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Investigating Protective Factors for Victims of Cyberbullying

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Investigating Protective Factors for Victims of Cyberbullying

by

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Abstract

This study is the first to investigate personal, psychological, and school-based outcomes associated with cyberbullying victimization. Furthermore, this study investigated social and personal factors (i.e., perceived social support and developmental assets) that moderate the relationship between victimization and negative outcomes (i.e., self-esteem, life satisfaction, school connectedness). The sample consisted of 165 Canadian adolescents aged 12 to 18 years. The prevalence of cyberbullying victimization was 28.5% (n = 47), with males reporting higher rates of victimization than females. Results suggest that victimization was significantly negatively associated with all outcomes under investigation. Although perceived social support did not moderate the relationship between victimization and negative outcomes, developmental assets were found to moderate the relationship between victimization and self-esteem. Findings suggest that online aggression continues to be a prominent issue in today's society and the assessment of and prevention and intervention initiatives for cyberbullying need to consider factors that protect adolescents.

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Chapter 1: Introduction

Cyberbullying cases have ascended to the forefront of the public agenda due to the overwhelming number of incidents made public through media attention (Tokunaga, 2010; Ubertini, 2011). Societal concerns were raised when several children and adolescents reported experiencing debilitating health and psychological outcomes after being exposed to aggression through electronic devices (Tokunaga, 2010). In particular, the story of Megan Meier, a 13-year-old victim of cyberbullying, gained enormous media attention when she committed suicide due to the constant harassment she was experiencing online. Megan was harassed through a social networking website by the mother of a former friend (Ruedy, 2008). Even more disturbing, the perpetrator created a fake identity to correspond with and gain information about Megan online. The perpetrator then used the gathered information to humiliate Megan (Tokunaga, 2010). Numerous accounts of cyberbullying have been featured and highlighted in the media and have proven to caregivers, educators, clinicians, and politicians that cyberbullying has no boundaries, and it is a growing social concern due to the advances in the accessibility children and adolescents have to technology (Dempsey, Sulkowski, Dempsey, & Storch 2011). Although cyberbullying research is becoming increasingly available, the underlying basis of cyberbullying can be better understood by familiarizing one's self with a form of aggression – traditional bullying – that has been discussed extensively in the psychological literature and has been present in our society for far too long.

Bullying

Bullying is reportedly the most prevalent form of school violence (Swearer & Doll, 2001). A considerable amount of research has suggested that bullying victimization is one of the most distressing experiences a child or adolescent can go through (Brunstein, Marrocco,

Kleinman, Schonfeld, & Gould, 2007; Fosse & Holen, 2006; Frisen, Jonsson, & Persson, 2007; Smith, Cousins, & Stewart, 2005). The most widely known definition of bullying was developed by a prominent researcher in the area of traditional bullying, Dan Olweus (1993). He identified three components of bullying that are used to operationally define this form of aggression. First, the act must involve repeated physical or verbal negative actions that are intended to harm another, often in a systematic way. Second, bullying involves a power differential between the bully and his or her victim, where the latter is unable to stop such actions. Third, bullying causes the victim to feel physically or psychologically hurt, which is likened to a form of maltreatment or cruelty (Dake, Price, & Telljohann, 2003; McGrath, 2007; Olweus, 1993).

Over the years, researchers have identified specific labels for individuals who are involved in, or exposed to, bullying including, bullies, victims, and bully-victims. Specifically, children and adolescents are labeled as bullies if they report bullying others two or three times a month or more, and report being bullied no more than once or twice a month (Craig et al., 2009). Likewise, children and adolescents are referred to as victims if they report being bullied two or three times a month or more, and bully others no more than once or twice a month (Craig et al., 2009). On the contrary, bully-victims are those who bully and are bullied two or three times a month or more (Craig et al., 2009).

There are several forms of traditional bullying which include verbal attacks (e.g., name calling, threatening and taunting, insulting, and making racial or sexual comments), social isolation (e.g., silent treatment, manipulating friendships, ostracizing, and spreading rumors), and physical assaults (e.g., hitting, kicking, shoving) (Ma, 2002; Pepler et al., 2006; Public Safety Canada, 2010). Moreover, traditional bullying can be categorized as either direct or indirect (Smith et al., 2005). In particular, direct bullying involves bodily and verbal attacks, which harm

individuals through physical or psychological damage (Craig, 1998). On the other hand, indirect bullying includes social bullying, and can be defined as covert actions intended to exclude and marginalize bullied individuals (Smith et al., 2005). Examples of indirect bullying include spreading rumors and excluding individuals from groups (Smith et al., 2005). Despite the form and category of bullying, this type of aggression is considered to be a devastating social problem (Pepler et al., 2006), and pertains to any type of behaviour that either threatens to cause, or intentionally causes, damage to peer relationships (Hawker & Boulton, 2000).

