Battle of the sexes: An examination of male and female cyber bullying

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Abstract

Cyber bullying is defined as intentional, aggressive behavior toward another person that is performed through electronic means (i.e., computers, cell phones, PDAs) (Hinduja & Patchin 2007, 2008; Reekman & Cannard, 2009). In other words, it is behavior performed on the Internet that is intended to psychologically and emotionally harm someone. The present study will explore the differences in male and female cyber bullying in an undergraduate study, specifically in regard to posting gossip online with the intent to hurt others. The results indicate there are similar predictors of cyber bullying for the sexes, as well as unique predictors for male and female undergraduates.

Keywords: Cyber crime, cyber bullying, cell phones, under graduates, gender.

Introduction

Cyber bullying is defined as intentional, aggressive behavior toward another person that is performed through electronic means (i.e., computers, cell phones, PDAs) (Hinduja & Patchin 2007, 2008; Reekman & Cannard, 2009). In other words, it is behavior performed on the Internet that is intended to psychologically and emotionally harm someone. While Hinduja and Patchin (2008) argued that in order for the behavior to be considered cyber bullying the behavior must occur over multiple instances, Wolak,

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Mitchell and Finkelhor (2007) asserted that cyber bullying does not have to involve repeated aggression by the offender. They discussed that threats or offensive behavior performed online may only involve a single post, but the repeated behavior that equates to cyber bullying is that the post could be passed on to many recipients.

Despite the dispute over the frequency of the behavior required to equate to cyber bullying, there are several online behaviors that are categorized as this form of behavior; for instance, harassment, one of the most common, involves offensive messages by the perpetrator to the recipient (aka victim); flaming is the exchange of insults in a public setting, such as a bulletin board or chat room. Further, this behavior can occur in multiple arenas online. For instance, Internet users can post untrue and cruel rumors about others peers on a social networking website, which can be seen by hundreds of online friends. Or, a cyberbully can send continuous, harassing emails or instant messages to a peer. The Internet provides multiple places that bullies can participate in offending behavior.

There have been several notable studies performed regarding the prevalence of cyber bullying and the overall findings have been consistent. For example, in a study of Internet behavior of high school seniors, Marcum (2009) found that approximately 31% of the respondents had experienced some form of harassment online. The National Children's Home study (NCH 2002) found that almost 30% of youth (ages 11 to 19 years old) polled had been cyber bullied in some form, while O'Connell (2004) found that 20% of children aged 9–16 were harassed specifically in chat rooms. Finally, Patchin and Hinduja (2006) found that 30% of respondents under the age of 18 reported being a victim of cyber bullying and 11% confessed to perpetrating cyber bullying.

This particular study will contribute to the gap in the literature by comparing the experiences of cyber bullying by each sex. Past findings regarding the separation of the sexes are not consistent, as males and females are shown to experience harassment differently depending on the study. For instance, Marcum (2010) found that 35.2% of male college freshmen had experienced some form of cyber bullying, compared to 16.0% of female college freshmen. Conversely, the National Children's Home (NCH 2002) found that females were more likely to be cyber bullied via text messaging compared to males (21% vs. 12%); however, females (3%) and males (5%) were quite comparable in regard to victimization via email (Holt & Bossler 2009; Marcum, 2010). When discussing traditional bullying (i.e., in the physical realm), research indicates that males are more involved in bullying than girls (Borg, 1999; Espelage, Bosworth, & Simon, 2000; Seals & Young, 2003). However, past research has also indicated that females tend to participate in more indirect forms of bullying, such as psychological and emotional harassment and aggression (e.g., gossiping) (Owens, Shute, & Slee, 2000; Simmons, 2003). According to Hinduja and Patchin (2008), cyber bullying involves more forms of indirect harassment, so it is fair to assume that females would be just as likely to be involved in cyber bullying as males.

There is research indicating that the assertion by Hinduja and Patchin (2008) is correct, as females have been shown to be involved in cyber bullying just as much as males (if not more). For example, Kowalski, Limber and Agatston (2005) found that middle school females in the southwestern and southeastern United States are more likely than boys to report receipt of cyber bullying (25% versus 11%), as well as initiating cyber bullying as the offender of the behavior (13% versus 8.6%). It is important to explore why females would be more prone to participation in this form of criminality. First, females tend to

participate in more indirect forms of bullying. These forms involve such techniques as psychological and emotional harassment and aggression (e.g., gossiping, catty nitpicking) (Owens, Shute, & Slee, 2000; Simmons, 2003). Further, females are generally less confrontational face-to-face (Andreou, 2001), often as a result of cultural constraints that teach them to be passive. Participating in cyber bullying allows offenders to participate in aggressive and abusive behavior with the protection of a computer screen; therefore, it is not necessary to participate in "unladylike" behavior in the physical realm. In other words, females can talk about another female behind her back or harass her online without ever having to look her in the face to see her reaction. It is easy to react more brazenly without having to face the effect of your behavior.

