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A Social Ecological Approach To Cyber Bullying

Brett Holfeld

A SOCIAL ECOLOGICAL APPROACH TO CYBER BULLYING

by

Brett Holfeld
Bachelor of Arts (Honors), University of Manitoba, 2006
Master of Science, University of North Dakota, 2009

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This dissertation, submitted by Brett Holfeld in partial fulfillment of the requirements for the Doctor of Philosphy from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

_____
Mark Grabe, PhD

_____
Joelle Ruthig, PhD

_____
Andre Kehn, PhD

_____
Thomas Petros, PhD

_____
Myrna Olson, Ed.D

This dissertation meets the standards for appearance, conforms to the style and format requirements of the Graduate School of the University of North Dakota, and is hereby approved.

_____
Dr. Wayne Swisher (Dean of the Graduate School)

_____
Date

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Brett Holfeld
June 24th, 2013

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ABSTRACT

Advancements in technology in the past decade have corresponded with the emergence of a new form of bullying called cyber bullying or bullying through the use of technology. The Social Ecological Model was used as a guide to examine the development of cyber bullying through the dynamic interactions between adolescents and their social environment (i.e., peer group, family, and school). The main goal of the study was to examine the perceptions and attributions of bystanders to cyber bullying. A scenario was constructed that described a hypothetical middle school students' experience with cyber bullying. Middle school participants (N = 1,151) were randomly assigned to one of six experimental conditions that varied in terms of the type of response (ignored it, reported the behavior, confronted the bully) and blogger gender (male, female). A 3x2 MANCOVA (with perceptions of cyber bullying as covariates) examined Type of Response x Gender effects on attributions for the student's cyber bullying experience/outcome (i.e., cyber bullying continued). Victims were perceived as having more control, greater responsibility and greater blame when they responded by ignoring the behavior than when they reported it. Findings suggest that victims may not be trying hard enough to stop the behavior or may not be taken seriously when they respond passively to their experience for bystanders to intervene. The implications for future research are discussed.

CHAPTER I

INTRODUCTION

School yard bullying is a commonplace behavior that has affected children and adolescents for many generations all over the world (Andreou & Bonoti, 2010; Boulton, Smith, & Cowie, 2010; Cassidy, Jackson, & Brown, 2009; Kanetsuna, Smith, & Morita, 2006; Murray-Harvey & Shin, 2010; Nansel et al., 2001; Olweus, 1991, 1993; Slee, 2010). In the last decade, a new form of bullying called cyber bullying has emerged as a result of the advancements in technology. Cyber bullying has received considerable attention in recent years from the media, researchers, and educators who have highlighted the dangers of the behavior (Hinduja & Patchin, 2012; Hong & Espelage, 2012; Schneider, O'Donnell, Stueve, & Coulter, 2012; Tokunaga, 2010; Wong-Lo, Bullock, & Gable, 2011). Even though it is has not reached epidemic levels, cyber bullying is a significant issue facing many of today's youth, parents, and educators (Patchin & Hinduja, 2012).

Preliminary investigations of cyber bullying have examined the prevalence of the behavior in general and within different groups (i.e., gender, age, etc.), and the correlates with a number of psychosocial variables (i.e., depression, anxiety, etc.). An absence of theoretical inquiry has limited the ability of researchers to explain how and/or why cyber bullying occurs (Mishna, Khoury-Kassabri, Gadalla, & Daciuk, 2012; Tokunaga, 2010). Theories are also critical to develop a greater understanding of the behavior.

The application of theories is important to understand human development. In one of the earliest theories of human development, Kurt Lewin (1937) posited that human behavior is a function of the individuals interacting within their environment. Many years later, Bronfenbrenner (1979) described a similar process of human development in his Ecological Systems Theory. In this model, he suggested that human development is influenced by a series of interrelated systems acting within the environment. The microsystem which is at the center of the model includes the groups that have the most direct influence on a child's development (i.e., peers, family, and school). The surrounding systems (i.e., mesosystem, exosystem, macrosystem, chronosystem) have indirect influences but can also contribute to a child's development. Theories like these are needed to understand complex behaviors that result from the interaction of the individual and their social environment. One type of complex behavior that can be understood from this framework is bullying.

Swearer and Espelage (2004) modified their Social Ecological Theory from the principles of Bronfenbrenner's Ecological Systems Theory (1979) in an attempt to explain adolescent's involvement in bullying. According to this theoretical framework, bullying results from the bidirectional relations between adolescents and their social contexts/environments which includes the peer group, family, school, and community (Bauman, 2010; Espelage & Swearer, 2009; Mishna et al., 2008; Swearer & Espelage, 2004; Swearer et al., 2012). The notion that bullying develops from the dynamic interplay of factors within the environment is not new and has been well supported in both theory and research (Espelage & Swearer, 2009; Garbarino & deLara, 2002; Newman, Horne, & Bartolomucci, 2000; Olweus, 1993; Swearer & Doll, 2001; Swearer & Espelage, 2004;

Swearer et al., 2012). Since it is difficult to empirically examine all of the complex associations described in the Social Ecological Theory (Espelage & Swearer, 2009), the current study focused a few of the specific relationships between adolescents and their social environment in relation to a new form of bullying, cyber bullying, that many adolescents experience.

Like traditional bullying, cyber bullying is thought to arise from the reciprocal interactions between adolescents and their social environment (Bauman, 2010; Mishna et al., 2008). The social environments (i.e., peer group, family, and school) can also influence how adolescents interpret and respond to their specific experiences with cyber bullying.

The peer group has the most dominant influence on adolescents as they become the primary source of socialization during adolescence. During adolescence, youth strive to become independent from their parents and seek support from their peers (Hong & Espelage, 2012). Peer acceptance and the development of friendships are critical to adolescent's development and can help protect and/or buffer adolescents from the distress associated with the victimization (Demaray & Malecki, 2003; Schmidt & Bagwell, 2007).

Furthermore, research has consistently shown that peers play a critical role in the bullying process (Boulton et al., 1999; Espelage, Bosworth, & Simon, 2001; O'Connell et al., 1999; Rigby, 2005; Salmivalli, Huttunen, & Lagerspetz, 1997; Schmidt & Bagwell, 2007). Peers are commonly present as bystanders to bullying and can contribute to the maintenance and/or reduction of the behavior based on their actions in these situations (Hawkins, Pepler, & Craig, 2001; O'Connell et al., 1999; Schneider et al., 2012). The potentially unlimited audience to witness cyber bullying suggests that the role of

bystanders may be particularly important to cyber bullying (Mishna et al., 2010). However, little is known about the perceptions and reactions of bystanders to cyber bullying. A main goal of the current study was to utilize Weiner's Attributional Theory (1985) to examine the attributions (i.e., controllability, responsibility, blame) bystanders make for a hypothetical victim of cyber bullying. For example, if bystanders perceive victims of cyber bullying as responsible or blame them for their experience, they will be less likely to offer assistance to them. These findings have important implications for bystanders' willingness to assist real-life victims of cyber bullying.

A second social context to consider is the role of the family. A lack of parental involvement (Barboza et al., 2009; Flouri & Buchanan, 2003; Georgiou, 2009) and parental support (Holt & Espelage, 2007) can leave adolescents susceptible to bullying. A lack of supervision and support in adolescent's online activities may place them at a heightened risk to cyber bullying. Parents also need to understand how to safely and appropriately use technology (i.e., computers and cell phones) so that they are prepared to help adolescents when they share their experiences with cyber bullying. This is noteworthy as parents are sometimes informed about cyber bullying (Holfeld & Grabe, 2012b). Finally, cyber bullying seldom originates at school but the relevant relationships and consequences of the behavior occur at school so it is important to consider the role of the school environment in cyber bullying.

A final social context that was addressed in the current study was the school environment. Adolescents spend the majority of their day at school interacting with peers and teachers. The overall school environment or climate may be an important factor related to adolescent's attitudes and behaviors (Espelage & Swearer, 2003). Poorer

perceptions of school climate have been consistently related to an increase in the frequency of bullying and reduced perceptions of safety at school (Hinduja & Patchin, 2012; Kupermine, Leadbeater, Emmons, & Blatt, 1997; Nansel et al., 2001). Furthermore, the ability of teachers to respond to cyber bullying influences adolescent's willingness to report their experience. Ineffective responses (i.e., doing nothing, telling them to ignore it) contribute to a greater reluctance among adolescents to share future experiences.

In summary, the Social Ecological Theory which states that bullying results from the reciprocal interactions between adolescents and their social environments appears to be an appropriate framework from which to examine cyber bullying. Importantly, the social contexts can influence adolescent's involvement in cyber bullying as well as their interpretations and responses to their experiences. The current study used the Social Ecological Theory as a guide to examine the role of specific factors within the social environment that impact middle school student's involvement in cyber bullying. Individual factors (i.e., demographics, psychosocial problems such as depression and anxiety), peer factors (i.e., perceptions of social support, role of bystanders), family factors (i.e., perceptions of social support), and school factors (i.e., perceptions of school climate) were examined. A greater understanding of the complexity of these associations will assist with the development of whole-school types of intervention efforts aimed at reducing the frequency and impact of cyber bullying among middle school students.

Traditional Bullying

Ground-breaking empirical work by Scandinavian researcher Dan Olweus in the 1970's and 1980's helped to shed light on the phenomenon of bullying (Campbell, 2005;

Kowalski et al., 2012). Bullying is now recognized as a pervasive problem that can negatively impact adolescents in the short-term and/or long-term both inside and outside of school (Juvonen & Gross, 2008; Mishna, 2004; Nansel et al., 2001; O'Connell et al., 1999; Olweus, 1993; Rigby, 2000; Wang, Nansel, & Iannotti, 2011).

In spite of a burgeoning body of research that has accumulated since the pioneering work of Olweus, there remains some speculation regarding the critical elements of bullying (i.e., what behaviors constitutes bullying?). Some researchers argue that bullying is a repeated and aggressive behavior that involves an imbalance of power between the victim and the perpetrator (Craig, Pepler, & Blais, 2007; Juvonen & Graham, 2001). Others contend that an additional element, intent, in which the behavior is intended to inflict harm on another person, is necessary to fulfill the requirements of bullying (Espelage & Swearer, 2003; Langos, 2012; Nansel et al., 2001; Olweus, 2001; Riebel, Jager, & Fischer, 2009; Rigby & Smith, 2011; Smith & Sharp, 1994; Whitney & Smith, 1993). Bullying is most commonly characterized as a repeated, aggressive, and intentional behavior that is used to inflict harm or cause distress (i.e., physical, psychological, or emotional). The behavior must involve an imbalance of power between the victim and the perpetrator that favors the perpetrator. The perceived (or actual) power imbalance is typically manifested through physical size or strength, popularity status, intelligence, or some form of a disability (Craig et al., 2007; Hinduja & Patchin, 2006; Olweus, 1993; Patchin & Hinduja, 2006; Rigby & Slee, 1993; Roland, 1980). Furthermore, the behavior must occur repeatedly over time. The repetition of the behavior can create a greater disparity in power between the victim and perpetrator and

make it more difficult for the victim to escape the harassment (Craig et al., 2007; O'Connell et al., 1999).

There are many different forms or types of bullying. Bullying is usually categorized as either direct (i.e., face to face) or indirect (i.e., spreading rumors) (Olweus, 1991, 1993). Physical (i.e., hitting, pushing) and verbal (i.e., insults, threats) behaviors comprise the direct forms of bullying whereas social/relational (i.e., spreading rumors, social exclusion) constitute the indirect forms of bullying (Beale & Scott, 2001; Craig et al., 2007; Crick & Grotpeter, 1995; Langos, 2012; Ma, 2002; Mynard & Joseph, 2000; Olweus, 1993; Wang et al., 2011). Interestingly, cyber bullying is a unique form of bullying that can be classified as either direct or indirect (Langos, 2012). Research consistently finds that boys are more likely to be involved in direct forms of bullying while girls are more likely to be involved in more indirect forms of bullying (Bjorkqvist, 1994; Kaltiala-Heino, Rimpela, Rantenen, & Rimpela, 2000; Nansel et al., 2001; Owens, Shute, & Slee, 2000; Wang, Iannotti, & Nansel, 2009). Regardless of the form or type of bullying, it appears that the frequency of the behavior generally peaks during the middle school years and declines in high school (Brown, Birch, & Kancherla, 2005; Goldbaum, Craig, Pepler, & Connolly, 2007; Hoover, Oliver, & Hazler, 1992; Nansel et al., 2001; Olweus, 1994; Pellegrini, 2002; von Marees & Petermann, 2010).

The true incidence of bullying has been challenging to determine because researchers have operationally defined and measured bullying in a variety of ways, and thus, have impaired the ability to make cross-study comparisons. Exacerbating the problem is the reliance on self-report studies in which bullying is often underreported by adolescents who may be reluctant to disclose their experience (Hunter, Boyle, & Warden,

2004; Mishna, 2004; Olweus, 1993; Pepler et al., 1994). Consequently, the prevalence rates of bullying are likely higher than what has been reported across studies.

In the first large scale, nationally representative study conducted in the United States, Nansel et al. (2001) surveyed 15, 686 students in grades 6 through 10 about their experiences and involvement in bullying. Nearly 30% of students reported 'frequent' involvement in bullying in the past 2 months; 13% as bullies, 10.6% as victims and 6.3% as both bullies and victims (Nansel et al., 2001). Similarly, others studies report that at least one-third of adolescents are directly involved in bullying as victims and/or bullies (Currie et al., 2008; Olweus, 1996). According to a recent analysis of published longitudinal studies, the rates of traditional bullying appear to be declining over time (Rigby & Smith, 2011).

Despite some uncertainty regarding the number of adolescents who experience bullying, overwhelming evidence suggests that those involved in bullying directly as victims and/or bullies are negatively affected by their experience(s). In particular, adolescents involved in bullying are more susceptible to social, emotional, and psychological problems (i.e., psychological distress) than adolescents who report no involvement in bullying and these problems can persist into adulthood (Boulton, Smith, & Cowie, 2010; Crick & Bigbee, 1998; Espelage & Swearer, 2003; Haynie et al., 2001; Hoover & Hazler, 1991; Juvonen, Graham, & Schuster, 2003; Nansel et al., 2001; Nansel et al., 2004; O'Connell et al., 1999; Olweus, 1993, 1994; Pellegrini, 1998; Raskauskas & Stoltz, 2007; Rigby, 2000; Rigby & Slee, 1993). Because bullying occurs primarily within the peer group, the negative impact of the experience may be intensified (Craig & Pepler, 1997; Mishna, Wiener, & Pepler, 2008).

Chronic victims of bullying are particularly prone to adjustment problems and may experience a range of psychological distress (Dyer & Teggart, 2007; Goldblaum et al., 2003; Kochenderfer-Ladd & Skinner, 2002; Nansel et al., 2001; Pellegrini, 1998). The psychological distress can include: lower levels of self-esteem (Jackson, 2006; Rigby & Slee, 1993), higher levels of depression and anxiety (Crick & Grotpeter, 1996; Due et al., 2005; Espelage & Swearer, 2003; Kochenderfer-Ladd & Skinner, 2002; Olweus, 1994; Pellegrini, 1998; Roland, 2002; Williams et al., 2006), physical symptoms such as stomach upset or headaches (Due et al., 2005; Rigby, 2000; Williams et al., 1996) and suicide ideation (Cassidy et al., 2009; Roland, 2002). Victims of bullying may also be withdrawn, have few friends, and small (if any) social support groups (Hodges, Malone, & Perry, 1997; Hodges & Perry, 1999; Hugh-Jones & Smith, 1999).

Adolescents who engage in bullying are also vulnerable to internalizing and externalizing problems including low levels of self-esteem, poor psychological adjustment, and academic difficulties (Nansel et al., 2001). Unlike victims of bullying, bullies typically have authoritarian and dominant personalities which contribute to their propensity for aggressive behavior (Brodsky, 1976; Olweus, 1993). More than half of children that are labeled as 'bullies' during childhood will have a criminal conviction by the age of 24 (Olweus, 1992).

Finally, adolescents involved in bullying as both victims and perpetrators are at the greatest risk of experiencing social, emotional, and psychological distress (Berger, 2007; Haynie et al., 2001; Juvonen, Graham, & Schuster, 2003). Adolescents may be particularly susceptible to experience psychological distress if they are involved in

additional forms of bullying such as cyber bullying (Shariff & Churchill, 2010; Sleglova & Cerna, 2011).

Cyber Bullying

The growth and proliferation of electronic communication devices in the last decade have corresponded with the development of a new form of bullying called cyber bullying. The term cyber bullying was first coined by Bill Belsey and refers to bullying that is committed through the use of electronic devices (Cassidy et al., 2009). Even though this is the description typically given by adolescents when asked to describe the behavior (Hinduja & Patchin, 2012), it is not an adequate definition for researchers to adopt as it lacks the specific elements of bullying required to effectively measure the behavior. Instead, two of the pre-eminent cyber bullying researchers have adapted and modified their definition of cyber bullying over the years into the present form: "cyber bullying is the willful and repeated harm inflicted through the use of computers, cell phones, and other electronic devices" (Patchin & Hinduja, 2010, p. 615). Other concepts such as cyber-harassment (Beran & Li, 2005), Internet/online harassment (Ybarra & Mitchell, 2004a, 2004b; Ybarra, Diener-West, & Leaf, 2007; Ybarra, Espelage, & Mitchell, 2007), electronic bullying (Raskauskas & Stoltz, 2007), online bullying (Patchin & Hinduja, 2006), c-aggression (Slonje & Smith, 2008), cyber aggression (Dempsey, Sulkowski, Dempsey, & Stroch, 2011), online social aggression (Willard, 2007), and online social cruelty (Kowalski & Limber, 2007) have also been used to describe a similar, if not identical behaviour.

Cyber bullying is primarily committed through two technological devices, the computer (i.e., Internet) and cell phones. A number of mediums can also be used to

perpetrate cyber bullying including e-mail, instant messaging (IM), text messaging, chat rooms, social networking sites, blogs, and discussion forums (Hinduja & Patchin, 2009; Kowalski et al., 2012; Vandebosch & Van Cleemput, 2009). There are also many different 'types' of cyber bullying or ways in which the behavior can be carried out.

Nancy Willard (2006) published one of the first cyber bullying books and described eight types of cyber bullying: flaming, online harassment, cyberstalking, denigration, trickery, impersonation, outing, and exclusion. The first type of cyber bullying, flaming, occurs when two or more individuals engage in a short and tense online discussion, often in a public forum (i.e., chat room, discussion forum). Second, online harassment which has been used synonymously with cyber bullying (Ybarra & Mitchell, 2004a, 2004b), refers to harassing messages that are posted in a public or private forum intended to create high levels of psychological distress for another individual (Kowalski et al., 2012). The third type of cyber bullying, cyberstalking, describes the behavior of an individual who repeatedly uses electronic communication devices to harass and stalk another individual. The repetitive nature of cyberstalking can make it very distressing for the victim. Posting information online that is derogatory and/or false is referred to as denigration and is the fourth type of cyber bullying (Kowalski et al., 2012; Willard, 2006). This material can be posted anywhere online such in a social networking site, an e-mail, an IM, or in the form of a text, picture, or video clip (Kowalski et al., 2012). The fifth type of cyber bullying discussed by Willard (2006, 2007) is trickery. Trickery involves 'tricking' another individual into revealing personal information that is subsequently shared with others to embarrass them. When an individual 'impersonates' or pretends to be someone else online, it is called

impersonation, the sixth type of cyber bullying. Commonly, the imposter gains access to the victim's account through a shared password and can then send rude or malicious messages to the victim's friends (Kowalski et al., 2012). The seventh type of cyber bullying, outing, describes a behavior where one individual shares embarrassing personal and private information online with others (Willard, 2006, 2007). The final type of cyber bullying discussed by Willard (2006), exclusion, occurs when one or more individuals are restricted or excluded from certain online forums or groups.