It has been documented through past and present research that bullying among children and adolescents is a widespread and international problem (Craig et al., 2009). For instance, in a meta-analysis of bullying studies conducted worldwide, findings suggest that the prevalence rates of bullying occurring once a week or more can range from 8% to 24% across countries (Fekkes, Pijpers, Fredriks, Vogels, & Verloove-Vanhorick, 2006). Studies investigating prevalence rates have been conducted in Norway, Sweden, Denmark, Finland, Germany, Spain, Italy, England, Scotland, Ireland, Australia, Japan, Canada, Lithuania, Africa, the United Kingdom, and the United States (Dake et al., 2003; Due et al., 2005). Interestingly, rates of bullying differ significantly depending on the geographic region (Dake et al., 2003; Due et al., 2005). For instance, Dake and colleagues (2003) completed an extensive literature review on the prevalence of bullying victimization among school-aged children. It was found that prevalence rates of bullying victimization among children in grades 1 through 5, ranged from 11.3% in Finland to 49.8% in Ireland. Furthermore, victimization among children in grades 6 through 8 ranged from 4.7% in Finland to 27% in the United Kingdom, whereas rates among youth in grades 9 through 12 ranged from 4.2% in a large sample of British students to 25% in a small sample of Australian students (Dake et al., 2003). Similarly, Due and colleagues (2005)

completed a large scale study of bullying victimization among youth ages 11, 13, and 15 years old. As previously discussed, significant differences were found in terms of the prevalence of bullying victimization, as rates ranged from 5.1% in Sweden to 38.2% in Lithuania (Due et al., 2005).

As for Canadian rates of bullying victimization, the World Health Organization (WHO) Health Behaviours in School-Aged Children (HBSC) survey revealed considerably higher rates of victimization compared to youth in many other countries. Specifically, Canada ranked a disappointing 9th out of 35 counties on measures of bullying victimization (Craig, Pepler, & Blais, 2007). In terms of sex differences in Canada, it has been suggested that 34% of boys and 27% of girls aged 11 to 15 years experience bullying victimization (Craig & Pepler, 2003). Due to its widespread nature and frequency, it is quite evident that the topic of bullying deserves significant attention and sustained research efforts.

Consequences of Bullying

Brunstein and colleagues (2007) reported that children and adolescents who are exposed to bullying, whether as a perpetrator or victim, are more likely to experience adverse cognitive, psychological, and behavioural problems compared to those who are not exposed to this form of aggression. Past and present bullying literature has identified a plethora of negative outcomes that are associated with traditional bullying. For instance, it has been reported that children and adolescents who experience bullying, report heightened levels of anxiety, depression, loneliness, as well as impaired self-esteem (Delfabbro et al., 2006; Hawker & Boulton, 2000; O'Moore & Kirkham, 2001; Sabuncuoglu et al., 2006; Wilkins-Shurmer et al., 2003). In addition, higher rates of health-related symptoms have been reported for those who experience bullying, such as headaches, stomach aches, bedwetting, suicide ideation, and poor sleeping habits (Fekkes et al.,

2006; Hawker & Boulton, 2000; Wilkins-Shurmer et al., 2003). Research has also shown that bullying can have serious future implications, as it has been suggested that those who experience bullying report poorer sexual relationships as adults, among other social and emotional difficulties (McCarter, Shao, & Huang, 2006; Smith et al., 2005; Srabstein, 2006).

Cyberbullying

As illustrated by the literature, traditional bullying does not discriminate between sex, age, grade, or geographic region. Bullying continues to be a serious cause for concern, and researchers are still unveiling a host of negative outcomes that are associated with this type of peer aggression. However, research has suggested that advancements in technology has created vulnerable and susceptible means for such negative behaviours as bullying to take place online, known as cyberbullying (David-Ferdon & Hertz, 2007). The following section will begin by discussing the increased technology use in today's society. Following, an extensive review of cyberbullying will be presented that will include: the definition of cyberbullying, prevalence rates, developmental characteristics of victims, outcomes of cyberbullying, and potential protective factors associated with this type of aggression.

Increased Technology Use

With the increased use of and accessibility to mass media, technology has transformed the lives of many children and adolescents by becoming integrated into their everyday routines (Rivers & Noret, 2010), and has thus created a new avenue by which children and youth can experience bullying. According to Statistics Canada (2004), of the over one million computers within Canadian schools, 90% have internet access. Furthermore, approximately 94% of Canadian adolescents have access to the internet from home (Media Awareness Network, 2005). In addition, 86% of students from grade 4 to grade 11 have a personal email account, 37% have

their own computer with internet access (with this number increasing to 57% by grade 11), 23% have their own cellular phone (with this number increasing to 47% in grade 11), and 30% are members of a social networking website (e.g., Facebook) (Media Awareness Network, 2005). Interestingly, it has been reported that adolescents are more likely to use online forms of communication to socialize with peers rather than face-to-face communication (Statistics Canada, 2011). For adolescents, technology and the internet are valuable means of communication and social interaction with their peers (Guan & Subrahmanyam, 2009), and this is evident internationally.

The U.S. Census Bureau (2009), reported that the number of American households with internet access has increased 27.2% since 2000. Additionally, according to the study, 76% of children aged 3 to 17 have access to a computer in their primary residence. Furthermore, the Office for National Statistics reported that 98% of children and adolescents between the ages of 5 and 18 had regular access to a computer (Rivers & Noret, 2010), and computers have become increasingly prominent in today's school systems. For instance, it has been reported that 90% of children and adolescents have access to and use a computer at school (Ubertini, 2011).

