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Cyberbullying Victimization and Perpetration, Connectedness, and Monitoring of Online Activities: Protection from Parental Figures

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Abstract: Cyberbullying victimization and perpetration are associated with poor mental health outcomes for adolescents, including depressive symptoms, anxiety, and suicide ideation. Although most cyberbullying occurs at home, few interventions have been developed for parents of adolescents. We examined parental connectedness and parental online monitoring in relation to cyberbullying victimization and perpetration, with the goal of understanding how parents buffer young teens from involvement in cyberbullying. We leveraged data from an existing study involving three racially and ethnically diverse middle schools in a metropolitan area in the Midwest of the U.S. ($n = 570$). In the spring of sixth grade, students reported on cyberbullying involvement, parental connectedness, and parental monitoring. Greater parental connectedness was related to a lower likelihood of cyberbullying victimization and perpetration in logistic regression models. Parental monitoring of online activities was not related to cyberbullying victimization but was marginally related to a lower likelihood of cyberbullying perpetration. Results suggest that cyberbullying prevention programs should consider ways to foster parent/youth connectedness.

Keywords: cyberbullying; parenting; adolescence; parental monitoring

1. Introduction

Cyberbullying victimization and perpetration are associated with internalizing behaviors such as anxiety, depression, and suicidal ideation (Campbell et al. 2013; Hinduja and Patchin 2010; Kim et al. 2018; Kowalski and Limber 2013). Although most cyberbullying occurs while youth are at home, little is known about parent-based prevention of cyberbullying (National Academies of Sciences, Engineering, and Medicine 2016). Emerging research has found that warm parent–child relationships and parental monitoring are associated with decreased risk of cyberbullying (Elsaesser et al. 2017). Few studies have examined parent–child connectedness and monitoring concurrently with respect to cyberbullying. Our goal was to understand how parents buffer young teens from involvement in cyberbullying by examining concurrent associations between cyberbullying victimization, perpetration, and potential protective parenting factors in a diverse sample of middle school youth.

1.1. Cyberbullying Perpetration and Victimization among Youth

Cyberbullying refers to repeated hostile or aggressive communication via technology or digital means such as texting, social media, mobile applications, or video games (Tokunaga 2010; National

Academies of Sciences, Engineering, and Medicine 2016). A challenge in defining cyberbullying is the difficulty of determining hostile intent online, where social and emotional clues are lacking (National Academies of Sciences, Engineering, and Medicine 2016). In a recent study on youth perception of cyberbullying, adolescents most often included the following components from the Centers for Disease and Control and Prevention (CDC) definition of bullying in their description of cyberbullying: *aggressive, peer-to-peer* behavior online that *inflicts harm* (Moreno et al. 2018). Kowalski and Limber (2013) argue that cyberbullying poses unique risks—reaching farther and spreading faster online than traditional bullying, and often providing anonymity to perpetrators (see also Kowalski et al. 2018).

The prevalence of cyberbullying victimization and perpetration varies widely. In national surveys, involvement in cyberbullying behavior ranged from 6.9 to 14.8% of U.S. youth aged 10 to 18 years (National Academies of Sciences, Engineering, and Medicine 2016). The CDC's nationwide Youth Behavior Risk Survey indicator of cyberbullying victimization ranged from 10.1% to 21.2% across states, which suggests that environmental factors contribute to cyberbullying (Centers for Disease Control and Prevention 2017). In recent reviews of the literature, cyberbullying perpetration among youth ranged from 1% to 41%, and cyberbullying victimization ranged from 3% to 72% (Borges Bottino et al. 2015; Selkie et al. 2016), reflecting variation in definitions, populations, and measurements.

