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Elementary-Aged Cyber Bully-Victims: Incidence, Risks, and Parental Involvement

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Elementary-Aged Cyber Bully-Victims: Incidence, Risks, and Parental Involvement

by

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DISSERTATION

Submitted in partial fulfillment of the requirements for the degree of Doctor of Psychology in the Department of Clinical Psychology at Antioch University New England, 2014

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ELEMENTARY-AGED CYBER BULLY-VICTIMS: INCIDENCE, RISKS, AND PARENTAL INVOLVEMENT

presented on September 17, 2014

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Dedication

For H + Z + …

It has all been for you.

It will always be for you.
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Abstract

The frequency of cyber bullying involvement is systematically increasing, as is the access to electronic communication tools. Many youth are both victimized by and perpetrate cyber bullying. In fact, youth who are victimized are more likely than non-victims to perpetrate cyber bullying. Youth who engaged in both forms of cyber bullying are referred to as cyber bully-victims. The purpose of this research was to determine whether self-concept, parental involvement with electronic communication tools, parent-imposed consequences, and parental support differ depending on cyber bullying status. Participants consisted of 60 4th and 5th graders at elementary schools in southwestern NH. Data was collected using the Piers-Harris Children’s Self-Concept Scale, Second Edition and the Cyber Bullying Scale (CBS), which was created for the study. Descriptive analyses captured the frequency of electronic technology, and suggested that the Internet is the more commonly used than cell phones for this age group. In addition, the frequency of various types of cyber bullying acts were measured; having pictures forwarded without permission via text was rated the most common type of both perpetration and victimization. ANOVA analyses revealed that cyber bully perpetrators experienced significantly higher levels of parental involvement than their non-involved peers. The implications of these results include alerting parents of the high rates of cyber bullying using picture messaging in order to increase parental monitoring and oversight.

Keywords: cyber bully-victim, Piers-Harris 2, self-concept, parental involvement
Elementary-Aged Cyber Bully-Victims: Incidence, Risks, and Parental Involvement

The use of digital technology has increased dramatically over the past decade, resulting in a rise in the use of electronic communication to bully (Johnson, 2009). Research has shown that youth today are vulnerable to cyber bullying involvement, as a victim, perpetrator, or oftentimes both (i.e., cyber bully-victims; Georgiou & Stavrindes, 2008). Cyber bullying is a common occurrence and is becoming more widespread in youth culture (Agatston, Kowalski, & Limber, 2007).

For the purpose of this study, cyber bullying will be defined as using the internet or other digital technologies such as cellular phones to intentionally harass or inflict harm towards another (Agatston et al., 2007). Electronic means by which cyber bullying can take place include e-mail, instant messaging, chat rooms, websites, social networking sites, social polling sites, blogs, webcams, and text messaging (Kowalski, Limber, & Agatston, 2008; Mishna, Saini, & Solomon, 2009). The most popular cyber bullying platforms are social networking sites, chat rooms, blogs, and polling sites (Jose, Kljakovic, Scheib, & Notter, 2011).

Cyber Bullying Affects Youth of all Ages

Upwards of 40% of elementary through high school aged youth report having participated in cyber bullying (Demaray & Malecki, 2003). Involvement in cyber bullying is associated with emotional and behavioral problems such as misconduct, depression, anger, impulsivity, and a tendency for violence, all of which can distract youth from learning in the classroom (Demaray & Malecki, 2003). Youth involved in cyber bullying often experience less confidence in social relationships and poor self-esteem (Bowers, Smith, & Binney, 1994). Bullies report higher levels of alcohol abuse, domestic crimes, and violence in the community as adults than do their non-bully peers (Bowers et al., 1994).
Cyber bullying is becoming increasingly prevalent for elementary-aged students, in part due to their growing access to electronic communication. Accessibility to cell phones and computers has increased for school-aged children in particular. While 21% of elementary-aged students had access to a cell phone in 2004, 31% had access by 2008 (Rideout, Foehr, & Roberts, 2010). In terms of cyber bullying, 20% of youth report incidents of online harassment by third grade (Englander, 2011). In one study, rates of cyber bullying between friends was higher for fifth graders than for middle or high school students (Englander, 2011).

**The Cyber Bullying Cycle Places Victims at Risk for Perpetrating**

Bullying behaviors are often cyclical, with victims of both traditional and cyber bullying being more at risk than non-victims to perpetrate cyber bullying (Cassidy, Jackson, & Brown, 2009; Gradinger, Strohmeier, & Spiel, 2009; Li, 2007; Ybarra, Diener-West, & Leaf, 2007). Those youth who both perpetrate cyber bullying and are victimized by means of either traditional or cyber bullying are known as “cyberbully-victims” or “bully-victims” (Gradinger et al., 2009). Of youth involved in bullying, one-third identify as a bully-victim (Gradinger et al., 2009).

Traditional victimization, or schoolyard bullying, is a significant risk factor for becoming a cyber bully. Approximately 64% of online harassment begins as schoolyard bullying and continues as cyber bullying at home (Cassidy et al., 2009). In other words, cyber bullying is often a reaction to a bullying incident that happened at school. Cassidy et al. found that of those who perpetrate cyber bullying, 23% claim “retaliation” as the primary motivator. Ma (2001) hypothesized that the high number of bully victims might be explained in part by youth involvement in social groups where bullying is prevalent. In addition, youth are often bullied because of their lack of social skills, which is also a risk factor for cyber bullying (Ma, 2001).
Some school counseling programs have attempted to treat victims as victims and bullies as bullies. This has not necessarily been successful because many youth identify as both a bully and a victim. Similarly, most research has categorized youth as either a bully or victim, overlooking the important overlapping category of bully-victims (Olweus, 1994).

Little is Known About Cyber Bully-Victims

While cyber bully-victims have been minimally studied to date, more extensive research has been conducted on the bully-victim cycle in the context of traditional bullying. Thus, research on traditional bullying might shed important light on the phenomena of cyber bully-victimhood (Andreou, 2001).

The bully-victim subgroup in traditional bullying is a high-risk population. Research indicates that mental illness, particularly depression and anxiety, and traditional bully-victim status, are linked (Swearer, Song, Cary, Eagle & Michelson, 2001). Of those involved in traditional bullying, 42% of bullies, 30% of bully-victims, and 13% of victims suffer from depression (Swearer et al., 2001). In addition, of youth involved in traditional bullying, 0% of bullies, 19% of victims, and 17% of bully-victims experience significant levels of anxiety (Swearer et al., 2001). Further, bully-victims are at the highest risk of any of these groups for co-morbid depression and anxiety. Therefore, this subgroup may be the most impaired in terms of internalizing psychopathology.

Traditional bully-victims rate higher levels of hyperactivity, depression, and overall problem behaviors than either the bully or victim-only subgroups (Georgiou & Stavrindes, 2008). The bully-victim subgroup also experiences lower levels of social acceptance, self-worth, self-control, school functioning and psychosocial functioning (Andreou, 2011). Youth in this group are more likely to be involved with deviant peer groups and less likely to form positive
social relationships than other bully subgroups (Nansel et al., 2001). Of this group, there is also a high co-occurrence with other forms of violence and aggression, substance use, and delinquent behaviors (Haynie et al., 2001; Nansel et al., 2001). Bully-victims are at high risk due to higher levels of aggression and loneliness. Research has shown that traditional bully-victims are less well liked by their peers than non bully-victims, mainly due to high levels of emotional dysregulation, anger, and impulsivity (Shin, 2010).

