Cyberbullying: What Does Research Tell Us?

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Introduction

MEDIA COVERAGE OF THE tragic outcomes of some incidents of cyberbullying raised the alarm about this relatively recent phenomenon. Bullying is a type of aggressive (purposefully harmful) behavior that is intentional, repeated, and based on a power imbalance between the aggressor and the target. Cyberbullying, then, is bullying perpetrated with digital technology.

Unique features of cyberbullying have been identified: Perpetrators can conceal their identities; perpetrators have constant access to targets; the potential audience is huge; the perpetrator does not see the target’s immediate reaction; there are no nonverbal clues to the meaning of a message; the power imbalance is altered (the perpetrator may have little power in the real world but superior technological skills), and content that is posted online is permanent (Campbell, 2005; Dooley, Pyżalski, & Cross, 2009). In addition, Suler (2004) identified a phenomenon, online disinhibition, which is a tendency to say and do things in cyberspace that would not be said or done in person. This effect likely contributes to the increased cruelty that has been noted in content posted or transmitted digitally.

Cyberbullying is possible because of the wide availability of digital technology. Innovations continue to proliferate, which means that research always lags behind the current digital landscape. For example, Facebook, the most widely used social networking site in the world with over one billion members, was not available to the general public (over age 13) until 2006. Thus, much of the early research does not include social networking as a platform for bullying. Before cell phones (and smartphones) were commonplace, studies primarily focused on the Internet, ignoring the device that is now a frequent tool of cyberbullies. Thus, caution must be used when drawing conclusions from early studies.

Conceptual Questions

When cyberbullying emerged, there was debate about whether it is a different form of aggression, or a variation of traditional bullying. In an effort to resolve this question, Canadian researchers first surveyed 17,551 ethnically diverse youths in grades 8-12 on their bullying and cyberbullying involvement, and then conducted a follow-up study with 733 students in grades 6-11 (Law, Shapka, Hymel, Olson, & Waterhouse, 2012). In the first study, factor analyses detected a single factor for cyberbullying/victimization, compared with separate perpetration and victimization factors for traditional bullying.

This suggested that cyberbullying involves “reciprocal banter” (p. 239) so that many students are both perpetrators and targets. These researchers speculated that it is easier to retaliate in the digital context than in traditional bullying, which could explain the large overlap between cyberbullying and cybervictimization. In the second study, participants indicated how often they participated in various aggressive digital behaviors as bully, victim, or witness. Factor analysis found that the roles were less salient than the modality used (aggressive messages or embarrassing pictures). Mishna, Khoury-
Kassabri, Gadalla, and Daciuk (2012) observed that even though a small proportion of youths are both bullies and victims in traditional bullying, in cyberbullying a much larger group is so classified (25.7%). These findings point to cyberbullying as a unique phenomenon.

However, other results suggest that cyberbullying is more accurately conceptualized as a form of bullying. Bauman and Newman (2013) used eight pairs of items describing similar hypothetical bullying scenarios that varied by the mode by which the harm was inflicted (cyber or traditional). They expected to find two factors, one for cyber items, and one for traditional. Instead, three factors emerged (general harassment, name calling, and explicit visual), and in all cases, both items in the pair loaded on the same factors. This suggests that cyberbullying is a variation of bullying, and that specific behaviors (e.g., name-calling), whether inflicted in person or online, are the focus. Vandebosch and Van Cleemput (2008) also concluded that the behavior, rather than the method of delivery, is the critical factor. More evidence comes from a study of Swiss adolescents. Although participants rated cyber scenarios as more serious than traditional ones (a small difference), scenarios that included public and anonymous bullying, regardless of format, were considered worse than those that were private or from a known perpetrator, a large difference (Sticca & Perren, 2013). Additional support for the position that cyberbullying is a form of traditional bullying is the report of a decrease in cyberbullying after implementation of an antibullying program that contained no cyber-specific content (Salmivalli, Karna, & Poskiparta, 2011). Finally, in a study of the stability of victimization in 665 early adolescents in Austria, cybervictimization was not stable over the 1-year period of the study, but traditional victimization was moderately stable (Gradinger, Strohmeier, Schiller, Stefanek, & Spiel, 2012). Results also showed that being victimized in cyberspace, although often occurring at the same time as traditional victimization, was not predicted by, nor did it predict, traditional victimization over 1 year. An unexpected finding was that for girls, cybervictimization appeared to increase popularity.