In addition to the eight types of cyber bullying described by Willard (2006, 2007), Kowalski et al. (2012) contend that two other types of cyber bullying, happy slapping and sexting, should be included. Happy slapping refers to an aggressive behavior committed by one adolescent or a group of adolescents who approach an individual and 'slap' them (usually the act involves more than just slapping) while another adolescent records a video of the incident to upload online for others to see (Hinduja & Patchin, 2009; Kowalski et al., 2012). Sexting occurs when one person sends nude or partially nude photos of themselves to another via some form of an electronic device. Once received, these pictures can be uploaded online or forwarded to others to view (Kowalski et al., 2012). The posting and/or forwarding of a private message can have devastating consequences for adolescents who did not want others to see the pictures.

Among all the types of cyber bullying described above, Patchin and Hinduja (2010) suggest that sending threatening text messages, posting malicious messages on social networking sites and uploading embarrassing pictures/videos online without permission are the most common forms of cyber bullying. A combination of the different methods and ways in which cyber bullying can be carried out as well as the overlap with

other types of bullying (i.e., traditional bullying) complicates investigations of the behavior.

Differences from Traditional Bullying

The large overlap of adolescents involved in traditional bullying and cyber bullying (Dehue & Bolman, & Vollink, 2008; Gradinger et al., 2010; Hinduja & Patchin, 2006, 2008; Holfeld & Grabe, 2012a; Juvonen & Gross, 2008; Li, 2007a, 2007b; Price & Dalgleish, 2010; Raskauskas & Stoltz, 2007; Riebel et al., 2009; Schneider et al., 2012; Smith et al., 2008; Vandebosch & Van Cleemput, 2009; Ybarra, Diener-West, & Leaf, 2007; Ybarra & Mitchell, 2004b) has led to speculation that cyber bullying is just an extension of traditional bullying. In other words, adolescents who engage in traditional bullying behavior now have another tool (i.e., computer and cell phones) to continue their harassment of others. However, there are important differences between the two forms of bullying that delineate cyber bullying as a unique form of bullying (Cassidy et al., 2009; Holfeld & Grabe, 2012a; Mishna et al., 2009; Varjas, Heinrich, & Meyers, 2009; Wang et al., 2009).

The first and perhaps most important distinction between the two types of bullying is that cyber bullying involves the use of technological devices to bully and harass others (Hinduja & Patchin, 2009; Patchin & Hinduja, 2006). While traditional bullying is restricted to face-to-face situations, the technology has given adolescents the ability to bully someone from virtually any location in the world, largely unsupervised (Patchin & Hinduja, 2006, 2010). Any adolescent with access to these devices may be vulnerable to cyber bullying as a victim and/or perpetrator (Hinduja & Patchin, 2006; Holfeld & Grabe, 2012a).

Second, unlike traditional bullying, cyber bullying can be a relatively anonymous behavior if the perpetrator chooses to keep his/her identity confidential (Brown et al., 2006; Hinduja & Patchin, 2006, 2009; Sleglova & Cerna, 2011; Sourander et al., 2010; Wong-Lo et al., 2011). A perpetrator can use a pseudo-name or create a fake account (i.e., e-mail, social networking) to harass someone (Patchin & Hinduja, 2010). Preliminary investigations of cyber bullying suggested that the behavior was largely anonymous whereby the victim often did not know the identity of the perpetrator (Dehue et al., 2008; Hinduja & Patchin, 2008, 2009; Juvonen & Gross, 2008; Kowalski & Limber, 2007; Li, 2007a, 2007b; Shariff, 2009; Strom & Strom, 2005; Ybarra & Mitchell, 2004a). However, recent findings suggest that cyber bullying occurs most often within social groups/circles (Hinduja & Patchin, 2009; Hoff & Mitchell, 2008; Huang & Chou, 2010; Jackson et al., 2009; Mishna et al., 2009; Mishna et al., 2010; Price & Dalgleish, 2010; Willard, 2011). This indicates that even though cyber bullying can be anonymous, it is more likely that the victim will know the identity of the offender.

The inherent anonymity of the online world allows adolescents to feel less inhibited online and can lead them to behave in ways that they would not normally behave in during face-to-face situations (Africak et al., 2008; Brown et al., 2006; Calvete et al., 2010; Hinduja & Patchin, 2009; Joinson, 1998; Lenhart, Madden, & Hiltin, 2005; McKenna & Bargh, 2000). Adolescents who are particularly naïve to the online world may be particularly susceptible to engage in these types of behavior (Postmes & Spears, 2008). Moreover, a lack of visual cues and an inability to witness the reactions of others may contribute to adolescents feeling less empathy and responsibility for their online behaviors (Gerson & Rappaport, 2011; Hinduja & Patchin, 2009; Luck, 2007; Mishna et

al., 2009; Patchin & Hinduja, 2006; Pornari & Wood, 2010; Postmes & Spears, 1998; Schneider et al., 2012; Slonje & Smith, 2008).

The third major distinction between traditional bullying and cyber bullying relates to the audience who can witness and/or participate in the behavior. Typically in traditional bullying situations, only adolescents who are present when the bullying occurs can participate in the behavior. For example, if an adolescent is being pushed around and harassed on the playground, only adolescents who observe the behavior can be involved. With the recent advancements in technology, the landscape of bullying has changed. Now, this same bullying situation on the playground can be recorded via cell phone cameras and uploaded online instantly for others who were not around at the time to view and/or post comments on. The technology has enabled a much wider and virtually unlimited audience who can witness and participate in cyber bullying (Cetin, Yaman, & Peker, 2011; Hinduja & Patchin, 2009; Kowalski & Limber, 2007; Slonje, Smith, & Frisen, 2012; Sourander et al., 2010).

The fourth difference between traditional bullying and cyber bullying relates to the inescapability of the behavior. Traditional bullying typically affects students exclusively at school (Patchin & Hinduja, 2006). When adolescents are bullied via traditional means at school, they can usually escape the harassment by going home. Victims of cyber bullying cannot avoid the harassment by leaving school because of the dynamics technological world where messages, pictures, videos, etc, can be sent or posted at any time of the day or night (Hinduja & Patchin, 2009; Raskauskas & Stoltz, 2007; Willard, 2007). The 24 hours a day, 7 days a week (24/7) nature of the technological world renders victims of cyber bullying helpless against repeated and

chronic victimization (Gerson & Rappaport, 2011; Kowalski et al., 2008; Patchin & Hinduja, 2006; Sleglova & Cerna, 2011; Slonje et al., 2012; Tokunaga, 2010; Wong-Lo et al., 2011).

Collectively, the use of technology, lack of supervision, potential anonymity of the offender, unlimited audience, and 24/7 nature of the technological world differentiate cyber bullying from other forms of bullying and contribute to feelings of helplessness and powerlessness experienced by many victims of cyber bullying (Sleglova & Cerna, 2011).

Technology

The proliferation of electronic communication devices in the last few decades have changed the landscape of socialization patterns, particularly among adolescents who have grown up in the 'digital age' (Berson, Berson, & Ferron, 2002; Mishna et al., 2009; Mishna et al., 2010). Adolescents now have an endless number of tools (i.e., e-mail, social networking sites, text messaging) at their disposal to communicate and socialize with friends and family all over the world (Mishna et al., 2009; Palfrey & Gasser, 2008). This is particularly beneficial for adolescents who have difficulties interacting with others in face-to-face situations (McKenna & Bargh, 2000). A number of educational and developmental benefits have also coincided with the growth of technology including: allowing adolescents the ability to explore their identity, exposing them to a wealth of information, improving their ability to develop new relationships, and enhancing their critical thinking/decision making skills (Cassidy et al., 2009; Gross, 2004; Hinduja & Patchin, 2012; Jackson et al., 2006; Valkenburg & Peter, 2007).

These technologies have become so prevalent in the lives of adolescents that many prefer spending time online to watching television (Hinduja & Patchin, 2009;

Kowalski et al., 2008). The importance of the Internet and cell phones has also led many adolescents to feel dependent on these devices to socialize and communicate with others (Berson et al., 2002; Hinduja & Patchin, 2012; Kowalski et al., 2008; Mishna et al., 2009).

A greater accessibility of the Internet and cell phones has led to increasing use of these devices. Today, adolescents are spending more time online than ever before (Hinduja & Patchin, 2012; Shariff, 2009). The majority of adolescents now have Internet access at home and report going online on a daily basis (Cassidy et al., 2009; Holfeld & Grabe, 2012b; Lenhart et al., 2011; McQuade & Sampat, 2008; Mishna et al., 2010; Slonje et al., 2012; Wade & Beran, 2011). Approximately 11 million adolescents go online each day (Hinduja & Patchin, 2012). Furthermore, computers are becoming more common in the homes of adolescents as nearly one in three report having three or more computers at home (Cassidy et al., 2009; Wade & Beran, 2011).

Similarly, cell phones have become increasingly popular and accessible for adolescents. More than half of the adolescents surveyed reported owning or having access to a cell phone (Cassidy et al., 2009; Lenhart et al., 2011; Slonje et al., 2012; Vandebosch & Van Cleemput, 2008) and nearly two-thirds of adolescents prefer sending text messages to talking on the phone as evidenced from approximately 30% of adolescents sending 100 or more text messages per day (Hinduja & Patchin, 2012).

The growth of technological devices has been largely positive but there have been some negative and unintended consequences that have resulted from the abuse and misuse of the technology (Langos, 2012; Mishna et al., 2009; Mitchell, Finkelhor, &

Wolak, 2003). One particular type of abuse that will be the focus of the current study is cyber bullying.

It is important to note that the majority of adolescents engage in appropriate behavior online (Hinduja & Patchin, 2012). However, some adolescents engage in irresponsible practices online that affect the safety of themselves and others. Increasing use of technology has been associated with a greater involvement in cyber bullying behavior. For example, greater frequency of online behavior has been consistently related to an increased risk of being cyber bullied (Akbulut, Sahin, & Eristi, 2010; Hinduja & Patchin, 2006, 2008; Juvonen & Gross, 2008; Mishna et al., 2010; Smith et al., 2008; Wolak et al., 2007; Ybarra & Mitchell, 2004a) and an increased likelihood of engaging in cyber bullying (Hinduja & Patchin, 2006; Ybarra & Mitchell, 2004a). One contributing factor to this association may be the types of behavior adolescents engage in while online. Online behavior considered to be 'risky' (i.e., sharing passwords, talking to strangers, pretending to be someone else) leave adolescents particularly susceptible to cyber bullying (Erdur-Baker, 2010; Hinduja & Patchin, 2009; Mishna et al., 2010; Sengupta & Chaudhuri, 2011; Ybarra & Mitchell, 2004a). Another contributing factor may be the location of the computer in the home. For example, adolescents may be more vulnerable to online victimization if the computer is located in a private area of the home (i.e., adolescent's bedroom) versus a public area where there is less supervision of the adolescent's online behavior (Sengupta & Chaudhuri, 2011). Interestingly, this finding has not been supported in other studies (Mishna et al., 2012). Perhaps a greater number of computers in the home available to adolescents and advanced Internet capabilities of smart phones have led to this discrepancy. A final contributing factor may relate to

adolescents ignorance about the dangers of the online world and/or their inability to engage in 'safe' online behavior. A lack of awareness and knowledge in the online world can leave adolescents vulnerable targets and potential perpetrators (Mishna et al., 2010; Ybarra et al., 2006).

A greater frequency of Internet/cell phone use and dependency in combination with an engagement in risky online behavior appears to be related to adolescent's involvement in cyber bullying, but it is unknown whether specific types of online activities (i.e., social networking sites) place adolescents at a greater risk of being cyber bullied.

Prevalence of Cyber Bullying

With greater access and use of technological devices, it is not surprising that a greater number of adolescents are involved in cyber bullying (Raskauskas & Stoltz, 2007). However, large discrepancies in the findings reported across studies have made it particularly challenging to determine the actual prevalence of cyber bullying among adolescents (Tokunaga, 2010).

One of the first studies to investigate cyber bullying was conducted in the United Kingdom in 2002 and found that 25% of adolescents experienced victimization via the Internet and/or cell phones (National Children's Home, 2005). Meanwhile, in the first study conducted in the United States, Ybarra and Mitchell (2004b) utilized data from the University of New Hampshire's Crimes Against Children Research Center in 2000 and reported that 6% of adolescents had been bullied online while 15% stated that they had bullied others online in the previous year.

Kowalski and Limber (2007) conducted one of the first large scale studies to examine rates of electronic (i.e., cyber) bullying among 3,767 middle school students (i.e., grades 6, 7, and 8) in southwestern and northwestern United States. The researchers found that 22% of adolescents were involved in electronic bullying at least once in the previous two months; 11% as victims, 4% as bullies and 7% as bully/victims.

In the last few years, accumulating research published in both peer-reviewed and open-access journals, has culminated in several reviews of the cyber bullying literature. These reviews are critical to better understand the frequency and extent of cyber bullying. Most recently, Patchin and Hinduja (2012) examined 35 peer-reviewed articles published before the summer of 2011 and found victimization rates to vary between 5.5% and 72% with an average of 24.4%. Conversely, across 27 studies, perpetration rates varied between 3% and 44.1% with an average of 18%. These findings are consistent with previous reviews regarding the rates of victimization and perpetration of cyber bullying among adolescents. For example, Kowalski et al. (2008) found victimization rates ranging from 4% to 53% and rates of perpetration varying from 3% to 23%. Similarly, David-Ferdon and Hertz (2007) reported victimization rates ranging from 9% to 34% and perpetration rates ranging from 4% to 21% across studies. Meanwhile, in a meta-synthesis of studies published before June 2009, victimization rates varied between 20% and 40% (Tokunaga, 2010).

Findings from these reviews and several large scale studies (Berson et al., 2002; Kowalski & Limber, 2007; Mishna et al., 2010; Williams & Guerra, 2007; Ybarra & Mitchell, 2004a, 2004b) suggest that cyber bullying is a significant issue for adolescents, particularly adolescents in middle school who experience the highest rates of involvement

(Tokunaga, 2010; Wade & Beran, 2011; Williams & Guerra, 2007; Worthen, 2007). Conservative estimates suggest that 20% to 25% of adolescents have experienced cyber bullying in the past few months (Patchin & Hinduja, 2012).

Cyber bullying is not a problem that is exclusive to adolescents in North America. Numerous studies have been conducted all over the world including: Australia (Luck, 2007; Price & Dalgleish, 2010), Finland (Sourander et al., 2010), Germany (Riebel et al., 2009), Singapore (Ang & Goh, 2010), Spain (Calvete et al., 2010; Ortega et al., 2009), Taiwan (Huang & Chou, 2010), Turkey (Africak et al., 2008; Akbulut et al., 2010; Erdur-Baker, 2010; Erdur-Baker & Kavsut, 2007; Topcu, Edrur-Baker, & Capa-Aydin, 2008), and Vienna (Gradinger, Strohmeier, & Spiel, 2009, 2010). Results from these studies suggest that cyber bullying is a global concern that may be rising at both a national and international rate (Kowalski et al., 2008; Rigby & Smith, 2011; Slonje & Smith, 2008).

Since adolescents all over the world are affected by cyber bullying, it is necessary to identify whether certain groups or populations may be at a heightened risk to be cyber bullied. Unfortunately, only a few studies have examined the similarities and/or differences between groups involved in cyber bullying. Overall, it appears that nonheterosexual adolescents are more likely to be targets of cyber bullying than heterosexual adolescents (Hinduja & Patchin, 2011; Schneider et al., 2012). High rates of cyber bullying victimization have been found among minority groups such as the Lesbian, Gay, Bisexual, and Transgendered (LGBT). For example, Blumenfield and Cooper (2010) found that over half of LGBT adolescents surveyed reported being cyber bullied at least once in the past three months. In another study, more than twice as many LGBT adolescents reported being cyber bullied in the past 30 days compared to

heterosexual youth (17% to 7%; Hinduja & Patchin, 2011). Moreover, in the same study, 36% of LGBT adolescents reported being victimized at least once in their lifetime compared to 20% of heterosexual adolescents victimized during the same time period (Hinduja & Patchin, 2011).

To date, it remains unclear whether gender plays a significant role in adolescent's involvement in cyber bullying (Hinduja & Patchin, 2010; Tokunaga, 2010; Vandebosch & Van Cleemput, 2009). The majority of studies to examine the association between gender and cyber bullying victimization report that girls are more likely to be victimized than boys (Dehue et al., 2008; Kowalski & Limber, 2007; Li, 2007b; Mishna et al., 2012; Ortega et al., 2009; Schneider et al., 2012; Smith et al., 2006; Smith et al., 2008; Sourander et al., 2010; Wade & Beran, 2011; Wang et al., 2009). However, many researchers have been unable to find any differences in victimization by gender (Beran & Li, 2005, 2007; Didden et al., 2009; Gradinger et al., 2009; Hinduja & Patchin, 2008; Juvonen & Gross, 2008; Katzer et al., 2009; Li, 2006; Slonje & Smith, 2007; Trach, Hymel, Waterhouse, & Neale, 2010; Varjas et al., 2009; Ybarra et al., 2007) and a minority of studies suggest that boys are more likely to be victimized than girls (Africak et al., 2008; Erdur-Baker, 2010; Erdur-Baker & Kavsut, 2007; Huang & Chou, 2010; Topcu et al., 2008). Interestingly, all of the latter studies included international samples, and may reflect a cultural difference in gender roles rather than a true association with cyber bullying. More research is needed to further investigate the role of culture in the association between gender and cyber bullying but it is outside the scope of the current study.

Regarding engagement in cyber bullying, the majority of studies find that boys are more likely to engage in cyber bullying than girls (Africak et al., 2008; Calvete et al., 2010; Dehue et al., 2008; Erdur-Baker, 2010; Erdur-Baker & Kavsut, 2007; Gradinger et al., 2009; Huang & Chou, 2010; Li, 2007a; Mishna et al., 2012; Topcu et al., 2008; Trach et al., 2010; Wang et al., 2009). Although, many studies report no differences in offending by gender (Beran & Li, 2005; Hinduja & Patchin, 2008; Mishna et al., 2010; Patchin & Hinduja, 2006; Slonje & Smith, 2008; Smith et al., 2008; Wade & Beran, 2011; Williams & Guerra, 2007; Ybarra & Mitchell, 2004b), and a minority of studies find that girls are more likely to engage in cyber bullying than boys (Keith & Martin, 2005; Kowalski & Limber, 2007; Nelson, 2003; Pornari & Wood, 2010).

Inconsistencies in the Research

The variability in the incidence of cyber bullying victimization and offending reported across studies can be explained by the inconsistencies in methodologies utilized (Hinduja & Patchin, 2012; Holfeld & Grabe, 2012a; Tokunaga, 2010). Perhaps the most arduous issue facing researchers attempting to investigate cyber bullying is the operationalization and measurement of the behavior (David-Ferdon & Hertz, 2007; Kowalski et al., 2008; Langos, 2012; Schneider et al., 2012; Sleglova & Cerna, 2011; Tokunaga, 2010; Vandebosch & Van Cleemput, 2008; Ybarra, Boyd, Korchmaros, & Oppenheim, 2012). Moreover, with continual advancements in technology, the detection and examination of cyber bullying has become increasingly challenging (Hinduja & Patchin, 2008; Kowalski et al., 2008; Schneider et al., 2012).

The operationalization of cyber bullying has been a significant issue that has plagued the literature. Different conceptualizations of cyber bullying (i.e., how to define

the behavior) have led to potential variability in participant responses reported across studies. The majority of researchers incorporate the commonly agreed upon characteristics of traditional bullying (i.e., repetition, power imbalance, and intent) into their definitions of cyber bullying so there appears to be at least some consensus that these elements are necessary to include in any definition of cyber bullying provided to participants (Langos, 2012; Sleglova & Cerna, 2011; Tokunaga, 2010). But, there remains much debate regarding how these elements are manifested within cyber bullying (Sleglova & Cerna, 2011; Slonje & Smith, 2008).

