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# Risky electronic communication behaviors and cyberbullying victimization: An application of Protection Motivation Theory

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ABSTRACT

The present study tested Protection Motivation Theory (PMT) as an explanation of electronic communication safe behavioral intentions and behaviors and cyberbullying victimization. We recruited 577 college students who completed a battery of surveys examining PMT-based constructs and cyberbullying victimization. We found that higher perceived susceptibility to cyberbullying victimization was associated with lower electronic communication safe behavioral intentions, higher electronic communication risky behaviors, and higher cyberbullying victimization. In addition, higher perceived severity of cyberbullying victimization was associated with higher electronic communication safe behavioral intentions and lower cyberbullying victimization. Furthermore, higher response efficacy and self-efficacy regarding electronic communication safe behaviors were predictive of higher electronic communication safe behavioral intentions. The PMT-based model accounted for over 30% of the variability in cyberbullying victimization. PMT constructs may be promising targets for interventions designed to decrease the incidence of cyberbullying victimization.



## 1. Introduction

Cyberbullying can be defined as "willful and repeated harm inflicted through the use of computers, cell phones, and other electronic devices" (Hinduja & Patchin, 2009, p. 5). With the increasing number of media reports of victims of cyberbullying who have committed suicide (De Nies, Donaldson, & Netter, 2010; Friedman, 2010; Michels, 2008; Smith-Spark & Vandoorne, 2013), there is a growing awareness of the widespread prevalence and severity of cyberbullying. Based on a comprehensive assessment of cyberbullying victimization (i.e., Cyberbullying Experiences Survey, CES), Doane, Kelley, Chiang, and Padilla (2013) found that 78% of college students reported experiencing at least one form of cyberbullying involving deception, 88% reported experiencing cyberbullying involving malice, 73% reported experiencing cyberbullying involving public humiliation, and 66% reported experiencing cyberbullying involving unwanted contact. According to these estimates, the vast majority of college students have been a victim of cyberbullying. Although we strongly support initiatives targeting the reduction of cyberbullying perpetration (Doane, Kelley, & Pearson, 2015; Doane, Pearson, & Kelley, 2015), there is a strong need to identify ways in which individuals can protect themselves from cyberbullying victimization.

Understanding the predictors of cyberbullying victimization is essential to enabling researchers to develop effective interventions to reduce cyberbullying victimization. Several studies with early to late adolescents have found that frequency of Internet use is positively related to cyberbullying victimization (Erdur-Baker, 2010; Helweg-Larsen, Schütt, & Larsen, 2011; Mesch, 2009; Mishna, Khoury-Kassabri, Gadall, & Daciuk, 2012; Navarro & Jasinski, 2012; Vandebosch & Van Cleemput, 2009). In a sample of college students, Lindsay and Krysik (2012) found that social networking frequency was associated with increased 'online harassment' by someone known to the participant. Although the initial generation of cyberbullying research demonstrated that exposure to electronic forms of communication places individuals at increased risk of cyberbullying victimization, it is time to examine specific behaviors that place individuals at increased risk of cyberbullying

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victimization.

### 1.1. Risky electronic communication behaviors

Although some inconsistency exists in study findings, several specific risky electronic communication behaviors have been identified as predictors of cyberbullying victimization. These behaviors include agreeing to meet or inviting someone met online to meet in person (Mitchell, Wolak, & Finkelhor, 2008), sharing personal information (Mesch, 2009), sharing passwords (Mishna et al., 2012), communicating with people known only online (Helweg-Larsen et al., 2011; Vandebosch & Van Cleemput, 2009), and using specific media (i.e., social networking websites, video sharing websites, and chatrooms; Mesch, 2009; Navarro & Jasinski, 2012).

The converse of risky electronic communication behaviors, or safe electronic communication behaviors, has been promoted as a way to reduce cyberbullying victimization. For example, Parris, Varjas, Meyers, and Cutts (2012) interviewed 20 high school students' recommendations regarding protective strategies against cyberbullying. Twelve students (60%) suggested discussing interpersonal matters in person to avoid miscommunications that may lead to cyberbullying. All of the students recommended increased use of security strategies and awareness of Internet safety, such as not sharing passwords, frequently changing passwords, setting social networking profiles to private, not accepting friend requests from people with no mutual friends, being respectful of others, and being aware of cyberbullying in general.