In Swearer et al.’s study (2001), bully-victims scored higher on the “victim” score than did victims-only, illustrating the subgroups’ susceptibility to higher levels of victimization. In addition, the bully-victim group rated higher on the “bully” score than bullies-only. Therefore, research has shown that the bully-victim subgroup is reporting higher levels of engagement in both bullying and victimization than other groups (Demaray & Malecki, 2003). Some of the more extremely victimized youth are also the most dangerous and harmful bullies (Ma, 2001).

**Lack of parental support and monitoring linked with traditional bullying behaviors.**

Parental support has been shown to be a protective factor for traditional bullying behaviors (Demaray & Malecki, 2003). Conversely, insecure or anxious attachments with adult figures serve as a risk factor for traditional bullying (Bowers et al., 1994). In contrast to victims, bully-victims are more likely to rate the ‘self’ or ‘other family member,’ rather than a parental figure, as the most involved and influential individual in their life (Bowers et al., 1994).

Traditional bully-victims tend to endorse either parental over-protection or neglect coupled with low levels of parental monitoring (Bowers et al., 1994). Demaray and Malecki (2003) found that low levels of parental support, monitoring, and consequential actions, such as physical discipline and lack of supervision, are associated with traditional bullying behaviors. With respects to youth initiation of parental involvement with cyber bullying, there is often fear
of removal of computer or phone privileges if parents become aware of acts of cyber bullying (Mishna et al., 2009). Therefore, youth often do not seek out parental support. This study seeks to determine whether lower levels of parental involvement and supervision, much like with traditional bullying, are associated with cyber bully-victim status.

**More Research on Cyber Bully-Victims is Needed**

Traditional and cyber bullying are similar in many ways, most notably in terms of the negative consequences of victimization (Andreou, 2001). On the other hand, cyber bullying differs in some respects from traditional bullying, especially in terms of the anonymity of the bully, lack of supervision on the Internet, the wider audience, and the powerlessness of victims to escape (Mieczynski, 2008). Therefore, research on the traditional bully-victim subgroup may or may not necessarily translate and be applicable to cyber bully-victims.

Although some research has explored the nature of cyber bullying, there are gaps in the research. Research has shown that victimization of cyber bullying is a risk factor for perpetration, but it is unknown as to why some youth go on to perpetrate, while others do not. Ma (2001) was able to identify that the cycle exists in traditional bullying, but acknowledged that the research falls short of addressing the degree to which variables, such as parental involvement, school climate, and discipline, most influence a child’s likelihood of being a cyber bully-victim. In addition, as research is indicating a rise in electronic communication use and cyber bullying acts for school-aged children, it is important to gather information on this minimally studied, vulnerable population.

**This Study Seeks to Learn More about Characteristics Unique to Cyber Bully-victims**

The main purpose of this study was to increase the field’s knowledge of characteristics unique to cyber bully-victims in elementary school, in the hopes that it may translate into more
effective prevention and intervention strategies for school-aged children. Cyber bullying victimization tends to be a cycle, wherein victims of cyber bullying are more likely than non-victims to perpetrate cyber bullying. Even though many victims become cyber perpetrators, not all do. Therefore, victimization status is not the only risk factor for cyber bully perpetration. The purpose of this research, therefore, is to investigate the degree to which cyber bully-victim involvement is associated with self-concept, parental involvement, and parental consequences resulting from cyber bullying.

The research hypotheses are:

1. Self-concept will be lower for youth involved with cyber bullying (as a bully, victim, or both) than for the not-involved group.

2. Parental monitoring of electronic communication tools will be higher for those not involved with cyber bullying than for bullies, victims, or bully-victims.

3. Parental support will be higher for youth not involved with cyber bullying than for bullies, victims, or bully-victims.

4. Parental consequences will be higher for youth not involved with cyber bullying than for bullies, victims, or bully-victims.

**Literature Review**

Of today’s youth, approximately half are involved in cyber bullying behaviors (Hunt, Peters, & Rapee, 2012). Even though cyber bullying is becoming a norm in today’s society, not all children are involved. Therefore, it is necessary to better understand what factors separate youth who cyber bully from those that do not.
Comparing Traditional and Cyber Bullying

In this study, cyber bullying refers to harassment that occurs using electronic communication tools and ‘traditional bullying’ refers to schoolyard or face-to-face bullying. Bullying research has historically focused on traditional bullying. There are several differences between cyber and traditional bullying that make the application of that literature to cyber bullying tenuous.

Although acts of cyber and traditional bullying can take similar forms, such as teasing or threatening, the two bullying platforms and strategies differ (Patchin & Hinduja, 2006). Bullying strategies unique to the cyber environment include flaming, cyber-stalking, denigration, and outing or spreading of personal or entrusted information (Li, 2007; Vandebosch & Van Clement, 2009). Other forms of cyber bullying include coercion or blackmail, often in order to gain personal information or pictures (Mishna et al., 2009). Masquerading, or posing as someone else online, is another common type of cyber bullying. In fact, in a survey by Vandebosch and Van Clement (2009), participants cited masquerading to be the most common form of cyber bullying. Participants in this study also reported that the most emotionally damaging form of cyber bullying tended to be the forwarding of private information without permission (Vandebosch & Van Clement, 2009).

Cyber bullying may also be more harmful than traditional bullying. The Internet is dangerous for victims because there is little escape from the harassment. Information is spread rapidly, reaches a large audience, and is easily preserved (Hay, Meldrum, & Mann, 2010). Once information has been posted, it is nearly impossible to retract. The constitutional free-speech rights and lack of laws governing internet postings make it nearly impossible for even law-enforcement agencies to assist in the removal of hurtful or damaging online content (Li,
There is less opportunity to escape online bullying because harmful acts can reach children at all times and places, whereas traditional bullying acts are constrained by the requirement of the physical presence of the bully (Vandebosch & Van Clement, 2009). Indeed, Kapatzia and Sygkollitou (2009) discovered that approximately 68% of youth participants found cyber bullying to be equally or more harmful than traditional bullying.

It is also easier for cyber bullies than for schoolyard bullies to remain anonymous. Forty percent of cyber victims reported being unaware of the identity of their cyber bully (Li, 2010). The anonymity of cyberspace also reduces social accountability (Li, 2006). One study referred to the power of anonymity as “hiding behind the keyboard” (Mishna et al., 2009, p. 1224). Bullies have little fear of incriminating information being traced (Mishna, Khoury-Kassabri, Gadalla, & Dacuk, 2012). Additionally, cyber bullies are able to perpetrate bullying acts from the safety of their own home (Mishna et al., 2009). Due to the increased privacy and decreased visibility of cyber bullying, it is easier for youth to hide it from parents and teachers (Hay et al., 2010).

