Adjustment outcomes of victims of cyberbullying: The role of personal and contextual factors

Hillary K. Morin*, Catherine P. Bradshaw, Joseph M. Kush

University of Virginia, United States of America

A B S T R A C T

With many of today's youth utilizing technology to bully their peers, there is a need to better understand both predictors and consequences of cybervictimization. However, few researchers have employed a multi-level approach to jointly identify potential individual (e.g., gender) and school-level (e.g., urbanicity) predictors of cybervictimization, or examined a range of psycho-social and adjustment outcomes. The current study used survey data from 28,583 students from 58 high schools to explore the risk factors associated with cybervictimization. We also examined the association between cybervictimization and adjustment outcomes (e.g., psychological, academic), as well as a possible moderators (e.g., student connectedness) that may buffer youth from these negative outcomes. Self-report measures assessed experiences with cybervictimization, adjustment problems, and student connectedness using previously validated measures. A series of two-level hierarchical linear modeling analyses revealed that females, underclassman, and those who are traditionally victimized or were perpetrators of cyberbullying were at significantly increased risk of cybervictimization. Cybervictimization was also associated with an increased risk of psychological (internalizing problems, sleep problems, stress problems) and academic (truancy, poor grades) adjustment problems. However, student connectedness buffered the internalizing problems experienced by victims of cyberbullying. These findings extend prior research on cybervictimization predictors, outcomes, and buffers, and in turn inform the potential use of school-based efforts aimed at preventing cyberbullying.

1. Introduction

With the recent advances in technology, computers and cell phones have become new venues for social interaction among youth and adults alike. Yet emailing, text messaging, and posting on social media sites are other forums through which youth can engage in bullying behaviors. This behavior, known as cyberbullying, Internet aggression, or electronic aggression, is defined as an aggressive act that is deliberately and repetitively carried out in an electronic context (e.g., instant messaging, emails, Facebook, text messaging) against a person who cannot easily defend him or herself (Kowalski, Limber, & Agatston, 2012). A meta-analysis of 131 studies on cyberbullying found that, in general, the lifetime prevalence of being the target of a cyberbully ranges between 10% and 40% (Kowalski, Giumetti, Schroeder, & Lattanner, 2014). Although rates of cyberbullying are lower than traditional (e.g., verbal, physical) forms of bullying, cyberbullying remains a pervasive issue for today's youth (Kowalski et al., 2014). Furthermore, there is some evidence that experiencing cybervictimization may be perceived as more hurtful and predict adjustment problems, over and above

that of traditional forms of victimization (Bonanno & Hymel, 2010; Dempsey, Sulkowski, Nichols, & Storch, 2009).

A growing body of literature has attempted to identify potential predictors and outcomes of cyberbullying. Moreover, researchers have identified possible personal and contextual factors that may contribute to cyberbullying and cybervictimization, as well as exacerbate mental health outcomes among victimized youth (see Kowalski et al., 2014). Although previous research has demonstrated that cybervictimization is associated with a range of psychological adjustment problems (e.g., anxiety, depression, loneliness), few studies have explored the broader range of negative outcomes, such as academic adjustment problems. Additionally, few studies have examined the role that contextual factors play in the risk for cybervictimization and negative mental health outcomes among adolescents (Kowalski et al., 2014). The current paper aimed to address these gaps in the literature by exploring the association between cybervictimization and multiple adjustment problems as well as the extent to which contextual factors contribute to and potentially exacerbate or buffer risk of cybervictimization and adjustment problems. Identifying individual and contextual risk factors for cybervictimization is important for bullying prevention efforts, as it can elucidate the high-risk groups and contexts that warrant particular attention when developing prevention and intervention programs for bullying.

