Comparing Children and Adolescents Engaged in Cyberbullying to Matched Peers

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Abstract

Although characteristics of traditional bullying participants have been identified and studied for years, research on cyberbullying is limited. The purpose of this study is to expand the literature on cyberbullying with a particular focus on the relationships among cyberbullying characteristics, typical social activities, and more traditional forms of bullying. The typical activities and experiences with traditional bullying and cyberbullying of 52 children ages 11 to 17 were compared to those of 52 matched controls. Children exposed to cyberbullying, whether as a cyberbully, cybervictim, or both (bully/victim), spent more time on computer-based social activities. Nearly two thirds of cyberbully/victims were also traditional bully/victims. While preliminary, results suggest that efforts to prevent cyberbullying may need to focus on patterns of Internet use, amount and type of social activities, and exposure to traditional bullying as risk factors for engaging in cyberbullying.

Introduction

Traditional bullying has been a longstanding problem in the school environment, affecting approximately 25% to 30% of children in the United States. Common forms of traditional bullying include intentional physical or verbal/social harm that occur over time toward another person judged to be physically or psychologically weaker than the aggressor. However, as children have started to use the Internet and text messaging for social communication, cyberbullying has become increasingly prevalent. Although definitions of cyberbullying vary, the term is used here to describe the use of e-mail, cell phones, instant messaging, and/or Web sites by individuals or groups with intent to harm others. Studies examining cyberbullying prevalence are varied but estimate that 4% to 15% of children engage in cyberbullying, with more cases reported in late middle school and high school. More children are becoming targets of cyberbullying, with estimates ranging from 19% to 42% of children bullied online at least once. Children who engage in or are victims of traditional bullying are becoming more involved in cyberbullying, with the highest percentage being bully/victims, or children who bully and are bullied by other children online. In a study of 177 seventh-grade students, 54% were victims of traditional bullying and 32% had also been victimized online, while 17% bullied someone else online. From the same sample of students, of the 31% who admitted to traditional bullying, 30% had also bullied someone online and 27% were victimized online. Children who are traditional victims and/or cybervictims may be more likely to speak up for themselves and/or retaliate online than in person. This could explain why many traditional bullies also report being victims of online aggression, ultimately attaining the bully/victim role. In one study, nearly 30% of the victims wanted to seek revenge on those who had cyberbullied them.

There are a few differences between cyberbullying and traditional bullying that could make cyberbullying a more serious issue. Willard identified that cyberbullying can occur any time, day or night. This leaves many victims feeling trapped when they know they may receive a harassing message every time they turn on their cell phone or go online. This is unlike targets of offline bullying who can often find a safe haven at home or away from school. Cyberbullying messages and images can also be distributed widely and quickly. Being anonymous allows for reduced social accountability, which may encourage individuals to engage in inappropriate behavior online. Many individuals cyberbully because they think it is entertaining and funny, not realizing the negative impact it has on the victim.

Several studies have examined characteristics of children exposed to cyberbullying. Cyberbullies and cyberbully/victims are reported to be intense users of the Internet, averaging 4 or more days a week, rate themselves as experts in terms of their abilities online, consider the Internet to be very important, and report infrequent parental monitoring, while

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victims-only are less confident online and spend less time online.\textsuperscript{5,6}

The effects reported for cyberbullying are very similar to those from traditional bullying, including lower academic performance, higher levels of stress, low self-esteem, changes in interests, and depression.\textsuperscript{6,13,14} Preliminary research suggests the reported effects of cyberbullying may be comparable to or worse than the identified effects of traditional bullying.\textsuperscript{6,15} Therefore, there is an essential need to identify individuals who may be potentially vulnerable to cyberbullying and to identify potential risk and protective factors for cyberbullying. The aim of this study was to expand the literature on the relationship of cyberbullying characteristics and children’s social competence with a focus on activities with friends and family as protective factors and activity online as potential risk factors. An additional goal was to determine whether children who are exposed to cyberbullying have different traditional bullying experiences compared to children who report no exposure to cyberbullying.

Materials and Methods

Participants

Three hundred children were recruited from various pediatric primary care and subspecialty clinics as well as a local public arts magnet school in a midsized southeastern U.S. city. Of those recruited, 52 participants reported exposure to cyberbullying (as either a cyberbully or a cybervictim) on the Student Observation of School Bullying questionnaire. They were matched to 52 children who were not exposed based on age, gender, race, and whether or not they were enrolled in special education classes. The final sample of 104 participants were ages 11 to 17.

Measures

Student Observation of School Bullying (SOSB). To determine a participant’s exposure to cyberbullying, we used questions from the SOSB, which is a student-completed questionnaire used for this and other studies and has good validity and reliability for bullying and victimization. The SOSB\textsuperscript{17} opens with definitions for three types of bullying: verbal/social, physical, and online or cyberbullying, then asks 12 items rated on a 1 to 5 scale based on frequency of occurrence (almost never to almost all the time). Students rate the frequency with which girls were bullied each way (questions 1–3), boys were bullied each way (questions 4–6), respondent was personally bullied each way (questions 7–9), and respondent bullied someone else each way (questions 10–12) in the past school year. For this study, a child was identified as a cyberbully if his or her response to the question “I bullied someone online” was greater than 1 (“at least once or twice”), and cybervictims were similarly identified on the basis of their answer to “I was bullied online.” Participants were classified as a cyberbully/victim if their responses were indicative on both questions.