While both traditional and cyber bullies are motivated by social domination, revenge is a more common motivator for cyber than traditional bullies (Dooley, Pyzalski, & Cross, 2009; Kowalski et al., 2008). In particular, while socially anxious youth are more likely to perpetrate cyber bullying in general, they are also more likely to use cyber bullying as a way to seek vengeance for past victimization (Kowalski et al., 2008). Revenge, therefore, is one of the factors that drives the cyber bully-victim cycle.

The two types of bullying also differ in that youth are reinforced by immediate gratification when perpetrating traditional bullying (Dooley et al., 2009). For example, bullies receive an immediate response from the victim and/or encouragement from peers. On the other
hand, there is less likely to be an immediately reinforcing response from peers with cyber bullying. Instead, cyber bullies experienced delayed yet longer lasting gratification because of the preservation and spread of electronic communications (Dooley et al., 2009).

Although there are several differences between cyber and traditional bullying, the prevalence of both types of bullying tends to be similar. Langdon and Preble (2008) determined that approximately 15% of youth participate in ongoing traditional bullying on a monthly basis. In addition, anywhere from 10-30% of youth report being involved with cyber bullying (Cassidy et al., 2009).

**Prevalence and Frequency of Cyber Bullying**

Upwards of one-third of all youth have been cyber bullied (Cassidy et al., 2009; Li, 2006; Li, 2010; Mishna et al., 2009). Of all youth, 15% admit to cyber bullying others (Li, 2006; Li 2010). Additionally, half of students who engage in cyber bullying report being a bully-victim (Li, 2006). Not only is cyber bullying prevalent among today’s youth, but many youth are also victimized frequently. One study reported that 10% of cyber victims experience victimization several times a week (Wang, Iannotti, & Luk, 2012). Another study estimated that serial victimization, or being victimized more than three times, occurs for 37% of cyber victims (Li, 2006). Today’s youth appear aware of the increasing frequency and dangerousness of cyber bullying acts. Approximately 75% of youth believe that cyber bullying is becoming more problematic and frequent (Cassidy et al., 2009).

In 2009, Cassidy et al. determined that the peak age for cyber bullying was 14. Recent research indicates that cyber bullying is becoming more common in elementary school and may now be peaking in that age group. Mishna et al. (2012) found that elementary-aged students reported higher levels of cyber bullying involvement, especially victimization, than middle and
high school populations. Swearer, Wang, Maag, Siebecker, and Frerichs (2012) and Englander (2011) found that fifth graders reported higher levels of cyber victimization than students in 6-12th grade. It is important to note that the peak age for cyber bullying is not changing because cyber bullying is decreasing in middle and high school; instead, the frequency of cyber bullying is increasing in elementary school (Englander, 2011).

**Risk Factors for Cyber Bullying Involvement**

Electronic communication tools are easily accessible for today’s youth. More than 90% of middle and high school-aged children have Internet access, more than half report daily Internet use, and over half use a cell phone (Cassidy et al., 2009). Youth are using electronic communication tools at younger ages than ever before. Mishna et al. (2009) reported that the average fifth grader uses the Internet for at least three hours per day ---- more time than spent watching television. More than 20% of third graders use a cell phone, 90% are already online, and almost one-quarter report problems with peers on the Internet (Englander, 2011).

The easy access of electronic communication may be contributing to the increased pervasiveness of cyber bullying. However, accessibility is a necessary but not sufficient ingredient for cyber bullying. Not all youth engage in harmful cyber bullying behaviors despite the prevalence of Internet and cell phone use. Instead, research has identified several other risk factors of cyber bullying involvement.

**Risk factors for perpetration.** Youth who have higher levels of social anxiety, lower levels of empathy, and a more negative self-concept are at increased risk for perpetrating cyber bullying (Georgiou & Stavrindes, 2008; Kowalski et al., 2008). Most research indicates that cyber bullies tend to be less accepted by peers than non-bullies (Georgiou & Stavrindes, 2008;
Williams & Guerra, 2007). Andreou (2001) noted that youth who are rejected by peers and have a dominant personality style are particularly likely to perpetrate cyber bullying.

High-risk behaviors such as substance use and violence are also highly correlated with cyber perpetration (Andreou, 2001; Berry & Hunt, 2009; Wang et al., 2012; Ybarra et al., 2007). Other risk factors include lack of parental and school support, feeling as though school is unfair, and lack of trust with teachers (Demaray & Malecki, 2003; Vandebosch, & Van Clement 2009; Williams & Guerra, 2007). Additionally, males are more likely than females to be cyber bullies (Kapatzia & Sygkollitou, 2009; Li, 2006; Li, 2007). Finally, youth who view cyber bullying as normative and acceptable are more likely to perpetrate acts of cyber bullying (Williams & Guerra, 2007).

Risk factors for victimization. Ninety-five percent of victims report that online bullying occurs because of a specific personal attribute, such as a disability, religion, minority status, or sexual orientation (Cassidy et al., 2009). Physical characteristics such as being overweight or frail also tend to elicit cyber bullying (Li, 2010). Youth who receive higher grades are at greater risk for experiencing victimization (Georgiou & Stavrindes, 2008; Li, 2006). Although parental involvement protects against cyber bullying, parental over-involvement is also a risk factor for victimization (Katzer, Fetchenhauer, & Belschak, 2009).

Victims of cyber bullying are more likely to exhibit insecurity, introversion, vulnerability, and submissiveness in interpersonal relationships (Chan, 2006; Furlong, Chung, Bates, & Morrison, 1995; Katzer et al., 2009; Wolak, Mitchell, & Finkelhor, 2007). Similarly, many Internet users are socially isolated and search for peer support online. They may be more apt to visit chat room, social networking sites, or other online locations with greater occurrences
of victimization (Katzer et al., 2009). This supports the idea of victimology, in that specific behaviors may increase the likelihood of being victimized (Katzer et al., 2009).

Risk factors for victimization may also include being more trusting with online information, such as providing passwords to peers or speaking to strangers online (Mishna, et al., 2012; Wolak et al., 2007). Computer use in private, such as in a bedroom, as opposed to a public space, contributes to victimization risk; youth who use the Internet in private are 60% more likely to suffer cyber victimization that those who use the computer in a public space (Mishna et al., 2012, Sengupta & Chaudhuri, 2011). Youth who use a webcam or are more active online are at greater risk for falling victim to Internet harassment than those who do not (Vandebosch & Van Clement, 2009; Wolak et al., 2007).

**Risk factors for cyber bully-victimization.** Cyber bully-victims are youth who both perpetrate and experience victimization. One study reported that just over one half of cyber bullies reported being victimized at least three times in the past year (Haynie et al., 2001). Risk factors for being a cyber bully-victim include having low self-worth, weak problems solving skills, and poor social skills (Andreou, 2001; Boulton, Smith, & Cowie, 2010; Haynie et al., 2001). Social risk factors include having limited positive relationships and difficulty making friends (Boulton et al., 2010; Georgiou & Stavrindes, 2008). These youth tend to be less well liked by peers because of the higher likelihood for emotional dysregulation, anger, and impulsivity (Shin, 2010). Additionally, children with parents who are less involved with Internet use are more likely to participate in risky Internet behaviors, such as disclosing personal information and speaking with strangers online (Rosen, Cheever, & Carrier, 2008).

