supported.

The interaction effect of sex and cyber harassment status on self-esteem level was analyzed next. It was hypothesized that female victims would report the lowest self-esteem scores. Descriptive statistics are listed in Table 1. Results revealed a significant interaction effect of harassment status and sex on self-esteem scores F (2,116)= 3.06, p=. 05. Males who were instigator-victims had significantly lower self-esteem scores than the male control group according to post hoc analyses. (See figure 2). However, the original hypothesis was not supported.

The next two-way ANOVA analyzed the effects of cyber harassment and sex on depressive symptoms. The first main effect analyzed was harassment status on level of depression. It was hypothesized that the victims would report the highest levels of depression out of all of the cyber harassment groups. The mean depression score for the control group was 15.08 (SD= 10.03, N=46), while the mean depression score for the victim-only group was 15.77 (SD=9.54, N=30). The last status group evaluated was the instigator-victim group with a mean depression score of 15.98 (SD=8.90, N=45). A score of 16 or higher on this depression scale would have been considered depressed. Results did not reveal a significant difference in depression scores between the different cyber harassment groups F (2, 115)= .92, p> .05. Therefore, these results do not support the original hypothesis.

The main effect of participants' sex on depression scores was next analyzed. It was hypothesized that female participants would report higher depression scores than males. The mean depression score for females was 16.19 (SD=9.50, N=89), while the mean depression score for males was 13.90 (SD=9.1, N=32). The results revealed no significant difference between female and male depression scores, F (1, 115)= 2.22, p>. 05. Therefore this hypothesis was not supported.

The interaction effect of sex and cyber harassment status on depression was then analyzed. It was hypothesized that female victims would report the highest depression scores. Descriptive statistics are listed in Table 2. Results did not reveal a significant interaction effect of harassment status and sex on depression scores F (2,115)= 2.17, p> 05. The original hypothesis was not supported by these findings.

Discussion

More than 75% of participants in the current study were involved somehow in the act of cyber harassment within the past 12 months. Although the initial hypothesis predicted that instigators would have the lowest self-esteem scores it was not possible to support this hypothesis due to a low number of participants who were considered solely instigators; (N=3) this status group was not included in the analysis of data. Results showed the self-esteem scores to be significantly lower in the instigator-victim group. It is possible that the reason instigator-victims reported the lowest self-esteem was because they were the only status group analyzed with participants who were instigators of cyber harassment. These results would still be consistent with those of O'Moore and Kirkham (2001) whom claimed that students who bully others have low self-esteem. However, the authors also mentioned that the bully-victims of traditional bullying, comparable to the

instigator-victims of cyber harassment, could also have the low self-esteem scores because not only are they bullying others, but they are also being bullied (O'Moore & Kirkham, 2001). Current findings show instigator-victims had the lowest self-esteem which could be influenced by many factors. First, it is possible that those in the instigator-victim group already had low self-esteem and once they were harassed, their self-esteem level went down even more. Cyber harassing the person who initially harassed them, to get back at them may have been a way that they could get back at the person as well as a way to try and raise their own self-esteem. It is also possible that people in this group had low self-esteem and in order to make themselves feel better, and in hopes of raising their self-esteem, they instigate cyber harassment. However, those who they harass end up getting them back, so they become instigator-victims of cyber harassment. Therefore, instigator-victims are caught up in both sides of cyber harassment.

The original hypothesis for the effect of sex on self-esteem scores of the current study was that females would score significantly lower on self-esteem. This was not supported by the findings of the current study. There were no significant differences found between the scores of male and female self-esteem scores. However, there was a marginal difference between the self-esteem scores reported by males and females, showing that female had slightly lower self-esteem scores as originally expected based on previous research (Wild et al., 2004). Results of the current study do not fully support previous research however they do somewhat show that in general, the female participants reported lower self-esteem scores. Perhaps the difference may have been statistically significant if there were more participants used in the current study, as well as more male representation in the sample.

The results of the interaction effect between sex and cyber harassment status was estimated to show that women victims had the lowest self-esteem among all other possible combinations. The results of the current study did not support this hypothesis and instead exhibited a significant lower self-esteem score for the male instigator-victims. These results were surprising taking into account that females were most often associated with low self-esteem. However, the instigator-victims showing the lowest self-esteem for the interaction effect are consistent with earlier findings of the current study. Results show that males are affected significantly more by being instigator-victims than females were, the mean self-esteem scores for women hardly changed at all based on the status group they were in, but the self-esteem score for men varied. Perhaps, because men are socialized to have high self-confidence and have egos they were more likely to be affected negatively by their role as an instigator victim.