The issue of repetition becomes complicated when harassing messages, pictures, or videos are posted online (Gradinger et al., 2010; Langos, 2012; Mishna et al., 2010; Tokunaga, 2010). The important question to consider is what action meets the criteria of repetition in the online world? Some researchers suggest that the element of repetition is satisfied when messages, pictures, or videos are posted in a public domain where anyone can view them and/or share with others (Campbell, 2005; Langos, 2012; Ortega et al., 2007; Slonje & Smith, 2008). Others argue that the simple observation of cyber bullying online does not constitute repetition because a similar behavior occurring in a face-to-face situation (i.e., a negative comment written on a bathroom wall at school) would not satisfy the element of repetition in traditional bullying (Ybarra et al., 2012). Instead, Ybarra and colleagues (2012) suggest that researchers need to use specific follow-up questions developed by Olweus (1996) to inquire about the duration and repetitive nature of an adolescent's experience (e.g., "Was it repeated, so that it happened again and again?") to determine whether the behavior clearly satisfies the requirement of repetition.

A second key element of cyber bullying is that the behavior must involve an imbalance of power between the victim and perpetrator. An imbalance of power is a critical component of cyber bullying but many scholars have failed to account for it (Menesini, Nocentini, & Calussi, 2011). A power imbalance exists when a victim feels like there is nothing they can do to defend him/herself against the offender (Langos, 2012). In traditional bullying situations, an imbalance of power typically occurs as a result of size and/or strength differences between the victim and perpetrator with the perpetrator possessing greater size and/or strength over the victim (Hinduja & Patchin, 2007). In cyber bullying, it is unclear what the power differential looks like. A perceived (or actual) imbalance of power may occur when a perpetrator possesses superior technological expertise (Bauman, 2010; Hinduja & Patchin, 2006, 2009; Vandebosch & Van Cleemput, 2008), involves an unlimited audience, and/or remains anonymous (Hinduja & Patchin, 2006; Mishna et al., 2009; Vandebosch & Van Cleemput, 2008; Ybarra & Mitchell, 2004b). Together, these factors contribute to feelings of helplessness in victims of cyber bullying and creates a larger imbalance in power between the victim and perpetrator (Langos, 2012; Vandebosch & Van Cleemput, 2008).

A third important characteristic of cyber bullying relates to the level of intent of the act or behavior (Tokunaga, 2010). In some instances, it is easy to discern the level of intent. For example, when a perpetrator repeatedly sends harassing messages, pictures, or videos to a victim, it is apparent that the behavior is intentional. In most cases however, it is difficult to determine whether a perpetrator intended to hurt the victim, particularly when a message, picture, or video is posted online in a public domain (Langos, 2012). When adolescents engage in this type of behavior, they often report that they were just

'joking' and did not think it was a big deal (Mishna et al., 2010). Other times, adolescents display clear intent when they report that they are trying to get revenge against another adolescent (Varjas et al., 2010). Importantly, perpetrators can also choose when and how to harass a peer and whether they want others to witness it (Dempsey et al., 2011). Once the information is posted online in the public domain, the perpetrator has little to no control over what others do with the information. The information can be forwarded to others instantaneously leading to a snowball effect irrespective of whether the perpetrator intended to hurt the victim (Slonje, Smith & Frisen, 2012). Thus, Slonje, Smith, and Frisen state that it is imperative for researchers to also examine how the information is distributed online to determine whether perpetrators or bystanders (i.e., potential perpetrators) intend to hurt the victim.

With varying operational definitions utilized to describe cyber bullying, it is difficult to identify similarities and/or differences between prevalence rates reported across studies. These comparisons are exacerbated by several measurement issues in the research.

There has been an evolution in the measurement of cyber bullying in the last decade as researchers have developed a greater understanding of the complexity of the behavior. Early investigations utilized a simple and direct approach to examine youth's involvement in cyber bullying. Participants were first provided with a definition of cyber bullying (or another similar concept such as online harassment) and then asked to report their involvement as a victim, bully, and/or bystander in a specified period of time (Vandebosch & Van Cleemput, 2009). Many of these preliminary studies assessed adolescent's involvement (i.e., victim, bully, bystander) in cyber bullying with single

items and dichotomous response options; '*yes*' or '*no*' (Calvete et al., 2010; Gradinger et al., 2009; Hinduja & Patchin, 2006, 2008; Li, 2006, 2007b; Schneider et al., 2012; Wang et al., 2011; Ybarra & Mitchell, 2004b; Ybarra et al., 2007). Aside from a limited variability in response options, a second major flaw with this approach is that it assumes that when given a definition of cyber bullying, participants' share a similar interpretation of the behavior (Gradinger et al., 2010; Ybarra et al., 2012). It is unclear whether participants understand the definition they are given or if they have an entirely different perception of what constitutes cyber bullying (Gradinger et al., 2010). These questions are important to consider as they can impact participant's responses.

As both technology and cyber bullying have evolved in recent years, it has become clear that the true nature and extent of cyber bullying cannot be determined with single-item measures and dichotomous response options (Calvete et al, 2010). Accordingly, researchers have begun to use a more comprehensive, yet indirect approach to examine adolescent's involvement in cyber bullying. In this approach, respondents are provided with a list of behaviors thought to be associated with or considered types of cyber bullying (i.e., threatened someone via e-mail) and are asked to report their frequency of involvement (i.e., never, once or twice, a few times, many times) as a victim and/or offender in a specified period of time (Aoyama et al., 2011; Mishna et al., 2010; Vandebosch & Van Cleemput, 2008, 2009; Yilmaz, 2011). Unlike the direct approach, participants are usually not provided with a definition of cyber bullying, thus reducing any participant bias to the concept of cyber bullying (Cassidy et al., 2009; Mishna et al., 2010; Mishna et al., 2012; Schneider et al., 2012).

Generally, multi-item scales are considered superior to single-item scales because they can provide a more accurate picture of the scope and magnitude of a complex behavior like cyber bullying (Menesini et al., 2011; Nunnally, 1978; Tokunaga, 2010). Moreover, it allows researchers to examine adolescent's involvement in cyber bullying along a continuum rather than on two extreme ends of the spectrum (i.e., no experience vs. chronic experience) (Marsh, Parada, Craven, & Finger, 2004).

A number of multi-item cyber bullying scales/instruments have been developed in recent years to more accurately assess cyber bullying behavior from both national and international perspectives. Typically, researchers have modified/adapted their scale from either the Olweus 'Bully/Victim' Questionnaire (Olweus, 1996) or existing cyber bullying scales (Smith et al., 2006). Some of the developed scales include the: 'Cyberbullying Student Questionnaire' (Yilmaz, 2011), 'Cyberbullying Questionnaire' (CBQ; Calvete et al., 2010), 'Cyberbullying Experience Student Survey' (Li, 2006), 'Cyberbullying and Online Aggression Survey' (Hinduja & Patchin, 2009), 'Checking in Online: What's Happening in Cyberspace' (Mishna et al., 2010), 'Cyber Bullying Inventory' (CBI; Erdur-Baker & Kavsut, 2007), 'Revised Cyber Bullying Inventory' (Topcu & Erdur-Baker, 2010), 'Cyber Victim and Bullying Scale' (CVBS; Cetin, Yaman & Peker, 2011), a 'Questionnaire of Cyberbullying' (QoCB; Africak et al., 2011), 'Berlin Cyberbullying-Cybervictimisation Questionnaire' (BCCQ; Schultze-Krumbholz & Scheithauer, 2009), 'Chat Bully and Chat Victim Scales' (Katzer, 2009), 'Lodz Electronic Aggression Prevalence Questionnaire' (LEAPQ; Pyzalski, 2009) and the 'Student Survey of Bullying Behavior-Revised 2' (SSBB-R2; Varjas, Meyers, & Hunt, 2006). Despite the plethora of instruments now available to measure cyber bullying, it is

unclear which scales are particularly effective (i.e., reliable, valid) because the appropriate psychometric properties of the respective scales often have not been provided (Menesini et al., 2011; Tokunaga, 2010). Moreover, since technology is constantly changing, there is concern that measurement items will have to be continuously modified and revised (Topcu & Erdur-Baker, 2010; Ybarra et al., 2012).

A relatively new area of research like cyber bullying can benefit from researchers using different methodological approaches to examine the behavior. Both direct and indirect measurement can provide useful information for better understanding cyber bullying and direct future research. In fact, many researchers have opted to utilize both methods within a single survey design (Mishna et al., 2010; Sourander et al., 2010; Smith et al., 2008). Interestingly, the indirect approach appears to yield higher prevalence rates of cyber bullying than the direct method (Africak et al., 2008; Gradinger et al., 2010; Mishna et al., 2010; Raskauskas & Stoltz, 2007; Vandebosch & Van Cleemput, 2009; Williams & Guerra, 2007) and suggests that the direct approach may underestimate the frequency of cyber bullying or that participants have a different view of what behaviors are considered cyber bullying (i.e., the indirect approach) (Gradinger et al., 2010; Mishna et al., 2010; Vandebosch & Van Cleemput, 2009).

Sample/Survey Type

An important methodological issue to consider when analyzing the prevalence of cyber bullying is the type of sample that was utilized. Convenience samples are the most popular because they allow researchers to collect data among participants who live within a close proximity. However, nationally representative samples are desired because they allow researchers to generalize their findings to a larger population and provide more

support for their findings. Unfortunately, nationally representative samples are often difficult to attain, especially with populations involving children and adolescents.

Both quantitative and qualitative approaches have been used to collect data regarding adolescent's involvement in cyber bullying. Quantitative approaches involve an empirical investigation of a particular construct and surveys are the most popular type of quantitative methodology (Kowalski et al., 2012). Adolescents who have been surveyed about their experiences with cyber bullying complete a paper and pencil survey usually at school (Africak et al., 2008; Bauman, 2010; Cassidy et al., 2009; Dehue et al., 2008; Gradinger et al., 2009; Holfeld & Grabe, 2012a, 2012b; Li, 2010; Mishna et al., 2010; Mishna et al., 2012; Ortega et al., 2009; Raskauskas & Stoltz, 2007; Schneider et al., 2012; Slonje et al., 2012; Smith et al., 2008; Vandebosch & Van Cleemput, 2009; Varjas et al., 2009; Wade & Beran, 2011), an online survey, typically through a popular adolescent website (Akbulut et al., 2010; Aoyama et al., 2011; Hinduja & Patchin, 2006, 2007, 2008; Juvonen & Gross, 2008; Price & Dalgleish, 2010; Ybarra, Espelage, & Mitchell, 2007; Ybarra et al., 2012), or a telephone survey (Wolak, Mitchell, & Finkelhor, 2007; Ybarra & Mitchell, 2004a, 2004b; Ybarra, Mitchell, Diener-West, & Leaf, 2007; Ybarra, Espelage, & Mitchell 2007; Ybarra, Mitchell, Finkelhor, & Wolak, 2007). The telephone surveys conducted by Ybarra and colleagues utilized a nationally representative sample of adolescent Internet users in the United States (Youth Internet Safety Survey 1; YISS-1, Ybarra & Mitchell, 2004b; Youth Internet Safety Survey 2; YISS-2; Ybarra, Mitchell, Finkelhor, & Wolak, 2007).

Qualitative approaches have also been used and are effective in providing a more detailed account of adolescent's particular experiences with cyber bullying. These

approaches tend to be more time-intensive and generally involve smaller samples. Common qualitative methodologies that have been used in the cyber bullying literature include in person interviews (Varjas et al., 2010) and focus groups (Agatston et al., 2007; Mishna et al., 2009; Smith et al., 2008; Vandebosch & Van Cleemput, 2008).

Differing Time Frames

The ability to make cross-study comparisons has been complicated by researchers examining adolescent's involvement in cyber bullying across varying lengths of times. For example, participants have been asked about their involvement in cyber bullying across: their lifetime (Li, 2006, 2007a), the past year (Ang & Goh, 2010; Finkelhor et al., 2000; Holfeld & Grabe, 2012b; Juvonen & Gross, 2008; Schneider et al., 2012; Ybarra & Mitchell, 2004a, 2004b; Ybarra, Diener-West, & Leaf, 2007), the past 6 months (Hinduja & Patchin, 2006; Pornari & Wood, 2010; Sourander et al., 2010), the past 2-3 months (Gradinger et al., 2009, 2010; Kowalski & Fedina, 2011; Kowalski & Limber, 2007; Menesini et al., 2011; Mishna et al., 2010; Mishna et al., 2012; Ortega et al., 2009; Riebel et al., 2009; Slonje & Smith, 2008; Smith et al., 2008; Vandebosch & Van Cleemput, 2008, 2009; Wang et al., 2009), or the past 30 days (Dempsey et al., 2011; Hinduja & Patchin, 2010).

In summary, the inconsistencies regarding the operationalization (i.e., definition) and measurement (i.e., items/scales, samples, time frames) of cyber bullying have continued to be a problem in the literature. Despite these inconsistencies, accumulating evidence suggests that cyber bullying affects a large proportion of adolescents and will likely continue to affect them as technology develops and becomes more accessible.

Effects/Psychological Distress

Cyber bullying is a serious concern for many adolescents who experience high levels of psychological distress as a result of being cyber bullied (Hinduja & Patchin, 2009; Kowalski et al., 2012; Pearce, Cross, Monks, Waters, & Falconer, 2011; Raskuaskas & Stoltz, 2007; Tokunaga, 2010). Preliminary investigations of cyber bullying led some scholars to conclude that, "cyber bullying is a significant health and psychological issue for young people online" (Ybarra & Mitchell, 2004b, p. 320). The 24/7 nature of the technological world leaves victims of cyber bullying continually vulnerable to abuse. Moreover, harassing material posted online can remain online for an extended period of time and can intensify the distress experienced by victims of cyber bullying (Hinduja & Patchin, 2009; Wolak et al., 2007; Wong-Lo et al., 2011).

Many adolescents who are cyber bullied report feeling negatively affected by the experience. Typically in these situations, adolescents are not physically harmed but they may experience high levels of psychological or emotional distress that can affect them at school and at home (David-Ferdon & Hertz, 2007; Juvonen & Gross, 2008; Mason, 2008; Raskauskas & Stoltz, 2007; Ybarra et al., 2006). Compared to adolescents who report no involvement in cyber bullying, victims of cyber bullying may experience a host of psychological and emotional problems including: decreased quality of life (Blais, 2008), higher levels of depressive symptoms (Aoyama et al., 2011; Finkelhor et al., 2000; Kowalski et al., 2008; Mitchell et al., 2007; Schneider et al., 2012; Wang et al., 2011; Ybarra et al., 2006), higher levels of anxiety (Aoyoma et al., 2011; Kowalski et al., 2008; Juvonen & Gross, 2008; Tynes & Giang, 2009; Ybarra et al., 2006), lower levels of self-esteem (Aoyama et al., 2011; Hinduja & Patchin, 2009; Kowalski et al., 2008; Patchin &

Hinduja, 2010), higher levels of substance use (Mitchell et al., 2007), and an increased risk of suicidal thoughts and/or actions (Gerson & Rappaport, 2011; Hinduja & Patchin, 2006, 2010, 2011; Kowalski et al., 2008; Schneider et al., 2012). Victims of cyber bullying are also affected academically as evidenced by their poor attendance, fear of going to school (Hinduja & Patchin, 2009; Kowalski et al., 2008; Raskauskas & Stoltz, 2007), decreased academic performance (Mason, 2008), and a greater frequency of delinquent behavior (i.e., detentions, suspensions, weapons) (Mitchell et al., 2007; Ybarra, Diener-West, & Leaf, 2007). Finally, many victims of cyber bullying report feeling sad, upset, angry, embarrassed, hopeless and/or frustrated with their experience (Beran & Li, 2005; Finkelhor et al., 2000; Hinduja & Patchin, 2006; Mishna, Mclukie, & Saini, 2009; Mishna et al., 2010; Raskauskas & Stoltz, 2007). Consequently, victims of cyber bullying report reduced perceptions of 'safety' in the online world (Mishna et al., 2012; Sleglova & Cerna, 2011).

Victims of cyber bullying are not the only adolescents who are impacted by the experience. Adolescents who engage in cyber bullying are more likely to: abuse substances such as drugs and alcohol (Blais, 2008; Sourander et al., 2010), engage in aggressive and delinquent behavior (Sourander et al., 2010; Ybarra & Mitchell, 2007), and report lower levels of empathy (Steffgen et al., 2011) and self-esteem (Patchin & Hinduja, 2010).

Not surprisingly, adolescents who are involved in cyber bullying as both victims and perpetrators are at a heightened risk to suffer a range of psychosocial problems including, but not limited to: mental health problems (i.e., depression, anxiety),

delinquency, and substance use/abuse (Gradinger et al., 2009; Kowalski et al., 2012; Sourander et al., 2010; Ybarra & Mitchell, 2004b).

In spite of a wealth of research demonstrating how adolescents are affected by cyber bullying, more research is needed to determine why certain adolescents may be a greater risk of experiencing psychological distress than others. Particular aspects of an adolescent's experience such as the method/type of cyber bullying and the perceived severity and duration of the experience can help to shed light on why some adolescents report feeling relatively unaffected by their experience while others experience high levels of distress.

The perceived severity of an adolescent's experience as a victim of cyber bullying is associated with their corresponding level of distress (Smith et al., 2008). For example, minor forms of cyber bullying (i.e., receiving an upsetting e-mail from someone you do not know) are likely perceived as less distressing than more serious forms of cyber bullying (i.e., embarrassing pictures/videos posted online) which are perceived as more distressing (Menesini et al., 2011; Smith et al., 2008). In fact, bullying via photos or video clips was rated as more severe and distressing than bullying through text messaging and e-mail (Slonje & Smith, 2008).

Another factor related to adolescent's level of distress resulting from cyber bullying is the duration of the victimization. Episodes of victimization that persist for longer periods of time (i.e., a month or longer) are generally characterized as more stressful than experiences that last for a shorter period of time (Tokunaga, 2010). Smith et al. (2008) suggest that the majority of cyber bullying experiences are short-lived as 75% of victims of cyber bullying in their study reported that their experience lasted less than a

month. A short-lived experience does not mean that adolescents will not be affected by it. A simple act of posting an embarrassing picture or video of another person online can have profound effects and can be exacerbated by the potential anonymity of the perpetrator and unlimited audience (Hinduja & Patchin, 2009; Raskauskas & Stoltz, 2007; Slonje & Smith, 2008; Sourander et al., 2010; Wong-Lo et al., 2011).

Risk/Protective Factors

In addition to examining adolescent's perceptions of cyber bullying, it is critical to identify factors that may 'protect' adolescents from being negatively impacted by their victimization experience. Protective factors such as social support (i.e., peers, family) and school climate (i.e., school) are two constructs within the Social Ecological framework that warrant investigation in the current study.

The first protective factor, social support, has been consistently linked to bullying in the research. For example, adolescents report less involvement in bullying with greater perceptions of parental support (Bowers, Smith, & Binney, 1994; Haynie et al., 2001; Wang et al., 2009), peer support (Hodges, Boivan, Vitaro, & Bukowksi, 1999; Hodges, Malone & Perry, 1997; Hodges & Perry, 1999; Mishna et al., 2008) and overall social support (Malecki & Demaray, 2004; Osborne-Oliver, 2009). Thus, a strong social support network can be a protective factor from bullying for adolescents.

A secondary protective feature of social support relates to the 'buffer' it can provide for adolescents who are victimized. According to the Buffering Hypothesis, a positive social support system can help to reduce the potentially negative effects associated with stressful situations and events (Cohen & Mckay, 1984; Cohen & Wills, 1985). Bullying can be a very stressful situation for adolescents and can lead to

internalizing and externalizing problems (Craig, 1998; Leadbeater et al., 2003). For victims of bullying, a strong social support system can serve as a 'buffer' against these negative psychological outcomes.