Youth are also more likely to be cyber bully-victims when they have friends who are involved with cyber bullying. Ma (2001) explained that victims become desensitized to bullying
behaviors. Youth in these social groups may view bullying behaviors as normal or accepted. These youth may also bully each other, thereby further increasing victimization rates. Another explanation for the high rate of cyber bully-victims may be that victimization increases certain risk factors for perpetration, such as anxiety, social isolation, or aggression (Andreou, 2011; Jose et al., 2011; Shin, 2010).

**Consequences of Cyber Bullying**

Research has found that cyber victimization can result in anxiety, depression, anger, fear, and hopelessness (Gradinger et al., 2009; Li, 2006; Mishna et al., 2009; Ybarra et al., 2007). Victims who experience anxiety as a result of cyber victimization tend to be at greater risk for somatic concerns that result in school absences (Swearer et al., 2001). This school truancy reinforces an avoidant passive coping style, which in turn is a risk factor for cyber perpetration, therefore increasing the victim-perpetration cycle (Swearer et al., 2001).

Cyber victimization is associated with higher rates of substance use, delinquent behaviors, and violence (Mishna et al., 2009). Victims of online harassment tend to experience more frequent school suspensions and are more likely to bring a weapon to school (Mishna et al., 2009; Ybarra et al., 2007). Youth who are harassed online may lose friends, feel humiliated, become isolated, and/or lose trust in others (Kowalski et al., 2008). Early victimization, in particular, decreases feelings of self-worth and social acceptance (Boulton et al., 2010).

Perhaps the most serious negative consequence of cyber bullying is an increased risk for self-harm or suicidal ideation. Males tend to be at greater risk for suicidal ideation after cyber victimization (Hay et al., 2010). Cassidy et al. (2009) surveyed 355 youth aged 11-15 to gather information about the frequency and consequences of cyber bullying. Results indicated that 4% of these individuals reported suicidal thoughts following cyber victimization (Cassidy et al.,
2009). Although other factors may also have been at play, these students indicated that cyber bully victimization was the most proximal precipitant of their suicidal ideation.

Anecdotally, the suicide of 15-year old Phoebe Prince, who hanged herself in January 2010, seemed to be precipitated by incessant bullying (Szaniszlo & Crimaldi, 2010). Bullies victimized Prince using Facebook, text messaging, and traditional bullying (Archer, 2010). Other suicides of youth who were persistently bullied include 11-year old Carl Walker Hoover, from Massachusetts, and 11-year Jaheem Herrera from Georgia (Archer, 2010).

Summary

Given the potential negative consequences and the large number of youth involved, it is incumbent on the field to better understand cyber bullying in order to develop effective prevention efforts. Although certain characteristics of cyber bullies and victims are known, research is still in the early stages. Therefore, it is important to continue gathering information about cyber bullies and victims in an attempt to further the field’s knowledge to combat the increasingly common and dangerous phenomenon in today’s youth culture.

The research falls short of addressing the degree to which certain variables influence involvement as a cyber bully-victim. The above risk factors are known; however, this study provides additional information about characteristics common to cyber bully-victims. In particular, information has been gathered about self-concept, parental involvement with electronic communication use, parental support, and parental consequences resulting from cyber bullying. With this additional knowledge about potential factors that may be related to involvement with cyber bullying, the field will be more prepared to provide prevention and intervention services.
Method

This study used a quantitative, descriptive and quasi-experimental, ANOVA research design. The dependent variables were self-concept, parental monitoring, parental support, and parental-imposed consequences for cyber bullying behaviors. All dependent variables were measured using a continuous scale. The independent variable was cyber-bullying status, which included four groups: not-involved, victim, perpetrator, and bully-victim.

Participants

Sixty students in the 4th and 5th grade at two elementary schools in southwestern NH school districts participated in the study. Schoolchildren were selected to participate based on age. No other inclusion or exclusion criteria were used for this study. Youth from these schools came from mainly Caucasian middle-income households; the median family income for Cheshire County in 2009 was $55,719, with 97% of the population identifying as Caucasian (U.S. Census Bureau, 2009).

Measures

This study utilized two measures to test the research hypotheses. The first measure was the Piers-Harris 2, which measures the following variables: (a) anxiety, (b) happiness, (c) behavioral adjustment, (d) social status, and (e) general self-concept. The variable self-concept was used as the first dependent variable. The second measure was the Cyber Bullying Scale (Appendix A), which was developed for this study to measure the frequency of electronic communication use, cyber bullying acts, and cyber victimization acts. This scale also measured parental monitoring of electronic communication use and parent-imposed consequences.

Piers-Harris Children’s Self-Concept Scale, Second Edition: Piers-Harris 2 (Piers, Harris, & Herzberg, 2007). The Piers-Harris 2 was used to measure participants’ self-reported
emotional wellbeing. This scale is typically administered to children aged 7-18. The
Piers-Harris 2 items consist of 60 descriptive statements to which participants respond using a
Yes/No format. Administration of the Piers-Harris 2 takes approximately 10 minutes. The
Piers-Harris 2 is an adaptation from the First Edition of the Piers-Harris Children’s Self-Concept
Scale. Norms for the Piers-Harris 2 are based on a geographically diverse sample of 1,387 youth
(Piers et al., 2007).

The Piers-Harris 2 includes six self-concept sub-scales: (a) Physical Appearance and
Attributes, (b) Intellectual and School Status, (c) Happiness and Satisfaction, (d) Freedom from
Anxiety, (e) Behavioral Adjustment, and (f) Popularity. A Total Score is also computed to
reflect overall self-concept. Two validity measures, Inconsistent Responding (INC) and
Response Bias (RES), are used to assess potentially problematic response sets. Scores in the
significant range on these two validity scales represent invalid data, and should be excluded from
analyses (Piers et al., 2007).

Scores of the six sub-scales, the three validity scales, and the Total Sore are converted to
T-scores. High Range scores are indicated by T-scores above 60, normal scores are indicated by
T-scores of 40-60, T-scores between 30 and 39T are considered Low, and T-scores less than 29T
are considered Very Low. Lower scores on the Piers-Harris 2 indicate greater concern (Piers et
al., 2007). The internal consistency of Piers-Harris 2 scores is adequate, with reported
Cronbach’s alphas of .91 for the Total Scale, and .74-.81 for the subscales (Butler & Gasson,
2005). Test-retest reliability is also strong, with an estimate of .77 for both a 2-month and
4-month follow-up, demonstrating stability of results over time (Piers et al., 2007).

The Piers-Harris 2 removed 20 items from the original measure. A factor analysis was
completed to compare the structure of the remaining 60 items on the Piers Harris 2 with the
original Piers-Harris. Results determined that the factor structure was replicated for the Total Score and each domain score on the two measures, displaying strong content validity (Puckett, 2008).

