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A Short-term Longitudinal Analysis of the Relation of Children Telling a Friend or a Parent About Being a Cyber Victim and Later Cyber Victimization

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A SHORT-TERM LONGITUDINAL ANALYSIS OF THE RELATION OF CHILDREN TELLING A FRIEND OR A PARENT ABOUT BEING A CYBER VICTIM AND LATER CYBERVICTIMIZATION

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Abstract

Children's social interactions increasingly occur with the use of internet-accessible devices as Information and Communication Technologies (ICTs) continue to rise in both access and use, providing a powerful platform for children to experience victimization. Of particular interest to the present research was children's (222 children, Males = 105; Females = 117) willingness to tell a friend and willingness to tell a parent about experiences of cyber victimization (Grades 3 and 4) to cyber victimization a year later (Grades 4 and 5), controlling for cyber victimization at Time 1 and cyber usage at Time 2. For boys, willingness to tell a friend at Time 1 about cyber victimization was associated with less cyber victimization at Time 2 than not being willing to tell a friend. For girls, willingness to tell a parent at Time 1 about cyber victimization was associated with less victimization at Time 2 than not being willing to tell a parent. These findings underscore the importance of using disclosure as a coping strategy to reduce future incidences of cyber victimization and highlight the complexity of this strategy in terms of gender and nature of social support.

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Children's social interactions increasingly occur with the use of internet-accessible devices, and these communications are being embraced at younger ages as access and use of Information and Communication Technologies (ICTs) continue to rise (Mishna, Saini, & Solomon, 2009). Availability of internet at home is widespread with approximately 90% of children having access (DePaolis & Williford, 2015; Huang & Chou, 2010; Li, 2010) and 39% of children as young as 10-12 years engaging in daily use (DePaolis & Williford, 2015). Although there are positive effects of ICTs, there are also concerns. Of particular concern for the present research is the occurrence of cyber victimization. Considering the abundance of negative effects of cyber victimization, reviewed below, it is imperative for researchers to examine coping strategies children can use. Coping strategies may be used to prevent cyber victimization from occurring, stop victimization after the fact, or buffer the negative emotional impacts (Machackova et al., 2013, Perren et al., 2012). The current research focuses on one coping mechanism which has been suggested as helpful – disclosure of cyber victimization to a friend and/or a parent.

The present research was designed to evaluate the extent of self-reported cyber victimization by third and fourth graders one year later (when in fourth and fifth grades), in relation to telling or not telling a friend or a parent about the victimization earlier. The use of a short-term longitudinal design and assessment of elementary school-aged children are rare in this area of research and are particular strengths of the present research. In the remainder of this Introduction, we provide a review of research on cyber victimization, contrast it with traditional

victimization, and consider coping strategies victims may use and the effectiveness of those strategies. An overview of the present research is offered at the conclusion of the Introduction.

Cyber Victimization: Overview

Blair and Fletcher (2010) identified three common themes in a qualitative analysis of 7th graders regarding the benefits of owning a cell phone: 1) providing a source of connection to friends and family, 2) being a source of social status, and 3) facilitating adolescent autonomy. Communication through ICTs has allowed for the maintenance of existing friendships and ability to stay connected, regardless of physical location (Bessiere et al., 2008) and further has allowed for opportunities to boost social connectedness and well-being through increased closeness and bonding (Valkenburg & Peter, 2007). Furthermore, the internet has provided opportunities for collaborative learning experiences (Beran & Li, 2005).

Although ICTs may offer social and educational benefits as noted, there are also potential risks such as experiencing cyber victimization. Cyber victimization is defined as being the recipient of an act of aggression through ICTs including cell phones, computers, and other electronic devices (Schoffstall & Cohen, 2011). Cyber victimization has allowed aggression to extend beyond face-to-face encounters and into the homes and private lives of children (Patchin & Hinduja, 2006). There are a variety of ways in which children can become cyber victims, including being impersonated, harassed, hacked, outed, excluded, stalked, etc. (Willard, 2006). Huang and Chou (2010) reported that the three most common cyber victimization behaviors in a sample of Taiwanese youth (grades 7th - 9th), were threatening/harassing, inappropriate joking, and rumor spreading.

Cyber victimization has been related to a host of negative consequences including anxiety in both high school (N = 802, mean age = 15.84; Fredstrom et al., 2011; Juvonen & Gross,

2008), and elementary-aged samples (*N* = 2,792, mean age = 9.70; Guhn et al., 2013), along with depressive symptoms in a study with children ranging from 10 - 17 years old (*N* = 1501); Ybarra, 2004). In addition, suicidal ideation and self-harm behaviors have been noted in middle-school samples (*N* = 1963, mean age = 12.8, Hinduja & Patchin, 2010). Furthermore, Ybarra et al. (2007) found school functioning to be negatively impacted by experiences of cyber victimization (*N* = 1515, mean age = 12.6). Cyber victims were significantly more likely than non-victims to be suspended or given detention and engage in delinquent behaviors such as skipping school and carrying a weapon to school.

Prevalence of Cyber Victimization. As noted, internet access has become widespread with children, with over 90% of children and adolescents reporting internet availability within their homes (DePaolis & Williford, 2015; Huang & Chou, 2010; Li, 2010). Although the internet is most commonly accessed at home, youth have also reported accessing the internet in public spheres, including academic settings. In a sample of 7th - 12th graders, nearly 47% of respondents were found to use their cell phones at school (Li, 2010). Entertainment (87%) and communication (76.6%) were found to be the dominant reasons for using ICTs, followed by academics (67.9%) and self-expression (53.6%) (Huang & Chou, 2010).

In a review on youth's experiences with cyberbullying victimization, Tokunaga (2010) reported that prior literature found approximately 20-40% of youth experience victimization online, with experiences peaking in 7th- 8th grade. DePaolis and Williford (2015) found 17.7% of their sample of 3rd- 5th graders had experienced cyber victimization since the beginning of the school year - primarily through online games (67%). Furthermore, 83% of students reported cyber victimization to have occurred outside of the school context, with only 13% identifying

cyber victimization occurring at school or on the way to or from school (DePaolis & Williford, 2015).

High internet usage may relate to incidents of cyber victimization, although the findings have been inconsistent on this relation (see Tokunaga, 2010), and the rate of reported cyber victimization varies greatly across studies. The varied reported frequency of cyber victimization may be due to methodological differences in the reports including varying operationalization of cyber victimization, sample size, and age range (Kowalski et al., 2014). For example, lower rates of victimization have been found for younger samples (10 - 12 years old), perhaps due to lower rates of access or usage of the internet (Olenik-Shemesh & Heiman, 2014). Regardless of the discrepancies surrounding its prevalence rates, cyber victimization has been shown to negatively relate to the victim's social adjustment and further appears to be on the rise - Youth Internet Safety Survey's (YISS) identified 6% of youth 10-17 years old in their nationwide survey to have experienced cyber harassment in 2000, which then increased to 11% by 2010 (Jones et al., 2012).

