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Cyberbullying: causes, effects, and remedies

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Abstract

Purpose – The purpose of this paper is to present research exploring the pervasiveness and causes of cyberbullying, the psychological impact on students, and the responses to cyberbullying from students and administrators. The goal is to give school leaders a greater understanding of this phenomenon and suggest steps to deal with this challenging issue.

Design/methodology/approach – The data are collected from 351 students using a survey, which contains limited choice, scaled response, and open-ended questions. This qualitative/quantitative design enables collection of data from a large population along with rich qualitative data that expand and explain students' experiences.

Findings – The paper reveals that cyberbullying emerges most commonly from relationship problems (break-ups, envy, intolerance, and ganging up); victims experience powerfully negative effects (especially on their social well-being); and the reactive behavior from schools and students is generally inappropriate, absent, or ineffective.

Research limitations/implications – This is self-reported data collected from a group of students in one institution, who are asked to recall instances from their pre-college experience. Additional research on from a variety of age groups and cross-culturally would add another layer of understanding about cyberbullying among teens.

Practical implications – Technological advances have created new challenges for schools in keeping students safe. This paper has implications for educational policy and practice, including steps school leaders can take to curtail cyberbullying.

Originality/value – This paper builds on a small body of research on cyberbullying and focuses on underlying causes, categories of psychological effects, and specific remedies.

Keywords Bullying, Leadership, Internet, Communication technologies, Schools, United States of America

Paper type Research paper

Introduction

Historian Howard Segal (Nagle, 2008) suggests that all technological developments are mixed blessings, presenting society with both tremendous benefits and unexpected burdens. This is certainly the case with technology in schools, for despite the endless opportunity and access that technology can provide for learning, it has also become a vehicle for cyberbullying, a burgeoning form of teen social cruelty (Harmon, 2004). Educators are increasingly faced with the challenge of keeping students safe at school – not only in their physical space, but also in a virtual world that has become a very dangerous environment, with few rules and very little oversight (Shariff and Hoff, 2007). The pervasiveness and causes of cyberbullying in schools, the psychological impact on students, student and administrators' responses to cyberbullying, and the steps school leaders can take to deal with this challenging issue are presented here.

Defined as “willful and repeated harm inflicted through the medium of electronic text” (Patchin and Hinduja, 2006, p. 152), cyberbullying puts targets under attack from



a barrage of degrading, threatening, and/or sexually explicit messages and images conveyed using web sites, instant messaging, blogs, chat rooms, cell phones, web sites, e-mail, and personal online profiles (Blair, 2003; Harmon, 2004; Shariff, 2006).

Similar to traditional forms of bullying, cyberbullying is often deliberate and relentless, but it can be even more unnerving because of the anonymous nature of the assault. Would-be cyber-bullies are able to hide their identities by using screen names and well-hidden internet protocol addresses, leaving the target vulnerable and unsettled. Further, the attacks can be psychologically vicious. For example, students might take sexual pictures (sometimes with consent at a time when the relationship was good, sometimes covertly with cell phone cameras) that later can be dramatically altered and posted on web sites once relationships sour (Harmon, 2004), leaving the target exposed for millions to see. Cyber-bullies also create bash boards, or online bulletin boards, that invite others to contribute hateful and malicious remarks (Patchin and Hinduja, 2006). Some start text wars, encouraging others to send a relentless flow of messages, which can result in the target receiving numerous cruel messages every day (Shariff, 2006). Advances in technology have made this activity extremely difficult to supervise or detect (Li, 2006), which has emboldened bullies and given them an elevated sense of power and control (Milson and Chu, 2002). The result is that cyberbullying has become the attack mode of choice among young people, who increasingly engage in electronic bullying behavior that threatens and degrades others (Adam, 2001; Blair, 2003; Campbell, 2005; Chu, 2005; Hinduja and Patchin, 2007; Ybarra and Mitchell, 2004).

