

Cyberbullying in Schools

A Research of Gender Differences

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ABSTRACT This study investigates the nature and the extent of adolescences' experience of cyberbullying. A survey study of 264 students from three junior high schools was conducted. In this article, 'cyberbullying' refers to bullying via electronic communication tools. The results show that close to half of the students were bully victims and about one in four had been cyber-bullied. Over half of the students reported that they knew someone being cyberbullied. Almost half of the cyberbullies used electronic means to harass others more than three times. The majority of the cyber-bully victims and bystanders did not report the incidents to adults. When gender was considered, significant differences were identified in terms of bullying and cyberbullying. Males were more likely to be bullies and cyberbullies than their female counterparts. In addition, female cyberbully victims were more likely to inform adults than their male counterparts.

KEY WORDS: adolescents; cyberbullying; victimization

Introduction

School violence is a serious social problem (Charach et al., 1995; Clarke and Kiselica, 1997; Hoover and Juul, 1993; Hoover and Olsen, 2001) and is particularly persistent and acute during the junior high/middle school period (National Center for Educational Statistics, 1995). Much of school violence involves students bullying their peers (Boulton, 1999). According to Hoover and Olsen, 'Only a slim majority of 4th through 12th graders ... (55.2 percent) reported neither having been picked on nor picking on others' (2001; p. 11). Bullying is related to

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more serious forms of aggression and it is reported that in many school-shooting cases, bullying played a major role (Dedman, 2001).

Although many teachers and administrators now recognize the problem of school bullying, few are aware that students are being harassed through electronic communication (Beran and Li, in press). Parallel to the fast development of technology and drastic increasing adoption of such technology including the Internet and cell phones in society, many schools are enthusiastically embracing new technology. It has been found that the increasing access to new technology has the potential to increase students' social interaction and enhance collaborative learning experiences (Beran and Li, 2004). Substantial research studies have shown that computers in classrooms can have positive effects on learning of all subjects. The introduction of electronic communication into classrooms, however, also brings problems that deserve our serious consideration. One such issue of concern is that cyberbullying has become a growing problem in schools, i.e. the use of electronic communication devices to bully others. The growing number and the level of severity of cyberbullying call for our educators, researchers, administrators and authorities to take action.

But before we can tackle this problem, a better understanding of the issue is necessary. Because cyberbullying is a new territory, we know little about it. This study investigates the nature and the extent of adolescences' experience of cyberbullying, focusing on the effect of gender. A survey study of 264 junior high students in an urban city was conducted. In this article, 'bullying' refers to bullying in the traditional sense, and 'cyberbullying' refers to bullying via electronic communication tools.

Related literature

Cyberbullying is a new phenomenon resulting from the advance of new communication technologies including the Internet, cell phones and Personal Digital Assistants. Cyberbullying can be briefly defined as 'sending or posting harmful or cruel text or images using the Internet or other digital communication devices' (Willard, 2004; p. 1). According to Willard (2004), it can occur in various format including flaming, harassment, cyberstalking, denigration (put-downs), masquerade, outing and trickery and exclusion. Cyberbullying can involve stalking and death threats and can be very serious. Unlike face-to-face bullying, people often feel that cyberspace is impersonal and they can therefore say whatever they want. Further, it is reported that females prefer this type of bullying (Nelson, 2003).

Many news stories have reported cyberbullying incidents all over the world. For example, in Australia, a nine-year-old grade 4 female

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student received very pornographic emails. Her parents assumed the sender of the emails was an adult. When the source was traced by local police, it was found that the sender was actually her classmate (Thorp, 2004). A 15 year-old boy in Quebec, Canada became an unwilling 'celebrity' when a film he made of himself emulating a Star War's fight scene was posted on the Internet by some classmates. Millions downloaded the two-minute clip ... He was so humiliated he sought counseling [and dropped out of school], and his family has launched a lawsuit against his tormentors' (Snider and Borel, 2004; p. 76). In Japan, cell phone pictures of an overweight-boy, which were taken on the sly in the locker room, were distributed to many of his peers (Paulson, 2003). Another incident happened in Calabasas High School in California. 'It was a website – schoolscaandals.com – on which vicious gossip and racist and threatening remarks grew so rampant that most of the school was affected' (Paulson, 2003; p. 3).

Combating cyberbullying is more difficult for schools than people initially expected. Many bullies are anonymous. Further, under the free-speech rights, it is difficult to take down a website. In the case of the Calabasas High School, the principal did get involved after comments [on the website] caused many of his students to be depressed, angry or simply unable to focus on school.