Whereas traditional bullying peaks in middle school (National Academies of Sciences, Engineering, and Medicine 2016; Graham and Bellmore 2007), evidence from national data in the U.S. suggests that cyberbullying may continue to increase during high school as youth increase their online presence (National Academies of Sciences, Engineering, and Medicine 2016). Middle school may be an ideal time to prevent cyberbullying because many youth increase their cell phone use going into middle school (Rideout et al. 2010)—the average age for children in the U.S. to receive a smart phone is 10.3 years (Influence Central 2016). Relatedly, the average age for U.S. children to open social media accounts is 11.4 years, which for most students is during their sixth grade year or first year of middle school (Influence Central 2016). Finally, addressing cyberbullying early is important because online harassment may also follow students back into school environments and interrupt learning (Waasdorp and Bradshaw 2015).

1.2. Parenting as Protective of Cyberbullying

Although bullying and cyberbullying often co-occur (Waasdorp and Bradshaw 2015), the context of cyberbullying differs from face-to-face bullying: 70% of cyberbullying occurs at home (Kowalski et al. 2012). Furthermore, bullying that starts at school can now follow students home via texting, internet, and social media use (Tokunaga 2010) and vice versa. This suggests a growing need for parents to be included in bullying prevention.

Warm and firm parenting protects against several youth risk behaviors, including bullying (Elsaesser et al. 2017; Fletcher et al. 2004). In this paper, we use the term “parenting” to refer to the behaviors and skills of caregivers raising adolescents, regardless of whether those caregivers are biological parents. In other words, parenting may be done by grandparents, foster parents, or others. In an increasingly digital environment, parenting may be complicated by adolescents' proclivity for online activities because adolescents often have greater skills and greater online activity than parents realize (Cassidy et al. 2012). However, research confirms that nurturing a warm and caring relationship between parents and children as well as monitoring are effective parenting skills that support positive youth development in a digital age (Elsaesser et al. 2017).

1.3. Parent–Adolescent Relationships and Youth Cyberbullying Prevention

Research across several countries has consistently indicated that parental support and parental warmth have negative associations with cyberbullying (Accordino and Accordino 2011; Elsaesser et al. 2017; Hong et al. 2016). Parental support—measured by four items about helping, loving, understanding, and comforting—was related to lower levels of cyberbullying victimization and perpetration in a national sample of U.S. teens (Wang et al. 2009). Although these studies have largely been

cross-sectional, one found that family support was negatively related to cyberbullying victimization and perpetration one year later (Fanti et al. 2012). In a meta-analysis that examined parenting with respect to cyberbullying victimization and perpetration, Kowalski et al. (2014) reported five studies that found that parental warmth was negatively associated with cyberbullying victimization and perpetration, though effect sizes for these associations were small in magnitude given the small number of studies. Few studies have examined the role of youth gender in the relationship between parent connectedness and cyberbullying, and examinations of moderation effects by gender are needed (Navarro 2016).

One study on cyberbullying in the Netherlands used Baumrind's original conceptualization of parenting styles to identify authoritarian (controlling), authoritative (both controlling and warm), permissive (warmth but low control), and neglectful parents (neither controlling nor warm; Dehue Francine et al. 2012). As they transitioned into secondary school, youth were the least likely to report cyberbullying victimization or perpetration if they had authoritative compared to other parenting types. In other studies, authoritarian parenting was positively related to cyberbullying perpetration but not victimization (Floros et al. 2013a; Makri-Botsari and Karagianni 2014).

This research into parental warmth, support, and parenting style establishes that relationships exist between aspects of parenting and youth cyberbullying. However, these studies did not examine other important parental factors such as monitoring or attempts to control an online environment.

1.4. Parental Monitoring

Few studies focus on the effects of parental monitoring with respect to cyberbullying (Elsaesser et al. 2017). Although some studies caution that adolescents may have a negative reaction to parental monitoring (Hessel et al. 2017; Laird et al. 2018), emerging studies suggest a negative relationship between parental monitoring and cyberbullying victimization/perpetration (Chang et al. 2015; Hemphill and Heerde 2014; Hong et al. 2016; Khurana et al. 2015). Hong et al. (2016) found that parental monitoring—measured by parental knowledge of youth's friends, free time, and activities—was negatively related to both face-to-face bullying and cyberbullying. In a longitudinal Australian study, parents' awareness of their adolescents' activities was linked to lower levels of reported cyberbullying harassment four years later (Hemphill and Heerde 2014). However, adolescents may view some forms of parental monitoring as snooping or invasion of privacy (e.g., Hawk et al. 2008). Although there are several forms of monitoring (see Laird et al. (2018) for an excellent discussion), in the current paper, monitoring generally refers to parents' behaviors (e.g., asking questions about child behaviors).

