How Can Mobile Technology Help Reduce the Incidences of Cyberbullying?

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Abstract

Cyberbullying is a growing concern that is prevalent among youth and adolescents. The phenomenon is similar to traditional bullying in that it is a hurtful, repetitive behavior that involves a power imbalance and often causes psychosocial challenges for the victim of the abuse. The anonymous characteristic of this type of bullying is appealing because it releases the inhibitions of individuals to act in an aggressive manner. The objective of this report is to assess how mobile technology can be implemented to provide resource and support to victims of cyberbullying; further, to offer education about the negative impact of bullying to youth during the developmental period in which they are most likely to engage in this behavior. The author assessed the Youth Risk Behavior Surveillance System (YRBSS), a national database that tracks six health risk behaviors shown to contribute to death and disability in youth. The proportion of youth who reported "ever been electronically bullied," was reviewed, with a focus directed on analyzing bullying through email, chat rooms, instant messaging, websites, or texting during the 12 months before the survey was given in 2011. In addition to the YRBSS, the author reviewed literature on the social, environmental and cultural causes and consequences of electronic bullying. Finally, the mobile health promotion literature was assessed and this offered information on how to use Short Message Service (SMS) to: (1) disseminate information about social behaviors and health outcomes, and (2) provide social networking support. By providing a proposal that outlines use of mobile technology to target cyberbullying, the goal is to spur research that will address this issue and minimize its negative emotional, social and behavioral consequences.

Keywords: Cyberbullying, mHealth, Youth

1. Introduction

1.1 Defining The Problem

Cyberbullying is a concern. The phenomenon is similar to traditional bullying in that it is a hurtful, repetitive behavior that involves a power imbalance, and often causes psychosocial problems.[1] Cyberbullying is defined by experts as "electronic bullying through cellphone texting, email, instant messages, chat rooms or website postings of harmful words or photographs of an individual."[1]

Cyberbullying is of particular concern, because it seems to occur among adolescents who may not have sufficient adult supervision.[2] This phenomenon differs from traditional bullying in that it occurs most frequently outside the school setting. Furthermore, a cyberbully can send messages at any time of the day. Often, these two experiences (traditional bullying and cyberbullying) overlap, and put the victim under ongoing stress.[1]

1.2 Prevalence Rates?

A report from the Cyberbullying Research Center revealed that from June 2004 to February 2010, the number of cyberbullying victimizations varied between 18.8% and 40.6%.[3] Adolescent girls are more likely to be victimized by cyberbullying (25% versus 16%); they are more likely to tell an adult (21% versus 18%).[3] The nature of bullying among girls varies from boys in that the former tend to spread rumors in cyberspace while the latter are more likely to post photos. Cyberbullying can start as early as age 10, and may continue into adulthood.[1] Just about half (51%) of young people report giving consideration to the fact that their online postings might have personal repercussions. Furthermore, there is a strong personal component to cyberbullying in that 73% of students report being confident that they knew the identity of their perpetrator.[3] Finally, according to a recent survey of 1,247 14-to-24 year olds, 50% report having experienced some form of digital abuse.[4]

1.3 What Is The Impact Of Bullying?

Face-to-face bullying can lead to long-term psychological harms to victims, including low self-esteem, depression, anger, school failure and avoidance, and in some cases, school violence or suicide.[4] In fact, a study of over 3,000 students revealed that 38% of victims felt vengeful, 37% were angry, and 24% felt helpless. Additionally, the U.S. Department of Justice's Office of Juvenile Justice reported that victims of schoolyard bullying fear going to school and experience loneliness, humiliation, and insecurity. Moreover, they tend to struggle with poor relationships and have difficulty making emotional and social adjustments.[4]

1.4 Who Are The Key Players?

Males are more likely to be bullies and cyberbullies than their female counterparts. In addition, female cyberbully victims are more likely to inform adults than their male counterparts.[3]

Researchers have suggested that girls may be more likely to engage in cyberbullying than traditional forms of bullying. The research suggests that due to strong verbal abilities, girls might be more proficient at using the internet to electronically deliver attacks. Boys on the other hand, are more physically aggressive than girls, and some forms of cyberbullying involve physical aggression (threats of physical harm).[5]

1.5 Technology Provides Opportunity

A recent study found that adolescents consider texting a favorite way to communicate. In fact, it provides them with the majority of their social interactions. Over 80% of teens use a cell phone regularly, making it the most common medium for cyberbullying.[18] 75% of all teenagers text, and up to one-third of 14-17 year olds own smart phones.[19] 93% of teens use the Internet as a way of interacting with friends. Social media websites continue to increase in popularity, with 55% of teens having a profile on sites such as Facebook or MySpace.[1]

1.6 Mental And Physical Impact

The research demonstrates that adolescents' brains are not fully developed in the prefrontal cortex (the area that controls the assessment of risk behaviors and consequences related to these risks).[1] This lack of awareness and poor decision-making may lead to youth readily sharing personal information with others online, thus creating risky situations. Although some youth are more emotionally mature than others, mental health concerns including anxiety and depression will result from repeated anonymous harassments.