It might have been happening off campus ... but the effects carry on into the school day ... [However], the site has more than 30,000 members and any student can post a message ... [further], getting the site stopped wasn't easy. Talking to law-enforcement officials led nowhere; there are few rules governing what can get posted on the Internet. (Paulson, 2003, Unflattering Images section, p. .5)

Cyberbullying also takes various forms and electronic communication tools – from email, listserve, cell phone to websites. In the US, a boy, using a photo-editing tool to paste a girl's face onto a pornographic photo, distributed the photo to his entire email list because he had a quarrel with the girl.

Some used websites to circulate rumors, ask students to vote on the ugliest or fattest kid in school ... When Will, a middle-schooler in Kansas, broke up with his girlfriend, she created a website devoted to smearing him. She outlined vivid threats, made up vicious rumors, and described what it would be like to see him torn apart. (Paulson, 2003; p. 1)

Aside from the many reported news stories, several surveys have been conducted to explore cyberbullying issues. In a survey conducted in Britain in 2002, it was found that one in four youngsters aging 11 to 19 had been cyber-bullied (National Children's Home, 2002). An earlier survey conducted in New Hampshire in 2000 found that about 6 percent of youths had the experience of being harassed online (Thorp,

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2004). A survey conducted in Canada showed that one-quarter of young Canadian Internet users reported that they had the experience of getting messages telling hateful things about others (Mnet, 2001).

Further, a more severe form of bullying – harassment – has also been found in cyberspace. In a small sample of developmentally delayed adolescents, Katz (2002) found that many adolescents experienced sexual harassment over the Internet. Other researchers (Spitzberg and Hoobler, 2002) reported that one-third of undergraduate students reported being stalked over the Internet. Text-based name calling, use of coarse language, profanity and personal attacks have been discovered in computer-mediated communication environments (Kiesler and Sproull, 1992; Thompson, 1994).

In a survey to a females-only listserv, one-fifth of 500 subscribers reported that they had experienced online sexual harassment (Brail, 1994). This type of harassment or intimidation takes a variety of forms ranging from “flaming” (overt attacks on a person) to highly sexual comments and visual pornography that dehumanize women’ (Soukup, 1999; p. 169) and ‘seduction under false pretences, electronic stalking, and virtual rape’ (Herring, 1995; p. 8). For example, a textually enacted ‘rape’ was conducted on MOO in which a male user controlled two female players’ characters to force the performance of sexually degrading actions on themselves (Dibbell, 1996). Another incident occurred in a support MUD for sexual abuse survivors in which a male enacted graphic sexual abuse to all participants (Reid, 1994). Anonymity inherited in many electronic communication modes ‘not only fosters playful disinhibition but reduces social accountability, making it easier for users to engage in hostile, aggressive acts’ (Herring, 2001, Synchronous CMC section; p. 7).

Two previous research studies in Canada have examined the extent and impact of cyberbullying (Beran and Li, in press; Li, in press). They found that cyberbullying not only occurs in schools, but increasingly becomes a significant problem. About one in four adolescents are cyberbully victims and they experience various negative consequences, particularly anger and sadness. Over half of adolescents reported that they knew someone being cyberbullied. In addition, a close tie was identified amongst bullies, cyberbullies and their victims. That is, bullies, compared to non-bullies, tended to be cyberbullies; while bully victims in the physical world were also likely to be bully victims in cyberspace. Further, cyberbullies were more likely to be victims in cyberspace than those who did not cyberbully.

Abundant research studies (Borg, 1999; Boulton and Underwood, 1992; Olweus, 1991; Seals and Young, 2003) found that gender plays an important role in traditional form of bullying. For instance, males are more likely to be bullied than females (Eslea and Mukhtar, 2000;

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Kumpulainen et al., 1999). They also self-reported bullying others at significantly higher rates than their female counterparts (Hoover and Olsen, 2001; Kumpulainen et al., 1998). Males with atypical gender-related behaviours were at a much greater risk for peer assault than other young men. Also, females seen as less or more attractive than others were at the highest risk for harassment (Shakeshaft et al., 1995). In the study by Crick et al. (1999) gender differences with respect to bullying were found in preschoolers as young as 3- to 5-years-old. Their research indicates that males are significantly more physically victimized than females, while females were more relationally victimized. Both types of victims experienced bigger adjustment problems than did their counterparts. Similarly, Wiseman (2002) found that males use their fists and physical threats to bully others, but females' weapons are words and behind-the-scenes school bully manipulation. These gendered patterns identified in traditional bullying leads to the question: when moved to cyberspace, does gender also affect cyberbullying related issues?