Contrasting Cyber Victimization and Traditional Victimization. Although overlap has been found between those reported as being cyber and traditional victims in both the roles they play and consequences they face (Dooley et al., 2010; Monks et al., 2012; Olweus, 2013, Sticca & Perren, 2013), research has indicated that cyber victimization is often not merely an extension of social, face-to-face aggression manifested via a virtual platform but instead is a distinct construct with unique characteristics and implications (Bonanno & Hymel, 2013; Law et al., 2012; Schoffstall & Cohen, 2011).

Unlike traditional, face-to-face victimization, the perpetrators of cyber aggression may not be known by the cyber victims. Some studies have found about 40-50% of cyber victims

were able to identify their perpetrator (Kowalski & Limber, 2007, Wolak et al., 2007). This anonymity may foster a power imbalance between cyber-aggressor and victim by allowing the aggressor to continue without fear of consequence since their identity remains unknown by both the victim and potential change agents (Slonje et al., 2013). In addition, unlike traditional face-to-face victimization which commonly occurs at school, Huang & Chou (2010) found that cyber victimization predominantly happens at home (86.5%) followed by school (5.5%).

Cyber victims and traditional victims may differ in their use of coping strategies. Armstrong, Dubow, and Domoff (2019) found traditional victims (N = 321, 11 – 15-years-old) tended to use more coping strategies overall – problem solving, social support, distancing, distraction, and retaliation – than cyber victims. Similarly, cyber victims appear to be less likely to disclose victimization in general than traditional victims (Dooley et al., 2012; Slonje & Smith, 2008). It has been suggested that perhaps telling is viewed as a less effective strategy given that the perpetrator may be unknown, and therefore considered as less able to face consequences (Huang & Chou, 2010; Mishna et al., 2009; Pereira et al., 2016).

Age, Gender, and Cyber Victimization. A preponderance of the research on cyber victimization has been with adolescents and not younger children, despite technology being used by children of increasingly younger ages (Mishna et al., 2009). The current study examined cyber victimization and disclosure to friends and parent for third and fourth graders, an age range often neglected in cyber victimization research. Younger children have been found to be more likely to seek help or employ social support than older children or adolescents (Pereira et al., 2016; Skrzypiec et al, 2011). Thus, help-seeking behaviors may be influenced by victim's age and their accompanying perceptions of social support. Bokhorst and colleagues (2019) found that children 8-10 years old perceived parents and friends to be equally supportive; however, at 16-18

years old, friends' support exceeds that of parents. Perceptions of support may therefore influence victim's willingness to tell and to whom.

Although a number of studies found no gender differences in cyber victimization (Guhn et al., 2013; Jackson & Cohen, 2012; Lapidot-Lefler & Dolev-Cohen, 2015), some studies have found females to be cyber victimized more than males (Cappadocia et al., 2013; Matos et al., 2018; Wang et al., 2019). Furthermore, gender differences have also been found regarding the electronic device (e.g., cell phones, computers, online games, etc.) used to conduct or experience cyber victimization. Williford, Fite, DePaolis, and Cooley (2018) found that girls were more likely to experience cyber victimization on school buses with smartphones, and boys were more likely to experience victimization at home, perhaps by means of online games in a sample of 3rd - 5th graders (N = 278). This suggests differences in locations and types of media used by gender, which may account for inconsistencies within the literature (DePaolis & Williford, 2015; Williford et al., 2018). Wright (2020) suggested it may not be a matter of gender but instead a matter of gender stereotype traits (e.g., masculine, feminine). In Wright's study of 8th graders, children displaying higher rates of masculine traits, regardless of gender, were identified as having higher rates of cyber aggression compared to their feminine counterparts.

Coping with Cyber Victimization Through Disclosure

Disclosure is defined as telling another individual about one's experiences, in this case, the experience of cyber victimization. Previous research has identified social support, specifically disclosure of victimization, to be the most common coping strategy employed by victimized youth – both in cyber and traditional contexts (Black et al., 2010; Frisén et al, 2014; Machackova et al., 2013; Monks et al., 2012). However, children often opt to not tell anyone at

all (Bjereld, 2018; Cassidy et al., 2013; Price & Dalgleish, 2010). In fact, doing nothing at all is a common strategy (Craig et al, 2007; Monks et al., 2012).

When children decide to disclose, there are a variety of individuals they can turn to including their parents/caregivers, friends, teachers, school personnel, siblings, and other adults. Furthermore, they can report victimization to more formal agents, such as police, health professionals, or victim support services. Cyber victimized youth, ranging from ages 12-20, are more likely to disclose cyber victimization to their friends/peers than to adults (Cassidy et al., 2013; Dehue et al., 2008; Li, 2010; Matos et al., 2018; Slonje & Smith, 2008). Huang and Chou (2010) found in their sample of 7^{th}-8^{th} graders that they were more likely to turn to their peers (33.4%) and siblings (16.1%) than their parents (11.6%) or teachers (5.9%). Similarly, Patchin and Hinduja (2006) found that cyber victimized youth, ages 12 -20, were most likely to tell online friends followed by friends when asked their responses to online harassment.

Several reasons have been given regarding children's decision to not disclose cyber victimization, particularly to adults. Adults have been suggested by children (ranging 10-18 years old) to trivialize the experience or overreact, and some children fear they would not be believed and telling adults may in fact make the situation worse (Daneback et al., 2018; DeLara, 2012; Navarro et al., 2018; Priebe et al., 2013). Some children may fear that they will lose internet privileges if they report to their parents. Furthermore, many adolescents suggest that they want to handle the issue independently (Huang & Chou, 2010; Mishna et al., 2009).

Gender and Cyber Victimization Coping Strategies. A few studies have identified gender differences in the coping strategies children use to cope with traditional aggression. Research has shown a consistent pattern of females employing coping strategies, specifically disclosure, more than males to cope with traditional victimization and suggesting it as an

effective method for younger children (K-8th grade; Black et al., 2010) and early adolescents ranging from 12-16 years old (Murray-Harvey et al., 2012; Skrzypiec et al., 2011). Boys have been reported to use physical aggression, humor, and revenge more than females to cope with traditional victimization (Craig et al., 2007). However, these gender differences decline as the number of ways children are bullied increases (Skrzypiec et al., 2011).

There has been limited research examining gender differences for coping with cyber aggression. Females have been found to tell someone more than males when dealing when cyber victimization (Cerna et al., 2016; Hellfeldt et al., 2019; Machmutow et al., 2012), while males have been identified as less likely to tell (Daneback et al., 2018; Priebe et al., 2013). In a study using hypothetical situations where the target of the cyber aggression presumably knew the cyber aggressor, Frisén and colleagues (2014) reported that girls were more likely to recommend telling an adult, and boys were more likely to suggest retaliation later, when face-to-face. In short, research reveals some consistency with regard to females coping with the use of social support or disclosure practices and males with the use of retaliation or physical aggression.

In a qualitative study conducted by Dennehy et al., (2020) adolescent males suggested it was harder to disclose cyber victimization due to the need to appear "macho." These gender norms may play a role in reducing males' willingness to seek help or disclose cyber victimization. This may be due to males not perceiving telling someone/seeking support as an effective method of stopping or reducing victimization.