The unique and difficult features of cyberbullying pose numerous challenges for school leaders. Research has shown that cyberbullying can affect students' ability to learn at school (Devlin, 1997; Shariff and Strong-Wilson, 2005) and that victims experience a range of emotional effects (Patchin and Hinduja, 2006), so this is not a phenomenon that educators can ignore. Yet, there are jurisdictional questions related to how (and if) school administrators can intervene when the cyberbullying initiates off school grounds (Shariff, 2004; Shariff and Hoff, 2007). Even when the behavior does occur at school or on school-owned equipment, understanding when the behavior is simple teasing, and when it rises to bullying is difficult for adults, who have typically not had personal experience with this form of attack. Adults may be unaware of the serious nature and potential harm that cyberbullying presents. Moreover, teachers and administrators are unlikely to see the behavior first-hand, making it more difficult to respond to than traditional forms of face-to-face bullying, and many schools lack the resources and expertise to investigate cyber-incidents. When administrators do attempt to intervene, they may find themselves in conflict with parents of cyber-bullies, who are sometimes in denial about their child's online activity or quick to endorse their child's rights to engage in such conduct. All of the above factors point to the urgency for more focused research on the prevalence and consequences of cyberbullying in order for teachers and administrators to understand and respond appropriately.

Purpose of the study

The purpose of the study was to explore cyberbullying among teens, including:

- students' experiences with cyberbullying and the causes they identified;
- the psychological effects they experienced; and

- responses to cyberbullying, including students' own reactive behavior and their perceptions of school administrative responses.

Armed with this information, schools should be able to do a better job with remedies that prevent and respond to cyberbullying, an issue that today's school leaders find increasingly challenging.

Methods

This study was conducted over a full academic year (2006-2007) and included 351 students over two phases of data collection. The research was conducted face-to-face, using a survey, which contained limited choice, scaled response (on a ten-point Likert type scale with responses ranging from 0 (not at all) to 9 (very much)), and open-ended questions. This mixed-method, qualitative/quantitative design (Tashakkori and Teddlie, 1998) enabled the collection of data from a large population, along with rich qualitative data in which participants expanded and explained their experiences. This method, therefore, provided a comprehensive picture of the nature and causes of this phenomenon, the psychological effects on targets, and insights into students' and schools' responses to the bullying.

The research questions that guided this inquiry included:

RQ1. What types of cyberbullying do students face and what are the perceived causes?

RQ2. What are the effects on students personally, socially and/or academically?

RQ3. What are the responses to cyberbullying from the targets and from schools?

The participants were first and second year undergraduates attending a public research University in New England. They were asked to report on any cyberbullying incidents they had experienced in their pre-college years, and using a university setting was deliberate so that students could respond with more anonymity. Introductory-level courses were purposefully selected in order to reach our target population. In total, 500 students were enrolled in these classes, and 351 made the choice to participate, a response rate of 70 percent. Of the total respondents, 60 percent (212) were female and 40 percent were male, and the mean age was 19.9 years.

Since, this was exploratory data analysis, descriptive and inferential statistics were used to organize, summarize, and describe measures of the population. First the quantitative data were tabulated using SPSS. Participants revealed their gender, age, and high school grade point average on the survey, which allowed for comparisons by categories. Next, the open-ended responses were transcribed and coded, first across research questions and then into 25 categories, which were later clustered into four broad themes. These were compared to the findings of the broader quantitative data. And finally, both the quantitative and qualitative data were compared and contrasted according to the gender, age, and grade point average of respondents, which allowed us to uncover congruencies and incongruencies among participant groups.

Findings

The study revealed several findings, three of which are the topic of this paper: cyberbullying emerges most commonly from relationship problems; victims experience

powerfully negative effects (especially on their social well-being); and the reactive behavior, both from schools and from students, was generally inappropriate or ineffective. Each of these is discussed below.

Prevalence and causes of cyberbullying

Cyberbullying is amazingly prevalent, affecting 56.1 percent of the students in this study, with quite a large difference in the victimization of females and males (72.1 percent of the females reported they had experienced cyberbullying compared to 27.9 percent for males $\chi^2(1, N = 197) = 38.42, p < 0.001$). The number of students in this study reporting incidents of cyberbullying is higher than reported in previous years (Patchin and Hinduja, 2006; Ybarra and Mitchell, 2004), suggesting that cyberbullying may be increasing among teens. Further evidence of this was indicated by the fact that 89 percent of the respondents reported knowing a friend who had been targeted.