Monitoring specifically in the online environment—often referred to as parental mediation—may be particularly important to parents who are concerned about cyberbullying (Cassidy et al. 2012; American Psychological Association 2017). In a mixed-methods study of 312 parents of sixth- to ninth-graders in Canada, most parents emphasized the need for the prevention of cyberbullying—starting at home (Cassidy et al. 2012). Although parents voiced some concern about online risks and cyberbullying, parents underestimated the amount of cyberbullying children experienced (compared with child reports) and the amount of time that their children spent online. Over two-thirds of parents reported monitoring their children at least somewhat, and 41% believed that restrictive monitoring was the best way to prevent cyberbullying. Still, more than half of parents emphasized the need for communication, support when cyberbullying occurred, and more education on how to respond to cyberbullying.

Parents also described the need to become more aware of their child's social media use, but others felt that parents generally do not have the energy to guide children's use (Cassidy et al. 2012). Similarly, in the Stress in America report (American Psychological Association 2017), 48% of parents reported that monitoring online activity was a constant battle, 45% felt that technology interrupted family connectedness, and 58% worried that their children were attached to their electronic devices. In a study of middle school students in Taiwan, Chang et al. (2015) found that parents' restriction of online activity was related to lower cyberbullying victimization and perpetration. According to

[Martins et al. \(2017\)](#), family rules, including rules regarding digital technology, may be a deterrent to cyberbullying. These studies underscore the need to involve parents in cyberbullying prevention, a theme echoed in qualitative studies with parents about face-to-face bullying ([Harcourt et al. 2014](#)).

Many parental monitoring studies have examined parental control of online activity. In a study of youth aged 12–17 years who participated in the Pew Internet and American Life project, [Mesch \(2009\)](#) examined both parental restriction of adolescents' online activities as well as family rules about information sharing and websites. Rule-setting implied that parents and adolescents had talked about these issues. Having rules in place about websites was the only type of online monitoring that was associated with lower levels of bullying victimization. In another study of the Pew data, [Wisniewski et al. \(2015\)](#) found that restrictive, direct parental control such as setting limits of screen time and access to passwords was related to low adolescent risky behavior online (including cyberbullying). However, parental control also may have discouraged teens from engaging online or correcting their online misjudgments (e.g., deleting their own posts). In contrast, active discussion and parental monitoring that included online interaction was related to engagement with others online and correcting their online misjudgments. In one cross-sectional study, primarily restrictive parental monitoring of online behavior was positively related to cyberbullying, which in turn was positively associated with offline bullying ([Meter and Bauman 2018](#)). Similarly, in a longitudinal study of Midwestern students (aged 13–15 years) in the U.S., restrictive parental monitoring of social networking activity was associated with greater cyberbullying victimization at the same time point and greater depressive symptoms one year later. However, parental co-viewing and instruction was associated with lower cyberbullying victimization at the same time point, and lower depressive symptoms one year later ([Wright 2018](#)).

These studies provide emerging evidence that active parent–teen communication about online activities and involved parental monitoring may be key leverage points for reducing risk of the negative health outcomes associated with cyberbullying. In the current study, we focus on the discussion of online activities as another form of parental monitoring that may include asking youth about what they have been doing in online contexts.