As studies and reports reviewed above suggested, cyberbullying indeed occurs, yet it is unclear whether gender plays a role in cyberbullying. This study, therefore, examines the nature and extent of students' experience of cyberbullying focusing on gender effect. Junior high students were chosen because adolescence is a time when physical aggression increases in frequency and intensity; for this reason it has been labelled a 'brutalizing' period. Correspondingly, and perhaps as an antecedent, this period also witnesses a series of abrupt changes in the social lives of youngsters (Pellegrini and Bartini, 2000; p. 700).

The nature of new technology makes it possible for cyberbullying to occur more secretly, spread more rapidly and preserve easily (such as cutting and paste messages). As this behaviour becomes recognized as a significant problem, researchers must provide information about its occurrence to inform and support educators and administrators. Considering that many Internet users are socially isolated (Mesch, 2001) and that some may even look for peer support on the Internet that incites them to act out in violence against their bullies (Beran and Li, in press), victims of cyberbullying may be at risk for experiencing poor psycho-social adjustment. Thus to support the appropriate use of technology in schools, teachers and administrators must be knowledgeable about cyberbullying, and as a result, develop appropriate preventive and intervention strategies to ensure the safety of all students.

Research questions

This study was an exploration of the cyberbullying focusing on gender effects. The primary focus was on the examination of gender differences

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in students' cyberbullying experiences. A secondary focus was on the investigation of male and female students' perception of school climates. Particularly, the following research questions guide this exploration:

1. Do male and female students have different experiences in relation to cyberbullying?
2. Are there gender differences in student beliefs about adults' prevention of cyberbullying?
3. When cyberbullying occurs, do male and female students behave differently in terms of informing adults?

Methods

Subject and instrument

The subjects for this study were randomly selected from three middle schools in a large city in Canada. A total of 264 grade 7–9 students (130 males and 134 females) completed the questionnaire. Among them, only 5.8 percent were ESL students. Further, 75.4 percent of the students were white, 6.4 percent Asian, and about 18 percent were Black, Hispanic, Aboriginal or from other ethnic groups (see Table 1 for details). Over half of the students reported above average school grades, while close to 40 percent of them reported average grades. Only a couple of the students reported below average grades.

Table 1 *Demographic of the students*

<i>Ethnicity (%)</i>			<i>Gender (%)</i>		<i>Academic achievement (%)</i>		
<i>White</i>	<i>Asia</i>	<i>Other</i>	<i>M</i>	<i>F</i>	<i>Above average</i>	<i>Average</i>	<i>Below average</i>
75.4	6.4	18.2	48.5	51.5	57.2	39.4	1.9

* $n = 264$;

**Total percentages may not add up to 100 due to missing values.

An anonymous survey adapted from previous research (Li, in press) was used which includes two major areas: students' demographic data and their experience related to cyberbullying. A total of 26 questions including the frequency of using computers were analysed to answer the research questions of this study (see Appendix 1 for details of the survey).

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Analysis

Both descriptive and inferential statistics were used to examine gender differences in junior high students' experience of cyberbullying. The statistical package SPSS (2004) was used to analyse data. Descriptive statistics were employed to provide background information such as the extent and frequencies of cyberbullying. Further, chi-square tests were used with an alpha level of 0.05 to examine possible gender differences.

Results

We first examined the extent to which student experience cyberbullying in order to gain a basic understanding of the issue. In addition to cyberbullying, students' experience of bullying was also investigated considering that adolescences' experience of bullying can inform our understanding of cyberbullying. Overall, close to half of the students were bully victims and about one in four students had been cyberbullied. Over 34 percent of the students had bullied others in the traditional form, and almost 17 percent had bullied others using electronic communication tools. In addition, 53.6 percent of the students reported that they knew someone being cyberbullied.

When male and female students' experiences were considering separately, it was found that over 22 percent of males and close to 12 percent of females were cyberbullies. However, 25 percent of males and 25.6 percent of females reported that they were cyberbullied. Table 2 provides details of male and female student reported experience.

Table 2 *Percentages of student experience of bullying and cyberbullying*

	<i>Male</i>	<i>Female</i>
Bully	40.8	27.8
Bully victim	53.7	44.4
Cyberbully	22.3	11.6
Cyberbully victim	25.0	25.6
Aware of cyberbullying	55.6	54.5

* $n = 256$

Do male and female adolescences experience differently in relation to cyberbullying?

There was no significant difference between the proportion of male and male adolescents who reported being bullied ($\chi^2 = (1, n = 256) = 3.50, p = 0.17$) or cyberbullied ($\chi^2 = (1, n = 257) = 0.011, p = 0.91$). However,

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males were more likely to bully ($\chi^2 = (1, n = 258) = 4.83, p = 0.028$) and cyberbully ($\chi^2 = (1, n = 233) = 4.82, p = 0.021$) others than were females.