Students in the study were asked to give a specific example of a cyberbullying incident they had experienced or had first hand knowledge of, and 167 students provided such examples. These were clustered first into two broad categories: cyberbullying due to relationship issues (91 percent) and those not related to relationship issues (9 percent). In the second level of analysis, the examples were sorted according to four specific relationship tensions that emerged in this study, categories that had not been seen in the previous literature, including: break-ups (41 percent), envy (20 percent), intolerance (16 percent), or ganging up (14 percent). It is evident from this analysis that students' inability to handle social tensions, particularly those that center on relationship issues, was at the root of most cyberbullying among these teens. Below are examples from the data of each of the relationship tensions we noted.

First, students reported that romantic break-ups caused feelings of rejection and anger that festered into retaliation by cyberbullying. In some cases, the cyberbullying was initiated by one member of the relationship and targeted the other. In other cases, the new girlfriend or boyfriend was the recipient. There were also cases in which other friends not involved in the relationship became involved. Following are examples from respondents who reported cyberbullying incidents as a result of break-ups. The perpetrators communicated using web sites, text messages, e-mail, and blogs:

An ex-boyfriend used his website to posted details about our relationship and break-up. None of it was anything good. Most was degrading to me and very embarrassing.

A friend of mine broke up with his girlfriend and she kept threatening to kill ME or have me arrested for slander because she thought I had been talking about her and that was why my friend dumped her.

My roommate's ex-girlfriend's exboyfriend kept texting that he was going to drive here to "stomp" us both out in our own rooms.

The second relationship tension that emerged was cyberbullying stemming from envy. Some respondents said this emerges when people are romantically attracted to others who reject or ignore them. Others said this envy arises when a person seeks friendship or a romantic relationship, but the other person is involved with someone else. Still others pointed to jealousy over characteristics or achievements that enable another to be more admired among teammates/classmates or more popular in school. In all cases, the cyberbully seemed unable to cope with the relationship envy, and resorted to cyberbullying as a way to vent frustration. For example:

Older girls were threatening to hurt me and my friends for talking to their boyfriends. Then they tried to run us over in the parking lot.

Someone thought that I was trying to steal their date for a homecoming dance. She sent me messages that were very cruel and degrading.

In ninth grade I was elected class president and some girls who were jealous and upset that their friends didn't win kept calling me names and told me that I had bad teeth, and that I should just die, etc.

Third, respondents reported that cyberbullying often grows out of intolerance. Respondents indicated that cyber-bullies act like this "to feel better about themselves," or "because they are small minded," or because "they want the other person to feel the misery or other feelings (scared, sad, isolated, helpless) that they themselves feel." Some of the cyberbullying examples, however, indicated more deeply held prejudice. Among the population studied in this research, sexual orientation was targeted most often, but some students also mentioned examples where their disability, religion, or gender was assailed. None reported racial cyberbullying, but it is important to remember that the participants in this study were nearly all the same race (Caucasian), so this was unlikely to be reported. Below are some of the many examples that respondents provided, first related to intolerance of homosexuality:

I have a friend who everyone said was gay. Kids made a website made about him, and he gets hate messages. In high school he was threatened all the time.

Someone has made a website about me saying I'm gay with a lot of gross pictures that are images of me, but it's not me. I don't know who's doing this, but now I'm getting hate messages.

These kids know I'm not gay, but they posted it anyway. Now my life is hell, and it won't stop.

Other examples of prejudice or intolerance for disability, religion, and gender:

In high school some juniors video taped a mentally challenged child with their cell phones. While videotaping, they were making fun of him. Then they posted the video on the internet.

People threatened me and said that I was going to die because I'm Muslim.

Boys always message me about how tall I am or just making sexual comments. Kind of treating me like a piece of meat.