Convergent validity was demonstrated by comparing the Piers-Harris 2 self-concept scores with the Attitudes towards Guns and Violence Questionnaire, Aggression Questionnaire, and My Worst Experience Scale (Piers et al., 2007). As expected, an inverse relationship was found between the Piers-Harris 2 self-concept score and general psychological problems as measured by anger, violent tendencies, and aggression (Wang Flahivel, Chuang, & Li, 2011). Moderate correlation was also found when comparing self-concept in the Piers-Harris 2 with the Behavior and Emotional Rating Scale and the Elementary School Children’s Self-Concept Scale (Wang et al., 2011).

**Cyber Bullying Scale (CBS).** The CBS was developed for the present study to measure elementary-aged students’ participation with cyber bullying, as a victim, perpetrator, or both. Access to electronic media and involvement with various types of cyber bullying was measured (e.g., cyber bullying via email, social media, etc.). The scale also measured characteristics for which children are bullied, such as weight or religion. Finally, this survey captured parental involvement with and monitoring of cyber bullying. In particular, parental oversight of electronic media use, support for their child when victimized, and consequences for involvement with cyber bullying was measured. A review of the literature informed the development of the survey questions. The Cyber Bullying Scale took approximately 10 minutes to complete.

The CBS consists of 34 items comprising five subscales. The first subscale is referred to as *Access to Electronic Communication Tools*. The items in this section measure use of cell phones, text messaging, the Internet, email, instant messaging, and a social media using a
Yes/No format. Items 1a through 1f load into this subsection. The second subscale is referred to as the Cyber Victimization subscale and measures the frequency of cyber victimization. Items 2a through 2j load into this subscale. The third subscale is called Cyber Perpetration and measures the frequency of cyber perpetration acts. Included in this subscale are items 3a through 3j. The fourth subscale, Parental Involvement, measures parental involvement and oversight of electronic communication tools. This subsection is comprised of items 4a through 4d. The final subscale, Parental Consequences, measures parental consequences resulting from cyber perpetration or victimization. Items 5a through 5d are included in this section. All of these subscales are measured using a four-point Likert-type scale (Never, Once, 2-5 Times, and More Than 5 Times). The dependent variables were computed by averaging all items in each subsection. The one exception is that the Cyber Bully-Victim variable is computed as an average of subsections two and three (items 2a through 3j).

**Procedures**

A cover letter and informed consent document were sent home to all parents in the participating schools in the fall of 2013 after the study received approval from Antioch University New England’s Institutional Review Board. The documents sent to the parents explained the nature of the study, potential risks and benefits, confidentiality, length of study, opportunity to examine the research results, and other conditions of the research. Parents had two weeks to send back the informed consent document. A reminder letter was sent home at the end of the first week. The informed consent form allowed parents the opportunity to sign and send back the form if they consented to have their child participate in the study. Parents who did not consent to their child’s participation did not need to take action.
The surveys were administered during guidance time. This is a time where students meet with guidance staff to cover a broad range of issues. The guidance curriculum already has a bullying segment, so the surveys were considered an addendum to the guidance class on this topic. Only those youth whose parents signed the informed consent form were provided with an opportunity to participate in the study. These students were given an assent form and were required to provide active assent in order to participate in the study. The investigator, and in one school also the guidance counselor, was present during the administration of the surveys to read through the survey questions and address any questions that arose.

All participants were told that they could revoke their assent and terminate participation at any time, with no consequences. The participants were debriefed on the research and their experience and were given a handout with anti-bullying information, complete with information and sources on prevention or intervention techniques. This handout came from the Stop Bullying Now curriculum (U.S. Department of Health and Human Services, 2013). The students, parents, and teachers were provided with information regarding the opportunity to examine the research results when completed.

Data Analysis Strategy

Two types of analyses were run. First, descriptive analyses were used to characterize the sample, and the frequency of cyber bullying involvement, electronic technology use (cell phone, email, etc.), reasons for victimization (e.g., popularity, gender, etc.), and acts of cyber perpetration and victimization (e.g., harassment in blogs, exclusion from online groups, masquerading, etc.).

Secondly, an ANOVA was used to assess the difference between group means within the continuous dependent variables and the categorical independent variables. The dependent
variables are: (a) self-concept, (b) parental monitoring of electronic communication use, (c) parental support following victimization, and (d) parent-imposed consequences for engaging in cyber bullying. The independent variable was type of involvement with cyber bullying: not-involved, victim, perpetrator, and bully-victim. Approximately 52 participants were necessary for .80 power to detect a medium effect at .05 alpha level.

Results

Frequency Data

Electronic media use. Participants were asked to rate their use of the Internet, text messaging, email, social media sites, and Instant Messaging (IM) using a Yes/No format on the Cyber Bullying Scale. Overall, results suggested that participants used the Internet (86.7%) more frequently than texting, email, cell phone, and social media respectively, see Figure 1. Youth reported minimal Instant Messaging (8.3%).

![Figure 1. Frequency of Electronic Media Use (n=60)](image)

Cyber bullying involvement. The Cyber Bullying Scale asked 20 questions to assess involvement with cyber bullying. Youth were categorized into four groups based on their
responses: (a) not-involved, (b) victim, (c) perpetrator, and (d) bully-victim. Participants were categorized in the “perpetrator” group if they responded positively to any act of cyber bullying but no acts of victimization within the last 12 months, the victim group if they endorsed at least one act of victimization but no acts of bullying, and the bully-victim group if they endorsed at least one act of both perpetration and victimization. Participants who endorsed “never” on all cyber bullying items were categorized in the not involved group.

More than half of participants were categorized as not involved (58%, N=35), about a quarter were categorized within the “victim” group (27%, N=16), and a few in the “perpetrator” group (3%, N=2), see Figure 2. About 12% (N=7) reported at least one act of both cyber perpetration and victimization within the last 12 months, placing them in the “bully-victim” group. When looking at only the youth involved in some way with cyber bullying, 28% (N=7) fell into the cyber bully-victim category.

Figure 2. Categorization of Participants by Type of Cyber Bullying Involvement

Reasons for cyber victimization. The Cyber Bullying Scale provided a list of common reasons for being bullied online and asked participants to respond in a yes/no format for all that applied. Participants rated physical appearance as the most common reason for victimization by
far (13.3%), followed by grades (5%), then gender (3.3%), popularity (3.3%), shyness (3.3%),
and weight (3.3%; see Figure 3). No participant rated minority status as a cause of cyber
bullying; note that the participant sample was likely predominantly, if not exclusively,
Caucasian.

Types of cyber bullying. The Cyber Bullying Scale asked about perpetration and
victimization of a variety of types of cyber bullying. The most frequently disclosed form of cyber
victimization was having embarrassing pictures texted to a peer without permission, with almost
one fifth of all participants reporting experience with this type of victimization (18.5%). Other
common forms of victimization included exclusion from online groups (15%), receiving hostile
texts (15%) and blog messages (11.7%), and having social media accounts hacked (11.7%).
Additional forms of cyber victimization were rated less frequently, including the spreading of
online rumors (6.7%); masquerading (5%); receiving hurtful emails (6.7%), Instant Messages (6.7%), and social media messages (5%).