1.5. Examining Parent–Child Relationships and Monitoring Concurrently

Despite consistent evidence of the protective association of positive parenting and low cyberbullying involvement ([Elsaesser et al. 2017](#)), a gap in the literature remains: the examination of parent–child relationships and monitoring together as they relate to cyberbullying involvement. In one of the few exceptions, [Chang et al. \(2015\)](#) found that a strong parent–adolescent relationship and restrictive parental monitoring of online activity were associated with lower likelihood of both cyberbullying victimization and perpetration in a sample of youth from Taiwan. Other types of parental monitoring—including active discussion, safety instruction, monitoring of activity, or technical help—were not significantly related to cyberbullying involvement. Another study of U.S. students found that a poor parent–adolescent relationship and low parental monitoring were both associated with greater cyberbullying perpetration ([Ybarra and Mitchell 2004](#)). However, a study of students in Greece found that parental safety practices online—including restrictive monitoring—were related to lower cyberbullying victimization, but parental bonding was not related to either type of cyberbullying involvement ([Floros et al. 2013b](#)). Given these sparse and contradictory findings, further joint examination of parent–child relationships and monitoring is warranted. We address this shortcoming in the current study.

1.6. The Current Study

Consistent with Baumrind's assertion that parenting warmth and control combine for the most effective parenting ([Baumrind 1991](#)), caring parent–child relationships and parental monitoring have been found to be deterrents of cyberbullying victimization and perpetration (e.g., [Hemphill and Heerde 2014](#)). In addition, parental monitoring of adolescents' online activities has been shown

to be effective in reducing online risk when it includes collaboration and discussion rather than control or restriction (e.g., Wisniewski et al. 2015). However, few researchers have examined caring parent–child relationships and parental monitoring of adolescents’ online activities concurrently. A warm parent–child relationship has been shown to dampen and moderate children’s negative reactions to parental monitoring (LaFleur et al. 2016). Therefore, by accounting for the effects of parental connectedness, we can examine under what circumstances parental monitoring of online activities may be related to low cyberbullying involvement.

In the current secondary data analysis, we addressed this gap by examining both parental connectedness and parental monitoring of online activities. We expected that youth report of parental caring would be negatively related to both cyberbullying victimization and perpetration. We also hypothesized that parental monitoring of online activities would be negatively related to both cyberbullying victimization and perpetration, controlling for connectedness and demographics. We explored potential moderating effects of youth gender, answering a recent call to understand differential effects of gender with respect to cyberbullying (Navarro 2016). We also explored potential moderating effects of parental connectedness on the relationship between parental monitoring of online activities and both forms of cyberbullying.

2. Methods

2.1. Participants

Data were collected from 570 sixth grade students participating in the Partnering for Healthy Student Outcomes (PHSO) study, a longitudinal study of school-based prevention programs in three middle schools in the Minneapolis/St. Paul metropolitan area in the spring of 2015. Participants were 48.7% female; 1.9% reported being American Indian, 13.7% Asian, 20.2% Black, 20.4% Latino, 22.7% White, and 21.1% multiracial. Nearly two-thirds (65.7%) qualified for free/reduced-price lunch (see Table 1).

Table 1. Descriptive statistics of the sixth grade sample: youth report of key variables.

	Full Sample (<i>n</i> = 570)
	% or <i>M</i> (<i>SD</i>)
Demographics	
Female	47.8%
Race/ethnicity	
American Indian	1.9%
Asian/South Pacific	13.7%
Black	20.2%
Latino/a	20.4%
Multi-racial	21.1%
White	22.6%
Lives with two biological parents	68.0%
Receipt of free/reduced-priced lunch	65.7%
Key Variables	
Cyberbullying victimization	16.7%
Cyberbullying perpetration	8.4%
Parental connectedness	3.20 (0.76)
Parental online monitoring	2.81 (1.11)

2.2. Procedure

Three schools were assigned to one of three conditions: (1) an evidence-based social emotional skill-building curriculum; (2) a year-long teacher professional development program aimed at improving teacher-student relationships, student engagement, and teacher classroom management and inclusion practices; and (3) both the social emotional skill building and the teacher professional

development program. Schools were recruited for two reasons. First, they served students from diverse racial/ethnic and socioeconomic backgrounds (i.e., high percentage of students eligible to receive free/reduced-price lunch). Second, they were experiencing challenges in terms of academic risk (i.e., lower percentages of students meeting proficiency on standardized tests), in comparison to overall state statistics.