Present Study

As stated previously, there is a gap in the literature that explores the differences in online bullying behaviors by males and females. The present study will explore the differences in male and female cyber bullying, specifically in regard to posting gossip online with the intent to hurt others. The next section will describe the methodology used in this study, followed by the discussion of the results.

Methodology

Sample

The sample for this study was obtained through the online survey administration at a large, southeastern university in the US. The survey was sent to 19,445 students, with a final 5.9% response rate (n = 1139). Students received three waves of invitations to participate in the survey, with seven days between each invitation. One of the limitations of using an online survey is the potential low response rate (Dillman, 2007); however, due to the sheer number of the population, it was the most cost efficient choice. The final sample size is more than large enough for a study of this magnitude.

Measures

A number of measures were used in this study. The dependent measure for this study was, "In the past year, I have posted information online with the intent to hurt others in following ways: posted gossip about them". The respondents indicated their response using a 5-item response category that is anchored by never (1) to 7+ times (5). The response categories were dichotomized because of skewness in the measure.

Several independent measures were used in this study. The first three independent measures were derived from the demographic data gathered in the survey. Age was an open-ended measure. Sex was dichotomized as female (1) and male (0). Renting an apartment (1) and dormitory living (0) was dichotomized.

The next three independent measures (parent attachment, school commitment, and self-control) were utilized by creating a scale. Parent attachment was captured using three items: "I can talk about anything with my parents", "My parents always trust me", "My parents always praise me when I do well". The respondents indicated their responses using a 5-point scale anchored by none of the time (1) and all of the time (5). Higher scores on the scale indicated greater attachment. The internal consistency was acceptable at 0.70.

School commitment was captured using three items: "I try hard in school", "Education is important to me", "I complete my assignments on time". The respondents indicated

their response using 5-point scale anchored by strongly disagree (1) and strongly agree (5). Higher scores on the scale indicated greater school commitment. The internal consistency was acceptable at 0.80.

Low self-control was captured using the 24-item Grasmick, Tittle, Arneklev, and Burisk (1993) scale. The responses to items were captured using a 5-point scale anchored by strongly disagree (1) and strongly agree (5). Higher scores on the scale indicated low levels of self-control. The internal consistency was acceptable at 0.84.

The final two Internet behavior related measures are also placed in a scale. The number of hours that the respondents spent using Twitter, social network sites in general (i.e., Twitter, Facebook, MySpace), or e-mailing was captured, using a 3-point scale that was anchored by 0 to 5 hours (1) to 11 or more hours (3). Higher scores on each of the measures indicated more hours. The number of friends that respondents has that use these communication devices while on the Internet was captured using a 4-point scale that was anchored by none of them (0) and all of them (4).

Analysis Plan

The analysis plan for the present study takes place in two phases. The first phase is a presentation of the descriptive statistics. The descriptive statistics provide an indication of how the measures are distributed. To make this assessment, we present the mean, standard deviation, skewness, and kurtosis. Kline's (2004) standards of 3 for skewness and 10 for kurtosis are used to indicate a non-normal distribution.

The second phase of the present study is a presentation of the regression analysis. Regression analysis is used to understand the measures that influence the dependent measure. In the present study, dependent measure is dichotomous, so logistic regression is used here. Logistic regression is used because it does not violate the assumption of continuous dependent measures (Menard, 2002). Within the presentation of this study, the odds ratio or Exp(b) is emphasized for statistically significant measures.

Results

Phase 1

Table 1 provides a presentation of the descriptive statistics. The first set of statistics is the sample demographics. The average age for sample was 20.34. Seventy-one percent of the sample is female and sixty-three percent of the sample is white. Sixty-four percent of the sample rents an apartment rather than living in a dorm room.

We utilized three scales in the analysis section. First, the average score for the parental attachment scale is 11.65. The average score for the school commitment scale is 13.38. Finally, the average score of the low self-control scale is 58.09.

The final information reported involves online usage. The average score of the Twitter hours measure indicates that the respondents use the Twitter 0 to 5 hours per week (mean = 1.64). The average score of the number of friends that use Twitter indicates that half of their (mean = 2.12) friends use Twitter. The average score of the number of hours that the respondents use social network sites is 0 to 5 hours per week (mean = 1.71). The average score of the number of friends that use social network sites is most of them (mean = 3.31). The number of hours spent e-mailing is 0 to 5 hours per week (mean = 1.36). The number of friends that e-mail are most of them (mean = 3.01). In the past year, twelve percent of the sample had posted gossip about others with the intent hurt them.