The most frequently reported form of cyber bullying was forwarding embarrassing pictures of others (6.7%), followed closely by excluding peers from online groups (5%) and spreading rumors online (5%). Fewer participants reported harassing others via text message (3.3%), instant message (1.7%) and email (1.7%), while no participant reported harassing others in a social media site. See Figure 4.

ANOVA Analyses

**Hypothesis #1.** The first hypothesis stated that self-concept would be lower for youth involved with cyber bullying (as a bully, victim, or both) than youth not involved with cyber bullying. Self-concept was taken from the self-concept subscale on the Piers-Harris 2 and was computed by totaling the number of positive responses and converting this total to a T-score. Participants were divided into four independent groups based on their self-rated involvement with cyber bullying on the Cyber Bullying Scale. The four groups consisted of “not-involved,”
“victim,” “perpetrator,” and “bully-victim.” As shown in Table 1, a one-way ANOVA yielded no significant differences between groups in regard to self-concept $F (3, 56) = .25, p>.05$. Hypothesis 1 was not supported.
Table 1. *ANOVA Analysis for Self-Concept Depending on Cyber Bully Status*

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not-Involved</td>
<td>50.74</td>
<td>10.95</td>
</tr>
<tr>
<td>Victim</td>
<td>48.65</td>
<td>8.82</td>
</tr>
<tr>
<td>Perpetrator</td>
<td>51.00</td>
<td>21.21</td>
</tr>
<tr>
<td>Bully Victim</td>
<td>52.29</td>
<td>8.12</td>
</tr>
</tbody>
</table>

**Hypothesis #2.** The second hypothesis stated that the amount of parental involvement and monitoring of cyber bullying acts would differ depending on cyber bullying status. In particular, parental monitoring would be higher for the not-involved group. When comparing cyber bullying status with parental monitoring, there was a statistically significant difference between groups as determined by one-way ANOVA (F (3,56) = 2.99, p = .04), see Table 2. Tukey post-hoc analyses were conducted given the statistically significant omnibus ANOVA F test. The post-hoc test revealed that the perpetrator group reported higher levels of parental involvement than the not-involved group (p<.05, M = 1.24, SD = .49). However, the victim (M = .91, SD = .51) and bully-victim group (M = .82, SD = .55) did not significantly differ from the perpetrator group. Nor did the victim (M = .33, SD = .20) and bully-victim group (M = .42, SD = .28) differ from the not-involved group, see Table 3. Hypothesis 2 was not supported.
Table 2. Statistical Significance Between Groups for Parental Monitoring Depending on Cyber Bully Status

<table>
<thead>
<tr>
<th>Cyber Bullying Status</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitoring</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>4.15</td>
<td>3</td>
<td>1.38</td>
<td>2.99*</td>
<td>.04</td>
</tr>
<tr>
<td>Within Groups</td>
<td>25.89</td>
<td>56</td>
<td>.46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>30.05</td>
<td>59</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. * = p<.05*
Table 3. *ANOVA Analysis for Parental Monitoring Depending on Cyber Bully Status*

<table>
<thead>
<tr>
<th>CYBER BULLY STATUS</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not-Involved</td>
<td>.51</td>
<td>.55</td>
</tr>
<tr>
<td>Victim</td>
<td>.84</td>
<td>.74</td>
</tr>
<tr>
<td>Perpetrator</td>
<td>1.75</td>
<td>1.06</td>
</tr>
<tr>
<td>Bully-Victim</td>
<td>.93</td>
<td>1.00</td>
</tr>
</tbody>
</table>

**Hypothesis #3.** The third hypothesis stated that parental support around cyber bullying would differ depending on cyber bullying status. In particular, parental support would be lower for youth involved with cyber bullying (as a bully, victim, or both) than youth not involved with cyber bullying. The Cyber Bullying Scale asked four Likert-type questions to determine parental support. As shown in Table 3, a one-way ANOVA yielded no significant difference between groups with regard to parental support $F (3, 27) = .29, p = .83$. Hypothesis 3 was not supported.
**Hypothesis #4.** The final hypothesis stated that parental consequences would differ depending on cyber bullying status, with higher levels of self-rated consequences for those not involved than for those involved with cyber bullying. The Cyber Bullying Scale asked three Likert-type questions to determine parental consequences. As shown in Table 4, a one-way ANOVA yielded no significant difference between group means with regard to parental support. $F (3, 24) = .45, p = .72$. Hypothesis 4 was not supported.

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not-Involved</td>
<td>.21</td>
<td>.50</td>
</tr>
<tr>
<td>Victim</td>
<td>.09</td>
<td>.30</td>
</tr>
<tr>
<td>Perpetrator</td>
<td>.33</td>
<td>.47</td>
</tr>
<tr>
<td>Bully-Victim</td>
<td>.19</td>
<td>.38</td>
</tr>
</tbody>
</table>

*Table 4. ANOVA Analysis for Parent Support Depending on Cyber Bully Status*
Table 5. *ANOVA Analysis for Parent Consequences Depending on Cyber Bully Status*

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not-Involved</td>
<td>.26</td>
<td>.36</td>
</tr>
<tr>
<td>Victim</td>
<td>.45</td>
<td>.50</td>
</tr>
<tr>
<td>Perpetrator</td>
<td>.17</td>
<td>.23</td>
</tr>
<tr>
<td>Bully-Victim</td>
<td>.56</td>
<td>.96</td>
</tr>
</tbody>
</table>

**Discussion**

The primary purpose of this study was to gather descriptive information about cyber bullying in a rural elementary school setting. The secondary aim of this study was to assess whether self-concept and parental involvement, consequences, and support differ based on cyber bullying status. The discussion will relate the findings from the current study to the extant literature, and attempt to explain the unexpected findings. Finally, the clinical implications, as well as a limitations and directions for future research, will also be addressed.

**Descriptive Results**

The rate of Internet use for participants in this study is generally consistent with previous studies. For example, Englander (2011) determined that approximately 90% of elementary-aged students were online by 2011 and 87% of participants reported Internet access in this study. In addition, about 12% of the sample fell within the cyber bully-victim category, which is similar to the rates appearing in published literature, with other studies indicating that 10-20% of youth identify as a cyber bully-victim (Cassidy et al., 2009). This suggests that rates of internet access and cyber bullying in this rural area of the northeast is comparable to other areas of the country, and that the Cyber Bullying Scale may be a useful tool for collecting such data in other communities.

Significantly more youth admitted to victimization than perpetration in this study, whereas the extant research suggested that the rates would be similar. Given the large discrepancy between victim and perpetration responses, social desirability may have played a
role in participants’ responses to the survey, with youth more likely to report instances of victimization than perpetration. It is possible that the results of this study underestimate the actual rates of cyber bullying in this sample.