The majority of cellular devices are now equipped for individuals to access social networking websites, informational websites, as well as instant messaging. Social networking websites such as *Facebook* and *Twitter* have created shortcut applications on cell phones for eased accessibility. Furthermore, in a study conducted in the United Kingdom, it was reported that over 97% of participants between the ages of 12 and 16 owned a cellular device (Rivers & Noret, 2010).

It is undeniable that the increased use of technology has a number of benefits for individuals in today's society. For instance, the use of the internet and computers has created a

domain of discovery for children and adolescents. The ability to gain information, spread ideas, play online games, and stay in communication via social networking websites with friends and family are only a few of the activities one can partake in (Dempsey, Sulkowski, Dempsey, & Storch 2011; Gross, Juvonen, & Gable, 2002; Shaw & Gant, 2002). However, attention has also been given to the risks associated with internet use. Research in this domain includes cyber-stalking (Seto, 2002), online sexual predators (Dombrowski, Lemasney, Ahia, & Dickson, 2004), and cyberbullying (Bhat, 2008; David-Ferdon & Hertz, 2007), all of which jeopardize the safety of children and adolescents (Tokunaga, 2010). Interestingly, it has been suggested that the accessibility of the internet and cellular devices rose from 745,000 to 1 million in 2005 (Lee, 2005), therefore it is predicted that the number of incidents of cyberbullying continues to be on the rise (Campbell, 2005).

Research has also investigated the degree to which children and adolescents are supervised during online activities. In a study conducted by Wang, Bianchi, and Raley (2005), it was discovered that only 38% of youth are supervised while engaging in online activities. Alarmingly, in a study conducted by Ybarra and colleagues (2006), it was found that children and adolescents tend to underestimate the risks associated with the online world and often self-disclose to others more frequently than they do offline (Dempsey, Sulkowski, Dempsey, & Storch, 2011). Both scholarly literature and popular media (Tokunaga, 2010) have demonstrated that with the high accessibility of cellular devices and computers, lack of caregiver supervision, and increased online self-disclosure, a new medium for aggression has been created, known as cyberbullying.

A number of studies have been conducted investigating the relationship between one's internet use and cyberbullying victimization (Juvonen & Gross, 2008; Patchin & Hinduja, 2006;

Ybarra, 2004). For instance, Ybarra (2004) reported that internet use is the most important predictor of online victimization. This finding was further supported by Patchin and Hinduja (2006) who also reported that individuals who spent more time engaging in online activities were more often victims of cyberbullying. Importantly, Juvonen and Gross (2008) reported that the likelihood of being victimized online increased with the use of instant messaging (e.g. MSN Messenger) and webcams. It is therefore supported by the literature that the amount of time spent on a computer and/or using the internet plays a critical role in cyberbullying victimization.

Past research has revealed significant findings regarding internet use and cyberbullying victimization (Juvonen & Gross, 2008; Ybarra, 2004). As previously discussed, it has been suggested that internet use and the amount of time one spends engaging in online activities is a strong determinant of cyberbullying victimization. However, due to the ever-changing methods of communicating technologically, the present study intends to extend research in this area by including adolescents' time spent on social networking websites and text messaging as potentially impacting the frequency of cyberbullying victimization one may experience. Thus, the first research question that is explored in the present study will be, "Is the amount of time spent engaging in online activities related to the frequency of cyberbullying victimization one experiences?"

Operational Definition of Cyberbullying

Cyberbullying is defined as "an aggressive intentional act carried out by a group or individual, using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend him or herself" (Smith et al., 2008, p. 376). The term cyberbullying is a broad term and is related to similar constructs such as online bullying, online aggression, electronic bullying, cyber aggression, and internet harassment (Tokunaga, 2010). In accordance

with the definition put forth by Dan Olweus (1993) for traditional bullying, it has been suggested that in order for an incident to be classified as cyberbullying, three criteria must be met: the act must be intentional, occur more than once, and be psychologically distressing to the individual (DeHue, Bolman, & Vollink, 2008). Examples of cyberbullying include sending harassing or threatening emails or text messages, constantly contacting an individual who does not want to be contacted, and posting rumors or lies about a person on a social networking website (SNW).

Much of the current cyberbullying literature stems from past research investigating traditional bullying. Although some have argued that traditional bullying and cyberbullying share similar underlying motives (Olweus, 2003), a number of distinct differences between traditional bullying and cyberbullying have been highlighted in the literature. For instance, one of the main differences between cyberbullying and traditional bullying is the lack of boundaries for cyberbullies. Moreover, cyberbullies are able to extend their aggression beyond the school grounds and impact the lives of victims at any time of day and in any environment (Patchin & Hinduja, 2006; Tokunaga, 2010). This is quite concerning, as it was recently reported that as little as 9% of youth who are victimized online report the aggressive acts to others (Patchin & Hinduja, 2006).