The findings of the current study about the effect of cyber harassment and sex on depression were not very conclusive. None of the results were significant; therefore none of the original hypotheses about depression were supported. Perhaps if another depression measure was used, which was more sensitive to depressive symptoms or had more questions in order to further measure depression there may have been a larger difference. Also, it is possible that those participants who came out and volunteered to help out in the current study were not depressed, but rather more outgoing and self-confident. Perhaps those who did have depressive symptoms are less likely to come out to participate in a study. The results of this study do not show to be in agreement with previous research which states that there are significant differences between male and female depression, as well as between instigators, instigator-victims and victims.

Because, of this research the initial hypothesis for the interaction effect stated that the females who were victims would be most depressed and that was not supported either by our results.

The current study was relevant and important in furthering the understanding of college students' involvement in cyber harassment. Prior to this study, there were very few other studies conducted on harassment behavior and this age group. Because there were significant findings such as linking instigator-victims with the lowest self-esteem scores and male instigator-victims with the lowest self-esteem now further research can be conducted to learn more about these specific groups who were affected. Also, dedicating more questions to asking about the general cyber harassment experience may be helpful. Future research in this area may be beneficial if it were to uncover the instigator and victim relationship in terms of who started the harassment, and how this affected self-esteem levels. Then perhaps educators and administrators could target those individuals and offer services to help those with low self-esteem. It may be beneficial for college administrators to have information sessions at the beginning of each year explaining to the dangers and rules regarding cyber harassment. Having a designated place or office to report cyber harassment on campus would be a good idea, as well as having psychological support available for those affected. Investigating the relationship of cyber harassment status groups and other emotional and psychological effects would also be beneficial in future research in this area.

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Table 1:

Comparison of Means for Self-Esteem Scores

Overall Status	Sex	Mean	Standard Deviation	N
Control	Male	26.5	3.1	8
	Female	21.5	4.7	38
Victim	Male	23.5	5.1	12
	Female	21.1	6.6	19
Instigator-Victim	Male	19.3	6.2	12
	Female	20.7	4.3	33

Table 2:

<u>Comparison of Means for Depression Levels</u>

Overall Status	Sex	Mean	Standard Deviation	N
Control	Male	10.6	5.8	8
	Female	16.0	10.5	38
Victim	Male	12.0	6.7	12
	Female	18.2	10.5	18
Instigator-Victim	Male	17.9	11.8	12
	Female	15.2	7.6	33

Figure Captions

Figure 1. Mean self-esteem scores as a function of harassment status

Figure 2. Mean self-esteem score as a function of sex and harassment status

Figure 1. Mean self-esteem scores as a function of harassment status

Figure 2. Mean self-esteem score as a function of sex and harassment status
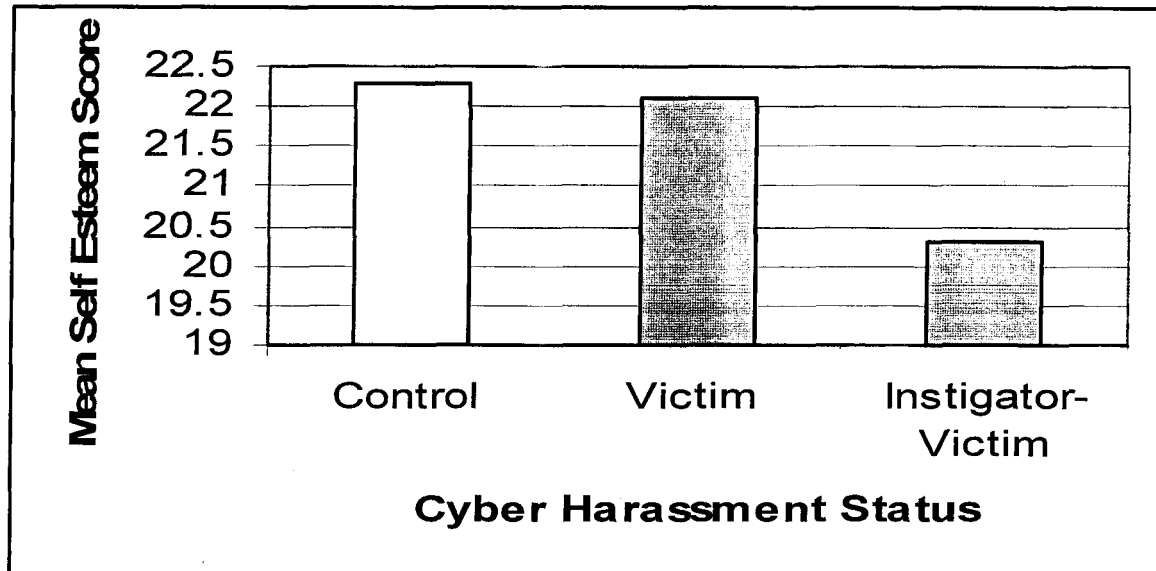
Figure 1