How often did cyberbullying occur?

The answer to this question was grouped into two categories: one to three times and more than three times. Among the cyberbully victims, about 62 percent were cyberbullied one to three times and 37.8 percent were harassed more than three times. No significant gender difference was found in frequencies of cyberbullying victimization ($\chi^2 = (1, n = 82) = 2.02, p = 0.15$). Further, close to 55 percent of cyberbullies harassed others between one to three times and over 45 percent did it more than three times using electronic means. As well, no significant gender difference was found in frequencies of cyberbullying ($\chi^2 = (1, n = 53) = 1.37, p = 0.24$).

What were student beliefs about adults' prevention of cyberbullying in schools?

Only 64.1 percent of the students believed that adults in schools tried to stop cyberbullying when informed. No significant gender difference was found in student beliefs about this adult involvement in stopping cyberbullying ($\chi^2 = (1, n = 231) = 1.24, p = 0.54$).

When cyberbullying occurred, who would tell adults, male or female students? The analysis showed that for the cyberbully victims, females were more likely to inform adults than males ($\chi^2 = (1, n = 81) = 6.15, p = 0.012$). For the students who knew someone being cyber-bullied, only 30.1 percent told adults but no gender difference was found ($\chi^2 = (1, n = 133) = 0.129, p = 0.72$).

Discussion

This study explores a new and important issue related to cyberbullying. The preliminary analysis of a survey data collected from junior high students in Canada sheds light on this evolving issue.

The first important issue concerns the large extent of young adolescents' experience of bullying and cyberbullying. In this study, about half of the students reported that they had been bullied during school. This supports the view that bullying is a significant problem in schools (Hoover and Olsen, 2001). The researcher is puzzled by this much higher percentage of bully victims as compared to previous research results (Hoover and Olsen, 2001). Initially, the researcher thought that the students' social economic background may have been a major factor. The fact that about half of the students were from the school where there are mainly middle class residences indicates that merely

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considering SES cannot explain this phenomenon. One possible explanation is the school climates – that is, perhaps no effective official policy toward bullying or anti-bullying programs are adopted and followed in the schools (Pellegrini and Bartini, 2000). Another explanation may be that bullying is becoming increasingly severe in terms of the scope and the extent in large cities. Further research studies are necessary to examine this issue.

A second issue that deserves our serious consideration is the scope of cyberbullying in schools. Over half of the students knew someone who had been cyberbullied. Further, over a quarter of the students in this study had the experience of being cyberbullied, and one in six students had cyberbullied others. This is consistent with previous studies (Beran and Li, in press) including a British survey conducted in 2002 which showed that 25 percent of children age 11–19 had been bullied or threatened via various electronic communication modes (National Children's Home, 2002). An earlier survey conducted in 2000 in New Hampshire found that only about 6 percent of teenagers had the experience of being cyberbullied or threatened (Thorp, 2004). This suggests that cyberbullying may be on the rise and is becoming an increasingly critical issue of concern.

Third, when gender is considered, significant differences were identified in terms of bullying and cyberbullying. Although no gender difference was found in relation to victimization, males were more likely to be bullies and cyberbullies than their female counterparts. This is consistent with previous research (Borg, 1999; Boulton and Underwood, 1992) that females are less likely to bully than are males. It also suggests the cyberbullying and bullying follow a similar pattern in terms of male and female involvement. This result, however, contradicts the theory that females prefer to use electronic communication mediums such as chatrooms and email to bully others (Thorp, 2004).

Fourth, over a third of the cyberbully victims had been harassed more than three times and close to half of the cyberbullies had bullied others more than three times using electronic means. This rate of cyberbullying is similar to the frequency of experiencing traditional bullying reported in several studies (Bentley and Li, 1995; Farrington, 1991). One possible explanation is that bullies are also more likely to engage in cyberbully actions and there is a close relationship amongst bullying, cyberbullying and victimization (Li, in press), hence similar patterns are observed between bullying and cyberbullying.

Another issue worth noticing is the bystanders of cyberbullying. Previous research show that up to 80 percent of regular bullying incidences are not reported to staff (Rigby and Slee, 1999). This study shows that, just like in the real world, the vast majority of the students who were cyberbullied or knew someone being cyberbullied chose to

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stay quiet rather than to inform adults. One possible explanation may lie in the fact that many students, over one-third of the students in this sample, do not think that adults in schools tried to stop cyberbullying when informed. Because of this belief that adults in schools would not help, many students, feeling either scared or powerless, chose not to report cyberbullying instances. This supports the literature that adolescents' perceptions of their school environments relate to their bullying related behaviours (Pellegrini and Bartini, 2000). It highlights the importance of building, and further strengthening, a trusty relationship between students and school staff (including teachers, administrators and the like). Another explanation may be due to students' lack of appropriate strategies to deal with the problems.