If cyber- and traditional bullying are different, prevention and intervention strategies need to reflect those differences. In traditional bullying, separate targeted programming may be needed for perpetrators (to develop empathy, impulse control, alter cognitive biases) and targets (social skills training, how to respond to bullying, how to avoid being targeted). This approach would apply to cyberbullying if it is a variation of traditional bullying. However, if cyberbullying is different, and characterized by students who are both bullies and victims, the message may be more universally delivered with the goal of treating others kindly and understanding the extent of harm caused.

Prevalence

A wide range of prevalence rates have been reported in the literature. For example, in the 2007 special issue of the Journal of Adolescent Health, the percentage of students who reported being victimized ranged from 9% to 34% for cybervictimization, and from 4 to 21% for cyberbullying. Kowalski, Limber, and Agatson (2008) located studies reporting from 4% to 53% for cybervictimization and from 3 to 23% for cyberbullying. The highest rate was reported by Juvonen and Gross (2008), who recruited a sample of 1,454 12- to 17-year-olds online, 72% of whom reported at least one incident in which they were victimized digitally. Many of these studies used convenience samples; it is difficult to generalize from such data. Ybarra, Boyd, Korchmaros, and Oppenheim (2012) used national US data from 1,200 youths aged 6-17 that were weighted to be representative of the population. They found that 25% of the sample reported being bullied monthly or more often in person, 10% had experienced online bullying, 7% were bullied by phone,
and 8% via text messages. Recently, a meta-analysis combined the results from 22 eligible studies that measured both traditional and cyberbullying and victimization (Modecki & Minchin, 2013). Overall, 21% were cybervictimized, compared to 38% who were victimized traditionally. The percentage of those identified as perpetrators were 14% and 38% respectively.

Difference in prevalence rates are due to the different definitions, the different ways in which cyberbullying is measured, and different methods researchers use, including how samples are obtained (Menesini & Nocentini, 2009; Tokunaga, 2010). Nevertheless, it is generally accepted that cyberbullying is a problem in most developed countries. It is also agreed that the rates of cyberbullying and victimization are lower than rates for traditional bullying and victimization (Modecki & Minchin, 2013). This is important, because the lower prevalence can be misconstrued to mean that cyberbullying is not a serious problem; although the rates are somewhat lower, they are not trivial, and given the unique characteristics of this behavior, there is a realistic concern that incidents may be more damaging than incidents of traditional bullying.

Overlap With Traditional Bullying

An area of agreement is that there is overlap between traditional and cyberbullying (Olweus, 2012; Sourander et al., 2010). For example, the risk of cybervictimization was almost 10 times as high for traditional middle-school victims (Holfeld & Grabe, 2012), and Monks, Robinson, and Worlidge (2012) found that being a traditional bully increased the odds of cyberbullying by almost seven times.

Gender and Age Differences

Studies on cyberbullying have had mixed findings regarding gender differences. Some studies found boys to be significantly more likely to be cyberbullies and to be both cyber- and traditional bullies (Calvete, Orue, Extévez, Villardón, & Padilla, 2010; Gradinger, Strohmeier, & Spiel, 2009). Other studies concluded that significantly more boys perpetrated cyberbullying and more girls were targeted (Kowalski, Morgan, & Limber, 2012; Wang, Ianotti, & Nansel, 2009). In a large representative sample of US youth, Mesch (2009) found that 61% of girls reported at least one experience of victimization online, compared to 39% of boys. Holfeld and Grabe (2012) found that middle-school girls were involved in cyberbullying more than boys. On the other hand, Perren and Gutzwiller-Helfenfinger (2012) found that boys were significantly more likely to be involved in traditional bullying, but not cyberbullying, and Werner, Bumpus, and Rock (2010) found no gender differences in cyberaggression. No gender differences in either perpetration or victimization by cyber means were found in the Monks, Robinson, and Worlidge (2012) sample.