The Buffering Hypothesis has been well supported in the bullying literature. In these studies, support from peers, parents, teachers, or among all groups were effective in providing a buffer against the negative effects associated with bullying such as depression and anxiety (Conners-Burrow et al., 2009; Davidson & Demaray, 2007; Demaray & Malecki, 2003; Hodges & Perry, 1999; Mcknight, Huebner, & Suldo, 2002; Mishna et al., 2008; Schwartz et al., 1999; Prinstein et al., 2001). In other words, adolescents who are victimized experience lower levels of psychological distress when they have a strong social support group versus when the social support group is weak or absent.

Currently, it is unclear whether social support shares a similar pattern of association with other forms of bullying such as cyber bullying. Only two studies have examined the role of social support in cyber bullying. Both studies found that perceived social support was negatively related to cyber bullying. In particular, adolescents who engaged in cyber bullying reported lower perceived levels of social support than adolescents who did not engage in cyber bullying (Calvete et al., 2010; Williams & Guerra, 2007). It is unknown how adolescent's perceptions of social support are related to cyber bullying victimization and whether social support serves as a buffer against the negative effects (i.e., depression, anxiety) associated with the experience.

A second protective factor of cyber bullying to consider is the role of school climate. School climate refers to the attitudes, beliefs, and values that make up the social

environment within a school and is demonstrated in the interactions between students, teachers, and administrators (Hinduja & Patchin, 2012). Past research has shown that positive perceptions of school climate are associated with: students' social/emotional and academic development (i.e., increased attendance, higher achievement scores), reduced involvement in bullying and other delinquent behaviors, and greater perceptions of safety at school (Brand et al., 2003; Hinduja & Patchin, 2012; Lee & Croninger, 1996; Nansel et al., 2001; Williams & Guerra, 2007). On the other hand, poorer perceptions of school climate are associated with a host of negative problems and behavior. By failing to adequately address bullying, schools can create a climate that tolerates, accepts, and ignores the behavior, and contribute to an increase in the frequency of bullying as well as reduced perceptions of safety for many students at school (Hazler, Hoover, & Oliver, 1992; Nansel et al., 2001; Unnever & Cornell, 2003; Varjas et al., 2009).

The relationship between school climate and cyber bullying is largely unknown because it has received little attention. To date, only one study (Hinduja & Patchin, 2012) has examined the association between adolescent's perceptions of school climate and their involvement in cyber bullying. These researchers found that students involved in cyber bullying had poorer perceptions of school climate than students who reported no involvement with cyber bullying. In spite of these findings, more research is needed to clarify this association and can provide critical information for educators attempting to address a new form of bullying that many adolescents experience.

Perceptions of Cyber Bullying

Adolescent's perceptions of social support and school climate as well as their perceptions of situations involving cyber bullying influence how they and others will

respond to the behavior (Mishna et al., 2006). Adolescent's response to a situation involving cyber bullying will likely differ from a situation they do not perceive to be cyber bullying. In general, girls perceive cyber bullying as a more serious issue than boys (Agatston et al., 2007; Mishna et al., 2009). Interestingly, these perceptions may also vary based upon the relationship between the victim and the perpetrator. For example, if cyber bullying occurs between friends, it is more likely to be considered a joke instead of cyber bullying (Vandebosch & Van Cleemput, 2008).

To date, it is unclear whether adolescents perceive cyber bullying in the same way as researchers. In other words, do adolescents share a similar perspective as researchers that cyber bullying needs to include the elements of repetition, intent, and an imbalance of power between the victim and perpetrator? With regard to traditional bullying, it appears that the majority of adolescents believe that an imbalance of power is necessary but few consider the elements of repetition and intent as important characterizations of the behavior (Mishna et al., 2006). Meanwhile, in a study by Vandebosch & Van Cleemput (2008), adolescents reported that the elements of repetition and imbalance of power were important to describe cyber bullying. Few considered intent to be necessary even though several respondents stated that adolescents who engage in cyber bullying often intend to hurt the victim. The level of intent is important to consider because it helps to differentiate 'joking' or cyber teasing from cyber bullying (Vandebosch & Van Cleemput, 2008).

Responding to Cyber Bullying

To better assist adolescents to deal with cyber bullying, it is imperative to examine how they respond to their experiences and determine whether their responses are

effective in reducing cyber bullying. Identifying how students respond to their experiences is also important in reducing distress associated with the experience and decreasing the likelihood of future occurrences (Paul et al., 2012).

In traditional bullying situations, adolescents who are bullied commonly respond by ignoring the bully, telling them to stop, asking an adult for help, and/or fighting back (Davis & Nixon, 2010; Smith et al., 2001). Interestingly, boys and girls respond to their victimization experience in different ways. Boys are more likely to use confrontational (i.e., reactive) strategies such as engaging in physical aggression, using humor, or getting revenge whereas girls are more likely to employ relational (i.e., active) strategies such as reporting the behavior to a friend or an adult (Craig, Pepler, & Blais, 2007). The concerning aspect of these findings is that both genders perceived their strategies to be effective in reducing bullying behavior in spite of research consistently showing that the use of confrontational strategies actually increase the rate of victimization over time (Davis & Nixon, 2010; Mahady-Wilton et al., 2000).

To examine how adolescents respond to cyber bullying, researchers have typically employed two strategies; asking victims directly about their response to a recent cyber bullying experience or asking adolescents to imagine how they would respond if they were a victim of cyber bullying. The former method is generally preferred since it provides information regarding adolescent's actual response to the experience whereas in the latter method, adolescents are only predicting how they might respond to the situation.

Using a hypothetical paradigm, Bauman (2010) found that respondents favored responses of revenge (i.e., bully the person who bullied them) or to ignore the

person/behavior. In other studies, seeking help from a friend or adult was rated as the most frequent and most desirable response (Cassidy et al., 2009; Paul et al., 2012). It is difficult to make generalizations from these studies since cyber bullying can be committed in a variety of ways and participants were only asked to report how they would respond in general to cyber bullying. It is likely that adolescents would respond in different ways based upon the type/method of cyber bullying.

In real-life cyber bullying situations, adolescents typically respond by using passive strategies such as 'ignoring the bully' and/or 'doing nothing' or active strategies including 'telling the bully to stop' and/or 'reporting the incident' (Africak et al., 2008; Dehue et al., 2008; Juvonen & Gross, 2008; Mishna et al., 2010; Patchin & Hinduja, 2006; Price & Dalgleish, 2010). Specific strategies (i.e., trying to ignore the behavior or changing e-mail addresses) may be particularly effective for minor forms of cyber bullying such as receiving harassing e-mail messages (Hinduja & Patchin, 2009; Juvonen & Gross, 2008). More active strategies are often necessary for more serious forms of cyber bullying and/or when the behavior persists over a longer period of time (Tokunaga, 2010).

To better assist adolescents with cyber bullying, it is also critical to determine which responses/strategies are effective in reducing the behavior. Price and Dalgleish (2010) compared the effectiveness of both offline strategies (i.e., confronting the bully) and online strategies (i.e., blocking the bully) utilized by victims of cyber bullying. Telling someone (i.e., a friend, family member, or someone at school) was perceived as the most effective offline strategy while blocking the bully, removing them as a friend,

and staying offline were perceived as the most effective online strategies (Price & Dalgleish, 2010).

One of the most common and effective responses to bullying is to report the incident. Despite a greater awareness of the dangers and impact of bullying, as well as repeated encouragements for adolescents to report their experience to adults, many fail to disclose their victimization (Hinduja & Patchin, 2009; Newman & Murray, 2005; O'Connnell, Price, & Barrow, 2004; Paine & Hansen, 2002; Sharp, 1996). Since bullying, particularly cyber bullying originates mostly outside of school (Agatston et al., 2007; Dehue et al., 2008; Holfeld & Grabe, 2012b; Tokunaga, 2010), it can be particularly difficult for adults to observe the behavior so they need to rely on reports from adolescents to effectively intervene (Holfeld & Grabe, 2012b; Mishna, 2004; Newman & Murray, 2005).

In traditional bullying situations, victims may be unwilling to share their experience because they think they should deal with it on their own (Hanish & Guerra, 2000; Slee, 1994), fear adults may not be able to help and/or may exacerbate the problem (Mishna et al., 2006; Newman & Murray, 2005; Smith, 1991), feel powerless to do anything (Mishna et al., 2006) or may desire a relationship with the perpetrator (Mishna, 2004; Newman & Murray, 2005).

Similarly, many victims of cyber bullying are reluctant to report their experience to adults (Hinduja & Patchin, 2006; Juvonen & Gross, 2008; Li, 2006, 2007; Mishna et al., 2010; Slonje & Smith, 2008; Tokunaga, 2010; Yilmaz, 2011). Their unwillingness to report the experience appears associated with the potential source of the reporting. Adolescents may be unwilling to tell their parents because they do not think they will

understand (Sleglova & Cerna, 2011), they fear they will restrict or terminate their computer/cell phone privileges (Agatston et al., 2007; Juvonen & Gross, 2008; Kowalski & Limber, 2007; Mishna et al., 2009) and/or think they will overreact (Sleglova & Cerna, 2011). Adolescents may be reluctant to share their cyber bullying experience with teachers because they do not think they could help if cyber bullying occurs off school grounds (Mishna et al., 2009) or do not think they could or would be able to reduce cyber bullying (Li, 2010). Similar reasons were given by adolescents who were asked to imagine how they would respond if they were cyber bullied (Cassidy et al., 2009). Furthermore, adolescents may fail to report their experience because they feel that it is not a big deal and/or feel that they should deal with it on their own (Hinduja & Patchin, 2009; Juvonen & Gross, 2008)

Adolescent's reluctance to disclose their victimization experience is perplexing considering the majority of adolescents advice others who are dealing with bullying to tell someone because they believe it is most effective response (Bentley & Li, 1995; Mishna, 2004; Smith, 1991). Even more disconcerting is the fact that simply telling someone about the situation can help to reduce levels of distress experienced by victims of bullying (Juvonen & Gross, 2008; Kelly & McKillop, 1996; Mishna, 2004).

A common belief is that when adolescents disclose their experience, particularly to an adult, they will be helped (i.e., bullying stops). However, the effectiveness of adults in helping adolescents deal with bullying, particularly cyber bullying is unknown. Many parents and school personnel feel reluctant and uncomfortable intervening in cyber bullying because they lack the technological knowledge associated with cyber bullying to effectively assist adolescents (Gerson & Rappaport, 2011). It remains unclear to what

degree and extent adults are effective at helping adolescents to terminate their experiences with cyber bullying. Holfeld and Grabe (2012b) found that adults were effective in helping adolescents slightly more than half of the time when they disclosed their cyber bullying victimization. Interestingly, peers were nearly as effective as adults in helping adolescents deal with their experience.

In one of the lone studies to examine the association between adolescent's response to their victimization and the perceived effectiveness of the response, Davis and Nixon (2010) surveyed 12,000 students in grades 5 through 12 about their strategies of dealing with peer harassment (Youth Voice Project, 2010). Reporting the incident was rated as the most effective response by adolescents who experienced moderate to severe forms of victimization. Respondents reported that being heard and acknowledged from peers and adults was the most helpful response when disclosing their experience. When reporting to adults, 'listening to me', 'giving me advice' (i.e., it wasn`t my fault) and 'checking in on me afterwards to see if the behavior stopped' was perceived as the most helpful. When reporting to peers, 'spending time with me', 'talking to me' and 'helping me get away' was rated as the most helpful. Interestingly, assistance from peers was perceived to be more helpful than self-directed actions or assistance from adults. Because this study investigated peer victimization in general, it is unclear whether these findings would generalize across situations involving cyber bullying. It is important to identify if and how adolescents are helped when they report their experiences with cyber bullying because if they are not helped when they disclose their experience (i.e., listened to and validated), they will be reluctant to share future victimization experiences with adults (Holfeld & Grabe, 2012a, 2012b; Mishna, 2004; Mishna & Alaggia, 2005).

Role of Bystanders

The final factor in the Social Ecological Theory that was examined in the current study is the unique role of peers who serve as potential bystanders in the bullying process. Bystanders play a critical role in the bullying process, particularly when victims of cyber bullying are reluctant to disclose their experience. Like traditional bullying (Atlas & Pepler, 1998; Craig & Pepler, 1997; O'Connell et al., 1999), cyber bullying commonly occurs in the 'presence' of bystanders (Mishna et al., 2009; Mishna et al., 2010; Vandebosch & Van Cleemput, 2009). Unlike traditional bullying where bystanders have a physical presence, bystanders in cyber bullying have a more virtual and potentially anonymous presence (i.e., online).

Bystanders play an important role in the maintenance and/or reduction of bullying behavior (Hawkins, Pepler, & Craig, 2001; O'Connell et al., 1999; Schneider et al., 2012). Typically, bystanders serve as either active or passive participants in bullying and these roles can change from situation to situation (Atlas & Pepler, 1998; Pellegrini & Long, 2004). As active participants, adolescents may participate by joining in on the bullying or by attempting to intervene on the victim's behalf. Simply observing the behavior and saying/doing nothing is associated with passive participation in bullying. Passive participation in bullying can contribute to the maintenance of bullying because it signifies to the bully that their behavior is acceptable (Salmivali et al., 1997; Trach et al., 2010). In other words, "by doing nothing, bystanders are doing something" (Hinduja & Patchin, 2009, pp. 174).

In spite of the importance of bystanders and the large numbers of bystanders that are usually present, few have examined the behavior of these individuals when they

witness cyber bullying. Salmivalli, Lagerspetz, Bjorkqvist, and Kaukiainen (1996) examined the behavior of bystanders of traditional bullying and found that 17% intervened on the victim's behalf, 26% assisted or joined in on the bullying, and 24% passively observed the behavior. Similar findings were reported by Craig and Pepler (1997) as 25% of bystanders actively intervened, 21% joined in on the bullying and 54% passively observed the behavior. The age and gender of bystanders are important factors that relate to their willingness to intervene. When asked how they would react if they saw bullying occurring at school, younger students (i.e., grades 4 and 5) were more likely to report using active strategies (i.e., telling the bully to stop, telling an adult) than older students who were more likely to respond by doing nothing or by getting friends to get back at the bully (Trach et al., 2010).

It is unclear how and to what extent the role of bystanders change from situations involving traditional bullying to cyber bullying (Mishna et al., 2010). The potentially large audience to witness cyber bullying suggests that the role of bystanders may be particularly important in cyber bullying (Mishna et al., 2010; Pearce et al., 2011). Importantly, the role of bystanders in cyber bullying is influenced by the type/method of cyber bullying. For example, in cyber bullying situations where the perpetrator has direct and repeated contact with the victim (i.e., e-mails), often in private settings, bystanders are likely not present and cannot intervene whereas if a video is posted on a social networking site (i.e., in the public domain), many bystanders are likely present and increases the likelihood of intervening. Therefore, when assessing the behavior and responses of bystanders, it is necessary to consider the type/method of cyber bullying.

Bystanders may be reluctant to get involved in cyber bullying because they believe it is none of their business, not their responsibility and/or feel that cyber bullying is not a big deal (Huang & Chou, 2010). Furthermore, some bystanders may want to assist a victim of cyber bullying but are unsure how to effectively help (Agatston et al., 2007). Thus, it is important to address, "bystanders in education and prevention interventions in order to alter their attitude and responses to online bullying" (Mishna et al., 2010, p. 371). If bystanders believe that their efforts will lead to positive outcomes, they will be encouraged to behave in prosocial ways in the future.

Another important factor related to bystanders' willingness to intervene is the attributions they make for adolescent's experience as a victim of cyber bullying. According to Heider (1944, 1958), the attributions adolescents make for the behavior of others will influence their subsequent behavior toward those individuals. Accordingly, if bystanders perceive victims of cyber bullying as responsible or blame them for their experience, they will be less likely to offer assistance to them.

According to Weiner's Attributional Theory (Weiner, 1985), following a negative event such as cyber bullying, adolescents engage in a process of causal search as they are motivated to identify an explanation for their own or others behavior. During the causal search process, causal attributions are made to explain the cause of the outcome, event, or behavior. These attributions are categorized based on three causal dimensions: locus of causality (internal vs. external), stability (stable vs. unstable) and controllability (controllable vs. uncontrollable). The locus of causality dimension distinguishes between causes that are perceived to be within a person (internal) versus outside of a person (external). The second dimension stability refers to whether a cause is likely to change

(unstable) versus not change (stable) over time. The third dimension controllability relates to whether a cause is perceived to be within one's control (controllable) versus out of one's control (uncontrollable). Notably, the dimensions underlying the causes are more important than the actual causes (Le Foll et al., 2008).

Weiner's theoretical framework has been applied to several domains (i.e., achievement, health) including adolescent's experiences with victimization (Graham & Juvonen, 1998). For example, adolescents who believe they were victimized because of a disability (i.e., internal, stable, uncontrollable) will expect to be bullied repeatedly over time whereas adolescents who believe they were bullied because they were in the wrong place at the wrong time (i.e., external, unstable, controllable), will likely expect little to no harassment in the future. The attributions adolescents make for their victimization will influence their subsequent emotions, motivations, and behavior. In the above example where an internal, stable, and uncontrollable attribution was made, feelings of helplessness/hopelessness, shame, and decreased motivations/behaviors would be expected.

Much of the attributional research on bullying has focused on examining the attributions children/adolescents make for a real or imagined victimization situation (Graham & Juvonen, 1998; Slee, 1993). The attributions adolescents make for another adolescent's experience have been largely neglected and are important in understanding the role of bystanders in a newer form of victimization, cyber bullying victimization. For example, how do adolescents respond and react when they witness cyber bullying? Do they perceive the victim as responsible or blame them for their experience? These questions can provide critical information regarding the factors that increase/decrease

bystanders' willingness to intervene in cyber bullying and assist in understanding how victims are impacted by a key part of their social environment (i.e., the peer group).

Current Study

The Social Ecological Theory posits that cyber bullying develops from the reciprocal interaction between adolescents and their social environment. The social environment which includes the peer group, family, and the school can influence how adolescents interpret and respond to their cyber bullying experiences. Within the Social Ecological framework, individual factors (i.e., demographics, psychosocial problems such as depression and anxiety), peer factors (i.e., perceptions of peer support, role of bystanders), family factors (i.e., perceptions of family support), and school factors (i.e., perceptions of school climate) were examined. This research attempted to examine the relationships among these components. The four main research objectives outlined below identify the priorities investigated here.

The primary objective was to examine the attributions (i.e., controllability, responsibility, blame) adolescents make (as bystanders) for a hypothetical student's experience with cyber bullying within the framework of Weiner's Attributional Theory (1985). Data were collected to determine whether these attributions varied as a function of the victim's response to the incident (i.e., ignored it, reported the behavior, or confronted the bully) and gender (i.e., male or female). It was expected that participants would assign greater responsibility and blame to the victim who responded passively (i.e., ignored it) than victims who responded actively (i.e., reported the behavior) or reactively (i.e., confronted the bully) to their experience.

Identifying how adolescents' interpret and respond to cyber bullying is necessary to develop more effective ways of helping victims of cyber bullying cope with their experiences. However, limited attention has been given to this understanding. The second objective of the study attempted to bridge this gap in the literature by exploring adolescents' knowledge and understanding of cyber bullying. For example, could adolescents accurately identify a situation as cyber bullying? What do they think cyber bullying is? Do they think cyber bullying is a serious or trivial issue?

The third objective was to further investigate how adolescents respond to cyber bullying. Past research (Holfeld & Grabe, 2012b) indicated that both peers and adults are only somewhat effective in helping adolescents deal with cyber bullying but this previous study was unable to identify the advice or suggestions that adolescents were given when they shared their experience. This limitation was addressed in the current study with a direct examination of the association between the information given to adolescents when they reported an incident and the perceived effectiveness of the information in reducing the bullying and associated psychological distress (i.e., depression, anxiety).

The fourth and final objective of the study was to examine how risk/protective factors such as school climate and social support were related to cyber bullying. The role of school climate in preventing and/or maintaining newer forms of bullying like cyber bullying which typically originates off school grounds is unclear. Determining how school climate is related to cyber bullying can provide critical information for researchers and educators attempting to devise intervention efforts aimed at reducing the frequency of cyber bullying at school. Based on previous research (Hinduja & Patchin, 2012), it was expected that more positive perceptions of school climate would be given by adolescents

who were not involved in cyber bullying versus adolescents with cyber bullying experience.