In a study conducted by the Massachusetts Aggression Reduction Center (MARC; Englander, 2006; Tokunaga, 2010), it was demonstrated that cyberbullying differs from traditional bullying in that individuals who would most likely partake in cyberbullying would not partake in traditional bullying. It was suggested that this was due to the increased anonymity of aggressive acts online. Thus, the covert nature of cyberbullying makes this type of aggressive act easily unnoticed by teachers and/or guardians who are in the presence of those being victimized (Tokunaga, 2010). Furthermore, while outlining the differences between

cyberbullying and traditional bullying, Englander and Muldowney (2007) suggested that the following factors are true of cyberbullying: it is a heavily opportunistic act as there is no physical interaction between the perpetrator and his or her victim, requires minimal planning, and the threat of being caught is unlikely.

Prevalence of Cyberbullying

A number of studies have attempted to identify the prevalence rate of this type of aggression among children and adolescents. For instance, in a study conducted by Juvoven and Gross (2008), it was found that approximately 72% of the 12 to 17 year olds in their sample had encountered cyberbullying at least once in their lifetime. Furthermore, in an online study, over 32% of males and over 36% of females reported that they had been victims of cyberbullying (Hinduja & Patchin, 2007). Tokunaga (2010) created a meta-synthesis of today's most prominent cyberbullying studies. Overall, it was found that approximately 20-40% of youth report being a victim of cyberbullying (Aricak et al., 2008; DeHue et al., 2008; Hinduja & Patchin, 2008; Li, 2006, 2007, 2008; Patchin & Hinduja, 2006; Smith et al., 2008; Topçu, Erdur-Baker, & Çapa-Aydin, 2008). Additionally, in a Canadian study conducted by Li (2007), it was found that 24.9% of a sample of 177 grade 7 students had been victims of cyberbullying. Similarly, Patchin and Hinduja (2006) conducted a study investigating the types of cyberbullying experiences among American youth and found that 29.4% of their sample had been victims of cyberbullying. Interestingly, in the latter study, 21.9% of the sample had been bullied in a chat room, 13.5% had been bullied via computer instant message, 12.8% via email, 2.9% via bulletin board, and 2.1% via mobile phone text messaging.

Developmental Characteristics Associated with Cyberbullying Victimization

As aforementioned, cyberbullying impacts the lives of many youth and the above prevalence rates are a cause for concern. Therefore, an area of research that deserves considerable attention is the identification of developmental characteristics that may increase the likelihood of exposure to cyberbullying for children and adolescents. A number of researchers have suggested that those who are unable to defend themselves and that display timid behaviour tend to be at an increased risk of experiencing victimization of all forms (Fekkes et al., 2006; Hanish & Guerra, 2000; Juvonen, Graham, & Schuster, 2003; Nansel et al., 2001). Moreover, factors including: (a) being physically unattractive, weak, and/or smaller than peers, (b) displaying withdrawn or submissive behaviours, (c) requiring specialized education, (d) having a Learning Disability, and (e) being easily influenced by peers, can impact the degree of victimization some children and adolescents face (Frisen et al., 2007; Hanish & Guerra, 2000; Van Cleave & Davis, 2006; Walden & Beran, 2010).

Sex Differences. Research has suggested that there is a relationship between sex and social interactions, and these interactions can be considered both positive and negative. For instance, Craig and Pepler (2003) suggested that socialization among children tends to be quite segregated such that girls often socialize predominantly with girls, and boys often socialize predominantly with boys. Research has also found that boys are much more likely to engage in physical activities, whereas girls are more likely to engage in intimate and quiet activities (Craig & Pepler, 2003). Therefore, it can be expected that boys and girls experience victimization differently.

In terms of cyberbullying victimization, the topic of sex differences has produced some of the most inconsistent findings surrounding this type of aggression. For instance, some authors

(e.g., Hinduja & Patchin, 2008; Li, 2006; Patchin & Hinduja, 2006; Slonje & Smith, 2008) have reported that there are equal risk factors for boys and girls of experiencing victimization, whereas others (e.g., Li, 2007) have reported that girls are victimized online more often than boys. For example, in the latter study, it was reported that almost 60% of cyberbullying victims are girls (Li, 2007). A host of researchers have supported the notion that females are more likely to be victimized online rather than through traditional bullying, however, males are more likely to be victims of both forms of bullying (Hinduja & Patchin, 2008; Li, 2006; Smith et al., 2008; Ybarra & Mitchell, 2004). Due to the mixed findings in the cyberbullying literature, there is a desperate need for continued research in the area of sex differences and cyberbullying victimization. In turn, this will aid in our overall understanding of those who are at greatest risk of experiencing this type of aggression. Furthermore, subsequent interventions must tailor to both males and females as there are discernable differences from such victimization.

Age/Grade Differences. A number of studies have supported the notion that cyberbullying victimization increases with age (Kowalski & Limber, 2007; Patchin & Hinduja, 2006); however, others have found that cyberbullying victimization decreases with age (Slonje & Smith, 2008). On the contrary, Smith and colleagues (2008) reported that there is no relationship between age and cyberbullying victimization. As evidenced by the literature pertaining to sex differences and cyberbullying victimization, studies that have investigated the relationship between age and/or grade differences and cyberbullying victimization have produced inconsistent results. For instance, some researchers suggest that children aged 11 to 16 years tend to experience online bullying at equal rates (Beran & Li, 2005; Smith et al., 2008). Researchers have also suggested that bullying behaviour, in general, tends to be most prevalent in middle school and then decreases with age (Goldbaum, Craig, Pepler, & Connolly, 2007).