Mixed findings are also the case for age. Eighth graders reported the highest rates of cyberbullying among participants in grades 6-10, and the highest rates of cybervictimization were reported by seventh grade participants in a nationally representative sample (Wang et al., 2009). Similarly, an Australian study of 1,530 boys found the highest rates of victimization by text message among junior secondary students, roughly equivalent to American middle schools (Sakellariou, Carroll, & Houghton, 2012). Other studies reached different conclusions: Older adolescents were more often cybervictimized than younger participants in Mesch’s (2009) study, and Vandenbosh and Van Cleemput (2009) also found that cyberbullying increased as the age of students increased. However, Werner, Bumpus, and Rock (2010) did not detect any differences in either cyberaggression or cybervictimization by grade.
At this point, it appears that no clear conclusion can be drawn regarding age or grade differences in cyberbullying experiences. Future research should continue to address this question using age-appropriate and psychometrically sound measures. Those who work with young children should not assume they are immune to cyberharm, and should consider doing prevention work with children in early elementary school.

Associated Characteristics/Risk Factors

As with traditional bullying, there are numerous risk factors for involvement in cyberbullying. Vendebosch and Van Cleemput (2009) found that the strongest predictors of being a cyberbully were being a cybervictim and being a perpetrator of traditional bullying. Bauman (2010) and Bauman and Pero (2011) found the best predictor of cybervictimization was cyberbullying, and vice versa, in cross-sectional studies; Wright and Li (2013) found similar results in a longitudinal study. They concluded that peer rejection and cybervictimization predicted cyberaggression 6 months later, and that the association was strongest for those with higher levels of peer rejection at the first assessment. Hemphill et al. (2012) found that relational bullying of others in grade 7 predicted perpetration of cyberbullying in grade 9. For cybervictims, being a traditional victim, and being a witness to, or perpetrator of, cyberbullying was associated with being victimized technologically. Mesch (2009) found that having a profile on a social networking site, using public chat rooms, and using YouTube were activities associated with increased victimization (although not participation in online games). A further risk factor for victimization online was a willingness to disclose personal information. Rivers and Noret (2010) studied experiences with text and e-mail bullying in 1,323 boys and 1,334 girls in years 7 and 8 in England. Among boys, being a victim of physical bullying was related to being victimized by text and e-mail, for girls the association was with being unpopular with peers. An interesting finding from Finland in a study of 16,634 students in 146 schools and 1,043 classes was that cyberbullying (and indirect traditional bullying) occurred more often in classrooms in which the students perceived their teachers would intervene effectively if bullying occurred (Elledge et al., 2013). A longitudinal study investigated cyberbullying involvement and other risky behaviors (substance use, delinquency, aggressive behavior), depression, and self-esteem in 1,364 adolescents in western Australia. They discovered that the steeper the increase in problem behaviors from grade 8 to grade 11, the more likely the student was to engage in cyberbullying either as perpetrator or victim. Higher rates of depression in grade 8, and steeper declines in self-esteem from grade 8 to grade 10, also predicted higher involvement in cyberbullying in grade 11 (Modecki, Barber, & Vernon, 2013). Hinduja and Patchin (2013) found that youth in grades 6–10 in their sample of 4,400 students in a southern US state were more likely to be involved in cyberbullying if they believed many of their friends engaged in the behavior, and lower levels were found among youth who expected to be punished by adults for cyberbullying.

Consequences of Involvement

A study of Swiss and Australian adolescents demonstrated that victims of cyberbullying had significantly more symptoms of depression than nonvictims, even when researchers controlled for traditional victimization (Perren, Dooley, Shaw, & Cross, 2010). Bauman and Newman (2013) found that levels of distress varied with the type of cyberbullying, and that the most distressing type of event was explicit visual, which is consistent with Slonje and Smith’s (2008) findings. Gradinger et al. (2009), whose subjects were 761 ninth-grade students in Austria, also found that those who were both traditional and cybervictims had significantly higher levels of depressive and somatic symptoms than
Involvement in cyberbullying predicted both depressive symptoms and suicidal ideation, over and above traditional bullying involvement in a sample of 599 Canadian adolescents (Bonnano & Hymel, 2013).