The Present Research

The internet is an important medium in the lives and social interactions of children, both in and out of the school context. High rates of availability and cyber usage have allowed a number of benefits but have also provided a new platform to experience victimization. It is

imperative to investigate how children cope with cyber victimization, and how coping mechanisms may relate to future incidents of victimization. The primary research question for the present research concerned the extent of cyber victimization reported by third and fourth grade children one year after (grades 4 and 5) endorsing telling about the cyber victimization to a friend or a parent.

The present research examined telling about cyber victimization by children in middle childhood, an age range often neglected in cyber victimization research. We expected children who reported willingness to tell a friend or parent to experience reductions in the extent of cyber victimization in the following school year. The present research also extends research on cyber victimization by examining the relation of telling a friend or a parent about cyber victimization to cyber victimization a year later. In addition, this research can help clarify potential gender differences in prevalence and disclosure.

Methods

Participants

Participants included elementary school children (final sample: $N = 222$, males = 105, females = 117) attending a university-affiliated public school in the southern United States. Of the 222, 24 student had incomplete data leaving the final sample at 198. None of the incomplete data was related to attrition from T1 to T2. The racial composition of the sample was White (67%), African American (21%), and Other ethnicities (12%). Two independent cohorts were included in the final sample and each was assessed twice: Cohort 1, tested in 2015 and 2016 and Cohort 2, tested in 2017 and 2018. For both Cohorts, at Time 1 (T1), students were 3rd and 4th graders and at Time 2 (T2) students were 4th and 5th graders. Demographic information regarding children's grade, gender, and ethnicity was provided by the school administration and

can be found in Table 1. The students primarily came from middle-class socioeconomic backgrounds, as evidenced by less than 20 percent of the families qualifying for any school lunch subsidy. A statistical power analysis was performed for sample size estimation. Our sample size of $N = 222$ was found to be more than adequate assuming a moderate effect size. Approval to conduct this study was obtained from a university Institutional Review Board (IRB) and from appropriate school administrators.

Measures

The current study used assessments from a larger longitudinal investigation of children's peer relations. Self-reports of cyber victimization, willingness to tell a friend and/or a parent, and technology usage, were obtained for each participant at each testing, one year apart.

Cyber Victimization. Children completed a self-report questionnaire to assess cyber victimization. Cyber victimization was assessed at T1 and T2. There was a total of 15 items and four were used to directly assess incidences of cyber victimization ("Have you ever been bullied on a computer, phone, or tablet?, 'Have you ever been teased in a mean way on a computer, phone, or tablet?', 'Have you ever been called hurtful names by someone on a computer, phone, or tablet?', and 'Have you ever had rumors spread about you on a computer, phone, or tablet?"). Children indicated their responses using a 4-point Likert scale, anchored as never, rarely, sometimes, and often. Responses were summed (never = 1, often = 4) to get an overall score for cyber victimization for each child (range = 4 - 16). Internal consistencies for the current sample were high: 2015, Cronbach's $\alpha = .85$; 2016, Cronbach's $\alpha = .82$; 2017, Cronbach's $\alpha = .87$; 2018, Cronbach's $\alpha = .87$.

Willingness to Tell a Friend and/or a Parent about Cyber Victimization. The same questionnaire used to assess extent of cyber victimization included two items, one to assess

children's willingness to tell a friend and one to assess children's willingness to tell as parent at T1 (Grades 3 and 4). Children were asked to imagine mean things happening to them on the Internet or in a text message. They were then asked to indicate if they would tell a friend/tell a parent Children responded either "Yes" or "No" to these questions.

Cyber Usage. Children completed a self-report questionnaire to assess cyber usage. Cyber usage was assessed at T1 and T2. Five items were used to directly assess for various uses of the internet (Email, Texting, Messenger apps like Facebook Messenger, Whatsapp, Social Networking Sites like Facebook, Snapchat or Instagram, etc.). Children indicated their responses using a 4-point Likert scale, anchored as never, rarely, sometimes, and often. Internal consistencies for the current sample were adequate: 2015, Cronbach's α = .74; 2016, Cronbach's α = .79; 2017, Cronbach's α = .72; 2018, Cronbach's α = .78.

Procedure

Data were collected in the Fall semesters of 2015 through 2018 as part of a larger ongoing longitudinal study regarding children's peer interactions. Parents were informed of research and consent for children's participation was obtained. Children provided assent and were made aware they were able to withdraw at any point from the study without penalty. Emphasis was placed on confidentiality and the student's privacy. Children were assured that the answers they provided would be kept private and only be seen by researchers. The children were administered questionnaires in the school library in a group session (total time, approximately 45 minutes). The session was led by at least two psychology graduate students. Session leaders read instructions aloud. Children were given additional, individual instruction as needed. Research assistants monitored children as they provided answers to questionnaires.

Results

Results are presented in two sections. First preliminary analyses were performed to assess associations among variables and to evaluate possible associations of variables which were not the focus of the present research. Second, the primary analysis, directly evaluated the association of willingness to tell a friend and/or parent about cyber victimization at T1 to the extent of cyber victimization in the following year, controlling for cyber usage (T2) and extent of cyber victimization (T1).

Preliminary Analyses

As preliminary analyses, we first report percentages of children who reported any cyber victimization at T1 or T2 and percentages of children willing to tell a friend or tell a parent about cyber victimization. Next, we conducted zero-order correlations among all the variables: cohort (T1), grade (T1), grade (T2), gender, race, willingness to tell a friend at T1, willingness to tell a parent at T1, cyber victimization (T1 & T2), and cyber usage (T1 & T2). Finally, we conducted a 2 (Cohort: 2015-16/2016-17; 2017-18/2018-19) x 2 (Grade: 3^{rd}, 4^{th}) x 3 (Race: African American, White, Other ethnicity) x 2 (Cyber victimization: T1, T2) repeated measures ANOVA with cyber victimization as a repeated measure. Means and standard deviations of all variables can be found in Table 2 along with the zero-order correlations for all variables.

Children were assigned a score of 4 if they reported receiving no cyber victimization, and a score of 5 to 16 if they experienced any cyber victimization. For this sample, 25.8% (n = 54) reported experiences of cyber victimization at T1, and 33.6% (n = 71) at T2 majority of children reported “yes” to willingness to tell a friend, 58.8%, chi square (1) = 6.49, $p < .05$; n =124, and willingness to tell a parent, 82.8%, chi square (1) = 89.80, $p < .001$; n = 173. Males and females significantly differed on their willingness to tell a parent with females being more willing to tell

than boys, $t(207) = 18.99$, $p = .034$. Table 3 provides gender breakdown of children's willingness to tell a friend or parent. Males reported higher rates of cyber victimization at T1 ($M = 5.30$, $SD = 2.62$) and T2 ($M = 5.01$, $SD = 1.98$) compared to Females (T1: $M = 4.68$, $SD = 1.57$, T2: $M = 5.06$, $SD = 2.06$).