Moreover, Wang, Iannotti, and Nansel (2009) conducted a study investigating various developmental characteristics of victims of peer aggression and found that cyberbullying victimization did not vary by grade.

There remains to be uncertainty regarding specific developmental characteristics of those who experience cyberbullying victimization. Identifying the sex, grade and/or age at which cyberbullying victimization is most prevalent would not only provide increased understanding of this type of aggression, but it would also offer useful information to aid in the development and implementation of school-wide programs targeting this demographic. Thus, the present study intends to explore and identify the developmental characteristics of youth who experience cyberbullying victimization most frequently. The second research question that will be explored in the present study is, "Are there sex, grade, and/or age differences for those who experience cyberbullying victimization?"

Outcomes Associated with Cyberbullying Victimization

There is a plethora of research available that highlights the dangerous implications for victims of cyberbullying (Ubertini, 2011) and outlines the various outcomes for these individuals. For instance, it has been reported that cyberbullying has been linked to multiple maladaptive emotional, psychological, and behavioural outcomes, including depression, school problems, and delinquent behaviours (Hinduja & Patchin, 2007). Furthermore, it has been suggested that the outcomes of cyberbullying victimization are comparable to, or worse than, those experienced following traditional bullying victimization including lower self-esteem and higher levels of depression (DeHue, Bolman, & Vollink, 2008; Ybarra, Mitchell, Wolak, & Finkelhor, 2006). Moreover, it has been supported in the literature that the outcome of depression depends heavily on the degree of cyberbullying victimization one experiences

(Didden et al., 2009; Ybarra, 2004). Researchers have also studied the development of psychosocial problems and negative moods such as social anxiety in victims of cyberbullying (Juvonen & Gross, 2008).

There are a host of other outcomes that have been the topic of research in the field of cyberbullying. These include, but are not limited to, emotional distress, anger and sadness toward the perpetrator, detachment, externalized hostility, and delinquency (Patchin & Hinduja, 2006; Tokunaga, 2010; Topçu, Erdur-Baker, & Çapa-Aydin, 2008; Ybarra, 2004). A concerning finding was reported by Ybarra, Diener-West, and Leaf (2007) who found that victims of cyberbullying were eight times more likely to bring a weapon to school and have increased frequencies of detentions, suspensions, and truancies than their non-victimized peers. In line with the research linking cyberbullying victimization to school behavioural problems, Hinduja and Patchin (2007) reported that victims of cyberbullying showed increased delinquency such as drinking alcohol and cheating on tests.

Research has clearly demonstrated that children and adolescents who are victimized online are much more likely to develop psychological and psychosocial symptoms compared to their non-victimized counterparts (Ybarra et al., 2007). In particular, researchers have indicated that children and adolescents who experience cyberbullying typically report severe depressive symptoms, life challenges, interpersonal victimization, social skills deficits, and significant distress (DeHue et al., 2008; Ybarra et al., 2007). As highlighted by the literature, the psychological, social, and physical outcomes associated with cyberbullying victimization emphasize the seriousness of this type of aggression and the critical need to expand our understanding on the lifelong detriments these children and adolescents may face. The following

section will review specific outcomes associated with peer victimization such as, self-esteem, life satisfaction, and school connectedness.

Self-Esteem. The onset of adolescence is a critical time in one's life for the development of personal identity (Livingstone, 2008). In fact, Patchin and Hinduja (2010) have suggested that during this time, the process of identity formation is greatly influenced by one's social environment. It is therefore believed that youth opt to seek behaviours and situations that aid in the development of positive self-worth and avoid such behaviours and situations that make them feel bad about whom they are (Patchin & Hinduja, 2010). Moreover, this relates to a child's awareness and recognition of his or her changing self and plays a pivotal role in directing his or her personal and even professional growth trajectory (Twenge & Campbell, 2001).

As mentioned earlier, there is an abundance of research supporting the notion that the outcomes associated with cyberbullying are very similar to those associated with traditional bullying, such as lower academic performance, higher levels of stress, depression, and low self-esteem (O'Moore & Kirkham, 2001; Ybarra, 2004). In addition, there is a growing body of research that demonstrates the negative effects of victimization on overall youth development (Espelage & Swearer, 2003; Haynie et al., 2001; Juvonen, Graham, & Schuster, 2003; Nansel et al., 2001). In particular, one relationship that has received significant attention is the effect of traditional bullying on one's self-esteem (Patchin & Hinduja, 2010). Rosenberg asserts that self-esteem is a positive or negative attitude towards one's self (Olweus, 1993; Rosenberg, 1965). Thus, self-esteem can be defined as one's reflection and judgments about him or herself and one's appraisal of their attributes (Civitci, 2010). The above conceptualizations emphasize that self-esteem is an individual's perception (Patchin & Hinduja, 2010). That is, it is one's belief as to their personal value and may be impacted by various interactions and participation in the

social world; a world of which is often tainted by interpersonal conflicts that may lead to behaviour such as peer aggression (Patchin & Hinduja, 2010).