As suggested by the data, most victims and bystanders do not report cyberbullying incidents. Female cyberbullying victims, however, are more inclined to inform adults about the incidents than are male victims. This is interesting and it may relate to the gender differences identified in conversational styles (Tannen, 1994). In her work, Tannen (1994) indicates that 'men are more likely to be aware that asking ... for any kind of help, puts them in a one-down position' (p.24). Therefore, males tend not to ask for help or inform others about their problems or troubles.

Conclusion

This study contributes to the extant literature on bullying in several conceptual areas. First, cyberbullying is a bullying problem occurring in a new territory. Few research studies have examined the bullying issue in this new context. The astonishing high percent of adolescents who had experienced cyberbully tactics observed in this study suggests that cyberbullying is becoming an increasingly critical problem for schools and the whole society.

Second, in this article, bullying and cyberbullying are examined at 'a point where it had seldom been studied. Extant studies, for the most part, studied primary school children. The early adolescent period merits attention because it is a period, labelled a 'brutalizing period', where disruptions in social networks afford opportunities for peer victimization and aggress to establish peer status' (Pellegrini and Bartini, 2000; p. 700). Consistent with this, the results of this study showed that a high percent of the students were involved in bullying or cyberbullying.

Third, bullying, cyberbullying and victimization are explored in this study considering the gender factor. This work, examined for the first time, the discrepancy between male and female adolescents' experience in relation to cyberbullying and victimization. It suggests that gender

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plays a significant role in cyberbullying. The gender difference identified in this study underscores the importance of differentiated approaches for the research and possible intervention programs related to cyberbully issues.

Fourth, the vast majority of adolescents choosing to be bystanders further stresses the importance of systematic education of safety strategies from early age. Just like dealing with traditional bullying issue, educating bystanders may provide some key strategies in dealing more effectively with cyberbullying. Focusing more attention on bystanders has the potential power to prevent a significant amount of cyberbullying. The gender difference identified in this study that male victims are less likely to inform adults underscores the importance of awareness. If students all understand cyberbullying related issues, aware of the strategies for combatting cyberbullying (e.g. informing adults), and know their own styles and limits, it would be much easier to fight cyberbullying.

The education dealing with cyberbullying related issues should be a joint endeavour of schools, families, communities and the whole society. It supports the idea that our concern of the bully and cyberbully issue 'must be at many levels, not only for the individuals themselves, and their families, but also society at large' (Morrison, 2002).

Like any research study, this study has limitations. For example, the data were collected from an urban city; we need to be cautious when generalizing the findings to other regions. In addition, although junior high is the time when bullying peaks, it is also important to examine cyberbullying in other age levels including elementary and senior high schools. The information obtained can paint a more holistic picture related to cyberbullying issue.

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Appendix I

Survey

Section one: About You (circle one):

1. Sex: Male Female Grade level _____
2. Year of birth _____
3. How do you describe yourself:
 Asian Hispanic Black White Aboriginal Other
4. English is my *second* language Yes No
5. My school grades are usually: above average average below average
6. I use computers: rarely 1–3 times/month at least 4 times/month

Part two: Cyberbully

1. I have *been bullied* during school: yes no
2. I have *bullied* others: yes no
3. I have been *cyber-bullied* (e.g. via
 email, chat room, cell phone): yes no
4. If yes, I was *cyber-bullied* via (circle *all* that apply):
 email chat room cell phone other, specify _____
5. If yes, I was *cyber-bullied* by:
 school mates people outside school I don't know who
6. If yes, I have been *cyber-bullied*:
 less than 4 times 4–10 times over 10 times
7. I have *cyber-bullied* others: yes no
8. If yes, I *cyber-bullied* others via (circle *all* that apply):
 email chat room cell phone other, specify _____
9. If yes, I have *cyber-bullied* others:
 less than 4 times 4–10 times over 10 times
10. I know someone who has *been cyber-bullied*: yes no
11. When adults in school know *cyberbullying*, they try to stop it: yes no
12. When I was *cyber-bullied*, I told adults (e.g. parents, teachers): yes no
13. When I knew someone being *cyber-bullied*, I told adults: yes no
14. I know safety strategies in cyberspace: yes no
15. If yes, I learned safety strategies:
 By myself taught by parents taught in schools
 other, specify: _____