Several significant correlations were found among the variables for the entire sample. Results of the Pearson correlation indicated that there was a statistically significant positive correlation between cohort and cyber usage at T1, ($r = .70$, $p < .001$). Grade (T1) was positively correlated with willingness to tell a friend at T1, ($r = .19$, $p = .006$) and cyber usage at T2, ($r = .15$, $p = .033$). Gender was positively correlated with willingness to tell a parent at T1, ($r = .146$, $p = .034$) and negatively correlated with cyber victimization at T1, ($r = -.15$, $p = .034$). Results of the Pearson correlation indicated that there was a significant negative correlation between race and cyber usage at T2, ($r = -.18$, $p = .012$). Cyber usage at T2 was positively correlated with cyber victimization at T2, ($r = .22$, $p = .002$) and cyber usage at T1, ($r = .36$, $p < .001$). Willingness to tell a friend was positively correlated to willingness to tell a parent, ($r = .19$, $p = .006$). Lastly, cyber victimization at T1 and T2 were positively correlated, ($r = .32$, $p < .001$).

Based on previous research, we were interested in gender and cyber usage in relation to the extent of cyber victimization over time. The variables of cohort, grade, and race were not the focus of the current study, however, we wanted to determine their possible association to the outcome variable. We conducted a 2 (Cohort: 2015-16/2016-17; 2017-18/2018-19) x 2 (Grade: 3rd, 4th) x 3 (Race: African American, White, Other ethnicity) x 2 (Cyber Victimization: T1, T2) repeated measures ANOVA with Cyber Victimization as a repeated measure. Neither cyber victimization at T1 nor cyber victimization at T2 was statistically significantly related to any of

the three independent variables (cohort, grade, race) nor their interactions. Therefore, we eliminated cohort, grade, and race as independent variables in the primary analysis.

Primary Analysis

The primary research question for the present research concerned the extent of cyber victimization reported by children in fourth or fifth grade one year after reporting the extent of cyber victimization and willingness to tell a friend or parent about victimization when in third or fourth grade. A 2 Gender x 2 Willingness to tell a friend at T1 (Yes, No) x 2 Willingness to tell a parent at T1 (Yes, No) analysis of variance was conducted on the dependent variable of cyber victimization at T2. We recognized the need to control for Cyber victimization at T1 and Cyber Usage at T2 given their significant correlation with the dependent variable of cyber victimization at T2. and included these as covariates. As expected, the covariate of Cyber victimization was found to be significantly related to the outcome variable of Cyber victimization at T2, $F(1, 188) = 4.56$, $p = .034$. The covariate of Cyber Usage at T2 was also found to be significantly related to the outcome variable of Cyber victimization at T2, $F(1, 188) = 19.44$, $p < .001$.

No main effects were found to be statistically significant for the independent variables of gender, willingness to tell a friend at T1 and willingness to tell a parent at T1. Two 2-Way interactions were found to be statistically significant: Gender x Willingness to tell a friend at T1, $F(1, 188) = 9.53$, $p = .002$, and Gender x Willingness to tell a parent at T1, $F(1, 188) = 3.90$, $p = .05$. Paired- sample t-tests post hoc tests were performed to pinpoint sources of differences in each interaction. These interactions are discussed below and may be found in Figure 1 and Figure 2.

All four comparisons of groups shown in Figure 1 proved to be statistically significant. Males who reported “yes” to willingness to tell a friend at T1 had significantly lower rates of

cyber victimization at T2 than males who reported "no" to willingness to tell a friend at T1, t (99) = -21.62, $p < .001$ (two-tailed). Females who reported "yes" to willingness to tell a friend at T1 had significantly higher rates of cyber victimization at T2 than females who reported "no," t (102) = -22.01, $p < .001$ (two-tailed). Males who responded "no" reported greater cyber victimization than females, t (83) = -14.70, $p < .001$ (two-tailed), and females who responded "yes" reported greater cyber victimization than males, t (118) = -19.40, $p < .001$ (two-tailed)

Figure 2 displays results for the significant Gender x Willingness to tell a parent interaction. All four comparisons of groups shown in Figure 2 proved to be statistically significant. Males who reported "yes" to willingness to tell a parent at T1 had significantly higher rates of cyber victimization at T2 than males who reported "no" to willingness to tell a parent at T1, t (98) = 21.40, $p < .001$ (two-tailed). Females who reported "yes" to willingness to tell a parent at T1 had significantly lower rates of cyber victimization at T2 than females who reported "no," t (102) = 19.57, $p < .001$. Males who responded "no" reported less cyber victimization than females, t (35) = -10.06, $p < .001$ (two-tailed), and females who responded "yes" reported less cyber victimization than males, t (165) = -22.03, $p < .001$ (two-tailed).

In summary, males who reported they would confide in friends experienced less cyber victimization a year later than males who did not. Females who reported they would confide in a parent experienced less cyber victimization a year later than females who did not. It should be emphasized that gender was not significantly related overall to extent of cyber victimization at either time of testing as shown in the preliminary analyses.

Discussion

Increasing access and use to Information and Communication Technologies (ICTs) have increased the contexts for children to be victimized. A substantial literature documents that cyber

victimization is associated with a number of negative consequences for children (e.g., Fredstrom et al., 2011; Guhn et al., 2013; Hinduja & Patchin, 2010), and can be a significant challenge in children' lives. Disclosure has been noted as a popular coping strategy used by youth (Frisen et al., 2014; Machackova et al., 2013) and it is important to understand more about how disclosing cyber victimization to friends or parents might relate to cyber victimization.

The aim of the present research was to examine the relation of 3rd and 4th graders' willingness to tell a friend or parent about cyber victimization to cyber victimization reported a year later, controlling for extent of cyber victimization at T1 and cyber usage at T2. Both willingness to tell a friend and willingness to tell a parent related to the extent of subsequent cyber victimization. In sum, willingness to tell was an effective coping strategy for children. Importantly, the association of these disclosures to reduced cyber victimization was moderated by gender in conjunction with who the child tells (friend or parent). Results are discussed first in terms of the willingness of children to seek social support and tell another person about cyber victimization. Next, we discuss findings related to the effectiveness and shortcomings of telling another person. Limitations and future directions are presented next.

Willingness to tell a Friend or a Parent

The results confirmed previous research (Frisen et al., 2014, Olenik-Shemesh et al., 2017) that children in middle childhood were willing to tell friends and parents about their previous cyber victimization experiences; 58.8% of the total sample reported they would tell a friend and 82.8% reported they would tell a parent. Perceived social support was found by Bokhorst et al. (2019) to be high for children 8 – 10 years old, and children perceived parents and friends equally supportive at this age. High perceived social support may therefore account for children's willingness to tell in the current sample. Furthermore, consistent with previous

research (Armstrong et al., 2019; Cerna et al., 2016; Daneback et al., 2018; Skryzpiec et al., 2011), females were found more likely than males to tell either a friend or parent about cyber victimization experiences at T1.

Willingness to Tell as a Strategy to Deal with Cyber Victimization

Willingness to tell was found to be an effective coping strategy in regards to reducing future incidents of cyber victimization, as moderated by gender along with to whom the child was willing to disclose. For males, telling a friend was helpful as evident by reductions in the extend of cyber victimization at T2. For females, willingness to tell a parent resulted in reductions in cyber victimization at T2. This finding is consistent with previous literature (Shelley & Craig, 2010; Skryzpiec et al., 2011).