A second risk/protective factor, social support, has been implicated as a significant factor in the association between traditional bullying victimization and psychological distress. It is unknown whether social support plays a similar role in the context of a new technological form of bullying, cyber bullying. The final objective of the study was to examine whether the effect of cyber bullying victimization on depression/anxiety was buffered by the perceived social support from friends and family. It was hypothesized that perceived social support would serve as a buffer in this association.

CHAPTER II

METHOD

Participants & Procedure

Participants included 1,151 adolescents (568 male and 554 female) drawn from nine middle schools in two Midwestern cities (in Manitoba and Minnesota) located a short distance from each other. The sample ranged in age from 10 to 16 with an average age of 12.8. The majority of adolescents self-identified as 'Caucasian' (*n* = 700 or 62.0%), 14.1% as 'Asian' (*n* = 159), 8.1% as 'Other' (*n* = 91), 6.9% as 'Aboriginal/Native' (*n* = 78), 5.8% as 'Black' (*n* = 65), and 3.2% as 'Hispanic' (*n* = 36).

At the beginning of the spring semester in 2013, superintendents of school divisions in the cities of Grand Forks, Fargo, East Grand Forks, Brandon and Winnipeg were approached to discuss the possibility of conducting the proposed study. A total of five school divisions agreed to participate while seven other school divisions declined participation. School administrators of the middle schools in the respective school divisions were contacted and appropriate arrangements were made with the interested schools. Similar to previous research (Holfeld & Grabe, 2012b), individual school administrators decided on the procedure for parental consent. An active parental consent procedure (i.e., parents must sign and return the form to the school) or a passive parental assent (i.e., letter sent home to parents that only needed to be returned if they did not want their child to participate) was used in response to school preference. After sufficient time was given for parents to give their assent or provide their consent (i.e., two weeks),

arrangements were made to meet with school administrators to discuss the nature of the study and provide them with all of the research materials (i.e., instructions, student consent forms, surveys, debriefing). In a regularly scheduled class, students were asked to read and sign a consent form before participating in the research. Students who did not have parental assent/consent or did not provide their own consent were exempt from participating. Students were given 30 minutes to complete the survey about their online experiences (Appendix A). Following the completion of the survey, all students were debriefed about the study in the form of a handout (Appendix B). The handout contained a description of cyber bullying, common examples of cyber bullying, characteristics of the behavior as well as a list of helpful websites (i.e., http://www.cyberbullying.us/) for students interested in learning more about cyber bullying. All student consent forms and completed surveys were collected by the teacher and placed in a manila envelope in the office of each school for the researcher to retrieve at the end of the day.

Design

A unique experimental design was developed for the purpose of this study to examine middle school students' perceptions and attributions of cyber bullying. A scenario was included in one published study but only investigated how adolescents might respond if they were cyber bullied (Bauman, 2010). The current methodology was focused on examining the attributions and perceptions of adolescents who witnessed cyber bullying (i.e., bystanders).

The constructed scenario attempted to depict a common and realistic situation involving cyber bullying that some adolescents experience. It improved upon existing methodologies in three significant ways. First, it included the important characteristics of

cyber bullying (i.e., intent/distress, repetition, and a power imbalance) without making reference to the concept cyber bullying (i.e., reducing potential biases). Second, it included a manipulation of specific variables (i.e., type of response to cyber bullying, gender) and allowed for an examination of the causal relations between these variables. Third, it contained a negative outcome (i.e., cyber bullying continued) which tends to elicit stronger attributions than a positive outcome yields (Stupnisky et al., 2011).

Participants were assigned a same-gender scenario to avoid confusing cross-gender effects. For example, male participants read a scenario about a male victim of cyber bullying and female participants read a scenario about a female victim of cyber bullying. This design allowed for an examination of gender differences in the type of response to cyber bullying and resulted in a 2 x 3 between subjects design; Gender (male, female) x Type of Response (ignored it, reported the behavior, confronted the bully). Note that gender refers to both the gender of the blogger and gender of the participant (i.e., same gender). The types of the response were selected from previous research that identified these actions/behaviors as the most frequently utilized responses to cyber bullying by adolescents (Mishna et al., 2010). A negative outcome (i.e., cyber bullying continued) resulted in all conditions.

The scenario, conditions, and associated questions were pilot tested for clarity, length, and realism among middle school students (N = 65) in one Winnipeg school. Only minor issues were brought to the attention of the researcher and the appropriate changes were made.

Hypothetical Cyber Bullying Scenario

Participants were randomly presented with a written scenario about a hypothetical middle school students' experience as a victim of cyber bullying. Each participant read a story (blog) about a hypothetical student of the same gender as him/herself. The scenarios included the following experimental conditions: a "*passive response*" condition (i.e., ignored the behavior), an "*active response*" condition (i.e., reported the behavior), and a "*reactive response*" condition (i.e., confronted the bully). Each condition resulted in a negative outcome (i.e., the cyber bullying behavior continued).

Each scenario contained the following instructions: "*Please read the following paragraph about a girl (boy) at your school. Please read the paragraph carefully then respond to the questions that follow. There are no 'right' or 'wrong' answers to the questions. We are only interested in your own personal opinions which will not be shared with anyone.*"

Next, respondents were asked to, "*Imagine the following blog was written by a girl (boy) at your school*." Subsequently, each scenario began the same way, "*I recently found out that another girl (boy) at school created a Facebook profile about me and sent friend requests to all of my classmates. In the profile, there are pictures of my face photo-shopped onto embarrassing pictures and everyone has been posting mean and hurtful comments. Since I found out about the profile a few weeks ago, I can't sleep because I can't stop thinking about it and I'm scared everyone is turning against me*."

The scenarios then varied based upon the condition: Passive Response condition ("*I tried to ignore it…*"), Active Response condition ("*I tried to get help by telling someone about it…*") and Reactive Response condition ("*I told the girl/boy who created the profile to*

stop...”). The concluding part of the sentence for each response in all conditions stated, “… *but the hurtful comments continue to be posted*.” Thus, in all conditions, a negative outcome resulted (i.e., cyber bullying continued).

Dependent Measures

A number of questions were adopted and modified from Weiner’s Attributional Theory (Weiner, 1985) and other applications of the theory (i.e., Ruthig, Holfeld, & Hanson, 2012) to measure the attributions of the negative outcome (i.e., cyber bullying continued) resulting from a hypothetical students’ experience as a victim of cyber bullying.

Control. Perceptions of control over the negative outcome (i.e., cyber bullying continued) resulting from the hypothetical students’ experience as a victim of cyber bullying was assessed with one item, “How much control did/does the student have over being treated this way?” (response range: 1 = *no control*; 7 = *total control*).

Responsibility. Perceptions of responsibility over the negative outcome resulting from the hypothetical students’ cyber bullying victimization were measured with a single item, “How responsible is the student for being treated this way?” (response range: 1 = *not at all responsible*; 7 = *completely responsible*).

Blame. Perceptions of blame over the negative outcome resulting from the hypothetical students’ experience as a victim of cyber bullying was assessed with one item, “Is it the student’s own fault for being treated this way?” (response range: 1 = *definitely not*; 7 = *definitely yes*).

In addition, all participants completed the same questionnaire regarding their individual characteristics, and experiences with technology and cyber bullying. The

questionnaire was divided into 9 parts. In part one, participants were asked to provide demographic information (i.e., age, gender, background). In part two, participants were asked about their access to the Internet at home and their frequency of specific types of online behavior (i.e., "What activities do you engage in most often on the computer?"). Risky online behavior was measured using three items adopted and modified from Erdur-Baker (2010): 1) Have you ever given your online password(s) to someone? 2) Have you ever sent pictures to someone you met online? 3) Have you ever met someone in person that you only met online? Participants rated each item on a five-point Likert-type scale ranging from 1 (*never*) to 5 (*always*).

Part three of the questionnaire asked participants about their Internet dependency. Participants' perceived dependency on the Internet was measured using five-items adopted from Vandebosch and Van Cleemput (2009). Participants were asked to rate each item (i.e., "A life without the Internet would be empty and boring") on a 7-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). After reverse scoring 3-items, responses were summed to create an overall level of Internet dependency with higher scores reflecting greater levels of Internet dependency ($\alpha = .67$).

The fourth part of the questionnaire contained 3-items that were used to examine participants' perceptions of their parent's knowledge and supervision of their online behavior (i.e., "How often do your parents talk to you about how to be safe on the Internet?"). Participants were asked to rate three items on a scale from 1 (*never*) to 7 (*all the time*). Higher scores reflected greater levels of parental knowledge and supervision.

The fifth part of the questionnaire included questions about participants' access to and use of cell phones. In particular, participants were asked whether they own a cell

phone, the most common use (i.e., text messaging, playing games, etc.) and the frequency of use (i.e., "On average, how much time do you spend using your cell phone in a given day during the week?").

The sixth and largest part of the questionnaire examined participants' experiences with cyber bullying. A measure of cyber bullying victimization and cyber bullying offending was used to assess participant's involvement as a victim and/or offender of cyber bullying.

***Cyber bullying victimization*.** Participants' self-reported experience as a victim of cyber bullying was assessed with a 9-item scale of cyber bullying victimization adopted from Hinduja and Patchin (2009). The scale has demonstrated adequate internal consistency ($\alpha = .74$) in previous studies (Hinduja & Patchin, 2009; Patchin & Hinduja, 2010). Each item in the scale represented a different form of online harassment and ranged from less distressing experiences (i.e., "Received an upsetting email from someone you don't know") to more distressing experiences (i.e., "Something posted online that you did not want others to see"). Participants were asked to rate each item on a scale form 0 (*never*) to 4 (*every day*) in terms of the frequency of the experience in the past 2-3 months. An overall frequency of cyber bullying victimization was created by summing up the responses for each item (range: 0 to 36) so that higher scores reflected greater levels of cyber bullying victimization ($\alpha = .88$).

***Cyber bullying offending*.** Participants' involvement as an offender of cyber bullying was examined with a 5-item self-report scale of cyber bullying offending adopted from Hinduja and Patchin (2009). The scale has evidenced adequate internal consistency ($\alpha = .76$) in previous studies (Hinduja & Patchin, 2009; Patchin & Hinduja,

2010). Each item in the scale represented a different form of cyber bullying (e.g., "Took a picture of someone and posted it online without their permission"). Participants were asked to rate the frequency of occurrence for each item in the past 2-3 months on a scale ranging from 0 (*never*) to 4 (*every day*). An overall frequency of cyber bullying offending was computed by summing up the responses for each item (range: 0 to 20) so that higher scores reflected greater engagement in cyber bullying ($\alpha = .80$).

After participants reported their experiences with behaviors considered to be types of cyber bullying, they were provided with the following definition of cyber bullying, "We describe cyber bullying as when someone repeatedly harasses, mistreats, or makes fun of another person online or while using cell phones or other electronic devices" (Hinduja & Patchin, 2012, p. 145). Participants were subsequently asked to rate the extent to which they agreed with the definition of cyber bullying (response range: 1= *strongly disagree*; 7 = *strongly agree*), and the words they would use to describe the behavior (i.e., repetitive, harassment, drama, a joke, etc.). Next participants were asked to report the frequency and characteristics of situations in which they engaged in cyber bullying. For example, they were asked to report their involvement in their entire life, in the past 2-3 months, the tool/method (i.e., cell phones, social networking sites, etc.) used most frequently, the most important motive (i.e., they deserved it) and the level of intent of the behavior (i.e., to hurt the person, as a joke).

Next, participants were asked about their experiences as a victim of cyber bullying. In particular, they were asked to report the frequency of experiences in their lifetime, in the past 2-3 months, and the average duration of these experiences (i.e., a day, less than a week, a week or two, etc.). To gain more insight into the characteristics of

particular cyber bullying situations, researchers commonly ask participants about their most stressful experience or most recent experience (Wolak et al., 2007). A similar approach was utilized in the current study as participants were asked to recall details regarding their most recent experience as a victim of cyber bullying.

First, participants were asked to describe the way in which they were cyber bullied (i.e., "Please describe what happened when you were cyber bullied?"), the duration of the experience, whether the harassment was repeated over time, the perceived cause (i.e., "Why do you think you were targeted?"), the perceived seriousness/severity of the experience (i.e., mild, moderate, severe, or very severe), the identity of the offender (i.e., who the bully was), the perceived power of the offender, previous relationship with the offender, and the emotions that resulted from the experience (i.e., sad, angry, frustrated, etc.). Second, participants were asked about their response to the victimization experience. Many of these questions were adopted and modified from previous studies (Davis & Nixon, 2010; Holfeld & Grabe, 2012a, 2012b). Participants were asked to report their initial response to the situation (i.e., did nothing, told a friend, blocked the bully, etc.) and the perceived effectiveness of that response in reducing the bullying (response range: 1 = *not very effective* through 7 = *very effective*) and making them feel better/reducing distress (response range: 1 = *not very effective* through 7 = *very effective*). Next, participants were asked about the advice they were given if and when they told someone about the experience and whether this advice was effective in resolving the cyber bullying behavior and making them feel better (i.e., reducing the distress). Finally, participants were asked to report the number of strategies (i.e., blocked the bully, told a friend) they used to try to stop the cyber bullying.

Next, participants were asked to report their involvement as a bystander to cyber bullying. Specifically, they were asked how often they had seen or heard someone being cyber bullied and how often they had seen or heard about their friends' cyber bullying someone (response range: 1 = *never* through 5 = *every day*). Participants were also asked to report how they typically responded to cyber bullying when they were a bystander (i.e., did nothing, joined in on the bullying, told an adult, etc.) and why others who witnessed cyber bullying were reluctant to help the victim.

Finally, participants were asked about their thoughts and opinions on issues concerning cyber bullying. For example, participants were asked whether the same students who are bullied via traditional means are also cyber bullied and whether cyber bullying is more stressful if it is committed by a friend. Additionally, participants were asked to report the frequency in which school personnel (i.e., teachers, administration, counselors) and parents talk to them about cyber bullying (response range: 1 = *never*; 5 = *every day*).

The final parts of the questionnaire included measures of school climate, perceived social support, depression, and anxiety.

***School climate*.** Participants' perception of school climate was assessed using a 6-item modified version of the American School Climate Survey (Student Version – 2006) utilized by Hinduja and Patchin (2012). Participants were asked to rate each item on a four-point scale from 0 (*strongly disagree*) to 3 (*strongly agree*) about their feelings of safety and caring within the school environment (e.g., "I feel that teachers at my school really care about me"). Responses were summed and higher scores reflected more positive perceptions of school climate ($\alpha = .85$).

Perceived social support. Participants' perceived social support was assessed using the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988). The MSPSS was initially established on college students (Zimet et al., 1988) and has demonstrated good reliability and validity with Cronbach's alpha values ranging from .91 to .95 (Zimet et al., 1990). However, it has also been deemed an appropriate measure for adolescents (Cheng & Chan, 2004). The MSPSS assesses participants' perceived social support from three sources; family, friends, and a significant other. Only perceived social support from friends (4-items) and family (4-items) was examined in the current study. Participants were asked to rate each item on a 7-point Likert-type scale ranging from 1 (*very strongly disagree)* to 7 (*very strongly agree*). Each respective item on the friends' social support scale and family social support scale was summed to create an overall level of social support from friends ($\alpha = .92$) and family ($\alpha = .91$). Higher scores reflected greater levels of social support from friends and/or family.

Depression and anxiety. Participants' perceived levels of depression and anxiety was measured using the 21-item version of the Depression, Anxiety, Stress Scale (DASS-21; Lovibond & Lovibond, 1995). The DASS-21 has been primarily utilized on adult populations (Brown et al., 1997; Clara, Cox, & Enns, 2001; Henry & Crawford, 2005; Taylor et al., 2005) but is appropriate for use on youth aged 12 or older (Lovibond & Lovibond, 1996). The DASS-21 has demonstrated strong psychometric properties in adolescent populations, particularly in regard to the depression and anxiety sub-scales (Aoyama et al., 2011; Duffy et al., 2005; Szabo, 2010; Tait et al., 2002). Because of some uncertainty regarding the reliability and validity of the stress scale among adolescent

samples, this scale was not included in the current study (Szabo, 2010). The depression and anxiety sub-scales included 7-items each and asked participants about their feelings experienced during the past week (e.g., "I was unable to become enthusiastic about anything"). Participants responded to each item on a 4-point Likert-type scale ranging from 0 (*did not apply to me at all*) to 3 (*applied to me very much or most of the time*). An overall level of depression ($\alpha = .92$) and anxiety ($\alpha = .87$) was created by adding up the responses for the respective sub-scale items. Higher scores on each scale represented greater levels of depression and/or anxiety present.

CHAPTER III

RESULTS

Before describing the results from the main objectives of the study, it is important to present the prevalence rates of cyber bullying among participants in the sample to highlight the nature and extent of the behavior. Like previous studies (Mishna et al., 2010; Smith et al., 2008; Sourander et al., 2010), cyber bullying behavior was measured both directly and indirectly in an attempt to shed light on adolescent's interpretations of the behavior.

The indirect approach asked participants to report their frequency of involvement in different types of behaviors considered cyber bullying. As shown in Table 1, the most common type of cyber bullying victimization was 'received an instant message that made you upset' (22.7%) followed by 'had something posted on your social networking profile that made you upset' (19.8%) and 'been bullied or picked on while online' (18.8%). Half (50.5%) of the sample reported that they experienced at least one type of cyber bullying victimization 'once or twice' or more in the past 2-3 months.

Table 1. Frequency of Cyber Bullying Victimization in the past 2-3 Months (N = 1130).

Type of Victimization	*n*	%
Been made fun of in a chat room	188	16.6
Received an upsetting e-mail from someone you know	175	15.5
Received an upsetting e-mail from someone that you didn't know	92	8.1
Had something posted on your social networking profile that made you upset	224	19.8
Had something posted about you on another Web page that made you upset	162	14.3
Received an instant message that made you upset	257	22.7
Been bullied or picked on while online	213	18.8
Been afraid to go on the computer	83	7.3
Had something posted about you that you didn't want others to see	185	16.4

Table 2 presents participants' frequency of engagement in cyber bullying in the past 2-3 months. The most common form of cyber bullying engaged in was 'posting something online about another person to make others laugh' (16.9%) while the least common was 'sending someone an e-mail to make them angry or make fun of them' (3.6%). Overall, 29.5% of students reported engaging in at least one type of cyber bullying 'once or twice' or more in the past 2-3 months.

Table 2. Frequency of Engagement in Cyber Bullying in the past 2-3 Months.

Type of Offending	*N*	%
Posted something online about another person to make others laugh	191	16.9
Sent someone a text message to make them angry or make fun of them	144	12.7
Sent someone an e-mail to make them angry or make fun of them	40	3.6
Posted something on someone's social networking profile to make them angry or make fun of them	50	4.4
Took a picture of someone and posted it online without their permission	150	13.3

An alternate and more common methodology to assess participants' involvement in cyber bullying involved a direct approach. After participants were provided with a definition of cyber bullying they were asked to report their frequency of involvement as a victim and offender of cyber bullying in their lifetime and the past 2-3 months (i.e., "How often have you been cyber bullied?"). Across their lifetime, 36.1% (*n* = 407) of participants reported at least some experience as a victim of cyber bullying. Nearly 1 in 4 students (*n* = 272 or 24%) reported being cyber bullied 'rarely', 8.3% (*n* = 94) reported being cyber bullied 'sometimes', and 3.6% (*n* = 41) reported being cyber bullied 'often' or 'very often'. Approximately half (*n* = 203 out of 407) of the participants who reported being cyber bullied at least once in their lifetime (or 18.0% of the total sample) also experienced victimization in the past 2-3 months. Within this time frame, 12.5% (*n* =

141) reported being cyber bullied 'rarely', 3.7% (n = 42) were victimized 'sometimes' and 1.8% (n = 20) were victimized 'often' or 'very often'.