All students in sixth grade at the three schools were eligible to participate in the study. In the fall of sixth grade, we attempted to obtain parental consent from $n = 789$ enrolled students by approaching parents at an information night before the school year started, sending home written notes to each student's parents, and by calling families who had not returned the written form. In the spring of sixth grade, 48 additional students had enrolled, and parents received information mailed to their home describing the study and follow-up phone calls, as needed, to obtain parental consent. Written forms were made available in English, Spanish, Hmong, and Somali based on the preferences of the family as documented by the school. Verbal consent was also offered in English, Spanish, and Hmong. Of the 837 eligible across both time points, 649 parents provided consent (77.5%). At the spring assessment, 615 students were still enrolled at the school and had parental consent. Of those, 571 (92.8%) students provided written assent and participated in the survey. One student had missing data on all variables of interest; therefore, the current secondary data analysis utilizes data from 570 students. Intervention effects were not tested or expected at this early interim time point. The Institutional Review Board at the University of Minnesota approved this study.

2.3. Measures

Cyberbullying victimization and perpetration were measured by asking, "During the last 30 days, how often have you [been bullied/bullied others] online through social media, email, texting, websites, video games, photos/videos, or instant messaging?" (California Department of Education 2015). Five frequency response options were dichotomized to "never" versus "ever" reporting cyberbullying victimization and perpetration in the past 30 days based on past research that has found a substantial difference in the experiences of those who have never been involved in bullying and those who have been even once or twice in the last month (Gower and Borowsky 2013).

Parental connectedness was measured by a three-item Caring Relationships at Home Scale. Items include "In my home, there is a parent or some other adult who listens to me when I have something to say," "... who is interested in my schoolwork," and "... who talks with me about my problems" (responses ranged from 1 = not at all true to 4 = very true; $\alpha = 0.73$; California Department of Education 2015). Online parental monitoring was measured by one item: "In my home, there is a parent or some other adult who asks me about things I do online (through social media, email, texting, websites, video games, photos/videos, or instant messaging)" (1 = not at all true; 4 = very true).

Several socio-demographic variables were included. Students indicated their family structure (two biological parents versus other configurations) on the survey; gender and qualification for free/reduced-price lunch were obtained from school records. Finally, a composite variable for race/ethnicity was created in which self-reports were prioritized first at baseline, then at the second assessment. If race/ethnicity was missing from these two self-reports, school records were used to provide data. We also controlled for school context by including dummy-coded variables and contrasting two of the schools to the third school as the referent.

2.4. Analysis Plan

First, we examined descriptive statistics of the variables of interest and correlations, and we tested for differences between those who reported cyberbullying victimization or perpetration and those who reported no cyberbullying involvement via *t*-tests and cross tabulation analyses. Then, we conducted a series of multivariable logistic regression analyses to estimate the relationship of parenting connectedness and parental monitoring with cyberbullying victimization and perpetration, controlling for socio-demographic variables and school. Next, to test whether the relationships between parenting

variables and cyberbullying involvement were moderated by gender and whether the relationship between monitoring of online activities and cyberbullying involvement was moderated by parental connectedness, we added interaction terms to the models. A spreadsheet containing the variables used in these analyses is available in the Supplementary Materials.

Missing data for each variable amounted to less than 5%. For example, only 1.9% of students were missing data on either of the cyberbullying victimization and perpetration variables. However, when all variables were considered together, 17% of cases had some missing data. We conducted cross tabulation analyses to examine missingness on the dependent variables. No significant differences were found by gender, race, or receipt of free/reduced-price lunch. However, students who did not live with two biological parents were more likely to be missing data on cyberbullying victimization and perpetration variables. To account for missing data, we used 25 iterations of multiple imputation in all models, including socio-demographic variables to inform the imputation (Johnson and Young 2011).