Shelley and Craig, (2010) examined coping styles and cyber victimization in children (N = 220) and found that social support coping was association with reduced victimization over a 6-month time period for females, but not for males. None of the coping styles examined (externalizing, internalizing, revenge, and social support) were significantly related to reductions in cyber victimization for males. Furthermore, in contrast to females, social support coping was positively related to cyber victimization at T2 for males (Shelley & Craig, 2010). Similarly, Skrzypiec et al., (2011) found that males and females in their Australian sample of 12–14-year-olds (N = 452) significantly differed in coping strategies they would use to deal with cyber victimization. Specifically, females reported they were more willing than males to seek social support from a parent. Female victims differed from female nonvictims in their willingness to tell, with those that had been victimization reporting less willingness than nonvictims (Skrzypiec et al., 2011)

However, the data also showed that telling was not always associated with cyber victimization reduction. For males, willingness to tell a parent was associated with increases in cyber victimization at T2. Several studies have addressed children's reluctance in telling adults due to lack of confidence in parent's ability to provide appropriate help along with fear of over-reactions, restrictions, and being misunderstood (Cerna et al., 2016; Dennehy et al., 2020). Although our sample reported a high rate in willingness to tell a parent (77%) perhaps these reluctances expressed by children in other studies may account for increases in cyber victimization at T2 as opposed to reductions. Parents may not be responding appropriately to male children when they disclose. Future research should explore how and if parents respond differently to males and females when they disclose victimization, and how their responses impact those children both in terms of the extend of future cyber victimization and social competence factors.

Willingness to tell a friend was not an effective coping strategy for females, resulting in increases in T2 cyber victimization. Understanding female motives to tell a friend along with how friends respond to cyber victims' disclosures may shed light on this phenomenon. Cyber victims may disclosure to friends for various reasons including seeking emotional support or instrumental support, such as advice on stopping or reducing cyber victimization. Previous research has identified telling a friend as an effective coping strategy for cyber victimization in that it buffers the negative emotional impacts associated with victimization (Sasson & Mesch, 2014). Female children may not be expecting their friends to aid in preventing or stopping future cyber victimization, but instead are motivated to tell in order to receive emotional support. Friendship quality may be another factor at play. Females in the current sample reported willingness to tell a friend, however, we are unable to determine if the "friend" they told

considered them a friend as well (i.e., mutual friend). These peers may not be motivated to help reduce child's cyber victimization experiences. Furthermore, friends/peers of children may provide inappropriate emotional/instrumental support resulting in increases in cyber victimization – such as advice to retaliate or do nothing, both of which have been reported as ineffective coping strategies (Armstrong et al., 2019; Price & Dalgleish, 2010; Shelley & Craig, 2010). Future research should explore the role of friendship quality in examining willingness to tell and cyber victimization. Furthermore, qualitative research would provide insight into children's motives in disclosing along with content and quality of support provided to them from friends.

Limitations and Future Directions

Several limitations in the present study are worth noting. First, the results of the present research were obtained from self-reported data. Although self-reported data makes the most sense in the given context since children are the most knowledgeable on their cyber usage/cyber victimization experiences and willingness to tell, it would be beneficial to obtain data from multiple informants particularly as a verification of children reaching out for social support. Second, only quantitative data was obtained, however, the use of qualitative data in this line of research would provide considerable insight into the motives behind telling a friend or parent about cyber victimization along with child's perception of this particular coping strategy's efficacy. In addition, qualitative data could pull from multiple informants and allow researchers to identify the type of support (emotional vs. instrumental, etc.) provided by parents and friends regarding cyber victim's disclosure. How friends and parents respond to children's cyber victimization disclosure may impact the child's well-being and extend of future cyber victimization.

A third limitation of the present research is the measure of willingness to tell a friend/parent at T1. Since this measure was worded as "would you tell…" it does not provide an accurate representation of what students actually did – only what they were willing to do. Furthermore, all children in the sample were asked to report on their willingness to tell and therefore both victims (of varying severity) and non-victims were included in the analysis. Future research should examine how victims and nonvictims differ in regard to their willingness to tell a friend or parent. Previous research on victim severity and willingness to tell has been inconclusive. Several studies have found non-victims or occasional victims to be more willing to tell than (severe) cyber victims (Navarro et al., 2018; Skryzpiec et al., 2011). However, this is in contrast to other studies that have found increasing severity of cyber victimization to be associated with greater odds of disclosing (Cerna et al., 2016), although research has also identified severe victims indicating coping strategies as less effective even when they are employed (Machackova et al., 2013).

Another limitation of the current study was that it did not break down cyber victimization by severity type, nor did it factor in perceived harm of victimization experiences. Greater perceived harm and fear of cyber victims has been associated with higher rates of willingness to tell (Daneback et al., 2018; Pereira et a., 2016). Lastly, other coping strategies were not accounted for nor controlled for in the current study. Although disclosure is a popular and often times effective coping strategy, there are many other coping strategies not accounted for in the present research that may be playing a role in reducing cyber victimization.

It is important to note that the current study obtained data from only one school in the southern Unities States with a majority middle-class and white sample. Therefore, results cannot be generalized beyond the scope of the current sample. However, a particular strength of the

current study is that it investigated the role of cyber victimization and willingness to tell in an age range often neglected in the cyber victimization literature – middle childhood. The vast majority of cyber victimization research is conducted on adolescent samples despite ICTs being increasingly used at younger ages (Mishna et al., 2009). The present research identified 25.8% of children at T1 and 33.6% of children T2 to have experiences of cyber victimization. It is imperative for research to continue to shed light on middle childhood's experiences with cyber victimization along with their willingness to tell a friend/parent or another source with the aim to identify interventions to reduce future cyber victimization.

Conclusion

Children's use of ICTs has contributed to a growing concern regarding incidences of cyber victimization. Considering the alarming prevalence of cyber victimization occurring at ages as young as 3rd – 5th graders, it is important for research to evaluate coping strategies children use to combat cyber victimization. The present research evaluated the association of gender and willingness to tell a friend or parent in relation to subsequent cyber victimization, after controlling for previous cyber victimization and current cyber usage. The present research confirms previous literature in finding willingness to tell as an effective strategy in reducing cyber victimization, however, this relation was moderated by both children's gender and whom they are willing to tell (friend vs. parent). Future research should explore motives behind children's willingness to tell along with the type of support they receive from friend and parents.

References

Armstrong, S. B., Dubow, E. F., & Domoff, S. E. (2019). Adolescent Coping: In-Person and Cyber-Victimization. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace, 13(4).*

Beran, T., & Li, Q. (2005). Cyber-harassment: A study of a new method for an old behavior. *Journal of educational computing research*, *32*(3), 265.

Bessiere, K., Kiesler, S., Kraut, R., & Boneva, B. S. (2008). Effects of Internet use and social resources on changes in depression. *Information, Community & Society*, *11*(1), 47-70.

Bjereld, Y. (2018). The challenging process of disclosing bullying victimization: A grounded theory study from the victim's point of view. *Journal of health psychology*, *23*(8), 1110-1118.