Given the lack of relationship between the Piers-Harris 2 scores and cyber bullying involvement, as well as the low rates of cyber bullying involvement reported by participants, I inspected the validity measures of the Piers-Harris 2 as a rough indicator of the presence of response/social desirability bias. Nine out of the 63 participants scored in the elevated range on the Piers-Harris response bias scale, indicating that these students may have been “faking good.” Nonetheless, two of these students admitted to perpetrating cyber bullying and four reported having been victimized. This percentage of students endorsing cyber bullying within the elevated validity group is comparable to the overall sample. This suggests that an elevated score on the faking good scale does not necessarily mean that these students are more inclined than others to fake good on the Cyber Bullying Scale as well.

In addition, as latency aged children often have more difficulty thinking abstractly than older children, there may have been threats to the validity of the Cyber Bullying Scale due to a misunderstanding or lack of clarity about item meanings. In fact, several children approached me to ask what type of Instant Message applied, or what “hurtful messages” referred to. It may be that this lack of clarity or confusion may have contributed to the low reported rates of cyber bullying perpetration, in particular.

Further, youth are often unaware that they are perpetrating, as cyber bullying tends to be more nuanced, subtle, and less obvious than traditional bullying. For instance, sarcasm can be difficult to understand in electronic communications and a seemingly unassuming comment can easily be misinterpreted (Lampinen & Sexton-Radek, 2010). Therefore, participants may not
have realized that they have perpetrated cyber bullying, which may have also depressed reports of perpetration frequency in this study. That is why anti-bullying strategies should educate all children of the subtleties and dangers of cyber bullying, regardless of their self-reported status. Another potential explanation for the lower rates of perpetration is that parents of perpetrators may have been less likely to consent to the study.

Swearer et al. (2001) found that bully-victims typically endorsed higher levels of both victimization and perpetration than either victims or perpetrators. This study indicated the opposite, that participants who fell into the “victim only” category reported more acts of victimization than cyber bully-victims, with the most heavily victimized participants among the least likely to report perpetration. This suggests that participants in the victim only group are more likely to be serial victims than those in the bully-victim group in this sample. Li (2006) indicated that serial victimization, or frequent victimization, tends to be a problem for approximately one-third of victims. The higher levels of victimization for the victim only category may also be attributable to the social desirability factor, with participants being more likely to report victimization than perpetration.

Several students reported being victimized online due to their physical appearance. The other possible reasons for victimization (e.g., grades, gender, popularity, etc.) were much less frequently endorsed. Targets of traditional bullying often have physical features that attract attention (Gordon, 2014), and half of female students in one study experienced traditional bullying due to their physical appearance (Daily Mail Reporter, 2010). Other research indicates that females tend to tease others when feeling insecure about their own physical appearance (EduGuide, 2014). These results suggest that physical appearance tends to be the most frequent reason for cyber bullying as well.
ANOVA Analyses

We expected more parental involvement in the not-involved group, based on previous research suggesting that parental involvement is a protective factor for traditional bullying (Demaray & Malecki, 2003). Our results, however, indicated that parental involvement was greater in the perpetrator than in the not-involved group, perhaps because parents got involved after the perpetration occurred/was discovered. It is also possible that parents of perpetrators tend to be over-involved or demonstrate an anxious attachment style, both of which are risk factors for traditional bullying (Bowers et al., 2010).

Self-concept, parental support, and parental consequences did not differ based on cyber bullying status, despite previous research indicating that the bully-victim group is at high-risk for low self-esteem as well as emotional and behavioral problems in the traditional bullying context (Bowers et al., 1994). The non-significant results in this study suggest that the same may not be true for cyber bully-victims. In addition, parental support has been shown to be a protective factor for engaging in traditional bullying behaviors and authoritative parenting styles, including excessive consequences, is a risk factor (Bowers et al., 1994). The non-significant results in this study, suggest that parental support and consequences may not function the same way for cyber bullying as for traditional bullying. Or perhaps youth are more likely/able to hide their engagement in cyber bullying from their parents, thus avoiding/preventing parental support and consequences.

Clinical Implications

The results of this study suggest cell phone use, particularly text messaging, is a high-leverage target for cyber bullying prevention and intervention. Parents should be encouraged to increase oversight of text messages, particularly picture messages, and teach
safety techniques, such as refraining from taking incriminating pictures or having a password on cell phones. Limiting or discontinuing texting privileges for elementary school aged youth may also warrant consideration from parents. Parents should at least be aware that children require guidance and supervision when first being exposed to electronic forms of communication.

Another prevention best practice is open dialogues between parents and school personnel about students’ presence on electronic communication tools and any acts of cyber bullying. When parents and teachers or guidance counselors are better able to communicate with each other about students’ engagement with electronic harassment, children can receive more comprehensive support from adults in all areas of their lives. Parents are also advised to learn about the nuances of cyber bullying and how it differs from traditional bullying. It is suggested that parents set up privacy controls and discuss Internet safety tips with their children. Suggestions for children include signing out of online accounts, refraining from opening unidentified messages, and protecting their passwords. It is also suggested that parents focus on specifics (e.g., avoid discussing personal topics, such as sex, with strangers) as opposed to general advice (e.g., not talking to strangers entirely; Lampinen & Sexton-Radek, 2010).

The majority of victimization and perpetration acts were rated as occurring “once” in this research. Most children may not believe that one simple act of perpetration can have a significant negative impact. In fact, due to the rapid spread of electronic information and the difficulty in removing content from electronic communication tools, one bullying act can have considerable reach and staying power, potentially magnifying the effects. Therefore, prevention strategies should also focus on the potential dangers of any, not just repeated, cyber bullying.

Exploring the emotional and social repercussions of negative social experiences in cyber space may be a helpful prevention strategy. Discussing the destructive social effects, such as
embarrassment, humiliation, or loss of peer supports and the resulting emotional consequences, such as anger and depression, will allow youth to be more cognizant of real life effects of cyber bullying. As acts of cyber bullying may be unintentional at times, educating youth on the potentially extreme detrimental effects of cyber bullying may increase empathy for others allow students to gain insight into the degree of harm acts of cyber bullying may be causing. Whilst this may not target intentional acts of cyber bullying that are meant to cause embarrassment and social repercussions, this knowledge may reduce unintentional acts of cyber bullying. In addition, emotionally charged stories and examples will likely impact youth more substantially than educational materials about cyber bullying prevention.

**Limitations**

The relatively small, convenience sample limited statistical power. The use of a new, “home-made” cyber bullying scale is another limitation, in terms of unknown psychometrics and comparability with previous research. When the surveys were administered, participants were told that their responses were anonymous and confidential. Given the sensitivity of the topic of this study and the administration of the survey within a classroom setting, social desirability bias may still have influenced the results. Further, because participants were seated closely at tables due to the limited classroom space, they may have feared that peers might see their answers. Finally, although the surveys were rated at a fourth grade reading level, several children needed clarification when completing the measures, suggesting that the content was not easily comprehended by at least some participants.

**Future Research**

The relationship between cyber bullying and parental involvement warrants further investigation. In particular, future studies could investigate the nature of parental involvement,
for example, by comparing the cyber bullying outcomes of authoritarian and compassionate styles of communication with children about electronic communications. Studies could also track the timing of parental involvement in relation to cyber bullying events. It would make sense that parents become involved as a response to the victimization. However, if parental involvement occurs before victimization, this factor may somehow be placing their children at risk, a counterintuitive finding that would be critical to better understand. Examining the timing and nature of parental involvement would educate the field about the most effective times or ways for parents to intervene to prevent victimization.