In regards to traditional bullying literature, consistent findings have been reported that support the relationship between bullying and self-esteem (Patchin & Hinduja, 2010). Specifically, a considerable amount of studies have found that victims of bullying tend to have lower self-esteem than their non-victimized peers (Beaty & Alexeyev, 2008; Egan & Perry, 1998; Glover, Gough, Johnson, & Cartwright, 2000; Wild, Flisher, Bhana, & Carl, 2004). However, scholars have continued to hypothesize the directionality of such relationship (Egan & Perry, 1998).

Patchin and Hinduja (2010) conducted a large scale study (N = 1963) that examined the relationship between cyberbullying and self-esteem. Even after controlling for various developmental variables, Patchin and Hinduja (2010) found that cyberbullying victimization was associated with significantly lower levels of self-esteem when compared to non-victimized youth. Other studies have also suggested that there is a significant relationship between cyberbullying victimization and self-esteem, as depreciated levels of self-esteem are often reported by those who experience cyberbullying (Didden et al., 2009; Katzer, Fetchenhauer, & Belschak, 2009; Tokunaga, 2010).

The importance of one's level of self-esteem is strengthened by research findings that suggest one's perception of their self-worth can have a detrimental impact on other facets of their life. For instance, DuBois, Felner, Brand, and George (1999) reported that depression, anxiety, delinquency, and learning problems are all outcomes that can be directly linked to the amount of self-esteem one possesses. In addition, relationships have been identified between self-esteem

and academic achievement, absenteeism, poor health, criminal behaviour, and other problematic consequences (Zimmerman, Copeland, Shope, & Dielman, 1997).

Due to the number of areas in one's life that can be negatively impacted by lower levels of self-esteem, it is not surprising that this topic is so widely researched and prevalent in today's literature (Zhang & Leung, 2002). Researchers have distinguished a relationship between cyberbullying victimization and the outcome of decreased self-esteem. However, the present study intends to add to the literature in this area, as the third research question explored will be, "Is there a relationship between cyberbullying victimization and self-reported self-esteem?"

Life Satisfaction. Life satisfaction has been studied as an element of subjective well-being and can be defined as one's cognitive evaluation of his or her quality of life (Diener, Suh, Lucas, & Smith, 1999). Past studies have highlighted the importance of life satisfaction for children and adolescents and it has been demonstrated that those who report high levels of overall life satisfaction, also report more social support, self-efficacy, less behavioural problems, and less neuroticism than those with average levels of life satisfaction (Suldo & Huebner, 2006). Moreover, children and adolescents who report high levels of life satisfaction show no evidence of psychopathology (Suldo & Huebner, 2006). Therefore, life satisfaction is beneficial to youth and leads to positive development and functioning (Suldo & Huebner, 2006). Gilman and Huebner (2006) reported that adolescents with high life satisfaction scored high on positive behavioural and psychological measures which included positive peer and parental relationships and higher academic performance compared to adolescents with low life satisfaction.

Researchers have identified a number of factors that can lead to high levels of life satisfaction. Specifically, Suldo and Huebner (2004) have suggested that adolescents who reported their parents as engaging in authoritative parenting and those who have high levels of

perceived social support from their parents express overall life satisfaction. Moreover, Suldo and Huebner (2004) suggested that adolescents who report support from close friends, classmates, and teachers have higher life satisfaction. There have been a number of studies conducted on children and adolescents' life satisfaction and the importance of this construct for positive functioning. Among those mentioned previously, factors such as living with both biological parents (Antaramian, Huebner, & Valois, 2008), sex, and age (Goldbeck, Schmitz, Besier, Herschbach, & Henrich, 2007) have all been considered important determinants to the degree of overall life satisfaction one has.

In terms of life satisfaction and bullying behaviour, it has been suggested that those who experience higher levels of stressful life events report lower levels of life satisfaction, as well as increased levels of internalizing and externalizing behaviours (McKnight, Huebner, & Suldo, 2002). Importantly, Suldo and Huebner (2004) suggested that "the experience of life satisfaction may serve as a significant psychological strength for adolescents" (p. 99).

Although researchers (You et al., 2008) have explored the relationship between traditional bullying victimization and life satisfaction, to date, no known studies have extended such research into the domain of cyberbullying victimization. Therefore, the present study will be the first to explore this relationship, which will in turn increase our overall understanding of the psychological impact of this type of aggression. The fourth research question that will be explored in the present study will be, "Is there a relationship between cyberbullying victimization and self-reported life satisfaction?"

School Connectedness. Over the past decade, research has demonstrated that the feeling of school connectedness for children and adolescents is very important for promoting positive youth development (McNeely, Nonnemaker, & Blum, 2002; Resnick et al., 1997). The term school

connectedness can be defined as "the belief by students that adults in the school care about their learning as well as about them as individuals" (CDC, 2009 p. 3). A number of underlying factors including, positive peer relationships, perceptions of school safety, feelings of school belongingness, and teacher support are all related to the concept of school connectedness and have been identified as promoting positive youth development (O'Brennan & Furlong, 2010).