Figure 2:

Appendix A

Cyber harassment is a method of harassment in which an individual uses the Internet (via email, text messages, websites, etc.) or other digital communication devices to send or post harmful and/or cruel text or images. Indicate how frequently you have experienced each of the following behaviors in the past year.
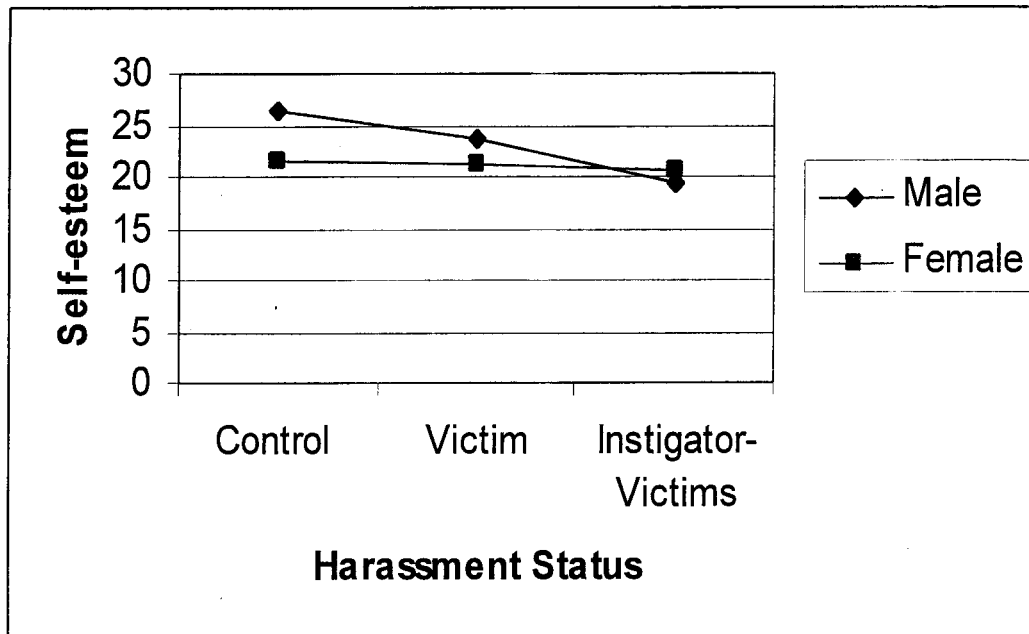
6. Indicate how frequently you have experienced any harassment via internet, text message, etc. in the past year.

1	2	3	4	5
Never	Once/Twice	A few times	Many times	Almost every day

7. In the past year, have you been sexually harassed via digital communication devices?

1	2	3	4	5
Never	Once/Twice	A few times	Many times	Almost every day

8. In the past year, have you experienced flaming (online/digital fighting):

1	2	3	4	5
Never	Once/Twice	A few times	Many times	Almost every day

9. In the past year, have you experienced general online harassment (repeated rude or offensive messages):

1	2	3	4	5
Never	Once/Twice	A few times	Many times	Almost every day

10. In the past year, have you experienced cyber stalking (repeated online threats/intimidation):

1	2	3	4	5
Never	Once/Twice	A few times	Many times	Almost every day

11. In the past year, have you experienced online denigration (sending/posting cruel gossip/rumors):

1	2	3	4	5
Never	Once/Twice	A few times	Many times	Almost every day

12. In the past year, have you experienced online impersonation (someone posing as you and sending messages to make you look bad):

1	2	3	4	5
Never	Once/Twice	A few times	Many times	Almost every day

13. In the past year, have you experienced online outing (someone sharing your secrets)

1	2	3	4	5
Never	Once/Twice	A few times	Many times	Almost every day

14. In the past year, have you experienced online exclusion (intentionally excluding from online group)

1	2	3	4	5
Never	Once/Twice	A few times	Many times	Almost every day

15. How likely would you be to report cyber bullying to a campus resource center that focused primarily on dealing with various cyber bullying issues, if such a center existed on your campus?

1	2	3	4	5

Not at all	A little	Somewhat	A lot	Very

16. In your opinion, how much of a problem is cyber bullying on your campus?

1	2	3	4	5
Not at all	A little	Somewhat	A lot	Very

Please stop and wait for experimenter before you continue.