Black, S., Weinles, D., & Washington, E. (2010). Victim strategies to stop bullying. *Youth violence and juvenile justice, 8(2),* 138-147.

Blair, B. L., & Fletcher, A. C. (2011). "The only 13-year-old on planet earth without a cell phone": meanings of cell phones in early adolescents' everyday lives. *Journal of Adolescent Research, 26(2),* 155-177.

Bokhorst, C. L., Sumter, S. R., & Westenberg, P. M. (2010). Social support from parents, friends, classmates, and teachers in children and adolescents aged 9 to 18 years: Who is perceived as most supportive?. *Social development, 19(2),* 417-426.

Bonanno, R. A., & Hymel, S. (2013). Cyber bullying and internalizing difficulties: Above and beyond the impact of traditional forms of bullying. *Journal of youth and adolescence*, *42*(5), 685-697.

Cappadocia, M. C., Craig, W. M., & Pepler, D. (2013). Cyberbullying: Prevalence, stability, and risk factors during adolescence. *Canadian Journal of School Psychology*, *28*(2), 171-192.

Cassidy, W., Faucher, C., & Jackson, M. (2013). Cyberbullying among youth: A comprehensive review of current international research and its implications and application to policy and practice. *School psychology international*, *34*(6), 575-612.

Cerna, A., Machackova, H., & Dedkova, L. (2016). Whom to trust: The role of mediation and perceived harm in support seeking by cyberbullying victims. *Children & Society*, *30*(4), 265-277.

Craig, W., Pepler, D., & Blais, J. (2007). Responding to bullying: What works?. *School psychology international, 28*(4), 465-477.

Daneback, K., Bjereld, Y., Macháčková, H., Ševčíková, A., & Dědková, L. (2018). Bullied Online but Not Telling Anyone: What Are the Reasons for Not Disclosing Cybervictimization?. *Studia paedagogica, 23*(4), 119-128.

Dehue, F., Bolman, C., & Völlink, T. (2008). Cyberbullying: Youngsters' experiences and parental perception. *CyberPsychology & Behavior*, *11*(2), 217-223.

DeLara, E. W. (2012). Why adolescents don't disclose incidents of bullying and harassment. *Journal of School Violence, 11*(4), 288-305.

Dennehy, R., Meaney, S., Cronin, M., & Arensman, E. (2020). The psychosocial impacts of cybervictimisation and barriers to seeking social support: Young people's perspectives. *Children and Youth Services Review, 111*.

DePaolis, K., & Williford, A. (2015). The nature and prevalence of cyber victimization among elementary school children. *Child & Youth Care Forum, 44*(3), 377-393.

Dooley, J. J., Gradinger, P., Strohmeier, D., Cross, D., & Spiel, C. (2010). Cyber-victimisation: The association between help-seeking behaviours and self-reported emotional symptoms in Australia and Austria. *Australian Journal of Guidance and Counselling*, *20*(2), 194.

Dooley, J. J., Shaw, T., & Cross, D. (2012). The association between the mental health and behavioural problems of students and their reactions to cyber-victimization. *European Journal of Developmental Psychology*, *9*(2), 275-289.

Fredstrom, B. K., Adams, R. E., & Gilman, R. (2011). Electronic and school-based victimization: Unique contexts for adjustment difficulties during adolescence. *Journal of youth and adolescence*, *40*(4), 405-415.

Frisén, A., Berne, S., & Marin, L. (2014). Swedish pupils' suggested coping strategies if cyberbullied: Differences related to age and gender. *Scandinavian journal of psychology*, *55*(6), 578-584.

Guhn, M., Schonert-Reichl, K. A., Gadermann, A. M., Hymel, S., & Hertzman, C. (2013). A population study of victimization, relationships, and well-being in middle childhood. *Journal of Happiness Studies*, *14*(5), 1529-1541.

Hellfeldt, K., López-Romero, L., & Andershed, H. (2020). Cyberbullying and psychological well-being in young adolescence: the potential protective mediation effects of social support from family, friends, and teachers. *International journal of environmental research and public health*, *17*(1), 45.

Hinduja, S., & Patchin, J. W. (2010). Bullying, cyberbullying, and suicide. *Archives of suicide research*, *14*(3), 206-221.

Huang, Y. Y., & Chou, C. (2010). An analysis of multiple factors of cyberbullying among junior high school students in Taiwan. *Computers in Human Behavior*, *26*(6), 1581-1590.

Jackson, C. L., & Cohen, R. (2012). Childhood victimization: Modeling the relation between classroom victimization, cyber victimization, and psychosocial functioning. *Psychology of Popular Media Culture*, *1*(4), 254.

Jones, L. M., Mitchell, K. J., & Finkelhor, D. (2012). Trends in youth internet victimization: Findings from three youth internet safety surveys 2000–2010. *Journal of adolescent Health*, *50*(2), 179-186.

Juvonen, J., & Gross, E. F. (2008). Extending the school grounds? Bullying experiences in cyberspace. *Journal of School health*, *78*(9), 496-505.

Kowalski, R. M., & Limber, S. P. (2007). Electronic bullying among middle school students. *Journal of adolescent health*, *41*(6), S22-S30.

Kowalski, R. M., Giumetti, G. W., Schroeder, A. N., & Lattanner, M. R. (2014). Bullying in the digital age: A critical review and meta-analysis of cyberbullying research among youth. *Psychological bulletin*, *140*(4), 1073.

Lapidot-Lefler, N., & Dolev-Cohen, M. (2015). Comparing cyberbullying and school bullying among school students: Prevalence, gender, and grade level differences. *Social psychology of education*, *18*(1), 1-16.

Law, D. M., Shapka, J. D., Hymel, S., Olson, B. F., & Waterhouse, T. (2012). The changing face of bullying: An empirical comparison between traditional and internet bullying and victimization. *Computers in Human Behavior*, *28*(1), 226-232.

Li, Q. (2010). Cyberbullying in high schools: A study of students' behaviors and beliefs about this new phenomenon. *Journal of Aggression, Maltreatment & Trauma*, *19*(4), 372-392.

Machackova, H., Cerna, A., Sevcikova, A., Dedkova, L., & Daneback, K. (2013). Effectiveness of coping strategies for victims of cyberbullying. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace, 7(3).*

Machmutow, K., Perren, S., Sticca, F., & Alsaker, F. D. (2012). Peer victimisation and depressive symptoms: Can specific coping strategies buffer the negative impact of cybervictimisation?. *Emotional and Behavioural Difficulties*, *17*(3-4), 403-420.

Matos, A. P., Vieira, C. C., Amado, J., Pessoa, T., & Martins, M. J. D. (2018). Cyberbullying in Portuguese schools: Prevalence and characteristics. *Journal of school violence, 17*(1), 123-137.

Mishna, F., Saini, M., & Solomon, S. (2009). Ongoing and online: Children and youth's perceptions of cyber bullying. *Children and Youth Services Review*, *31*(12), 1222-1228.