As expected, a much smaller percentage (n = 262 or 23.1%) of participants reported engaging in cyber bullying at least once in their lifetime. Approximately 1 in 5 participants (n = 203 or 17.9%) engaged in cyber bullying 'rarely' and 5.4% (n = 59) admitted to engaging in the behavior at least 'sometimes'. In the past 2-3 months, only 5.3% (n = 59) reported engaging in the behavior.

The majority of participants (n = 724 or 66.4%) in the sample reported that they had witnessed cyber bullying. More than 1 in 3 students (n = 375 or 34.4%) witnessed this behavior 'once or twice', 19.7% (n = 215) a 'few times', 10.3% (n = 112) 'many times' and 2.0% (n = 22) 'every day'.

Across all types of involvement in cyber bullying, gender emerged as a significant factor. Based on Chi-square analyses, a significant association was found between gender and cyber bullying victimization, $\chi^2(1, N = 1121) = 35.44$, $p < .001$, gender and cyber bullying offending, $\chi^2(1, N = 1127) = 145.79$, $p < .001$, and gender and witness to cyber bullying, $\chi^2(1, N = 1085) = 33.68$, $p < .001$. These results indicate that female participants were more involved in cyber bullying (victim, bully, witness) than male participants.

Bystander Attributions of Control, Responsibility, and Blame

The primary objective of the study was to investigate the attributions bystanders make for a hypothetical student's experience with cyber bullying. Descriptive statistics of the dependent variables and covariates are listed in Table 3. The overall mean ratings for the blogger's perceived level of control, responsibility, and blame were below the

midpoint (i.e., lower levels of control, responsibility, and blame). The majority of participants considered the situation to be cyber bullying and also rated cyber bullying as a very serious experience.

Table 3. Descriptive Statistics for Dependent Measures and Covariates.

Variable	M (*n*)	SD	Range
Perceived control	2.55 (1141)	1.56	1 to 7
Responsibility	2.71 (1137)	1.60	1 to 7
Blame	2.17 (1143)	1.40	1 to 7
Consider situation as cyber bullying	6.24 (1139)	1.36	1 to 7
Seriousness of cyber bullying	6.20 (1140)	1.18	1 to 7

The main analyses consisted of a 3 x 2 multivariate analysis of covariance (MANCOVA) that was used to examine the effects of Response Type (ignored it, reported the behavior, confronted the bully) x Gender (male, female) on the perceptions of control, attributions of responsibility, and attributions of blame for the blogger's cyber bullying outcome (i.e., cyber bullying continued). A significant main effect emerged in the overall MANCOVA for Gender [Wilks's $\lambda = .981$, $F(3,1107) = 7.24$, $p < .001$, $\eta_p^2 = .020$] and a marginally significant effect was found for Response Type [Wilks's $\lambda = .990$, $F(6,2214) = 1.89$, $p = .08$, $\eta_p^2 = .005$]. The interaction between Gender x Response Type was not significant [Wilks's $\lambda = .997$, $F(6,2214) = .54$, *ns*]. Follow-up univariate analyses of covariance (ANCOVAs) were used to probe main effects for each dependent measure.

Perceptions of control. A significant main effect for Response Type emerged in the ANCOVA for perceptions of control. The blogger was perceived as having more

control after being cyber bullied when he/she ignored the behavior than when he/she reported it (*M*s = 2.66 vs. 2.40), $F(2,1109) = 7.43$, $p = .04$, $\eta_p^2 = .006$. There was no main effect for Gender on perceived control (*M*s = 2.56 males vs. 2.54 females), $F(1,1109) = .41$, *ns.*

Attributions of responsibility. There was a significant main effect for Gender on attributions of responsibility. Male participants held the male blogger as more responsible for their experience than female participants' rating of the female blogger (*M*s = 2.87 vs. 2.52), $F(1,1109) = 10.40$, $p = .001$, $\eta_p^2 = .009$. Even though there was not a significant main effect for Response Type, the results trended toward the bloggers being viewed as more responsible if they ignored the behavior (*M* = 2.80) versus if they reported the behavior (*M* = 2.67) or if they confronted the bully (*M* = 2.64).

Attributions of blame. A significant main effect for Gender emerged on attributions of blame. Male participants assigned greater blame to the male blogger than female participants' assigned to the female blogger (*M*s = 2.37 vs. 1.98), $F(1,1109) = 14.67$, $p < .001$, $\eta_p^2 = .013$. There was also a marginal main effect for Response Type, $F(2,1109) = 2.71$, $p = .07$, $\eta_p^2 = .005$. Simple contrast results indicated that the 'ignored it' group differed significantly from the 'reported the behavior' group (*M*s = 2.30 vs. 2.09, 95% CI for difference [.16, .48], $p < .001$). Thus, greater blame was assigned to the blogger when he/she responded by ignoring the situation than if he/she reported the behavior.

Knowledge and Interpretation of Cyber Bullying

The second objective of the study was to examine adolescents' knowledge of cyber bullying in order to better understand how they interpret and respond to their

experiences. Multiple steps/questions were used to probe participants' thoughts on cyber bullying.

The first step assessed whether participants could accurately identify a scenario as cyber bullying that included all of the key characteristics (i.e., repetition, intent/distress, imbalance of power) of the behavior discussed in the literature (Langos, 2012). To avoid potential biases, the term 'cyber bullying' was not used in the scenario or follow-up questions. The majority of participants (n = 764 or 67.1%) accurately rated the situation as cyber bullying by responding with a 'definitely yes'. Some participants (n = 100 or 8.8%) suggested that it was 'possibly' cyber bullying and a small number of participants (n = 24 or 2.1%) indicated that the situation was 'definitely not' cyber bullying. In addition, almost all of the participants (n = 1102 or 96.7%) considered cyber bullying to be at least a 'somewhat serious' to 'very serious' experience.

In the second step, participants were provided with a definition of cyber bullying (i.e., "the willful and repeated harm inflicted through the use of computers, cell phones, and other electronic devices") that is often used in cyber bullying research (Hinduja & Patchin, 2012, p. 32). Following the definition, participants were asked to rate the extent to which they agreed or disagreed with it. The majority of participants indicated that they agreed with the definition and gave a rating of 5 or higher out of 7 (n = 822 or 74.3%). Many participants responded 'neutral' (n = 190 or 17.2%) while 5.1% (n = 56) of participants 'strongly disagreed' with the definition.

The final step asked participants to circle all of the words/phrases (e.g., harassment, drama, a way to exert power over someone) that best describe cyber bullying behavior. The most popular combinations were: repetitive, harassment, drama, harmful, a

way to get revenge, and a way to exert power over someone (n = 143 or 12%); repetitive, harassment, drama, harmful, a way to get revenge, a joke and a way to exert power over someone (n = 132 or 11.5%); and repetitive, harassment, harmful, a way to get revenge, and a way to exert power over someone (n = 129 or 11.2%).

A one-way ANOVA was conducted to determine if female participants differed from male participants in their knowledge and interpretations of cyber bullying. Significant gender differences emerged for all responses about cyber bullying discussed above. Girls were more likely than boys to consider the situation to be cyber bullying, (Ms = 6.42 vs. 6.10), $F(3,1129) = 11.08$, $p < .001$; consider cyber bullying to be a serious experience (Ms = 6.41 vs. 6.08), $F(3,1130) = 13.72$, $p < .001$; and agree with the definition of cyber bullying provided, (Ms = 5.80 vs. 5.43), $F(3,1098) = 8.02$, $p < .001$. In summary, the findings suggest that many participants conceptualize cyber bullying in a similar way to researchers and this may be particularly salient among female participants.

Responding to Cyber Bullying

To identify and develop effective ways of helping adolescents cope with cyber bullying, it is imperative to also examine how they respond to their experiences. Participants were asked to recall specific details regarding their most recent experience as a victim of cyber bullying. Most of the self-reported victims of cyber bullying (n = 295 out of 407) were willing to share their experience. Victims first responded to their experience by: 'doing nothing/trying to ignore it' (n = 56 or 19.0%), 'telling a friend or adult' (n = 54 or 18.3%), 'blocking the bully' (n = 50 or 16.9%), 'turning off my computer/cell phone' (n = 29 or 9.8%) and 'confronting the bully' (n = 27 or 9.2%).

To determine if these responses were effective in reducing the bullying and accompanying distress, two separate one-way ANOVAs were computed. The effectiveness of the first response in reducing the bullying was marginally significant, $F(10,280) = 1.63$, $p = 0.09$. LSD post hoc comparisons indicated that responding first by 'making a joke about it' ($M = 5.00$, 95% CI [3.97, 6.03]) was significantly more helpful in reducing the bullying than 'doing nothing/trying to ignore it' ($M = 3.24$, 95% CI [2.66, 3.82], $p = .002$), 'turning off my computer/cell phone' ($M = 3.69$, 95% CI [2.72, 4.66], $p = .04$), and 'getting revenge' ($M = 3.33$, 95% CI [2.21, 4.46], $p = .02$). 'Leaving the website' ($M = 4.54$, 95% CI [3.75, 5.33]) was also significantly more helpful in reducing the bullying than 'doing nothing/trying to ignore it' ($M = 3.24$, 95% CI [2.66, 3.82], $p = .01$).

An alternate one-way ANOVA examining the effectiveness of the first response in reducing the victim's distress was also significant, $F(10,277) = 2.41$, $p = .01$. Follow-up LSD post hoc comparisons revealed that responding by 'turning off my computer/cell phone' ($M = 3.21$, 95% CI [2.35, 4.07]), and 'doing nothing/trying to ignore it' ($M = 3.28$, 95% CI [2.74, 3.81]) were significantly less helpful at reducing the distress compared to 'making a joke about it' ($M = 4.85$, 95% CI [3.74, 5.96], $p < .05$), 'leaving the website' ($M = 4.77$, 95% CI [4.08, 5.46], $p < .05$), 'telling an adult at home' ($M = 4.68$, 95% CI [3.68, 5.69], $p < .05$), or 'telling a friend' ($M = 4.65$, 95% CI [3.82, 5.49], $p < .05$).

When victims chose to disclose their experience with a friend ($n = 181$ or 61.8%), they frequently received multiple pieces of advice ($n = 71$ or 40.6%). Other common responses included 'listening to me' ($n = 31$ or 17.7%) and 'telling me to ignore it' ($n =$

19 or 10.9%). Less helpful advice such as 'telling me to deal with it on my own' (n = 2 or 1.1%) and 'making fun of me' (n = 2 or 1.1%) were given less frequently by friends.

Participants were also asked to report if they told an adult about their experience. Much fewer victims (n = 133 or 45.5%) were willing to disclose their experience with an adult. Participants reported that adults gave multiple pieces of advice (n = 43 or 32%) most frequently followed by 'they listened to me' (n = 24 or 18%) and 'they gave me advice' (n = 22 or 16.5%). Advice typically considered less helpful such as 'they told me to stop tattling' (n = 5 or 3.8%) and 'they told me it was my fault' (n = 2 or 1.5%) was offered less frequently to victims.

Perhaps more important than the information given to adolescents when they report cyber bullying is whether the information is actually useful for them to resolve the situation. A series of one-way ANOVAs were used to determine whether the information given to adolescents when they shared their cyber bullying experience with a friend and/or an adult was effective (i.e., useful) in reducing the bullying and making them feel better (i.e., reducing the distress).

Two separate one-way ANOVAs were used to assess the effectiveness of the information given to adolescents when they told a friend. The first analysis examined the effectiveness of the information in reducing the bullying. The result of the ANOVA was not significant $F(10,159) = 0.99$, $p = 0.45$, and indicates that there was no difference in the perceived effectiveness of the information in reducing the bullying. Even though there were no statistical differences between the types of information given, some information appeared more effective than others based on the average mean values provided on a scale from 1 (*not very effective*) to 7 (*very effective*). Advice such as 'telling me to tell an

adult' (M = 5.50), 'telling the bully to stop' (M = 4.10), and 'spending time with me' (M = 4.10) were rated as most effective in reducing the bullying while 'making fun of me' (M = 1.00), 'telling me to deal with it on my own' (M = 2.50), 'telling me it was my fault' (M = 3.17) were perceived as least effective.

A second one-way ANOVA tested the effectiveness of the information provided by friends in making the victim feel better. The perceived effectiveness of the information did not significantly differ, $F(10,160) = 1.17$, $p = 0.31$ in reducing the distress and making the victim feel better. Again, in spite of significant differences, some types of information was perceived as more helpful such as 'telling the bully to stop' (M = 4.64), 'telling me to tell an adult' (M = 4.50) and when they were given multiple types of information (M = 4.39) compared with other types of information like, 'making fun of me' (M = 1.00), 'telling me to deal with it on my own' (M = 2.50), and 'telling me that it was my fault' (M = 2.67).

Two additional one-way ANOVAs were used to measure the effectiveness of the information given to adolescents when they reported their experience to an adult. The first one-way ANOVA assessed the effectiveness of the information in reducing the bullying. The analysis was significant, $F(7,120) = 2.27$, $p = 0.03$, and indicated that the effectiveness of the information differed significantly in reducing the bullying. LSD post hoc comparisons revealed that receiving multiple pieces of advice (M = 4.42, 95% CI [3.90, 4.94]) was significantly more helpful in reducing the bullying than 'listening to me' (M = 3.00, 95% CI [2.04, 3.96], p = .005) and 'telling me to stop tattling' (M = 2.20, 95% CI [-.02, 4.42], p = .02). 'Telling me to ignore it' (M = 4.53, 95% CI [3.73, 5.34]

was also significantly more helpful in reducing the bullying than 'listening to me' (*M* = 3.00, 95% CI [2.04, 3.96], *p* = .02).

A second one-way ANOVA examined the perceived effectiveness of the information in making the victim feel better. The effectiveness of the information did not significantly differ across type, $F(7,129) = 1.55$, $p = 0.16$, in making the victim feel better. Again, in spite of a lack of significance, some information appeared more effective than others based upon the mean values. Victims of cyber bullying indicated that they were most helped when adults gave multiple types of information (*M* = 4.44) and least helped when 'they were told to stop tattling' (*M* = 1.60).

A paired samples t-test was conducted to compare the perceived effectiveness of the information shared by friends and adults. There was no difference in the effectiveness of the information in reducing bullying given by friends and adults (*M*s = 3.66 vs. 3.69), $t(94) = -0.16$, *ns*. Similarly, no difference was found in the effectiveness of the information provided by friends and adults in reducing the distress and making the victim feel better (*M*s = 4.03 vs. 3.88), $t(95) = 0.84$, *ns*. Thus, adults were not more effective than friends in providing victims of cyber bullying with the information they needed to resolve the situation and reduce their distress.

Risk/Protective Factors of Cyber Bullying

The final objective of the study was to investigate the role of school climate and perceived social support as risk/protective factors of cyber bullying. To examine whether participants' involvement in cyber bullying influenced their perceptions of school climate, participants were first categorized into one of four groups (i.e., no involvement, victim only, bully only, bully/victim) based on their reported involvement in cyber

bullying. The 'no involvement' group contained participants who had no experience as a victim or bully. The 'victim only' group included participants who reported being victimized but did not engage in cyber bullying. The 'bully only' group contained participants who cyber bullied others but were not victimized. The 'bully/victim' group included participants who both engaged in cyber bullying and were victims of cyber bullying.

Next, a one-way between subjects ANOVA was conducted to determine whether group membership in cyber bullying predicted perceptions of school climate. There was a significant effect of group membership on perceptions of school climate, $F(3,1116) = 25.58$, $p < .001$. Post hoc comparisons using the Tukey HSD test indicated that the perceptions of school climate in the 'no involvement' group ($M = 12.86$, 95% CI [12.61, 13.11]) were significantly higher than the ratings in the 'victim only' group ($M = 11.44$, 95% CI [10.97, 11.91], $p < .001$) and the 'bully/victim' group ($M = 10.76$, 95% CI [10.31, 11.22], $p < .001$). That is, participants who reported no involvement in cyber bullying had more positive perceptions of school climate than participants who were involved as bully/victims or victims only.

The second risk/protective factor, perceived social support was examined using two hierarchical multiple regression models. The first regression model (Table 4) was computed to examine whether cyber bullying victimization predicted depression and whether that effect was buffered by social support. Step 1 of the regression model included cyber bullying victimization and gender as predictors of depression and Step 2 added friend support and family support as predictors. Step 1 of the model was significant, $F(2,370) = 42.58$, $p < .001$ and predicted 19% of the variance in depression.

Higher levels of victimization (β = .38, p < .001) and being female (β = .16, p = .001) predicted greater levels of depression. Adding friend support and family support in Step 2 of the model resulted in both a significant increment to R^2: $F_{inc}(2,368) = 20.29$, p < .001 and a significant overall model, $F(4,368) = 33.65$, p < .001. Greater friend support (β = -.19, p < .001) and family support (β = -.16, p = .002) predicted lower levels of depression. Gender (β = .20, p < .001) and cyber bullying victimization (β = .29, p < .001) remained significant predictors in Step 2 of the model but the effect of cyber bullying victimization was reduced (β = .38 in Step 1 to β = .29 in Step 2), indicating that the effect of cyber bullying victimization on depression was buffered by social support from friends and family.

Table 4. Cyber Bullying and Social Support Predicting Depression.

	Step 1			Step 2		
	B	SE	β	*B*	SE	β
Cyber bullying victimization	3.45	.43	.38**	5.55	.43	.29**
Gender	1.73	.51	.16*	2.63	.50	.20**
Friend support				-.17	.05	-.19**
Family support				-.16	.05	-.16*
R^2	.19**			.27**		

* p < 0.05; ** p < 0.001.

A second regression model (Table 5) was computed to assess whether cyber bullying predicted anxiety and whether social support buffered the effects of cyber bullying victimization on anxiety. In Step 1of the regression model, cyber bullying victimization and gender were included as predictors of anxiety and Step 2 added friend

support and family support as predictors. In Step 1, the overall regression model was significant, $F(2,370) = 52.00$, $p < .001$ and predicted 22% of the variance in anxiety. Consistent with the findings for depression, higher levels of cyber bullying victimization ($\beta = .44$, $p < .001$) and being female ($\beta = .11$, $p = .02$) predicted greater anxiety. The addition of friend support ($\beta = -.24$, $p < .001$) but not family support ($\beta = -.07$, $p = .20$) in Step 2 of the model resulted in a significant increment to R^2: $F_{inc}(2,368) = 17.38$, $p < .001$ and a significant overall model, $F(4,368) = 37.00$, $p < .001$. Both gender ($\beta = .16$, $p = .001$) and cyber bullying victimization ($\beta = .37$, $p < .001$ remained significant predictors of anxiety but the effect of cyber bullying victimization was reduced ($\beta = .44$ in Step 1 to $\beta = .37$ in Step 2) indicating that support from friends buffered the effect of cyber bullying victimization on anxiety.

Table 5. Cyber Bullying and Social Support Predicting Anxiety.

	Step 1			Step 2		
	B	SE	*β*	*B*	SE	*β*
Cyber bullying victimization	3.36	.36	.44**	2.81	.36	.37**
Gender	.96	.42	.11*	1.43	.42	.16*
Friend support				-.18	.04	-.24**
Family support				-.05	.04	-.07
R^2	.22**			.29**		

* $p < 0.05$; ** $p < 0.001$.

CHAPTER IV

DISCUSSION

The Social Ecological Theory (Swearer & Espelage, 2004) provided the framework for the current study. The theory suggests that cyber bullying results from the reciprocal interaction between adolescents and their social environment which includes the peer group, family, and the school. A few of the specific relationships between students (i.e., individual factors), their peer group, and the school were examined among middle school students.