17. About how many times have you experienced ANY form of cyber harassment in the past year? _____

18. What medium was used when you were harassed online (circle all that apply):

Email   Text Message   IM   Chat Room   Website   Other: _____

19. What medium was used MOST often when you were harassed online (circle only one):

Email   Text Message   IM   Chat Room   Website   Other: _____

20. Indicate who harassed you online (circle all that apply):

Friend   Acquaintance   Stranger   Ex-Significant Other   Don't Know

21. Indicate the sex of the individual(s) who harassed you online (circle all that apply):

Male   Female   Don't Know

22. Indicate how confident you are in your knowledge of WHO harassed you online?

1	2	3	4	5
Not at all	A little	Somewhat	A lot	Very

23. Indicate whether the source of the online harassment was the (circle only one):

Same individual(s)   Several different individuals   Don't Know

24. Did you tell an authority figure that you were harassed online (teacher, parent, counselor, etc.)?   Yes   No

25. Did you tell a friend that you were harassed online?   Yes   No

26. When you were harassed online, did you ever retaliate using cyber harassment yourself?
          Yes   No

For the next several questions, indicate how you felt after being harassed online.

27. After experiencing cyber harassment, how much did you fear for your safety?

1	2	3	4	5
Not at all	A little	Somewhat	A lot	Very

28. After experiencing cyber harassment, how sad did you feel?

1	2	3	4	5
Not at all	A little	Somewhat	A lot	Very

29. After experiencing cyber harassment, how lonely did you feel?

1	2	3	4	5
Not at all	A little	Somewhat	A lot	Very

30. After experiencing cyber harassment, how powerful did you feel?

1	2	3	4	5
Not at all	A little	Somewhat	A lot	Very

31. After experiencing cyber harassment, how angry did you feel?

1	2	3	4	5
Not at all	A little	Somewhat	A lot	Very

32. After experiencing cyber harassment, how anxious did you feel?

1	2	3	4	5
Not at all	A little	Somewhat	A lot	Very

33. After experiencing cyber harassment, how afraid did you feel?

1	2	3	4	5
Not at all	A little	Somewhat	A lot	Very

34. After experiencing cyber harassment, how embarrassed did you feel?

1	2	3	4	5
Not at all	A little	Somewhat	A lot	Very

If you answered "never" to questions 6-14, please begin answering questions here. All others, please continue to answer the following questions.

Indicate how frequently YOU have exhibited the following behaviors (toward others) in the past year.

35. Flaming (online/digital fighting):

1	2	3	4	5
Never	Once/Twice	A few times	Many times	Almost every day

36. Online harassment (repeated rude or offensive messages):

1	2	3	4	5
Never	Once/Twice	A few times	Many times	Almost every day

37. Cyber stalking (repeated online threats/intimidation):

1	2	3	4	5
Never	Once/Twice	A few times	Many times	Almost every day

Appendix B

Below is a list of statements dealing with general feelings about yourself. If you strongly agree ,circle *SA*. If you agree with the statement, circle *A*. If you disagree, circle *D*. If you strongly disagree, circle *SD*.

1. On the whole, I am satisfied with myself.   SA   A   D   SD

2. At times, I think I am no good at all.   SA   A   D   SD

3. I feel that I have a number of good qualities.   SA   A   D   SD

4. I am able to do things as well as most other people.   SA   A   D   SD

5. I feel I do not have much to be proud of.   SA   A   D   SD

6. I certainly feel useless at times.   SA   A   D   SD

7. I feel that I'm a person of worth, at least on an equal plane with others. SA   A   D   SD

8. I wish I could have more respect for myself.   SA   A   D   SD

9. All in all, I am inclined to feel that I am a failure.   SA   A   D   SD

10. I take a positive attitude toward myself.   SA   A   D   SD

Appendix C

Below is a list of some ways you may have felt or behaved. For each item, please indicate how often you have felt this way in the last week by circling the number that best describes your feelings.

	During the past week:	*Rarely* or none of the time (less than 1 day)	*Some* or a little of the time (1-2 days)	*Occasionally* or a moderate amount of time (3-4 days)	*Most* or all of the time (5-7 days)
1.	I was bothered by things that usually don't bother me.	0	1	2	3
2.	I did not feel like eating; my appetite was poor.	0	1	2	3
3.	I felt that I could not shake off the blues even with help from my family or friends.	0	1	2	3
4.	I felt I was just as good as other people.	0	1	2	3
5.	I had trouble keeping my mind on what I was doing.	0	1	2	3
6.	I felt depressed.	0	1	2	3
7.	I felt that everything I did was an effort.	0	1	2	3
8.	I felt hopeful about the future.	0	1	2	3
9.	I thought my life had been a failure.	0	1	2	3
10.	I felt fearful.	0	1	2	3
11.	My sleep was restless.	0	1	2	3
12.	I was happy.	0	1	2	3
13.	I talked less than usual.	0	1	2	3
14.	I felt lonely.	0	1	2	3
15.	People were unfriendly.	0	1	2	3
16.	I enjoyed life.	0	1	2	3
17.	I had crying spells.	0	1	2	3
18.	I felt sad.	0	1	2	3
19.	I felt that people disliked me.	0	1	2	3
20.	I could not get going.	0	1	2	3