Text messaging and picture messaging were the most common platforms for cyber bullying in this study. Future research could explore whether the same holds true for middle school and high school-aged children. Additional research with older students could also examine the amount of parental involvement. It is assumed that parental involvement decreases during the adolescent years. A longitudinal study could examine the link between parental oversight and cyber bullying over time. The goal would be to determine whether parental involvement with cyber bullying acts and electronic communication tools changes as children develop. This study would provide information about the age that parents tend to be most involved and when cyber bullying occurs most frequently to determine the relationship between the two variables as time progresses.

Future studies should try to better assess the nature/severity of the cyber bullying acts under study, as different forms of cyber bullying could have varying impacts; for example, hacking a peer’s social media account could have a greater negative impact than a hurtful email due to the wider audience. Learning more about the emotional impacts of various types of cyber
bullying acts would help inform prevention strategies by knowing which types of cyber bullying are most hurtful and warrant maximum attention.

Since the inception of this study, other digital technologies, such as tablets, smartphones, and iPods, have risen in popularity. In fact, many schools are implementing the use of iPads and other tablets to assist with learning. Although texting and social media are presumably disabled within the school context, it is possible that cyber harassment may still take place when these devices are used outside of school property. Although data was not gathered on these types of electronic communication tools, future research could examine the extent of cyber bullying occurring using these mediums. This research would determine whether the way these newer technology tools are used are as dangerous or even potentially more dangerous than the already existing forms of communication, as they may be more readily available for children who are otherwise unable to access electronic communication tools. By learning about the degree of harm that each type of electronic communication tool possesses, parents and teachers will understand which platforms require more substantial supervision or monitoring.

Another future direction for research could include analyzing the domain subscales of the Piers Harris-2. In particular, the Popularity subscale measures how relationships with others are perceived. Analyzing the relationship between the self-rated score on the Popularity subscale and cyber bullying involvement may provide additional information about how students perceive their interactions with others, including positive interactions gathered from the Piers-Harris 2 and negative interactions gathered from the Cyber Bullying Scale.

Due to the fact that participants may have misinterpreted or misunderstood the survey items, future research could gather perhaps more accurate or valid data through semi-structured interviews instead of or in addition to the Cyber Bullying Scale (to further assess its validity). In
addition, students should be prepared for future studies with education about cyber bullying prior
to the survey or interview administration. Careful preparation might clarify the concepts
involved and sensitize the children to the array of events and experiences that constitute cyber
bullying.

Conclusion

In conclusion, text messaging was the most common medium for cyber bullying in this
sample. Substantially more youth admitted to victimization than perpetration in this study.
Although the Cyber Bullying Survey appears to be a statistically sound tool for capturing cyber
bullying involvement, it is likely that the social desirability factor hindered full disclosure of
perpetration. In addition, cyber bullying perpetrators reported significantly higher rates of
parental involvement than for those not-involved with cyber bullying. The higher levels of
parental involvement within the perpetrator group may speak to the fact that parents become
involved after the perpetration occurred or that parents of perpetrators tend to be over-involved
or demonstrate an anxious attachment style, both of which are risk factors for traditional bullying
behaviors. In light of these results, future studies should focus on exploring the relationship
between perpetration and the time, quality, and type of parental involvement.
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Appendix A

Cyber Bullying Scale

Dear 4th and 5th Graders:

Thank you for taking this survey. Please answer all the questions honestly so that we can learn more about cyber bullying. We will not ask you for your name, so no one will know anything about your answers.

1. Please answer the following:
   a. Do you have a cell phone?   Yes   No
   b. Do you text?      Yes   No
   c. Do you use the Internet at home?   Yes   No
   d. Do you have an email account?    Yes   No
   e. Do you use instant message (IM)?   Yes   No
   f. Do you have an account on Facebook or other similar site?   Yes   No

2. Have you ever been teased online for the following (check all that apply):
   a. The way you look      Yes   No
   b. Your grades      Yes   No
   c. Your gender      Yes   No
   d. Being unpopular      Yes   No
   e. Being shy       Yes   No
   f. Having a disability     Yes   No
   g. Your religion      Yes   No
   h. Being a minority     Yes   No
   i. Your weight       Yes   No
   j. Other—Please specify:_________________________________________________
3. Please circle how many times the following things have been done to you in the last 12 months:

<table>
<thead>
<tr>
<th>Question</th>
<th>Never</th>
<th>Once</th>
<th>2-5 Times</th>
<th>More than 5 Times</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. How many times have you received a mean email?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. How many times have you received a hurtful text message?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. How many times has someone pretended to be you online?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. How many times have you been excluded from an online group?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. How many times have you been picked on in a chat room or blog?</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>f. How many times has a rumor been spread about you online?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. How many times have you received a hurtful MySpace or Facebook message?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>h. How many times has someone signed into your email or Facebook account without your permission?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. How many times have you received a mean Instant Message that hurt your feelings?</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>j. How many times has an embarrassing picture of you been texted?</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
4. Please circle how many times you have done the following in the last 12 months?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Once</th>
<th>2-5 Times</th>
<th>More than 5 Times</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. How many times have you sent a mean email?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. How many times have you sent a hurtful text message?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. How many times have you pretended to be someone else online?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. How many times have you refused to let someone join an online group?</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. How many times have you said something mean in a chat room or blog?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. How many times have you spread a rumor about someone else online?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. How many times have you posted a mean message on MySpace or Facebook?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>h. How many times have you signed into someone’s email or Facebook account without their permission?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. How many times have you sent a hurtful Instant Message to someone else?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>j. How many times have you texted an embarrassing picture of someone?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## 5. In the last 12 months, how often has your parent or guardian:

<table>
<thead>
<tr>
<th>Question</th>
<th>Never</th>
<th>Once</th>
<th>2-5 Times</th>
<th>More than 5 Times</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Talked to you about cyber bullying or how to stay safe online?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Looked at the websites you visit?</td>
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</tr>
<tr>
<td>c. Monitored your online postings and messages?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Looked at your text messages?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

Please only answer the following if you have been harassed online

## 6. In the last 12 months, how often has your parent or guardian:

<table>
<thead>
<tr>
<th>Question</th>
<th>Never</th>
<th>Once</th>
<th>2-5 Times</th>
<th>More than 5 Times</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Helped you feel better after being picked on online?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Helped you or stepped in on your behalf if you were picked on online?</td>
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</tr>
<tr>
<td>c. How often have you gone to a parent for help when you were teased on the Internet?</td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Please only answer the following if you have harassed someone else online

## 7. In the last 12 months, how often has your parent or guardian:

<table>
<thead>
<tr>
<th>Question</th>
<th>Never</th>
<th>Once</th>
<th>2-5 Times</th>
<th>More than 5 Times</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Taken away your computer or cell phone?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Grounded you?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Given you any other consequence for bothering someone on the Internet?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>