Monks, C. P., Robinson, S., & Worlidge, P. (2012). The emergence of cyberbullying: A survey of primary school pupils' perceptions and experiences. *School Psychology International, 33*(5), 477-491.

Murray-Harvey, R., Skrzypiec, G., & Slee, P. T. (2012). Effective and ineffective coping with bullying strategies as assessed by informed professionals and their use by victimized students. *Australian Journal of Guidance and Counselling, 22*(1), 122.

Navarro, R., Larrañaga, E., & Yubero, S. (2018). Differences between preadolescent victims and non-victims of cyberbullying in cyber-relationship motives and coping strategies for handling problems with peers. *Current Psychology, 37*(1), 116-127.

Olenik-Shemesh, D., & Heiman, T. (2014). Exploring Cyberbullying among Primary Children in Relation to Social Support, Loneliness, Self-Efficacy, and Well-Being. *Child Welfare*, *93*(5).

Olenik-Shemesh, D., Heiman, T., & Zuaretz-Hannan, M. (2017). Cyber-victimization among children: prevalence, characteristics, gender differences and links to social difficulties. *J. Child. Adolescent Behav*, *5*(2).

Olweus, D. (2013). School bullying: Development and some important challenges. *Annual review of clinical psychology*, *9*, 751-780.

Patchin, J. W., & Hinduja, S. (2006). Bullies move beyond the schoolyard: A preliminary look at cyberbullying. *Youth violence and juvenile justice*, *4*(2), 148-169.

Pereira, F., Spitzberg, B. H., & Matos, M. (2016). Cyber-harassment victimization in Portugal: Prevalence, fear and help-seeking among adolescents. *Computers in Human Behavior*, *62*, 136-146.

Perren, S., Corcoran, L., Cowie, H., Dehue, F., Garcia, D. J., Mc Guckin, C., ... & Vollink, T. (2012). Coping with cyberbullying: A systematic literature review. In *Cyberbullying*.

Priebe, G., Mitchell, K. J., & Finkelhor, D. (2013). To tell or not to tell? Youth's responses to unwanted internet experiences. *Cyberpsychology*.

Price, M., & Dalgleish, J. (2010). Cyberbullying: Experiences, impacts and coping strategies as described by Australian young people. *Youth Studies Australia*, *29*(2), 51.

Sasson, H., & Mesch, G. (2014). Parental mediation, peer norms and risky online behavior among adolescents. *Computers in Human Behavior*, *33*, 32-38.

Schoffstall, C. L., & Cohen, R. (2011). Cyber aggression: The relation between online offenders and offline social competence. *Social Development*, *20*(3), 587-604.

Shelley, D., & Craig, W. M. (2010). Attributions and coping styles in reducing victimization. *Canadian Journal of School Psychology*, *25*(1), 84-100.

Skrzypiec, G., Slee, P., Murray-Harvey, R., & Pereira, B. (2011). School bullying by one or more ways: Does it matter and how do students cope?. *School Psychology International, 32*(3), 288-311.

Slonje, R., & Smith, P. K. (2008). Cyberbullying: Another main type of bullying?. *Scandinavian journal of psychology, 49*(2), 147-154.

Slonje, R., Smith, P. K., & Frisén, A. (2013). The nature of cyberbullying, and strategies for prevention. *Computers in human behavior, 29*(1), 26-32.

Sticca, F., & Perren, S. (2013). Is cyberbullying worse than traditional bullying? Examining the differential roles of medium, publicity, and anonymity for the perceived severity of bullying. *Journal of youth and adolescence*, *42*(5), 739-750.

Tokunaga, R. S. (2010). Following you home from school: A critical review and synthesis of research on cyberbullying victimization. *Computers in human behavior*, *26*(3), 277-287.

Valkenburg, P. M., & Peter, J. (2009). Social consequences of the Internet for adolescents: A decade of research. *Current directions in psychological science*, *18*(1), 1-5.

Wang, C. W., Musumari, P. M., Techasrivichien, T., Suguimoto, S. P., Tateyama, Y., Chan, C. C., ... & Nakayama, T. (2019). Overlap of traditional bullying and cyberbullying and correlates of bullying among Taiwanese adolescents: a cross-sectional study. *BMC public health*, *19*(1), 1-14.

Willard, N. (2006). Flame Retardant: Cyberbullies Torment Their Victims 24/7: Here's How to Stop the Abuse. *School Library Journal*, *52*(4), 54.

Williford, A., Fite, P., DePaolis, K., & Cooley, J. (2018). Roles of gender, forms, and locations in understanding peer victimization experiences: implications for prevention and intervention. *Children & Schools*, *40*(2), 93-101.

Wolak, J., Mitchell, K. J., & Finkelhor, D. (2007). Does online harassment constitute bullying? An exploration of online harassment by known peers and online-only contacts. Journal of adolescent health, *41(6),* S51-S58

Wright, M. F. (2020). The role of technologies, behaviors, gender, and gender stereotype traits in adolescents' cyber aggression. *Journal of interpersonal violence*, *35*(7-8), 1719-1738.

Ybarra, M. L. (2004). Linkages between depressive symptomatology and Internet harassment among young regular Internet users. *CyberPsychology & Behavior*, *7*(2), 247-257.

Ybarra, M. L., Diener-West, M., & Leaf, P. J. (2007). Examining the overlap in Internet harassment and school bullying: Implications for school intervention. *Journal of Adolescent health*, *41(*6), 42-50.

Table 1

Participant Demographics at T1

	Total Sample		Cohort 1 2015 - 2016		Cohort 2 2017 - 2018	
	n	*%*	*n*	*%*	*n*	*%*
Gender						
Male	105	47.3	48	43.6	57	50.9
Female	117	52.7	62	56.4	55	49.1
Grade						
3rd	117	52.7	53	48.2	64	57.1
4th	105	47.3	57	51.8	48	42.9
Race						
Black	47	22.8	23	20.9	24	21.4
White	149	72.3	79	71.8	70	62.5
Other Ethnicities	10	4.9	8	7.3	18	16.1

Note. N = 222

Table 2

Frequencies of Willing to Tell by Gender

Willingness to Tell	Total Sample		Males		Females	
	n	*%*	*n*	*%*	*n*	*%*
Tell Friend						
Yes	124	58.8	53	52.5	71	64.5
No	87	41.2	48	47.5	39	35.5
Tell Parent						
Yes	173	82.8	77	77	96	88.1
No	36	17.2	23	23	13	11.9

Table 3

Zero-Order Correlations, Means, and Standard Deviations for Varaiables

	Variable	1	2	3	4	5	6	7	8	9	10	*M*	*SD*
1.	Cohort T1	_										1.50	.50
2.	Grade T1	-.09	_									3.47	.50
3.	Gender	-.07	.12	_								1.53	.50
4.	Race	.01	-.09	-.09	_							1.72	.45
5.	Willingness to tell friend (T1)	-.06	.19**	.12	-.01	_						.59	.49
6.	Willingness to parent (T1)	-.04	-.05	.15*	.04	.19**	_					.83	.38
7.	Cyber victimization (T1)	.01	.13	.15*	.01	.09	-.07	_				4.98	2.16
8.	Cyber victimization (T2)	-.12	.01	-.01	.04	.04	-.05	.32**	_			5.08	2.02
9.	Usage (T1)	.70**	-.06	.06	-.09	.03	-.01	.05	-.12	_		2.57	1.18
10.	Usage (T2)	.01	.15*	.03	-.18*	-.02	-.06	.11	.22**	.36**	_	2.20	.59