Finally, students mentioned that cyberbullying is often due to ganging up on a person in order to reject and isolate that person from the "group." By putting down someone else, students reported that it helps people "try to feel good about themselves" or "helps establish their own place in the 'group.'" Here are some examples where students were ganging up as a form of rejection:

People would make rude remarks about my weight and appearance. Others who didn't even know me chimed in.

It started for me as teasing when I was 11 from classmates. It got worse as I got older. They would send me hundreds of messages saying that everyone hated me.

Over AIM I received several messages degrading my soccer abilities, saying "I'm the worst player ever," "You suck" "You are worthless," and "You can't help the team."

Overall, whether the problem arose from break-ups, envy, intolerance, or ganging up, two categories of attack emerged from the data: out-group abuse and object abuse, both of which have roots in traditional forms of bullying, harassment, and victimization. Out-group abuse is cruelty to anyone not in "the in group." The term "out-group"

comes from social identity theory, and it has a rich history in sociology and social psychology (Tajfel and Turner, 1979). An individual or individuals from another group may feel contempt for, or a desire to compete with, people in the out-group, who are also often subjected to a homogeneity bias (Tajfel and Turner, 1979). In cyberbullying, out-group abuse can be directed at someone based on his/her lack of friends, physical appearance, or athletic ability. It may also arise from prejudice, targeting a person because of gender, race, ethnicity, sexual orientation, or disability. The female victims in this study most often received messages criticizing their popularity and appearance. Males most often were taunted with homophobic messages or their perceived lack of physical ability. Of the four areas of social skill tensions named earlier (break-ups, envy, intolerance, or ganging up), out-group abuse appears to be rooted most often in intolerance and ganging up.

Object-abuse, on the other hand, is directed at a specific individual independent of group membership. The term "object" is used deliberately because the victim is most often objectified in the abusive messages. The term has its roots in research on objectification (Hewstone and Brewer, 2004). Objectification commonly refers to regarding or treating a person as a thing worthy of contempt. For example, sexual objectification generally refers to treating a person as an object, or tool, for sex. The object-abuse seen in this study more frequently targeted females and took the form of sexually explicit and threatening messages or web sites. It can stem from perpetrators sexual desire (often due to an unrealistic belief about a possible relationship with the victim) or it can emerge from a break-ups or envy.

In extreme cases, cyberbullying resulting from object-abuse meets the definition of stalking, which Royakkers (2000, p. 7) defines as "a form of mental assault in which the perpetrator repeatedly, unwantedly, and disruptively breaks into the life-world of the victim." With cyber-stalking, the perpetrator is "watching" the victim in close physical proximity, while using technology to communicate that to the victim. Here are examples from female respondents, who received repeated stalking-like messages:

I would receive frequent messages from a screen name nobody know. They would talk about threatening me and sexually explicit stuff. Mentions of raping me were also made, so it was very nerve-racking to attend school some days.

The guy was sending my friend text messages – told her he watched her from outside her window at night and how much he wanted her body and then went on to say many sexual things.

My friend was receiving threatening cell phone calls where someone would call her and whisper her name and then hang up. Her house was broken into and someone went through her underwear drawer.

Finally, we asked participants to give their perspectives on why students engage in cyberbullying. Of the 325 students who answered this question, 52 percent noted that the anonymity of cyberbullying contributes to the phenomenon because of the power it gives bullies, emboldening them beyond what they might do on a face-to-face basis. Example comments included:

Cyberspace gives them more courage.

The don't have to do it face to face. It's easier for them to torment.

The cyber-bullies are bold because they don't think anyone can catch them.

The other responses indicated personal reasons for student cyberbullying, which fell broadly into either insecurity or frustration. Insecurity was noted by 29 percent and included descriptors such as:

- They are weak and cowardly.
- Low self esteem.
- They are lonely and insecure.

Comments that cyberbullying is due to frustration emerged 16 percent of the time, which included descriptors such as:

- Desperation.
- Resentment.
- Sexual Frustration.

The language these students used in explaining the reasons for cyberbullying aligns closely with our qualitative analysis of the cyberbullying examples they provided – both point to a gap in students' abilities to handle social tensions, particularly those that center around relationship issues. Contributing to this there seems to be a pervasive lack of self-worth, which can manifest itself in targeting others through cyberbullying. These attacks can have devastating effects, which are discussed below.