As with traditional bullying, associations have been found with involvement in cyberbullying and assorted psychosocial problems (Gradinger et al., 2009; Sourander et al., 2010). These researchers found that conduct and hyperactivity problems predicted being classified as either cyberbully only or cyberbully/victim, and deficits in prosocial behavior predicted being a cyberbully only. Problems with peers and emotional problems predicted cybervictim only and cyberbully/victim status. Being a cyberbully/victim was the strongest risk factor for concurrent psychosocial problems, as is the case with traditional bullying.

Parris, Varjas, Meyers, and Cutts (2012) summarized the consequences of cyberbullying that have been reported in the literature to date. These include increased depressive symptoms, acting out (carrying weapons and abusing substances), and increased suicidal behaviors. Spears, Slee, Owens, and Johnson (2009) observed that a sense of helplessness was associated with victimization, and that fears for one's safety were often reported. In some cases, both relationships and life circumstances were so disrupted that victims relocated to escape the humiliation that followed being cyber-victimized. Involvement in bullying and cyberbullying were related to suicide attempts in 1,491 high school students from one state in the United States, but for cybervictimization, depression mediated the link between victimization and suicide attempts (Bauman, Toomey, & Walker, 2013). Similarly, cybervictimization was associated with suicidal behavior in 4,693 high school students from 27 high schools in a midwestern US state; that link was mediated by substance use and violent behavior (Litwiller & Brausch, 2013). Sexual behavior was included, and although cybervictimization predicted sexual behavior, sexual behavior was not a significant predictor of suicidal behavior. Because the media has brought attention to suicides of victims of bullying and cyberbullying, these findings provide evidence that the concern is not frivolous.

Prevention and Intervention

A small body of research has examined prevention and intervention strategies for cyberbullying. Several studies (e.g., Cassidy, Brown, & Jackson, 2012; Heiman, 2010) found that teachers feel unprepared to deal with cyberbullying. A team of Canadian researchers (Ryan, Kariui, & Yilmaz, 2011) interviewed 17 educators from two high schools in a technology-rich school district. Although this was a district that had a specific emphasis on technology, the educators were primarily familiar with e-mail and cell phones, but not with chat rooms or blogs, and only moderately familiar with YouTube and Facebook. The majority of participants (59%) was concerned or very concerned about cyberbullying, but could not identify any specific incidents that had occurred. A survey administered to students in the same schools indicated that 36% of students admitted to cyberbullying others and 32% had been victimized. The school district did not have a specific cyberbullying policy; the generic bullying policy was believed to be applicable. Sadly, the researchers’ offer to present findings to staff and administration at the schools, in the form of either a presentation or a written report, was ignored.

There is evidence that effective antibullying programs, such as KiVa in Finland (Salmivalli et al., 2011), have an impact on cyberbullying even when that is not the focus of the intervention. This suggests that a well-designed and rigorously tested
program, perhaps integrated with some direct instruction on cybersafety, should be examined.

Although there has not been a rigorous evaluation study of any prevention or intervention program to curb cyberbullying, several suggestions have been offered by experts (Von Marées & Petermann, 2012). Many recommend direct instruction in Internet safety and appropriate behaviors in cyberspace. Such instruction would include strategies such as blocking offenders and reporting abuse. It has also been widely recommended that school antibullying policies specifically refer to cyberbullying as a prohibited behavior.

Conclusion

Cyberbullying researchers have yet to reach consensus on a number of basic issues. There is little we can say with absolute confidence about cyberbullying. Nevertheless, the frequency with which strong correlations between cyberbullying and cybervictimization has been reported suggests that cyberbullying involves more reciprocal behavior than traditional bullying, and that prevention and intervention strategies must take this feature into account. Furthermore, there is a strong relationship between involvement in traditional bullying and cyberbullying, so that students involved in traditional bullying are at risk for cyberbullying. It is also clear that cybervictimization results in several serious psychosocial consequences, as does traditional victimization.

The absence of certainty does not mean that development or prevention and intervention programs must be postponed. It seems likely that the most helpful methods will engage youth using the very technology that is used to engage in cyberbullying behaviors.

References


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