Reynolds Bully Victimization Scale for Schools (BVS). To evaluate participants’ experiences with traditional bullying, we used the BVS,\textsuperscript{16} a 46-item self-report measure designed to assess the severity and frequency of traditional bullying and victimization experiences. It is a standardized measure that displays strong internal reliability and moderate criterion-related validity.\textsuperscript{16} The BVS consists of two subscales, the Bully Scale and the Victimization Scale, each consisting of 23 items randomly dispersed throughout the questionnaire. Each question measures the frequency of the participants’ engagement in bullying behaviors or victimization over the past 2 months on a 4-point scale (0, never, to 3, five or more times). A t score on the bully or victimization scale greater than or equal to 60 denotes a positive score for bullying others or being victimized by others and was our benchmark for traditional bullying and victimization for this study.

Activities and Beliefs Checklist (ABC) for students. The ABC is a self-report measure developed for this study\textsuperscript{18} for participants over age 12. The first 20 items ask about students’ participation in various social activities outside of school for greater than 4 hours per week. Items 21 and 22 ask whether the respondent has a MySpace or Facebook page, personal Web page, personal e-mail account accessible and not accessible to parents, a phone or TV in their bedroom, or a computer in their home.

Procedures

In the pediatric clinic setting, parents and children were recruited from various pediatric clinics by lead investigators and trained graduate student research assistants. After obtaining informed consent, participants were asked to complete the BVS, SOSB, and ABC. If they were 12 years old or younger, the participants had the measures read to them by one of the investigators or a trained research assistant. If they were 13 years old or older, participants completed the measures independently with assistance from a research assistant as needed during a routine office visit. In the school setting, study participants were recruited by a letter sent home to parents. Participants completed the measures by interview or assistance from research assistants during school hours. Analyses confirmed there were no significant differences on SOSB items or summary scores based on either method of administration. Parents completed a short demographic questionnaire in both settings. After participants completed the questionnaire and self-report measures, the children were given a small gift (pencils, stickers, etc.), and families in the pediatric clinic setting were entered into a $300 raffle as compensation. The institutional review boards at all participating institutions approved this study.

Results

T tests and chi square analyses confirmed that the 52 with and without cyberbullying exposure were comparable on child age, parent age, household annual income, parent education, and marital status. The demographic composition of the matched sample (N = 104: 68 middle school students and 36 pediatric clinic patients) was 71% male, 77% Caucasian (20% African American), 80% enrolled in regular classes. Eighty-one percent of parents were married, and 40% of parents’ income was greater than $100,000 per year. Sixty percent of the study participants’ mothers and 53% of fathers completed at least a 4-year college degree. Within the matched sample (N = 104) created from the combined dataset, 50% reported no involvement (by design), while those who
were involved included 27% cybervictims, 17% cyberbully/victims, and 6% cyberbullies.

Cyberbullying vs. traditional bullying

In comparison to their peers, cybervictims had significantly higher traditional victimization $t(83) = -2.91, p < 0.01$ and bully scores $t(82) = -2.27, p < 0.03$ on the BVS, whereas cyberbullies were significantly higher on the BVS traditional bully scores $t(83) = -3.56, p < 0.01$, as shown in Table 1. These findings suggest that cybervictims are more likely to have been victimized in traditional ways and to have bullied others in traditional ways, whereas cyberbullies are more likely to have bullied others in traditional ways but are no different from their matched peers on victimization experiences.

Chi square analyses comparing cyberbullying rates to traditional bullying rates within the matched sample revealed significant relationships, $\chi^2 = 16.96, p < 0.05$, as shown in Table 2. Nearly two thirds of children who were identified as bully/victims online also reported themselves as traditional bully/victims. Cyberbully/victims and cyberbullies did not report traditional victimization unless they were also involved in traditional bullying. Not surprisingly, children with no cyberbullying exposure were the group most likely not to have been exposed to traditional bullying and victimization, yet over half of them were exposed to traditional bullying in some form or another. Interestingly, a fair percentage of children who are online bullies and/or victims are not involved in traditional bullying at all. Of the participants who reported no involvement in traditional bullying, over 50% were involved in cyberbullying, 28% as cybervictims and 33% as cyberbullies. Twenty-seven percent of traditional victims were also cybervictims. Of the participants who reported being traditional bully/victims, 62% were also cyberbully/victims, 33% were cyberbullies, and 27% were cybervictims. The majority of participants involved in traditional bullying were also involved in cyberbullying with 33% cyberbullies, 30% cyberbully/victims, and 18% cybervictims. There were no significant differences between traditional victims and nonvictims regarding cyberbullying involvement. However, there was a significant difference between traditional bullies and nonbullies regarding cyberbullying involvement, $\chi^2 = 12.97, p < 0.01$. The participants who had traditionally bullied someone else were significantly more likely to report involvement in cyberbullying in comparison to traditional nonbullies.