Psychological effects of cyberbullying

The second major finding was that students reported several negative psychological effects as a result of cyberbullying. Targets experienced high levels of anger, powerlessness, sadness, and fear. The psychological effects of cyberbullying were measured using a nine-point scale, the anchors ranged from 0 (not at all) to 9 (very much). Overall, the mean on each of these effects were higher than the mid-point of 4.5, as follows: anger (6.56), powerlessness ($m = 5.44$), sadness ($m = 4.93$), and fear ($m = 4.74$). Of course, some students rated themselves low (little or no effects) on several of these attributes, but just as many rated themselves at the highest level, indicating alarming psychological impacts. The responses were compared by gender, which revealed no overall gender differences on any of the dependent measures $p > 0.05$, indicating that cyberbullying had a similarly negative impact on both male and female students. There was also no significance when the responses were compared according to age or grade point average.

The results of the psychological effects students reported fell generally into two categories. In the first category, negative psychological effects (fear, powerlessness, and sadness) often resulted in students becoming more withdrawn. In their written comments, students revealed a loss of confidence, disassociation from friends and school, and a general sense of uneasiness. Here, are some specific examples:

- I became less confident in myself.
- I'm more timid at school.
- I fought depression and had to see a therapist.

In contrast, some students, especially those who experienced high levels of anger, tended to become more aggressive:

- I became meaner.
- I got more threatening!
- I started spreading nasty rumors.

There was one other important finding related to the psychological impact of cyberbullying. Negative effects were heightened when the student had no idea who was doing the bullying, which increased the feelings of powerlessness and fear among targets. Univariate ANOVAs were conducted on each dependent measure to determine the *locus* of the significant multivariate effect. Results show that anonymity led to increased feelings of powerlessness ($M = 6.65$, $SD = 2.20$) compared to when the victim knew who was doing the cyberbullying ($M = 4.10$, $SD = 2.53$). Similarly, not knowing the perpetrator increased the level of fear in the victims, ($M = 5.5$, $SD = 3.4$) compared to when the victim knew the identity of the cyberbully ($M = 3.14$, $SD = 2.74$). As movie producers have long known, terror increases when victims are blind to who is terrorizing them and when it might happen next.

These heightened psychological effects are somewhat unique to cyberbullying. Since perpetrators can hide behind technology, it is the perfect medium to heighten fear and powerlessness in the victim. This makes cyberbullying more than just a modern day form of school-yard bullying, but in fact more in line with victimization, where the intent is to terrorize and assert dominance. It can lead to dangerous and unproductive reactive behavior, which is discussed next.

Reactive behavior

The third finding of the study reveals what students did in reaction to cyberbullying and their perceptions of the responses from school administrators. In terms of their own reactive behavior, 65.3 percent of students in the study reported that they believed cyberbullying would usually stop on its own without their having to do anything about it. However, many students admitted that the cyberbullying had not stopped and had actually increased, suggesting that students more accurately just do not know what to do about it. This avoidance strategy allowed the cyberbullying to escalate, and based on the examples these students provided, sometimes to dangerous levels that can be damaging to students' physical and emotional well-being.

When asked if participants had taken action on their own to make the cyberbullying stop, the responses revealed differences based on gender. Males' responses revealed more active and physically retaliatory behavior, whereas females' responses indicated more passive and verbally retaliatory behavior. For example, from males:

- I decided I had to retaliate.
- I watched the person and when I got him alone, I ended it.
- I physically assaulted the bully.

The problem with this more physical approach is that it could potentially lead to real physical harm, and it is likely to escalate the situation further.

Female respondents, on the other hand, more typically changed their own behavior or used words to retaliate. For example:

- I changed my email and screen name.
- I decided just not to go online, which wasn't fair to me.
- I sent mean messages back.

These strategies, although probably more well-advised than physical retaliation, nevertheless put the target in a position of changing behavior (which may temporarily deter the cyberbully but is unlikely to discourage him/her from acting again),

or it perpetuates the cyberbullying with retaliatory messages, which are likely to perpetuate the bullying.