Results from the current study indicate that cyber bullying is experienced by a large proportion of middle school students. The prevalence of cyber bullying was measured in two separate ways in an attempt to determine the true nature and extent of the behavior. Direct estimates of cyber bullying victimization indicated that nearly 4 in 10 students reported being victimized at least once in their lifetime and 50% of these students were also victimized in the past 2-3 months. Conversely, 23% of students reported engaging in cyber bullying in their lifetime and just 5% in the past 2-3 months. The data suggest that students were less willing to report engagement in cyber bullying versus their experiences as a victim. Being labeled as a 'cyber bully' is not socially desirable, thus students may be reluctant to report these experiences. This pattern of results is also typical in the bullying/cyber bullying literature (Hinduja & Patchin, 2012; Mishna et al., 2012).

Meanwhile, indirect estimates of cyber bullying revealed that 50% of students experienced at least one form of cyber bullying victimization in the past 2-3 months while 30% engaged in at least one act of cyber bullying during this period. In spite of large variability in the prevalence of cyber bullying reported across studies, the direct estimates from this research are slightly higher than the average rates reported in a recent review of the literature (Patchin & Hinduja, 2012) and the indirect estimates are slightly higher than what has been found in other studies (Patchin & Hinduja, 2010). These prevalence rates are also above the rates reported in a previous study (Holfeld & Grabe, 2012a) that utilized a similar population (i.e., region, age group) and may suggest that cyber bullying is becoming more frequent among middle school students.

Consistent with prior research (Africak et al., 2008; Gradinger et al., 2010; Mishna et al., 2010; Raskauskas & Stoltz, 2007; Vandebosch & Van Cleemput, 2009), indirect measures of cyber bullying behavior yielded higher prevalence estimates than direct measures. A number of explanations are possible for this discrepancy. Perhaps the indirect methods developed by researchers included behaviors that middle school students do not consider to be true forms of cyber bullying (Mishna et al., 2010). For example, Hinduja and Patchin (2009) include one item on their cyber bullying victimization scale that asks participants how often they had been afraid to go on the computer. It can certainly be argued that this is not a true form of cyber bullying. Alternatively, participants may be more willing to identify their frequency of involvement in different behaviors that do not include the term cyber bullying to avoid the label of a 'victim' and/or 'offender' of cyber bullying that direct methods imply.

Gender was also implicated as a significant factor in cyber bullying as females were more likely to be involved in all aspects of cyber bullying compared to males. This finding supports past research that found girls more likely to be victimized than boys (Dehue et al., 2008; Holfeld & Grabe, 2012b; Kowalski & Limber, 2007; Li, 2007b; Mishna et al., 2012; Ortega et al., 2009; Schneider et al., 2012; Smith et al., 2006; Smith et al., 2008; Sourander et al., 2010; Wade & Beran, 2011; Wang et al., 2009) and girls more likely to engage in cyber bullying than boys (Holfeld & Grabe, 2012b; Keith & Martin, 2005; Kowalski & Limber, 2007; Nelson, 2003; Pornari & Wood, 2010). It is also consistent with prior research demonstrating girls preference to engage in more indirect types of bullying (i.e., spreading rumors) than boys (Crick & Grotpeter, 1995; Nansel et al., 2001; Wang, Iannotti, & Nansel, 2009; Wolak et al., 2007). The online world represents a unique environment where individuals can express themselves, often in an anonymous manner without a fear of the consequences of their actions. Indirect types of bullying such as cyber bullying provides girls with another and potentially more convenient medium to engage in these types of behaviors that are generally not accepted in daily face to face interactions (Brown, 2003; Hinduja & Patchin, 2009). Future research is needed to identify whether specific types of online behavior (i.e., Facebook use) are more prevalent among female adolescents and can help to explain the gender differences found in the current study.

Role of Bystanders

Aside from adolescent's involvement as victims and offenders of cyber bullying, it is important to consider their role as bystanders. Bystanders serve a pivotal role in the bullying process. They can play an active role and try to stop the behavior (i.e., report it,

tell the bully to stop) or a passive role (i.e., do nothing). Bullying is more likely to be reduced when bystanders take an active role. When bystanders behave passively, it can contribute to the maintenance of the behavior by indicating to the bully that their behavior is acceptable. The role of bystanders may be even more critical with certain types of bullying like cyber bullying that typically involves a larger audience (Mishna et al., 2010; Pearce et al., 2011). In the current study, nearly 7 out of 10 participants reported witnessing cyber bullying. With many bystanders present to cyber bullying, it is critical to examine the behaviors/situations that can increase their willingness to behave in prosocial ways.

Bystander Attributions

A key factor that can influence how bystanders of cyber bullying will respond in these situations is their perceptions and attributions of the victim. The main goal of the current study was to examine the attributions bystanders make for a hypothetical victim of cyber bullying. For example, would victims be viewed as responsible and blamed for their experience if they responded passively versus actively or reactively to the situation?

Bystanders assigned lower levels of perceived control, responsibility, and blame to the hypothetical victim of cyber bullying. Thus, in the situation depicted in the scenario, the victim was typically not viewed as responsible or blamed for what happened. These attributions are also important in that they commonly increase the likelihood of bystanders helping behavior in these situations.

The main analyses found main effects for response type and gender. The findings are consistent with attribution theory (Weiner, 1986; Weiner et al., 1988) and our expectation that passive responses to cyber bullying would elicit stronger attributions of

control, responsibility, and blame than active or reactive responses. In particular, the hypothetical blogger was perceived as having more control, greater responsibility, and greater blame over being cyber bullied when he/she responded by ignoring the behavior than when he/she reported it. Bystanders may view cyber bullying situations as less serious when the victim tries to ignore it. For example, they might think that if the victim is trying to ignore it, it must not be that big of a deal. On the other hand, if victims reported an experience, bystanders may think that it must really be bothering them and is a serious issue if they had to tell someone about it. Thus, bystanders may hold the same view as victims of cyber bullying who are reluctant to share their experience because they don't think it is a big deal and should deal with it on their own (Hinduja & Patchin, 2009; Juvonen & Gross, 2008). This perspective is also in line with Tokunaga (2010) who suggested that victims conclude that more active strategies are needed in longer lasting situations. An alternative explanation is that bystanders feel that victims who respond actively or reactively to the experience are 'trying harder' to deal with the situation than victims who respond passively and thus these victims are less responsible and less at fault for what happened. In either case, more research is needed to identify why adolescent bystanders view victims as more responsible and more at fault when they respond passively to their experience.

Assigning same-gender scenarios enabled an examination of gender differences in the overall attributions of control, responsibility, and blame. Males assigned greater blame and responsibility to the male blogger than females assigned to the female blogger regardless of the type of response. The gender effect is consistent with past research on gender differences in attributions (MacGeorge, 2003; Ruthig, Holfeld, & Hanson, 2012).

Females in the current sample had more experience as a victim of cyber bullying than males. If female victims of cyber bullying felt little to no responsibility or blame for their experience, they may conclude that other female victims of cyber bullying are similarly not responsible or at fault. Thus, it is possible that these experiences influenced their perceptions regarding other victims of cyber bullying.

Interpretation of Cyber Bullying

Overall, the results indicate that adolescents' interpretation of cyber bullying, particularly female adolescents is similar to that of researchers. The majority of participants were able to: accurately identify a scenario as cyber bullying, identify the seriousness of the behavior, express their agreement with a commonly utilized definition of cyber bullying in the literature, and identify the key characteristics of the behavior (i.e., repetition, way to exert power, intent/harmful). It is not surprising that girls expressed greater knowledge about the behavior considering they had more experience with cyber bullying (victim, offender, and witness) than boys in the current study. However, it was unclear if this knowledge was directly related to girls' experiences with cyber bullying. Taken together, this information has significant implications for researchers who continually struggle to operationalize and measure cyber bullying. Since adolescents define and describe cyber bullying similarly to researchers, direct measurement procedures where researchers provide a definition of cyber bullying and ask participants to report their frequency of involvement in the behavior are particularly relevant approaches to study the behavior.

Response to Cyber Bullying

Identifying how adolescents respond to cyber bullying is essential in decreasing the likelihood of future occurrences (i.e., repeated cyber bullying) and reducing the distress associated with the experience (Paul et al., 2012). Past investigations have typically asked participants about their response to a real or imagined situation but have curiously neglected to ask about the advice provided and the usefulness of the advice (Africak et al., 2008; Bauman, 2010; Dehue et al., 2008; Juvonen & Gross, 2008; Mishna et al., 2010; Patchin & Hinduja, 2006). The current study attempted to probe deeper into adolescents' cyber bullying experiences to determine which responses were particularly effective in reducing the bullying and corresponding distress.

When describing their most recent experience, more than half of the victims of cyber bullying first responded by trying to ignore it, telling a friend or adult, or blocking the bully (Juvonen & Gross, 2008; Mishna et al., 2010). Making a joke was perceived as more effective at reducing the bullying than passive responses (i.e., trying to ignore it) or reactive responses (i.e., confronting the bully). Making a joke in response to being cyber bullied may be particularly effective because it may signify to the bully and bystanders that it is not a big deal and does not affect them, thereby, diverting attention elsewhere. Passive responses (i.e., ignoring it) were again perceived as less effective than active responses (i.e., making a joke about it or telling an adult/friend) in reducing the victim's distress. Again, doing nothing in response to the experience appears to offer little value for victims' overall distress levels. It would be wise for educators and parents to encourage adolescents who experience cyber bullying to first respond in an active way as it can help to reduce the bullying and associated distress.

Victims of cyber bullying are strongly encouraged to report the behavior immediately to an adult who is considered to be the most helpful individual to resolve the situation. These encouragements are often ignored by adolescents who attempt to deal with it on their own or tell a friend (Hinduja & Patchin, 2006; Juvonen & Gross, 2008; Li, 2006, 2007; Mishna et al., 2010; Tokunaga, 2010). As in past research (Holfeld & Grabe, 2012b), victims of cyber bullying were more likely to disclose their experience to a friend rather than an adult. However, victims suggested that both friends and adults responded in a similar way (i.e., gave multiple pieces of advice, listened to them). More importantly, the information typically considered less helpful such as 'making fun of me' and 'they told me it was my fault' were offered infrequently. Thus, both friends and adults typically provide victims of cyber bullying with the information regarded as most helpful in these situations.

Consistent with prior research (Holfeld & Grabe, 2012b), adults were not more effective than friends in helping victims of cyber bullying. Mean effectiveness ratings indicated that victims of cyber bullying perceived that the information provided by adults and friends was only 'somewhat effective' at reducing their bullying and associated distress. In many cases, the information provided to victims of cyber bullying was not sufficient for them to resolve the situation.

Interestingly, victims of cyber bullying indicated that when friends told them to tell an adult, it was perceived as helpful to reduce both the bullying and distress. It was also helpful when friends actively tried to help the victim by confronting the bully and telling them to stop. Thus, friends may be most helpful when they take an active role in helping the victim.

On the other hand, the information adults shared to victims that appeared to be particularly helpful was when they gave multiple pieces of advice/information (i.e., they said they would talk to the other students involved, they gave me advice). Victims indicated that 'being listened to' was largely ineffective, particularly at reducing the bullying. This contradicts previous research that suggested that 'being listened to and acknowledged' was regarded as most helpful response by adults for victims of peer harassment (Davis & Nixon, 2010). Perhaps adults would be viewed as more helpful with cyber bullying if they took a more active approach like friends and tried to resolve the situation directly (i.e., talk to the bully or their parents).

Overall, the finding that many victims of cyber bullying who come forward do not receive the help they need to resolve the bullying is disconcerting. Greater emphasis needs to be placed on the education and training of both students and adults so that they can more effectively manage these situations. Otherwise, students will be reluctant to share future experiences and be left with the arduous task of trying to deal with a potentially helpless situation on their own.

Risk/Protective Factors of Cyber Bullying

The effectiveness of both friends and adults in response to cyber bullying can be influenced by a number of additional factors including the school climate (Davis & Nixon, 2010). Consistent with previous research (Hinduja & Patchin, 2012), adolescent's involvement in cyber bullying was associated with their overall perceptions of school climate. More positive perceptions of school climate were shared by participants who had no involvement in cyber bullying compared with participants who were involved as victims only or bully/victims. Even though the cross-sectional nature of the study was

unable to determine the direction of the relationship, it highlights the prominent role of school climate in cyber bullying. In particular, more positive perceptions of school climate are associated with reduced involvement in cyber bullying among middle school students. Educators need to be aware of this association and work to find ways of developing a safe and trusted environment where students are encouraged to behave in prosocial ways. Also, teachers and support staff need to receive training by bullying experts so that they can effectively deal with bullying and other problematic behaviors more consistently.

Social support, an additional risk/protective factor for cyber bullying in adolescent's social environment is also important to consider. A strong social support network can help to mitigate the effects associated with the victimization and prevent future occurrences. In the current study, being a female and a victim of cyber bullying predicted greater levels of depression and anxiety. Victims of cyber bullying, particularly females were more likely to experience depression and anxiety but the directionality of the association could not be tested in the current study (i.e., cross-sectional design). When social support was added to the model, the effect of cyber bullying victimization on depression and anxiety respectively was buffered by social support, namely the support from friends. In other words, adolescents who were victims of cyber bullying experienced lower levels of distress in the form of anxiety and depression when a strong peer social support group was present versus when it was absent. The buffering effect of social support on traditional bullying victimization and depression/anxiety is not new and has been well supported in the literature (Conners-Burrow et al., 2009; Davidson & Demaray, 2007; Demaray & Malecki, 2003; Hodges & Perry, 1999; Mishna et al., 2008; Schwartz

et al., 1999; Prinstein et al., 2001). However, this was the first study to demonstrate the buffering effect of social support on cyber bullying victimization and psychological distress.

These findings re-iterate the importance of continuing to find ways to foster supportive relationships among peers both inside and outside of school. The role of technology in the development of these relationships is also important to consider. Adolescents have cited social networking sites as critical to initiate and maintain both new and existing relationships (Cassidy et al., 2009; Hinduja & Patchin, 2012; Valkenburg & Peter, 2007). Future research is needed to examine the differential effects of face-to-face and technological peer support in the association between cyber bullying victimization and psychological distress.

Limitations

This study addressed several gaps in the literature but was particularly noteworthy for examining the role and perceptions of bystanders to cyber bullying. However, the study is not without limitations. First, the study utilized a cross-sectional design which did not allow for causal claims to be made between variables of interest. For example, it is unclear if the symptoms of anxiety and depression preceded or followed cyber bullying victimization. Because cyber bullying victimization predicted both anxiety and depression in the regression analyses it is likely that these symptoms developed at least partially from the experience. Second, the sample was a convenience sample and the findings may not be representative or generalizeable to a larger population. Third, participants were asked to recall details regarding their 'most recent' experience with cyber bullying. It is unclear if their response to this experience was similar to their

previous experiences. For example, victims may have told an adult in a previous experience and were not helped so they told a friend in their most recent experience. Again, the design of the study was unable to capture multiple experiences and how their responses to these experiences may have changed over time. A longitudinal design would be well suited to identify these changes over times. A final limitation relates to the veracity of respondents, a problem inherent in self-report surveys. Because adolescents were asked questions about undesirable behaviors (e.g., cyber bullying others), it is unknown if this impacted their responses. To avoid these potential issues, the teachers responsible for administering the survey were asked to emphasize the confidentiality and anonymity of the survey.

Implications & Conclusion

The current findings have several implications for the cyber bullying literature moving forward. First, it shed light on the perceptions bystanders hold for victims of cyber bullying. The constructed scenario which participants described as a common occurrence in middle school represents a realistic account of an adolescents' experience as a victim of cyber bullying (i.e., through social networking sites). Thus, the scenarios have practical implications for understanding adolescent's willingness to assist real-life victims of cyber bullying. Second, it identified that adolescents share similar interpretations of cyber bullying as researchers. This information is particularly helpful for researchers attempting to more accurately measure the behavior. Third, it demonstrated that many victims of cyber bullying are continuing to deal with their experience even after telling an adult or friend about it. Further research is critical to examine these situations and find more effective ways to help adolescents deal with their

cyber bullying experience(s). Fourth, it highlighted that certain risk/protective factors like school climate can actually increase or decrease adolescent's involvement in cyber bullying and other factors like social support can provide a buffer for victims of cyber bullying. Together, these findings provide necessary information for educators to consider when developing an intervention effort aimed at reducing the frequency and impact of cyber bullying.

Cyber bullying continues to be a frequent problem for many middle school adolescents, particularly female adolescents. The present findings highlight the importance of specific relationships and factors within an adolescent's social environment that can influence their involvement in cyber bullying. It is apparent that the best way to deal with the complexity of cyber bullying will be to utilize a multi-faceted approach involving adolescents, parents, and educators.

APPENDICES

Appendix A
Survey

Instructions: Please read the following paragraph about *a girl at your school*. Please read the paragraph carefully then respond to the questions that follow. There are no 'right' or 'wrong' answers to the questions. We are only interested in your own personal opinions which will not be shared with anyone.

Imagine the following blog was written by a girl at your school:

"I recently found out that another girl at school created a Facebook profile about me and sent friend requests to all of my classmates. In the profile, there are pictures of my face photo-shopped onto embarrassing pictures and everyone has been posting mean and hurtful comments. Since I found out about the profile a few weeks ago I can't sleep because I can't stop thinking about it and I'm scared everyone is turning against me.

I tried to ignore it but the hurtful comments are still being posted."