Note. *$p < 0.05$.**$p < 0.01$. *Race (1 = Black and Other ethnicities, 2 = White)*

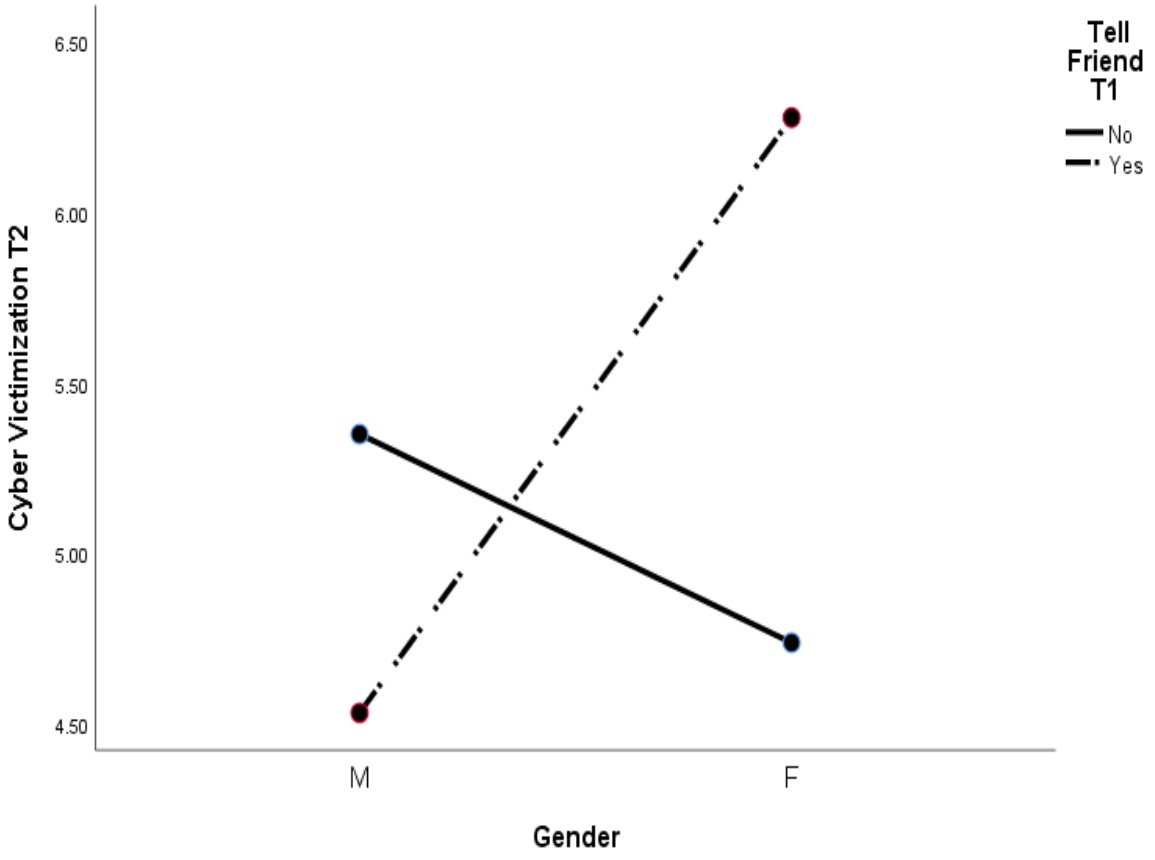

Figure 1. Interaction of Gender and Willingness to Tell Friend on Cyber Victimization (T2)

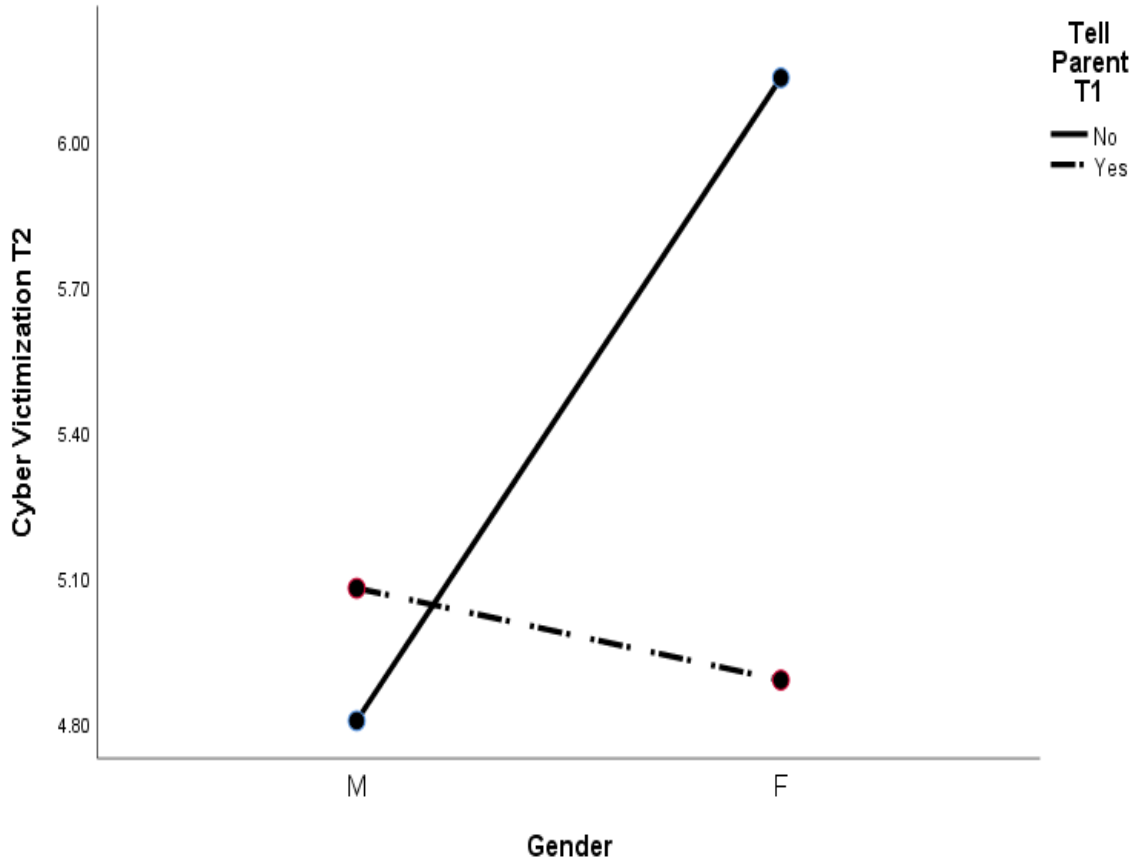

Figure 2. Interaction of Gender and Willingness to Tell Parent on Cyber Victimization (T2)