When participants were questioned about their willingness to seek out adults for help with cyberbullying problems, few had done so. As Li (2006) found, it was the female students who were more likely to report her experiences. Even among females, it was evident the cyberbullying had to escalate to dangerous levels before the female targets would seek help from adults. As Spitalli (2003, p. 56) noted related to traditional bullying and school-yard behavior, students are reluctant to break a code of silence and report bullying, to the point that "they will not disclose even the most disturbing and dangerous information about each other to adults." In the case of cyberbullying, this study suggests that the same code is in force. Students in this study rarely reported cyberbullying to their parents or at school, despite their admission that being targeted left them feeling fearful, angry, sad, and powerless.

Participants were somewhat more willing to talk to their parents than to school leaders, with 35.9 percent saying they had reported incidents at home. Among those who did not report incidents to parents, they wrote they did not want to worry or anger their parents. Many felt that reporting the cyberbullying to their parents would compound their problems by opening them up to sanctions or discipline. The largest number of written responses indicated either a fear of losing privileges (e.g. computer time, loss of cell phone) or the fear that their parents would learn something about their own behavior that they would be embarrassed to reveal (e.g. a sexual relationship, chat room antics, or information they had posted on their own personal online profile).

Dramatically fewer (only 16.7 percent) reported cyberbullying to school officials. Their responses reveal a lot about their perceptions of administrative inaction to cyberbullying. First, there was a consistent pattern of belief that school officials would not take it seriously, would not handle it in a confidential way (leaving them more vulnerable), or would do nothing about it. Students' responses about why they do not report included these examples:

Because they don't want to know.

They pass the buck – say go to the counselor, or go to your parents.

Because if I talk to them people will know and it will get worse.

One male target explained why he had not reported cyberbullying:

Because the "bully" was the principal's son!

Perhaps, the saddest response came from another male respondent, who said:

I just didn't know who to tell.

The broader survey data also illustrate that students widely hold the perception that schools will not act. Of the 16.7 percent of participants who did report the bullying at school, a majority of this group (70.7 percent) reported that school officials "rarely" or "never" did anything about it. McGrath (2007, p. 34) suggests that schools may be unwittingly reinforcing a "code of silence" among students by sending messages, such as "Don't be a tattletale," or "Fight your own battles." Clearly the vast majority of students in this study appear to have taken a cue from these adult signals and kept silent.

Some also indicated what they had been told (or had been given the impression) by school teachers and administrators regarding cyberbullying that:

Cyberbullying is not a big deal.

Kids will be kids – just ignore it and they'll stop.

We can't do anything because it starts on your cell phone or home computer.

These responses indicated that students have a strong impression that schools want to distance themselves from the problem, do not know what to do, and/or do not understand the potential seriousness of cyberbullying.

To the question of whether schools had policies against cyberbullying, 36.1 percent said their school did have such a policy (although only six participants were able to recall the specifics of what it said). However, 15.4 percent said their school had no policy on cyberbullying and nearly half (48.6 percent) reported that if the school had one, they did not know about it. Taken together, the students' responses indicate their lack of knowledge about, or faith in, school policies and practices related to cyberbullying.

Limitations

As in all research studies, there are limitations to this study. The results must be viewed in light of the self-report nature of the data. It is also possible that targets of cyberbullying were more inclined to participate in this study, which could adversely affect the reported frequencies. Further, although the participants' experiences occurred at many different elementary and secondary schools, the survey was conducted at just one university. Finally, the participants were asked to recall instances from their pre-college experience, which was recent and gave them the opportunity for more anonymity, still did not reflect their current setting.

Conclusions

The study reveals four important themes that can help schools better understand the nature of the cyberbullying phenomenon and what they might do to support students.