Researchers have outlined the benefits of school connectedness such as, an increased ability to form close relationships with those in the school community, higher academic performance (Anderman, 2002; Rostosky, Owens, Zimmerman, & Riggle, 2003), healthier social-emotional functioning (Appelton, Christenson, & Furlong, 2008), and less involvement in delinquent behaviours (Rice, Kang, Weaver, & Howell, 2008). For example, it has been suggested that youth who feel more connected to their school are less likely to smoke cigarettes, engage in drug use, become sexually active at a young age, and be emotionally distressed than their less connected peers (Resnick et al., 1997; Taylor-Seehafer, & Rew, 2000).

As confirmed by the literature, there are a breadth of benefits and positive outcomes for those who have a strong sense of school connectedness. Although there has been no research conducted investigating the relationship between cyberbullying victimization and school connectedness specifically, Eisenberg, Neumark-Sztainer, and Perry (2003) investigated the relationship between traditional peer harassment (e.g., spreading rumors, name calling, public ridicule) and school connectedness. In their study, students in grades 7 to 12 reported on the frequency of peer harassment they experienced and their degree of school connectedness (Eisenberg, Neumark-Sztainer, & Perry, 2003). As hypothesized by the researchers, those who reported more mistreatment by their peers also reported a higher dislike for school (Eisenberg, Neumark-Sztainer, & Perry, 2003), and thus resulting in a lower degree of school connectedness.

This finding is concerning as the sense of disconnect and disengagement experienced by youth who are mistreated by their peers, may lead to higher rates of absenteeism which will negatively impact one's educational advancement (Taylor-Seehafer & Rew, 2000). Furthermore, researchers in Australia conducted a study with a sample of more than 900 students in grades 7 to 12 and found that those who had experienced bullying, reported feeling less connected to their peers and teachers, compared to their non-bullied counterparts (Skues, Cunningham, & Pokharel, 2005).

As mentioned earlier, the extent to which cyberbullying impedes school connectedness has not yet been investigated. Therefore, the present study will be the first to explore this relationship, which will in turn increase our overall understanding of the school-related outcomes associated with cyberbullying victimization. Thus, the fifth research question that is explored in the present study will be, "Is there a relationship between cyberbullying victimization and self-reported school connectedness?"

Protective Factors for Victims of Cyberbullying

As suggested by the literature, cyberbullying has been linked to a number of maladaptive behaviours similar to that of traditional bullying. Some outcomes include: depression, anxiety, delinquency, and low self-esteem (e.g., Deater-Deckard, 2001; Fredstrom, Adams, & Gilman, 2011; Raskauskas, 2010; Sontag, Clemons, Graber, & Lyndon, 2011). Investigating the various outcomes associated with cyberbullying victimization is a very important area of study due to its prevalence in today's society. However, researchers are hopeful in also identifying factors that are ameliorative in nature in order to decrease the consequences of victimization. Although limited, studies have attempted to highlight specific protective factors (also known as moderators) that protect children and adolescents who are victims of this type of peer aggression

(Ubertini, 2011). For instance, prosocial experiences have been identified as having a protective component for victims of aggression, which in turn, aid educators and clinicians in the establishment of preventative programs (Ubertini, 2011).

Although researchers have identified specific socializing agents, such as family and school, as being protective factors for those who experience traditional bullying victimization (Ahmed & Braithwaite, 2004), research is only beginning to identify potential protective factors for those who experience cyberbullying. For instance, parental supervision has been considered a potential protective factor, as it was outlined previously that this may be related to personal self-disclosure online, which has been shown to increase the likelihood of cyberbullying victimization (Rosen, Cheever, & Carrier, 2008). Specifically, research has suggested that children and adolescents are less likely to disclose personal information, seek inappropriate websites, and engage in chat room conversations with strangers, when their parents monitor their online activities (Mesch, 2009). Furthermore, family rules for computer and/or internet use were also investigated and it was found that when parents had outlined specific rules for the computer and/or internet use, children and adolescents were less likely to meet strangers online and decreased their time spent engaging in online activities (Mesch, 2009). Therefore, evidence suggests that parental monitoring and family rules surrounding online usage may act as protective factors and decrease children and adolescents' exposure to online risks (Mesch, 2009). In order to add to the limited literature on protective factors for victims of cyberbullying, the present study sought to identify both social and personal factors that may "buffer" youth from the effects of cyberbullying victimization.

Perceived Social Support. Generally speaking, social support can be defined as both structural and functional. Moreover, the interpersonal relationships that flourish from both structural and

functional social support have been reported as being a vital factor in shaping one's overall wellbeing (Kasprzak, 2010). Specifically, structural social support refers to the individuals in one's life who provide help, psychological closeness, and accessibility to the individual (Kasprzak, 2010). On the other hand, functional social support refers to "a type of interaction or its consequences in the form of exchanging psychological or instrumental benefits" (Kasprzak, 2010 p. 145). Furthermore, functional social support can come in the forms of emotional support, practical support, as well as social integration. It has been reported that positive social interactions and relationships are very important in creating positive psychological wellbeing and allow for human development (Ryff & Singer, 2000; Ryff, Singer, Wing, & Love, 2001). In addition, a number of researchers (e.g., Cohen & Willis, 2005; Ebata & Moos, 1994; Weber, Puskar, & Ren, 2010; Yeaton & Sechrest, 2008) have suggested that social support deters the occurrence of negative outcomes by promoting healthy behaviours and alleviating stress in individuals. It has also been proposed that social support decreases the incidence of stress that may interfere with one's ability to cope with stressful life events (Weber, Puskar, & Ren, 2010).