Social competence factors

The comparisons of activities and beliefs on the ABC of self-reported cyberbullies vs. unexposed peers and self-reported cybervictims and their peers yielded similar results, as shown in Table 3. However, $t$ tests revealed that cyberbullies were significantly less likely to dine out with families and were more likely to have a personal e-mail account not accessible to parents and a MySpace or Facebook page. Furthermore,
cyberbullies were significantly more likely to spend at least 4 hours a week with a boyfriend or girlfriend and at least 4 hours a week engaged in computer-based social activities, such as e-mail, instant messaging, or chat rooms.

Cybervictims were also significantly less likely to dine out with families and more likely to have a MySpace page and/or a personal e-mail account not accessible by parents. Additionally, cybervictims were more likely to spend at least 4 hours a week with a boyfriend or girlfriend and at least 4 hours a week engaged in computer-based social activities. In contrast to the cyberbullies, cybervictims were also significantly more likely to have a personal Web site and significantly less likely to complete non–computer-based homework than were their nonexposed peers, possibly increasing their probability of being targeted by being online more often.

**Discussion**

Findings from this study support earlier research concerning the overlap between traditional bullying and cyberbullying. While our findings cannot determine whether bullying begins at school and continues at home online, many children report involvement in both environments. In this study, the majority of children who are bully/victims online are also traditional bully/victims. These findings are nearly identical to Kowalski and Limber’s study of middle school children. These children may have social characteristics that make them especially susceptible to both bullying and victimization in both environments and have been shown to have the most damaging long-term effects.

Interestingly, some of our study participants are bullies only online and are not bullies in person. It is possible that children who ordinarily would not participate in bullying experiences feel disinhibited by the anonymity and physical distancing from their target the Internet provides. The cyberbullies and bully/victims in our study did not report traditional victimization except if they were involved as a traditional bully/victim. This highlights the role of anonymity in a different light, as children who bully others online may keep their identities hidden to avoid retaliation or victimization in person. However, it is only when cyberbully/victims engage in traditional bullying that they are at risk of victimization.

Of all the cyberbullying groups, it is not surprising that the non–cyber-exposed group would have the highest percentage of no traditional exposure. However, it is concerning that over half of this group has been exposed to traditional bullying and/or victimization. While it is possible that limited accessibility to the Internet may be contributory, children could be underreporting their cyber bullying experiences in general. Indeed, in a previous study, 31% of preteens and 35% of teens stated they had disclosed cyberbullying to their parents. In another study, 41% of students in grades 5 through 12 did not share details of their Internet experiences with their parents.

The matched sample comparison identified six characteristics unique to individuals who had been involved in cyberbullying either as a bully, a victim, or both (bully/victim). Past research has suggested that individuals who spend more time on the computer and/or the Internet are more likely to become involved in cyberbullying. In this study, the participants who were identified as either cyberbullies, cybervictims, or cyberbully/victims spent more time on the computer engaged in computer-based social activities such as e-mailing, instant messaging, and posting in chat rooms. They were also more likely to have a MySpace page, a personal Web site, and/or a personal e-mail account not accessible by parents. As individuals spend more time online using these media, this creates additional opportunities for communication with others but also increases their opportunity to be targeted and/or to target others online. The significant number of exposed participants with personal e-mail accounts not accessible by parents suggests infrequent parental monitoring may increase the chance that youth will engage in inappropriate behavior online. In our study, a relatively equal percentage of children exposed and not exposed to cyberbullying had an e-mail account accessible to parents, also suggesting that parental monitoring of e-mail alone is not effective.

There were limitations to this study. As in all cross-sectional studies, we were only able to find associations...
among cyberbullying and these factors but cannot establish causation. Also, it was necessary for us to recruit children from different environments, as our original pediatric sample did not have sufficient power for study. Even though the children completed the same protocol, the students may have felt more comfortable disclosing cyberbullying in a clinic setting than in the school environment. Also, due to time constraints for administering the protocol, we were unable to get a more accurate estimate of the amount of time spent in each social activity. Future research could help determine whether there is a dose-response relationship between various social activities and bullying risk (or protection).

More research is needed into the patterns of student cyberbullying and cybervictimization. Longitudinal studies of cyberbullying and its effects as well as a closer look at cyberbullying in relation to other forms of bullying will further elucidate the nature of this potentially damaging experience. It is clear that bullying prevention programs should address cyberbullying specifically, as some children’s bullying experiences happen only online. Also, since many parents may be misinformed about or unaware of the potential downsides of Internet access, they should be educated on the likelihood of their own children’s involvement in cyberbullying and how to protect them by close supervision of activities both online and offline. They should also be counseled on the appropriate way to handle cyberbullying if it occurs and to foster an environment that encourages children to tell their parents about their experiences online. By identifying the characteristics of children at risk for involvement in cyberbullying as well as the activities that may serve as protective factors, a knowledge base can be developed with school administrators, educators, parents, children, and community members, ultimately culminating in a communitywide effort to prevent cyberbullying.

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Disclosure Statement

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References


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