1.1. Theoretical frameworks

Unlike the broader aggression literature, research on cyberbullying has generally lacked a solid theoretical foundation (Slonje, Smith, & Frisén, 2012). However, there has been some interest in the application of the general aggression model to cyberbullying, as it may inform our understanding of the personal and contextual factors involved in aggression (Anderson & Bushman, 2002; DeWall, Anderson, & Bushman, 2011). Specifically, the general aggression model is an integration of several domain-specific theories of aggression that together give a more parsimonious view of both cyberbullying perpetration and victimization (Kowalski et al., 2014; Vannucci, Nocentini, Mazzoni, & Menesini, 2012). This socio-cognitive, developmental model uses the interactions between situational and personal factors to explain aggressive behavior and victimization. Specifically, the model allows for aggression to be explained in light of the dynamic interplay between multiple levels of factors that influence the individual, including the person, the situation, and aspects of the social encounter through which the bullying occurs (Anderson & Carnagey, 2004). For example, aggressive behavior may be explained in part by the interplay between a student's individual level of impulsivity and the extent to which those responsive are triggered by aspects of an unpredictable school environment. The theoretical basis of the general aggression model provides the structure to inform our exploration of individual and contextual factors that impact cybervictims and the related adjustment problems.

The social-ecological model also highlights the relevance of contextual factors, like the school and peer context, that should be considered in addition to individual-level risk factors (Bronfenbrenner & Morris, 1998). Related research on social disorganization theory (Sampson & Groves, 1989) suggests that structural characteristics of communities, such as ethnic heterogeneity, disrupt social organization, which leads to increases in crime and violence. This theory has been applied to school communities, such that school-level indicators of disorder may be predictors of bullying-related attitudes and behaviors (Bradshaw, Sawyer, & O'Brennan, 2009). Both the social-ecological model and the general aggression model provide frameworks to examined the potential influence of contextual and organization factors that may increase the risk for involvement in aggression and bullying.

1.2. Adjustment outcomes related to cyberbullying

1.2.1. Psychological adjustment

Cyberbullying has been linked to numerous negative mental health outcomes, including anxiety, depression, substance abuse, stress, and sleep problems (Beran & Li, 2005; Mitchell, Ybarra, & Finkelhor, 2007; Perren, Dooley, Shaw, & Cross, 2010). A recent meta-analysis of 131 studies indicated that depression, anxiety, loneliness, emotional problems, and stress are all outcomes related to being cybervictimized. Among those negative outcomes, stress ($r = 0.34$) and suicidal ideation ($r = 0.27$) had the strongest associations with cybervictimization (Kowalski et al., 2014). Both traditional and cybervictimization have been linked with high stress (Fredstrom, Adams, & Gilman, 2011). In fact, research suggests that approximately 32% of youth cybervictims have experienced at least one symptom of stress as a result of cybervictimization, whereas another study found that 41% of college student cybervictims reported frequently feeling stressed as a result of being a victim of cyberbullying (Finkelhor, Mitchell, & Wolak, 2000; Schenk & Fremouw, 2012). Even after controlling for traditional victimization, cybervictimization continues to be linked with negative mental health outcomes, including depression and anxiety (Fredstrom et al., 2011; Olenik-Shemesh, Heiman, & Eden, 2012). For example, Perren et al. (2010) found that cybervictimization was a significant predictor of depressive symptoms over and above that of being traditionally bullied.

Sleep problems is another health outcome that has been linked to cybervictimization. Adolescent cybervictims and cyberbully-victims (but not cyberbullies only) were at a significantly higher risk of developing sleeping problems than their non-victimized peers (Sourander et al., 2010). This finding is consistent with other research that found that bullied youth were at an increased risk of having sleep problems (Fekkes, Pijpers, Fredriks, Vogels, & Verloove-Vanhorick, 2006). Although researchers have established a clear link between cybervictimization and psychological adjustment problems, less is known about how personal and contextual factors may attenuate or exacerbate these outcomes.

1.2.2. Academic adjustment

A meta-analytic review of 33 studies that examined peer victimization and academic achievement found a small but significant negative association, such that peer victimization is related to concurrent academic struggles (Nakamoto & Schwartz, 2011). Despite