Some have suggested that exhibited depression might be trivialized by others in the youth's life, resulting in a spiraling of the mental distress thereby contributing to isolation or more chronic depressed states.[1] Further reports suggest that youth might not seek support from parents or other adults as they fear a potential loss of privileges should they confide in the adult.[1] Perhaps for these reasons, it might be especially important to involve adults in intervention efforts.

2. Mobile Health Promotion

2.1. What Is Mobile Health Promotion?

Mobile Health (mHealth) is the use of mobile technology in health research and healthcare delivery.[6] mHealth offers knowledge on public health-related concerns, provides remote data collection and patient monitoring, and promotes healthy behaviors.[6] Two examples of mobile technology used in health research are mobile applications and Short Message Service (SMS).

   A mobile application (app) is software designed to run on a mobile device like a smart phone or tablet.[7] This technology provides web-browsing as well as ready-access to information. Ease of access and portability means that mobile apps can be used to provide immediate psycho-education to youth. Short Message Service (texting) is another approach that can increase reach to youth and communicate information about the impact of inappropriate behaviors.[7] SMS allows for short text message to be sent between cell phones or from the web to cell phones – this permits informational exchange between users including patients and providers.[7] Mobile messages can aid communication when there is a need to distribute information over long distances or when the patient cannot physically meet the physician. The cost of the text message is very low and is available to almost everyone.[8]

2.2. Why Mobile Health Promotion?

Over 80% of teens use a cell phone regularly, making it the most common medium for cyber bullying;[18] thus, the application of mobile technology to promote health and wellness is growing in influence due to the prevalence of cellphone users.[9] A number of studies have emerged looking at the influence of SMS in remediating different health behaviors by targeting medication management, reinforcing adherence to treatment, and providing reminders. Many of these health behaviors include smoking cessation, HIV therapies, diabetes, drug abuse, and alcohol abuse.[8] The data suggest that an opportunity might exist to provide education and support to youth about the dangers of cyberbullying and potentially minimize its spread.

3. Traditional approaches to address bullying

Approaches designed to reduce traditional bullying may also be helpful in reducing the incidence of cyberbullying. The research has shown that teenagers need to be given the confidence to stand up for themselves.[10] *WeStopHate* is an organization designed to increase teenagers' self-esteem (teen-esteem) through online videos and social media promoting a healthy mental status.[10] *DoSomething.org* is another organization focused on making positive social changes among youth. The organization has spearheaded national campaigns for 13-25 year olds to make an impact on social issues.[11] Finally, *We Take A Stand* is an anti-bullying website that provides information about bullying and resources to address mental health.[12]

4. Objective

The objective of this report is to evaluate how mobile technology might help to reduce the incidence of cyberbullying. Specifically, to assess how SMS and mobile applications can help to support positive psychological outcomes in troubled teens and promote positive behavioral and social skills. Mobile technology may potentially be a tool to help prevent cyberbullying by addressing skill-building, promoting positive health behaviors, and improving emotional well-being.

5. Methodology

5.1. Youth Risk Behavior Surveillance System

The author evaluated data on cyberbullying among youth and young adults using the Youth Risk Surveillance Behavior System (YRBSS).The YRBSS uses data obtained in school settings from young adults and youth; it permits an analysis of local and nationwide socio-behavioral data and focuses on trends among individuals and groups.[13] The YRBSS also permits data analysis targeting specific demographics including gender, race/ethnicity and grade levels. The author focused analysis on 9th - 12th grades. For specific analyses, the author reviewed male and female data independently, aggregated gender data to assess grade-level information, and aggregated grade-level data to assess national and local cyberbullying occurrences.

5.2. Mobile Health Literature

The author also reviewed literature on the social and environmental causes and consequences of electronic bullying as well as the mobile health promotion literature on the uses of SMS and mobile applications to provide support to youth. The latter reviews provided an understanding of the process by which mobile technology might improve knowledge among youth, help to build skills in order to address complex social concerns, provide motivational support through personalized feedback, and help to connect youth so that they feel empowered.