3. Results

Descriptive statistics are found in Table 1. In the spring of their sixth-grade year, 16.7% of students reported cyberbullying victimization, and 8.4% reported cyberbullying perpetration in the past 30 days. Unadjusted bivariate analyses indicated that parental connectedness was significantly lower among adolescents who reported cyberbullying victimization ($M = 2.96$; $SD = 0.83$) compared to adolescents not involved in cyberbullying victimization ($M = 3.24$; $SD = 0.74$; $t(548) = -3.28$, $p = 0.001$). Parental connectedness was also significantly lower among adolescents who reported cyberbullying perpetration ($M = 2.90$; $SD = 0.83$) compared to adolescents not involved in cyberbullying perpetration ($M = 3.22$; $SD = 0.75$; $t(548) = -2.78$, $p = 0.006$). Online parental monitoring was significantly lower among adolescents who reported cyberbullying perpetration ($M = 2.48$; $SD = 1.24$) compared to adolescents not involved in cyberbullying perpetration ($M = 2.84$; $SD = 1.09$; $t(542) = -2.12$, $p = 0.035$). A similar, marginally significant pattern of differences in online parental monitoring was noted for youth who reported cyberbullying victimization ($M = 2.61$; $SD = 1.10$ versus $M = 2.85$; $SD = 1.11$; $t(542) = -1.89$, $p = 0.060$). We also examined the correlation between the two parenting practice measures. Parental connectedness was significantly correlated with parental online monitoring ($r = 0.47$, $p < 0.000$).

Results of the logistic regression models are found in three columns in Table 2. In Model 1 analyses, each one-unit increase in connectedness to a parent/parental figure was associated with a 35% reduction in likelihood of cyberbullying victimization and a 46% reduction in likelihood of cyberbullying perpetration. Adjusted associations with parental monitoring are shown in Model 2. Student report of parental online monitoring was associated with a 34% reduction in the likelihood of cyberbullying perpetration per unit of parental online monitoring. When both parental connectedness and parental online monitoring were included in Model 3, only parental connectedness was significantly associated with a lower likelihood of cyberbullying victimization and cyberbullying perpetration (24% and 36% lower per unit of parent connectedness, respectively). To illustrate the magnitude of effects in the non-linear models, we plotted the predicted probabilities of cyberbullying victimization and perpetration for each unit of parental connectedness (see Figure 1). Although online parental monitoring was associated with a 36% lower likelihood of cyberbullying perpetration, this effect was marginally significant ($p = 0.090$). Finally, no significant interaction effects were detected, indicating that gender did not moderate the main effects; nor did parental connectedness moderate the relationships between online parental monitoring and cyberbullying victimization/perpetration.

Table 2. Results of multivariable logistic regression models of parental connectedness and monitoring of online activities on cyberbullying victimization and perpetration ($n = 570$).

	Model 1			Model 2			Model 3					
	OR ^a	SE ^b	95% CI ^c	OR	SE	95% CI	OR	SE	95% CI			
Cyberbullying Victimization												
Connectedness	0.65 **	0.10	0.46	0.87			0.76 *	0.08	0.49	0.94		
Online Monitoring					0.82 +	0.09	0.67	1.01	0.76	0.12	0.55	1.17
Constant	0.21	0.11			0.62	0.41			0.64	0.43		
Cyberbullying Perpetration												
Connectedness	0.54 **	0.11	0.37	0.81					0.64 *	0.14	0.42	0.99
Online Monitoring					0.66 **	0.10	0.50	0.88	0.76 +	0.12	0.56	1.03
Constant	0.03	0.03			0.06	0.08			1.02	0.95		

Note. ^a OR = Odds Ratio. ^b SE = Standard Error. ^c CI = Confidence Interval. All models control for gender, race/ethnicity, family structure, receipt of free or reduced-price lunch, and school. + $p < 0.10$; * $p < 0.05$; ** $p < 0.001$.