First, the high percentage of students being affected by cyberbullying and the content of the messages revealed in this study suggest that cyberspace can be a graphic, scary, threatening, and generally pretty unsettling virtual world with few laws or norms for socially acceptable behavior. Typical teen tensions around relationship issues, including break-ups, envy, intolerance, and ganging up, are playing out in a far more dangerous environment. Students, who often lack the moral compass or leadership skills to govern themselves, are increasingly interacting with peers in this unsupervised setting. Adults, who normally would be supervising the lives of teens, are left on the outside – without the technological expertise or understanding of the environment to be of much help. The study suggests that cyberspace operates like the Wild West once did, where anything goes. People take the law into their own hands and retaliate because there is no governance structure to protect them from further victimization. Until schools, courts, parents, and internet/technology providers join forces to establish and enforce behavioral standards in cyber-space, students' lives are being negatively affected by a very uncivilized virtual world that is spilling over into their real lives.

Second, cyberbullying is causing students to experience feelings of anger, powerlessness, fear, and sadness. In other words, cyberbullying has some of the same

negative outcomes for targets as face-to-face bullying, which studies have shown leads to (among other things) sadness and depression (Smart and Walsh, 1993), powerlessness, fear, and delinquency (Aluedse, 2006), or more aggressive/retaliatory behavior (Leary *et al.*, 1995). The added dilemma is that cyberbullying is easier because of the anonymity of the attack, and it is more pervasive, with high numbers of students participating, by-standing, and/or being targeted. Cyber targets can feel helpless because, as the students in this study indicate, they do not know what to do to make it stop.

Third, it is clear that students are ill equipped to handle cyberbullying and its intrusion in their lives. They generally do not seek help because of fear of reprisal, embarrassment, or because they assume adults will not act. Some try to avoid the situation, which may stop a particular incident, but does little to protect them long-term or discourage the cyberbully. Some become very withdrawn, which can affect their school work, their friendships, and ultimately lead them to dangerous, self-destructive behavior. For those students who do take action, they often wait until the bullying reaches intolerable levels and then retaliate, which is inappropriate and potentially very dangerous. Indeed, the data show a pattern that bullying begets bullying, reflecting the kind of cycles we see in other social systems, which are insidious in their reinforcement of the problem and extremely difficult to interrupt.

Finally, schools are clearly not doing enough. Students reported that they were generally unaware of the existence or effectiveness of any school policies that would address cyberbullying. They found school officials to be generally unresponsive to requests for help, which admittedly may be more about perception than any real reflection of schools' willingness to step in. Yet many said that when they did report incidents, teachers, and administrators gave them the impression they did not wish to, or could not, become involved. Students in the study also hold the perception that school officials will not keep their reporting confidential, which could result in their becoming victimized even more. As long as students believe the school will not act or will handle things poorly, they will not report, and the cycle of cyberbullying will continue.

Even when schools want to help, the anonymity of the perpetrator and students' skill in using technology have made it more difficult for schools to take preventative steps or track down cyber-bullies in response to problems. It was interesting to find that some students recognized that school officials struggle with jurisdictional questions when it comes to dealing with incidents in cyber-space that originate off school grounds. This knowledge can be used by potential cyber-bullies, however, making it easy for them to side-step school intervention. This is where courts can help in clarifying the schools' authority and responsibility to take action to protect students from cyberbullying, much like their responsibility to squelch face-to-face bullying and other forms of harassment. However, these cases have been slow to come to court, especially cases that deal with peer-to-peer cyberbullying. In the meantime, with the prevalence of cyberbullying and the potentially devastating results, it is crucial that schools find ways to contribute to remedies, which are discussed below.

Implications and remedies

It is clear that schools must be at the center of the solution to affect change in the social climate of today's young people. Schools are in a unique position to both educate and, when necessary, take corrective action. It is therefore suggested that school leaders consider the following three-pronged approach for dealing with cyberbullying.

The first prong is to educate students, educators, and parents on the dangers that lurk in cyberspace and specific ways to protect students in this technological era. Many schools, in fact, have started this kind of training for students, using guest speakers at assemblies and technology classes to help students better understand the ways in which technology poses a threat to their safety. The limitation to this intervention is that it can be very intermittent and places most of the burden to remedy the problem on those targeted by cyberbullying, a commonly relied on solution that is unfair to the target and does little, if anything, to stop the perpetrator. Further, internet safety training, although very much needed, is a small aspect of a comprehensive approach, and worse, it can give school administrators a way to "check cyber training off their list," and believe they have done their part, often with little follow-up.