Table 1. Descriptive Statistics

Measure	Mean	Standard Deviation	Skewness	Kurtosis
Age	20.34	1.72	0.26	–1.20
Female	0.71	----	----	----
White	0.63	----	----	----
Renting	0.64	----	----	----
Parent Attachment	11.65	2.82	–0.96	0.48
School Commitment	13.38	2.01	–2.43	9.03
Low Self–Control	58.09	11.93	0.05	0.83
Twitter Hours	1.64	0.80	0.75	–1.03
Twitter Friends	2.12	1.07	0.03	0.15
Social Network Hours	1.71	0.77	0.54	–1.11
Social Network Friends	3.31	0.77	–1.22	1.94
E-mailing Hours	1.36	0.64	1.54	1.10
E-mailing Friends	3.01	1.10	–0.89	–0.30
Gossip	0.12	----	----	----

Table 2. Logistic Regression of Using Gossip to Hurt Others

Measure	b	S.E.	Exp(b)
Age	–0.08	0.13	0.93
Female	0.93★	0.45	2.53
White	0.78★	0.36	2.18
Renting	–0.23	0.38	0.79
Parent Attachment	0.03	0.06	1.03
School Commitment	–0.04	0.08	0.96
Low Self–Control	0.04★	0.02	1.04
Twitter Hours	0.30	0.24	1.34
Twitter Friends	0.04	0.19	1.05
Social Network Hours	0.22	0.25	1.24
Social Network Friends	0.08	0.26	1.09
E-mailing Hours	0.06	0.26	1.06
E-mailing Friends	–0.15	0.16	0.86

Model Diagnostics:
Chi-Square: 27.23★★
–2 Log Likelihood: 274.49
Cox and Snell R–Square: 0.07
Nagelkerke R–Square: 0.13

★$p<0.05$, ★★$p<0.00$

Phase 2

Table 2 presents the logistic regression analysis for the present study. The results of this analysis showed that three measures were statistically significant. The first significant measure involved the sex of the respondent. Females were 2.53 times more likely to post gossip about others, in the past year, than males. The second measure, race, indicated that whites were 2.18 times more likely to post gossip about others, in the past year, than blacks. Finally, for every one unit change in self-control reduction, the likelihood of the respondents posting gossip about others, in the past year, increases 1.04 times.

Discussion and Conclusion

This research produced several important findings in regard to the occurrence of cyber bullying. First, the results indicated that females were more likely than males to post gossip online about others to hurt them. This finding confirms previous literature that asserted females participate in bullying that involves emotional and psychological abuse, which involves gossiping and spreading of information (whether true or untrue) (Owens et al., 2000; Underwood, Galen, & Paquette, 2001). Females prefer participating in behavior that is not physically confrontational, and by hiding behind the protection of a computer, they can be more brazen with their behavior.

A dramatic example of cyber bullying at its worst by the hands of a female is that of Megan Meier. Megan was a young teenager who faced the same developmental and emotional challenges experienced by most adolescent females. She befriended another teenager named Josh via her MySpace account, but after several weeks, the messages from Josh became hostile and demeaning. Megan became confused by Josh's aggressions and became devastated when he told her the world would be a better place without her. As a result of Josh's behavior, Megan committed suicide as a result of these conversions and was completely unaware of the true identity of Josh. Her parents later discovered that Josh was actually the middle-aged mother of a former friend of Megan, Lori Drew. Drew was convicted in federal court of three counts of "accessing a computer without authorization via interstate commerce to obtain information to inflict emotional distress," but the conviction was later overturned based on the terms of use of MySpace (Beckstrom, 2008).

The second finding from this data was that whites were more likely to participate in cyber bullying than blacks. While Internet users are statistically more likely to be Caucasian compared to any other race, it is not surprising that the sheer number of Caucasian users would increase the likelihood that they would offend more than other races.

Finally, results indicated that for every one unit change in self-control reduction, the likelihood of the respondents posting gossip about others increased. In other words, as a person's self-control decreases, his or her likelihood of cyber bullying in this fashion increases. Multiple studies have demonstrated that low self-control increases the likelihood of participating in many forms of criminal or deviant behavior, including cyber crimes such as digital piracy or sexual solicitation (Higgins, 2005; Higgins, Wolfe, & Marcum, 2008).

These findings are extremely important in regard to policy implications, especially in regard to the treatment and education of young women. We found that female undergraduates are more likely to participate in gossiping behavior online than males. In addition, past research has indicated that younger females are also more likely to participate in gossiping online and offline compared to males (Kowalski, Limber, &

Agatston, 2005). With these results, it is safe to assume that more resources need to be aimed at educating young women on the extent of harm they can cause by gossiping about others, no matter the location or medium. Tragic stories such as Megan Meier or Phoebe Prince, both young women who committed suicide as a result of cyber bullying and bullying in the physical realm, could have easily been prevented had their perpetrators been more aware of the cost of their crime. Two of Prince's female bullies have publicly stated they were sorry for their actions and recognized that she did not deserve the bullying treatment.

Future research could also provide confirmation of the importance of these findings. A comparative study of students at other universities (specifically in other geographic locations) would be beneficial. In addition, a longitudinal study involving following a cohort of students from middle school age to undergraduate college freshman status would be extremely beneficial to contributing to the literature.

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