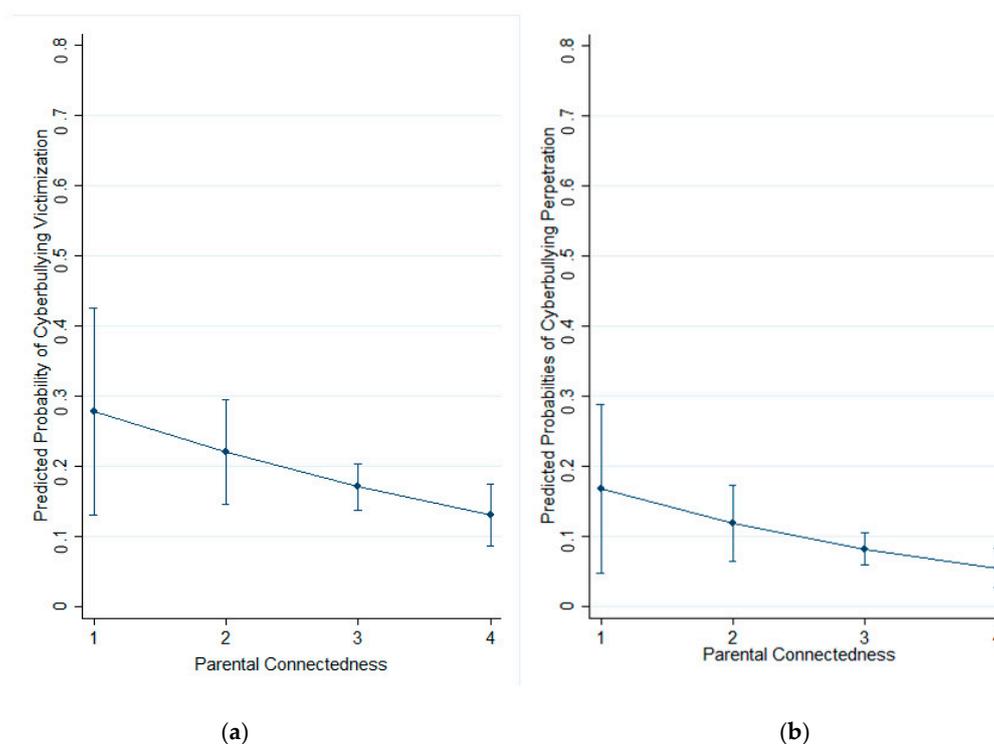


Figure 1. Marginal effects of parental connectedness on the predicted probabilities of (a) cyberbullying victimization and (b) cyberbullying perpetration.

4. Discussion

The current paper extends past research by examining both parental connectedness and monitoring with respect to cyberbullying victimization and perpetration. More specifically, we examined parental connectedness in concert with parental monitoring of online activities through discussion. We found that parental connectedness was negatively associated with the likelihood of both cyberbullying victimization and perpetration, accounting for the effects of parental monitoring. Parental monitoring of online activities was negatively associated with cyberbullying perpetration, though this association was only marginally significant when parental connectedness was included in the model. Study results suggest that parental connectedness may be more salient than parental monitoring of online activities to deter cyberbullying involvement.

Findings from this study contribute to a body of literature that has found that parent–adolescent connectedness is linked to positive youth health outcomes (Sieving et al. 2017) and is associated with lower risk of cyberbullying involvement (Kowalski et al. 2014; Wang et al. 2009). Strong parent–adolescent

relationships may encourage youth disclosure of online risk and enable parents to guide youth in online environments. Youth disclosure of online activities and risk-taking has been found to be more important than parental monitoring of information (Shapka and Law 2013). Additionally, parent–adolescent connectedness may provide a safe learning environment for adolescents to take online risks and correct mistakes (Wisniewski et al. 2015), ultimately protecting youth against cyberbullying involvement. For example, youth may be more willing to post creative videos or apologize for a failed attempt at online sarcasm if they feel the support of parents. These explanations merit further investigation.