6. Results

6.1. Importance Of Messaging

Cyberbullying is a nationwide phenomenon with 16% of the population reporting a recent experience. A significant gender disparity exists with female victims outnumbering males by 2:1 (22.1% versus 10.8% respectively); additionally, cyberbullying appears to be most prevalent during the 10th and 11th grades. Because cyberbullying is pervasive with a much larger audience, the long-term implications are substantial and include death by suicide by the bullied victim. Currently, 75% of 12-17 year olds and 95% of 18-29 year olds use SMS and more than 30% of all teens own a cell phone. The statistics suggest therefore that an opportunity exists to intervene by providing social networking support to victims of cyberbullying, and education about the implications of bullying to youth during the critical periods when this behavior is likely to occur. [13]

   Recent studies have found that text messages can be used successfully for short-term behavior change. A study done in Australia reviewed the use of mobile health promotion in addressing risky sexual behavior and preventing sexually transmitted diseases.[14] Using a sample of 16 to 29 year olds the investigators demonstrated that participants were more likely to prefer text messages over other types of message delivery, particularly messages that are positive, relevant, funny and short. Participants reported that the messages provided new information, a reminder of existing information and reduced apprehension about testing for sexually transmitted infections.[14]

6.2. Skill-Building

Mobile health promotion is shown to build skills that can address complex phenomena. A recent review revealed that unhealthy and risky behaviors among adolescents and young adults can be improved by using SMS to deliver information on how to avoid such behaviors thus building the necessary skills that can serve as a buffer protecting against future unhealthy activities.[15] Furthermore, existing anti-bullying websites provide information about bullying as well as resources to address mental health concerns.[10] These sites – *WeStopHate, DoSomething.org* and *We Take a Stand*, target schools, parents and workplaces.[11] Using mobile applications, it is therefore possible to organize the already available rich resources designed for traditional bullying so that they are portable and easily accessible to potential victims of cyberbullying, the perpetrators and their social networks.

6.3. Motivational Support

Short message service can provide motivational and behavioral support through personalized feedback to youth engaged in risky behaviors. In a recent study, investigators assessed binge drinking among young adults. They evaluated text message as a potential intervention. A sample of adults aged 18 to 25 years were screened for hazardous alcohol consumption. Participants identified as hazardous drinkers were put in either 12 weeks of weekly SMS drinking assessments with feedback, SMS drinking assessments without feedback, or a control group. The study tested the hypothesis that a mobile phone text-messaging program can lead to immediate and durable reductions in binge drinking among at-risk young adults by providing regular positive feedback and support to respondents.[16]

6.4. Emotional Support

SMS and mobile applications have been shown to provide emotional support. A recent study suggests that SMS might help depressed youth feel more connected and cared for. In this study, the investigator sent daily text messages to patients inquiring about mood ratings as well as additional messages sent that corresponded to: 1) tracking youth's experience of positive and negative thoughts using mobile apps on their mobile devices; 2) tracking experience of pleasant activities; and, 3) tracking physical well-being. Participants were also given feedback of their experienced mood, and their behavior and cognitive data were graphically displayed over time. Study results revealed that depressed young adults liked receiving text messaging, they were positively impacted by obtaining feedback on behavioral status, and benefited from receiving psycho-education and reminders.[17]

7. Conclusion

Mobile technology is shown in research to improve knowledge leading to positive health behaviors. Mobile devices such as SMS technology and mobile applications can promote the following:

A. Skill-building by delivering positive skill-building messages. Specific mobile applications can be tailored to build youth confidence and self-esteem, thus minimizing the occurrences of inappropriate information-sharing and consequent susceptibility to bullying. Additionally, youth can be connected to existing online programs (e.g., *WeStopHate*) that offer support and facilitate discussions about youth health promotion and provide support on how to avoid dangerous situations.
B. Motivational support to develop and maintain positive behavior changes. Motivational text messages might be delivered to youth with messages targeting the most vulnerable demographic (young females) and the most susceptible developmental stages (9th -10th graders).
C. Emotional support can be offered using mobile applications designed to track moods in real-time and apps that present the opportunity for users to reflect on positive interactions.

The research suggests that an impact might potentially be sustained through psycho-education; skill-building targeting confidence and self-esteem; improved motivation; and, provision of emotional support. Furthermore, online programs are available that can be accessed to provide ready assistance. Now is the time to bring mobile technology resources together in order to help youth navigate the challenging world of electronic bullying.

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