Instead, internet training and discussion of ethical behavior need to involve students, educators, and parents. For students this information and training must start at a young age (students in this study said the cyberbullying began as early as age ten). Involving them in discussions about the dangers of bullying and how to by an ally when they see cyberbullying behavior will help create a more positive school culture that benefits all students. They should also be included in the development of school district policies and practices to prevent and respond to cyberbullying, since they are the group who understands this phenomenon best.

For educators, it might mean creating a cadre of well-trained teachers, counselors, and administrators to become "safe contacts," giving students a place to turn if they are victims or if they want to report perpetrators or other students whom they believe may be targets. Establishing safe contacts would help reduce the student perception that schools do not care or will not act, and would reduce their fears about confidentiality. Training for parents on the dangers of this behavior, how to monitor their child's online behavior, and what to do if they discover that their child is a participant or a target, would close the loop and send a message that cyberbullying will not be tolerated at school or at home.

These are just a few examples of the kind of ongoing programs that could involve students, parents, teachers, and administrators working together to create new norms for acceptable techno-behavior. They represent just one prong of a three-prong approach, however, because in reality, teaching students about internet safety only addresses the symptom of the problem. Underlying cyberbullying is the much larger issue that students often lack the ability to handle social tensions, particularly those that center on relationship issues. So while technology training is important, it is not sufficient to bring about real change.

To get to the core of the problem, schools should add a second prong to their approach by greatly expanding the ways they are helping students deal with the social tensions they face on a daily basis. Parents and educators may be focusing so much on making students feel good about themselves that they fail to see (or do not want to see) the tensions and dark side of contemporary teen life. Ignoring this reality results in young people who are not equipped with the necessary skills to handle peer interaction and rejection. Possible remedies include a more systematic role for school counselors and teachers in helping students learn to navigate relationships, beginning in elementary school. Teachers and administrators need more training about their role in recognizing and responding to student social tensions – including the need for vigilance in maintaining school climates that do not tolerate peer cruelty of any kind.

Providing parenting sessions that focus on appropriate responses to their child's social behavior could also reduce the defensiveness and blinders that parents sometimes do not related to their own children. All of these steps could be part of a concerted school effort to help students handle break-ups, rejection, and jealousy; become more accepting of students who are different; understand the dangers in ganging up; and learn to be allies, instead of enemies, to one another. If we hope to curb the dangers of cyberbullying, getting at these root issues is key.

Finally, it is clear from this study that more training among school leaders needs to take place that will clarify their legal authority and responsibility to act in cyberbullying cases. The third prong of the approach, therefore, is to do more as a profession to follow legal cases related to cyberbullying, to collectively discuss interventions through professional networks (including conferences and professional associations), and to step up in terms of taking action, rather than hiding behind beliefs that what happens in cyberspace does not fall within the purview of the school. It is important for school administrators and teachers to realize that although cyberbullying occurs in virtual space, "it nonetheless constitutes a form of 'real' violence and ought to be understood and interpreted this way by schools and courts" (Shariff and Hoff, 2007, p. 114). Typically, courts of law look for evidence of a nexus between the action and the school in order to support administrative action toward a cyberbully. For example, if the cyberbullying behavior happens during school, is disrupting school, happens from home on school-owned technology, or is causing another student to be fearful about attending school, these would all show nexus and provide legal authority for school leaders to take action. Establishing and enforcing sanctions, however, is just one aspect of the solution. If school leaders hope to mitigate cyberbullying and the real dangers it poses to students, it will require proactive prevention steps embedded in the three-prong approach above.

Educators know that it is very difficult for students to succeed when they are feeling threatened, scared, angry, and powerless. This research may help school leaders better understand the serious nature of cyberbullying and arm them with specific data they may need to convince the broader school community of the need for action. Most importantly, it may inspire educators to remain vigilant in their efforts to promote a safe and inclusive environment that all students deserve.

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