Our findings are consistent with past research that has found that parental monitoring may deter cyberbullying perpetration. Past research has primarily focused on restrictive monitoring (Chang et al. 2015; Martins et al. 2017). However, we examined whether adolescents report that their parents ask them about what they do online, suggesting a type of active discussion. Although parental monitoring of online activities was marginally related to lower cyberbullying perpetration, parental connectedness was significantly related to both perpetration and victimization. This finding is in line with previous studies that suggest caution should be taken before recommending a strategy of asking adolescents what they are doing online. Older adolescents, in particular, may resent a perceived invasion of privacy (e.g., Hawk et al. 2008), and at least one study found that parental requests for information about youth activities via technology was related to higher rates of youth depressive symptoms rather than face-to-face conversations (Hessel et al. 2017). However, parental online monitoring may be an important deterrent in other areas of online safety.

These findings have implications for parent-based prevention of cyberbullying and online risk. Public opinion seems to indicate that parents want more options for monitoring and controlling online use. For example, a recent open letter to Apple on behalf of parents called for improvements in online monitoring, and Apple responded in kind with parental controls in their iPhone operating system (JANA Partners LLC and the California State Teachers' Retirement System 2018). Some monitoring of online activities may be appropriate for new users of technology-mediated activities such as social media use and reducing online risk in other areas. However, the current research suggests that parent–child relationships remain an important component in the prevention of cyberbullying (Elsaesser et al. 2017).

Parent-based programs for the prevention of cyberbullying may be especially effective because adolescents often use technology and experience cyberbullying at home (Kowalski et al. 2012). Also, parent-based programs have been shown to strengthen parent–child relationships (Sandler et al. 2011) and may serve as a buffer to cyberbullying (Low and Espelage 2014). Students who have experienced family dysfunction are at high risk for bullying involvement (Forster et al. 2017) and may benefit from programming that strengthens parent–adolescent relationships, which in turn could reduce the likelihood of cyberbullying.

Strengths and Limitations

The strengths of this study include the examination of youth reports of both parental connectedness and parental online monitoring, the diversity of the sample, and the inclusion of parental online monitoring via discussion as opposed to restrictive monitoring. However, limitations must be acknowledged. Cyberbullying victimization and perpetration were measured with a single item, which may not capture all potential cyberbullying situations and may underestimate results. Ideally, a stronger variable would consist of multiple items. In the current study, we did not examine parent connectedness and parental monitoring among youth who experience both cyberbullying victimization and perpetration because their numbers were so few ($n = 21$). Future analyses should also consider examining multiple parenting variables among youth involved in both cyberbullying victimization and perpetration. Also, parental online monitoring was a single item measure, and other aspects of parental monitoring behavior such as rule-setting were not captured.

The sample was local and may not generalize beyond the Midwest metropolitan area where the study took place. Replication is warranted. Finally, because this study was based on a cross-sectional analysis, temporal order was not established. It may be that cyberbullying involvement causes parents to be more protective of their children, which may manifest in greater connectedness and monitoring. Therefore, longitudinal studies examining the relationship of parenting practices with cyberbullying involvement are needed (Elsaesser et al. 2017).

5. Conclusions

Young adolescents involved in cyberbullying, whether as a victim or a bully, reported lower levels of parental connectedness and parental online monitoring in unadjusted analyses. Rates of cyberbullying experiences were similar to other studies of middle school students. Because large national data sets have found trends suggesting that cyberbullying increases across adolescence in the U.S., early prevention is key (National Academies of Sciences, Engineering, and Medicine 2016). In multivariable analyses, we found that that greater levels of parental connectedness, and to a lesser extent parental online monitoring, were associated with lower odds of cyberbullying involvement in a diverse sample of sixth graders. Our findings offer preliminary support for parent-involved prevention or intervention programs that focus on teaching both parents and their children strategies to strengthen their relationships, in addition to providing practical content about online contexts. Such programming might be delivered in a variety of settings—through schools, communities, or clinics. As most young adolescents will increase their engagement in online spaces as they grow older, nurturing strong parent–adolescent relationships will continue to be a primary protective factor for a digitally-focused generation. Research is needed to test whether parent-based interventions and digital training can deter cyberbullying involvement among middle school students.

Supplementary Materials: The following are available online at <http://www.mdpi.com/2076-0760/7/12/265/s1>, Spreadsheet 1. Study data.

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