Please read each question carefully then either circle the number that best represents your response or fill in your response in the appropriate space provided. Feel free to reread or refer back to the paragraph above if needed:

1. What do you think caused the student to be treated this way?

   _____

   _____

2. How much control did/does the student have over being treated this way?

   1 2 3 4 5 6 7

   No control *Some control* *Total control*

3. Do you think the student was treated this way because of something she did?

   1 2 3 4 5 6 7

   Definitely not *Possibly* *Definitely yes*

4. Should the student have tried harder to stop being treated this way?

   1 2 3 4 5 6 7

   Definitely not *Possibly* *Definitely yes*

5. Do you think the student was treated this way because she is an easy target?

   1 2 3 4 5 6 7

   Definitely not *Possibly* *Definitely yes*

6. How angry should the student feel about being treated this way?

   1 2 3 4 5 6 7

   Not at all angry *Somewhat angry* *Very angry*

7. How responsible is the student for being treated this way?

   1 2 3 4 5 6 7

   Not at all responsible *Somewhat responsible* *Completely responsible*

8. Do you think the student was treated this way because she is not very popular?

   1 2 3 4 5 6 7

   Definitely not *Possibly* *Definitely yes*

9. Do you think the student is likely to be treated this way again in the future?

1	2	3	4	5	6	7
Definitely not			*Possibly*			*Definitely yes*

10. How much influence does the student have over being treated this way?

1	2	3	4	5	6	7
No influence			*Some influence*			*Total influence*

11. Do you think the student was treated this way because of the way she looks?

1	2	3	4	5	6	7
Definitely not			*Possibly*			*Definitely yes*

12. Do you think the student has been treated this way in the past?

1	2	3	4	5	6	7
Definitely not			*Possibly*			*Definitely yes*

13. Do you think the student was treated this way because she was in the wrong place at the wrong time?

1	2	3	4	5	6	7
Definitely not			*Possibly*			*Definitely yes*

14. Are there better ways that the student could have responded?

1	2	3	4	5	6	7
Definitely not			*Possibly*			*Definitely yes*

15. Is it the student's own fault for being treated this way?

1	2	3	4	5	6	7
Definitely not			*Possibly*			*Definitely yes*

16. How helpless should the student feel?

1	2	3	4	5	6	7
Not at all helpless			*Somewhat helpless*			*Completely helpless*

17. How frustrated should the student feel about being treated this way?

1	2	3	4	5	6	7
Not at all frustrated			*Somewhat frustrated*			*Very frustrated*

18. Is it ever ok to treat someone this way?

1	2	3	4	5	6	7
Definitely not			*Possibly*			*Definitely yes*

19. What do you think is the best way to avoid being treated like this?

_____

_____

20. How would you rate the seriousness of the student's experience?

1	2	3	4	5	6	7
Not at all serious			*Somewhat serious*			*Very serious*

21. How often do you think this happens in middle school?

1	2	3	4	5
Never	*Rarely*	*Sometimes*	*Often*	*Very often (all the time)*

22. Do you consider this situation to be cyber bullying?

1	2	3	4	5	6	7
Definitely not			*Possibly*			*Definitely yes*

23. How serious is it to be cyber bullied?

1	2	3	4	5	6	7
Not at all serious			*Somewhat serious*			*Very serious*

For the next few questions, imagine that you were the student being treated this way in this situation described earlier:

24. Has something like this ever happened to you before?

1	2	3	4	5
Never	*Once or twice*	*A few times*	*Many times*	*Always*

25. Would you have responded differently?

1	2	3	4	5	6	7
Definitely not			*Possibly*			*Definitely yes*

26. How would you have responded?

_____

_____

27. What would be the most helpful thing someone can do to help you deal with this problem?

_____

_____

ONLINE EXPERIENCES QUESTIONNAIRE

PLEASE TELL ME ABOUT YOURSELF

1. How old are you? ____ years old.

2. How would you describe your gender?
   a. Male
   b. Female
   c. Transgender
   d. I prefer not to answer

3. How would you describe your background?
   a. Asian
   b. Hispanic
   c. Black
   d. White
   e. Aboriginal/Native
   f. Other

INTERNET ACCESS/USE

4. Do you have Internet access at home?
   Yes *No*

5. How many computers do you have in your home?
   0 *1* *2* *3 or more*

6. What area of the home do you use the computer most in?
   In my bedroom *In an open area in the home*

7. On average, how much time do you spend on your computer in a given day during the week?
   Less than 1 hour *1-2 hours* *2-3 hours* *3-4 hours* *4 or more hours*

8. On average, how much time do you spend on your computer in a given day during the weekend?
   Less than 1 hour *1-2 hours* *2-3 hour* *3-4 hours* *4 or more hours*

9. What activities do you engage in most often on the computer?
   a. Instant messaging
   b. Social networking sites (i.e., Facebook)
   c. Chat rooms
   d. E-mail
   e. Online games
   f. School work
   g. Other, please specify: _____

10. Do you have a Facebook account?
    Yes *No*

11. How long have you had a Facebook account? ____ years

12. On average, how much time do you spend on Facebook each day? ____ hours

13. Do you say or do things online that you would not normally say or do in person?

1	2	3	4	5
Never	*Rarely*	*Sometimes*	*Often*	*Very often*

14. How safe do you feel when you are online?

1	2	3	4	5	6	7
Not at all safe			*Somewhat safe*			*Very safe*

15. Have you ever given your online password(s) to someone?

1	2	3	4	5
Never	*Once or twice*	*A few times*	*Many times*	*Always*

16. Have you ever sent pictures to someone you only met online?

1	2	3	4	5
Never	*Once or twice*	*A few times*	*Many times*	*Always*

17. Have you ever met someone in person that you only met online?

1	2	3	4	5
Never	*Once or twice*	*A few times*	*Many times*	*Always*

IMPORTANCE OF THE INTERNET

18. I can easily go without the Internet for a few days.

1	2	3	4	5	6	7
Strongly disagree			*Neutral*			*Strongly agree*

19. I would rather surf the Internet than do something else.

1	2	3	4	5	6	7
Strongly disagree			*Neutral*			*Strongly agree*

20. I make a lot of new friends on the Internet.

1	2	3	4	5	6	7
Strongly disagree			*Neutral*			*Strongly agree*

21. If Internet access was disrupted, I wouldn't miss the Internet.

1	2	3	4	5	6	7
Strongly disagree			*Neutral*			*Strongly agree*

22. A life without the Internet would be empty and boring.

1	2	3	4	5	6	7
Strongly disagree			*Neutral*			*Strongly agree*

PARENTAL KNOWLEDGE & SUPERVISION

23. How often do your parents supervise your Internet behaviour?

1	2	3	4	5	6	7
Never			*Sometimes*			*All the time*

24. How often do your parents talk to you about how to be safe on the Internet?

1	2	3	4	5	6	7
Never			*Sometimes*			*All the time*

25. How often do your parents block certain programs and/or websites so you cannot access them?

1	2	3	4	5	6	7
Never			*Sometimes*			*All the time*

CELL PHONE ACCESS/USE

26. Do you own a cell phone?
    Yes *No*

27. How long have you had a cell phone? ____ years

28. On average, how much time do you spend using your cell phone in a given day during the week?
    Less than 1 hour *1-2 hours* *2-3 hours* *3-4 hours* *4 or more hours*

29. On average, how much time do you spend using your cell phone in a given day during the weekend?
    Less than 1 hour *1-2 hours* *2-3 hours* *3-4 hours* *4 or more hours*

30. What do you use your cell phone mostly for?
    a. Text messaging
    b. Social networking
    c. Checking e-mails
    d. Playing games
    e. Other, please specify: _____

SCHOOL ENVIRONMENT:

31. I feel safe at my school.
    Strongly disagree *Disagree* *Agree* *Strongly agree*

32. I feel that teachers at my school care about me.
    Strongly disagree *Disagree* *Agree* *Strongly agree*

33. I feel that teachers at my school really try to help me succeed.
Strongly disagree *Disagree* *Agree* *Strongly agree*

34. I feel that students at my school trust and respect the teachers.
Strongly disagree *Disagree* *Agree* *Strongly agree*

35. I feel that teachers at my school are fair to all students.
Strongly disagree *Disagree* *Agree* *Strongly agree*

36. I feel that teachers at my school take bullying very seriously.
Strongly disagree *Disagree* *Agree* *Strongly agree*

ONLINE EXPERIENCES

How often in the last 2-3 months *have you experienced* the following?

37. In the last 2-3 months, have you been made fun of in a chat room?
Never *Once or Twice* *A Few Times* *Many Times* *Every day*

38. In the last 2-3 months, have you received an email from someone you know that made you really mad?
Never *Once or Twice* *A Few Times* *Many Times* *Every day*

39. In the last 2-3 months, have you received an email from someone you didn't know that made you really mad? This does not include 'spam' mail.
Never *Once or Twice* *A Few Times* *Many Times* *Every day*

40. In the last 2-3 months, has someone posted something on your social networking profile (e.g., Facebook) that made you upset or uncomfortable?
Never *Once or Twice* *A Few Times* *Many Times* *Every day*

41. In the last 2-3 months, has someone posted something on another web page that made you upset or uncomfortable?
Never *Once or Twice* *A Few Times* *Many Times* *Every day*

42. In the last 2-3 months, have you received an instant message that made you upset and uncomfortable?
Never *Once or Twice* *A Few Times* *Many Times* *Every day*

43. In the last 2-3 months, have you been bullied or picked on by another person while online?
Never *Once or Twice* *A Few Times* *Many Times* *Every day*

44. In the last 2-3 months, have you been afraid to go on the computer?
Never *Once or Twice* *A Few Times* *Many Times* *Every day*

45. In the last 2-3 months, has anyone posted anything about you online that you didn't want others to see?
Never *Once or Twice* *A Few Times* *Many Times* *Every day*

How often in the last 2-3 months *have you done* the following?

46. In the last 2-3 months, have you posted something online about someone else to make others laugh?
Never *Once or Twice* *A Few Times* *Many Times* *Every day*

47. In the last 2-3 months, have you sent someone a text message to make that person angry or to make fun of that person?
Never *Once or Twice* *A Few Times* *Many Times* *Every day*

48. In the last 2-3 months, have you sent someone an email to make that person angry or to make fun of that person?
Never *Once or Twice* *A Few Times* *Many Times* *Every day*

49. In the last 2-3 months, have you posted something on someone's social networking profile (e.g., Facebook) to make that person angry or to make fun of that person?
Never *Once or Twice* *A Few Times* *Many Times* *Every day*

50. In the last 2-3 months, have you taken a picture of someone and posted it online without that person's permission?
Never *Once or Twice* *A Few Times* *Many Times* *Every day*

We describe cyber bullying as when someone repeatedly harasses, mistreats, or makes fun of another person online or while using cell phones or other electronic devices.

51. To what extent do you agree with this definition of cyber bullying?
1 2 3 4 5 6 7
Strongly disagree *Neutral* *Strongly agree*

52. Please circle all the words below that describe cyber bullying?
    a. Repetitive behavior
    b. Harassment
    c. Drama
    d. Harmful/dangerous
    e. A way to get revenge
    f. Just a joke
    g. A way to exert power over someone

EXPERIENCE(S) CYBER BULLYING OTHERS

53. *In my entire life*, I have cyber bullied others:
Never *Rarely* *Sometimes* *Often* *Very Often*

54. *In the last 2-3 months*, I have cyber bullied others:
Never *Once or Twice* *A Few Times* *Many Times* *Every day*

55. In the last 2-3 months, I cyber bullied others using _____ most frequently? (please circle only one response)
    a. I have not cyber bullied another person in the last 2-3 months
    b. Instant messaging
    c. Chat rooms
    d. Cell phones
    e. Social networking sites (e.g., MySpace or Facebook)
    f. E-mail
    g. Other, please describe: _____

56. What was the ***MOST*** important reason for cyber bullying another person in the last 2-3 months?
    a. I have not cyber bullied another person in the last 2-3 months
    b. They cyber bullied me so I wanted to get revenge
    c. They deserved it
    d. Because others were doing it
    e. For fun and entertainment
    f. Because they picked on me at school
    g. To demonstrate power
    h. Other reason, please describe: _____

57. In the last 2-3 months, I cyber bullied others using _____ most frequently?
    a. I have not cyber bullied another person in the last 2-3 months
    b. My cell phone
    c. A friend's cell phone
    d. Home computer
    e. School computer
    f. Computer at a friend's house

58. In the last 2-3 months, I cyber bullied another person …? (please circle only one response)
    a. I have not cyber bullied another person in the last 2-3 months
    b. To be mean
    c. To hurt the person
    d. As a joke
    e. Other, please specify: _____

EXPERIENCE(S) AS A VICTIM OF CYBER BULLYING

59. *In my entire life*, I have been cyber bullied:
    Never *Rarely* *Sometimes* *Often* *Very Often*

60. *In the last 2-3 months*, I have been cyber bullied:
    Never *Once or Twice* *A Few Times* *Many Times* *Every day*

61. When you are cyber bullied, how long does it typically last?
    a. A day
    b. Less than a week
    c. A week or two
    d. A month
    e. A few months
    f. All year

If you have been cyber bullied, please tell me about *your most recent experience*: (if you have not been cyber bullied, please skip ahead to question 82)

62. Please describe what happened when you were cyber bullied:
    _____
    _____

63. Why do you think you were targeted?
    a. Race
    b. Physical appearance
    c. Sexual orientation
    d. Body shape
    e. Disability
    f. For no particular reason
    g. Other, please specify: _____

64. How long did the situation last?
    a. A day
    b. Less than a week
    c. A week or two
    d. A month
    e. A few months
    f. All year

65. Was the harassment repeated, so that it happened again and again?
    Yes *No*

66. How would you rate the severity of the experience?
    a. Mild – it did not really bother me
    b. Moderate – it bothered me quite a bit
    c. Severe – I struggled with daily behaviors such as eating and sleeping
    d. Very severe – I did not feel safe going to school

67. Did you know who did it to you?
    a. Friend
    b. Ex-friend
    c. Ex boyfriend or girlfriend
    d. Someone else from school
    e. Someone I met online
    f. Stranger
    g. Other, please specify: _____

68. Was it by someone of the same gender?
    Yes *No* *Both boys and girls were involved* *Not sure*

69. Was it by someone who had more power or strength than you? (this could be because the person was bigger than you, had more friends, was more popular, or had more power than you in another way)
    Yes *No* *Not sure*

70. Has this person bullied you in person before?
    Yes *No*

71. How did you feel? (please choose the strongest emotion that you felt)
    a. I was not bothered by it
    b. Sad
    c. Angry
    d. Upset
    e. Frustrated
    f. Helpless

72. What was the ***FIRST*** thing you did in response to being cyber bullied?
    a. Turned off my computer/cell phone
    b. Left the website
    c. Did nothing (tried to ignore it)
    d. Blocked the bully
    e. Changed my screen name or e-mail address
    f. Told a friend
    g. Told an adult at school
    h. Told an adult at home
    i. Called the police
    j. Got revenge

k. Confronted the person (told them to stop)
l. Made a joke about it
m. Other, please specify: _____

73. How effective was this response in reducing the bullying?

1	2	3	4	5	6	7
Not very effective			*Somewhat effective*			*Very effective*

74. How effective was this response in making you feel better?

1	2	3	4	5	6	7
Not very effective			*Somewhat effective*			*Very effective*

75. What happened when you ***TOLD A PEER*** about your experience?
a. I did not tell a peer
b. They listened to me
c. They gave me advice
d. They told me to ignore it
e. They told me it was my fault
f. They told me to deal with it on my own
g. They told me to tell an adult
h. They made fun of me
i. They told the bully to stop
j. They spent time with me
k. Other, please specify: _____

76. How effective was this advice in reducing the bullying?

1	2	3	4	5	6	7
Not very effective			*Somewhat effective*			*Very effective*

77. How effective was this advice in making you feel better?

1	2	3	4	5	6	7
Not very effective			*Somewhat effective*			*Very effective*

78. What happened when you ***TOLD AN ADULT*** about your experience?
a. I did not tell an adult
b. They listened to me
c. They gave me advice
d. They told me to ignore it
e. They told me it was my fault
f. They told me to deal with it on my own
g. They told me to stop tattling
h. They said they would talk to the other student(s) involved
i. Other, please specify: _____

79. How effective was this advice in reducing the bullying?

1	2	3	4	5	6	7
Not very effective			*Somewhat effective*			*Very effective*

80. How effective was this advice in making you feel better?

1	2	3	4	5	6	7
Not very effective			*Somewhat effective*			*Very effective*

81. How many different strategies (***listed in question 72***) did you use to try to stop the cyber bullying?
____

EXPERIENCE(S) AS A WITNESS TO CYBER BULLYING

82. How many times have you seen or heard about someone that you know being cyber bullied?

1	2	3	4	5
Never	*Once or twice*	*A few times*	*Many times*	*Every day*

83. How many times have you seen or heard about your friends' cyber bullying someone?

1	2	3	4	5
Never	*Once or twice*	*A few times*	*Many times*	*Every day*

84. What do ***you usually do*** when you witness cyber bullying?
    a. I have not witnessed cyber bullying
    b. Do nothing
    c. Join in on the bullying
    d. I intervene and try to help the victim
    e. I send/forward the information to others
    f. I tell an adult

85. When there are many witnesses to cyber bullying, do you feel that you do not need to help the victim because someone else will?

1	2	3	4	5	6	7
Definitely not			*Possibly*			*Definitely yes*

86. Why do you think some kids who witness cyber bullying are reluctant to help the victim?

    _____

    _____

THOUGHTS ON CYBER BULLYING

87. Do you believe the same students who are bullied via traditional means (i.e., physical or verbal bullying) are also cyber bullied?

1	2	3	4	5	6	7
Definitely not			*Possibly*			*Definitely yes*

88. Is cyber bullying more stressful if it is committed by a friend?

1	2	3	4	5	6	7
Definitely not			*Possibly*			*Definitely yes*

89. Do teachers, principals, or others at school talk to you about cyber bullying?

1	2	3	4	5
Never	*Once or twice*	*A few times*	*Many times*	*Every day*

90. Do your parents talk to you about cyber bullying?

1	2	3	4	5
Never	*Once or twice*	*A few times*	*Many times*	*Every day*

<u>SOCIAL SUPPORT:</u> We are interested in the amount of social support you have. Please tell us how well each statement applies to you by circling one of the items in the following scale:

1 = Very Strongly Disagree
2 = Strongly Disagree
3 = Mildly Disagree
4 = Neutral
5 = Mildly Agree
6 = Strongly Agree
7 = Very Strongly Agree

91. My family really tries to help me.
1 2 3 4 5 6 7

92. I get the emotional support I need from my family.
1 2 3 4 5 6 7

93. My friends really try to help me.
1 2 3 4 5 6 7

94. I can count on my friends when things go wrong.
1 2 3 4 5 6 7

95. I can talk about my problems with my family.
1 2 3 4 5 6 7

96. I have friends with whom I can share my joys and sorrows.
1 2 3 4 5 6 7

97. My family is willing to help me make decisions.
1 2 3 4 5 6 7

98. I can talk about my problems with my friends.
1 2 3 4 5 6 7

<u>MOOD:</u> For each statement below, please circle the number that best represents how you have been feeling in the *<u>past week:</u>*

0 = Did not apply to me
1 = Applied to me to some degree or some of the time
2 = Applied to me a considerable degree or good part of the time
3 = Applied to me very much or most of the time

99. I was aware of dryness of my mouth.
0 1 2 3

100. I couldn't seem to experience any positive feeling at all.
0 1 2 3

101. I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion).
0 1 2 3

102. I found it difficult to work up the initiative to do things.
0 1 2 3

103. I experienced trembling (e.g., in the hands).
0 1 2 3

104. I was worried about situations in which I might panic and make a fool of myself.
0 1 2 3

105. I felt that I had nothing to look forward to.
0 1 2 3

106. I felt down-hearted and blue.
0 1 2 3

107. I felt I was close to panic.
0 1 2 3

108. I was unable to become enthusiastic about anything.
0 1 2 3

109. I felt I wasn't worth much as a person.
0 1 2 3

110. I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat).
0 1 2 3

111. I felt scared without any good reason.
0 1 2 3

112. I felt that life was meaningless.
0 1 2 3

Appendix B
Debriefing

What is cyber bullying?

- Cyber bullying is when someone deliberately and repeatedly harasses, mistreats, or makes fun of another person online or while using cell phones or other electronic devices.
    - A number of mediums can be used for cyber bullying including: e-mail, instant messaging, text/picture/video messaging, chat rooms, social networking sites, blogs, discussion forums, and online gaming

"Think before you type"

How common is cyber bullying?

- Cyber bullying appears to be most common during the middle schools years (i.e., grades 7 and 8) but can also affect other age groups such as adults
- Both boys and girls appear to be involved in cyber bullying but it is unclear which gender is more involved
- Approximately 1 in 4 youth are involved in cyber bullying as victims or bullies
- More than 50% of youth report witnessing cyber bullying

"How would you feel if those things were posted about you?"

Impact of cyber bullying?

- Victims of cyber bullying often assume something is wrong with them and experience feelings of sadness, frustration, anger, loneliness, and depression
    - These effects may be worse for the victim because messages, pictures, videos can be sent/posted at any time of the day or night, they may not know who is cyber bullying them, and there may be an endless number of individuals who can witness the situation and participate

How to respond to cyber bullying?

- If you are a victim of cyber bullying, your response may vary based upon the type/method of cyber bullying and the perceived seriousness of the situation
    - It is always recommended to report the incident to an adult (i.e., teacher, parent, etc.)
- Your role as a witness of cyber bullying is very important!
    - Your behavior can support the victim's assumption that it is their fault or can send the message to the bully that they are the one with the problem
    - You can help to stop the cyber bullying by reporting the incident to an adult and standing up for the victim

"Don't be part of the problem, be part of the solution!"

Helpful resources and websites

- http://www.cyberbullying.us/
- http://www.stopcyberbullying.org/
- http://kidshealth.org/parent/positive/talk/cyberbullying.html
- Kids Help Phone 1-800-668-6868

I just want to thank you for participating in this study. The purpose of the research is to learn about the social reactions to a youth's experience with cyber bullying. The personal story that you read is ***NOT*** *real but it represents a realistic account of what youth may experience when they are dealing with cyber bullying.*

From a 14 year old girl from New Jersey: ***Being bullied besides over the Internet is worse. It's torment and hurts. They say 'sticks and stones may break my bones, but words will never hurt me.' That quote is a lie and I don't believe in it. Sticks and stones may cause nasty cuts and scars, but those cuts and scars will heal. Insultive words hurt and sometimes take forever to***

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