### 1.2. Protection Motivation Theory

In order to develop effective preventions to reduce cyberbullying, an important next step is to identify and test theoretical models that may aide our understanding of the antecedents to risky (or safe) electronic communication behaviors. Protection Motivation Theory (PMT; Rogers; 1975; 1983) posits that threat appraisal (perceived severity and perceived susceptibility) and coping appraisal (response efficacy and self-efficacy) are cognitive processes aroused when one is confronted with a threat, which in turn are related to engagement in behaviors aimed to reduce threat. In a sample of adolescents in Singapore (ages 12–19), Lwin, Li, and Ang (2012) used PMT as a theoretical framework to explain motivations behind intentions to adopt 'online safety behaviors.' In support of PMT, perceived severity of cyberbullying, response efficacy, and self-efficacy regarding online safety behaviors (but not perceived susceptibility) were significant predictors of online safety behavioral intentions.

### 1.3. Purpose

To extend the work of Lwin et al. (2012), we examined the ability of PMT to explain electronic communication behavioral intentions, actual electronic communication behaviors, and cyberbullying victimization in a sample of college students. It was hypothesized that perceived susceptibility to cyberbullying victimization, perceived severity of cyberbullying victimization, response efficacy toward electronic communication safe behavior, and self-efficacy concerning electronic communication safe behavior would be positively associated with electronic communication safe behavioral intentions. In addition, it was expected that electronic communication safe behavioral intentions would be negatively related to electronic communication risky behaviors. Furthermore, we predicted that electronic communication risky behaviors would be positively associated with cyberbullying victimization. We used the CES (Doane et al., 2013) to assess a wide range of cyberbullying experiences as well as to assess perceived susceptibility and perceived severity of cyberbullying.

## 2. Method

### 2.1. Participants and procedures

We recruited 577 college students from a psychology department participant pool at a large university in the southeastern United States. Students at the participating university are required to take general education requirements including courses in human behavior. Thus, students represent both psychology and non-psychology majors. The majority of the sample was White (51.8%) or Black (37.3%), with 7.1% Asian, 5.5% "other" race, 1.9% American Indian or Native American, and 2.4% Native Hawaiian or Pacific Islander. Women were overrepresented (71.4%); 81.6% of participants were between ages 18 and 25 ($M$ = 22.79, *Median* = 20, $SD$ = 7.96). Participants were provided with research participation credit for their participation, and the study was approved by the participating university's Institutional Review Board.

### 2.2. Measures

#### 2.2.1. Cyberbullying victimization

Past year cyberbullying victimization was measured using the 21-item victimization scale of the Cyberbullying Experiences Survey (CES; Doane et al., 2013). All items are on a 6-point response scale: 1 = "Never," 2 = "Less than a few times a year," 3 = "A few times a year," 4 = "Once or twice a month," 5 = "Once or twice a week," and 6 = "Every day/Almost every day." The CES victimization scale consists of four factors: malice (5 items; "Has someone been mean to you electronically?"), deception (3 items; "Has someone lied about themselves to you electronically?"), public humiliation (9 items; "Has someone posted an embarrassing picture of your electronically where other people could see it?"), and unwanted contact (4 items; "Have you received an unwanted sexual message from someone electronically?"). For the purposes of the present study, a single composite score was created to reflect overall cyberbullying victimization ($\alpha$ = .933).

#### 2.2.2. Perceived severity

Based on the Lwin et al.'s (2012) measure, using the stem, "How serious are these experiences," perceived severity of cyberbullying victimization was measured using the CES victim scale behaviors on a 5-point response scale ranging from "Not at all serious" to "Extremely serious" ($\alpha$ = .965).

#### 2.2.3. Perceived susceptibility

Based on the Lwin et al.'s (2012) study, using the stem, "How likely is it that these experiences will happen to you?," perceived susceptibility was measured using the CES victim scale behaviors on a 5-point response scale ranging from "Not at all likely" to "Extremely likely" ($\alpha$ = .973).

#### 2.2.4. Risky electronic communication behaviors

Past year risky electronic communication behaviors were assessed with 7 items drawn from the extant literature (Erdur-Baker, 2010; Mesch, 2009; Mishna et al., 2012; Mitchell et al., 2008; Vandebosch & Van Cleemput, 2009) using the stem, "In the past year, how often have you," assessed on a 7-point response scale (based on the CES): 1 = "Never," 2 = "Less than a few times a year," 3 = "A few times a year," 4 = "Once or twice a month," 5 = "Once or twice a week," 6 = "Every day/Almost every day," and 7 = "Don't use this mode of communication." At the item level, "Don't use this mode of communication" was treated as missing data. Items covered sharing personal information with people they