Although there are many ways to operationally define perceived social support, for the purpose of the present study, perceived social support will be defined as being a subjective psychological representation of the extent to which one interprets the positive familial, peer, and/or significant other relationships in one's life (Kasprzak, 2010). There have been limited studies conducted investigating the protective nature of perceived social support for those who experience cyberbullying. However, in terms of traditional bullying, it was reported by Hodges, Boivin, Vitaro, and Bukowski (1999) that children who were victimized reported a higher frequency of internalizing behaviours when they did not have a high degree of perceived social support to buffer against negative outcomes. Additionally, Prinstein, Boergers, and Vernberg

(2001) reported that adolescent victims of relational bullying (i.e., an individual threatening to withdraw his or her friendship to another) had reported higher incidences of externalizing behaviours when they had low perceived social support (Holt & Espelage, 2007). Adult social support (e.g. parents, teachers) as well as school support have also been found to be buffers against bullying victimization (Mesch, 2009).

Aside from being a potential protective factor for those who experience peer aggression, Mesch (2009) also reported that children and adolescents who report having a close friendship have increased confidence and altruism, display less aggressive behaviours, and are more involved in school. Furthermore, Davidson and Demaray (2007) found that children and adolescents who had high levels of perceived adult social support exhibited less internalizing distress following bullying victimization than those with low levels of perceived adult social support.

Although research has discovered that there is a protective component of perceived social support for victims of traditional bullying, research has yet to be extended into the area of cyberbullying. As postulated by Ubertini (2011), research must continue to investigate how to protect children and adolescents against the harmful effects of cyberbullying victimization. Thus, the sixth research question explored in the present study will be, "Does perceived social support moderate the relationship between cyberbullying victimization and self-reported negative outcomes?"

Developmental Assets. The developmental assets framework that has been put forth by the Search Institute is one of the most widely used models of protective assets in today's psychological literature (Harlow & Roberts, 2010). It has been suggested that developmental assets can be considered a set of "building blocks" that increase positive outcomes for children

and adolescents (Leffert et al., 1998). Moreover, developmental assets are a set of benchmarks for positive child and adolescent development, and require both family and community engagement to ensure the acquisition of such targets (Leffert et al., 1998). Importantly, the aim of the developmental assets framework is to focus on prevention, resiliency, and protective factors for children and adolescents (Leffert et al., 1998).

Eight developmental asset categories have been identified by the Search Institute, which have been found to protect children and adolescents who are at-risk for experiencing adversity (Harlow & Roberts, 2010). According to the Search Institute (2006), the developmental assets can be grouped into the following eight categories, "(1) support - from family, school, and the community; (2) empowerment – valuing of young people by the community; (3) boundaries and expectations – clear expectations and limits; (4) constructive use of time – enriching activities in which young people can participate; (5) commitment to learning – lifelong commitment to learning and education; (6) positive values – guiding values for choices; (7) social competencies – skills equipping young people to make effective choices; and (8) positive identity – sense of purpose and worth" (Harlow & Roberts, 2010 p. 17). In addition, the assets can be grouped into two domains, external assets or internal assets. The external assets refer to the positive experiences children and adolescents encounter and opportunities that are provided to them by their family, schools, and the larger community (Leffert et al., 1998). Conversely, the internal assets are a set of skills and self-perceptions that are developed over time through observation and socialization experiences (Leffert et al., 1998).

A number of studies have been conducted that investigate how developmental assets can lead to positive youth development. For instance, Search Institute, who is the leader in this area of research, has conducted studies involving more than 1 million students in grades 6 through 12

in more than 1,000 U.S. communities (Benson, Scales, Leffert, & Roehlkepartain, 1999). Results from their studies have yielded strong support for developmental assets as contributing to positive outcomes for youth (Scales, Benson, Leffert, & Blyth, 2000). Specifically, it has been demonstrated that adolescents who report higher levels of developmental assets are less likely to engage in risky behaviours, such as early sexual activity and use of alcohol or drugs (Scales et al., 2000). In addition, adolescents who report high levels of developmental assets are considerably more likely to achieve positive outcomes, such as academic success, maintaining physical health, community service, and overcoming adversity (Scales et al., 2000). The relationship between children and adolescents' developmental assets and positive outcomes has been shown to be consistently strong (Benson et al., 1999; Leffert et al., 1998).

Minimal research has investigated the relationship between developmental assets and bullying victimization. However, of the research that is available, it has been suggested that children and adolescents who are victims of bullying may have inherent weaknesses in areas associated with positive identity and/or emotional well-being (Harlow & Roberts, 2010). Moreover, the presence of protective factors, or developmental assets, has been shown to reduce children and adolescents' susceptibility to a number of risk factors (Harlow & Roberts, 2010). Therefore, it is possible that developmental assets may help protect victims of bullying from the harmful effects of such aggression.

To date, there have been no studies conducted that have examined the protective nature of developmental assets for victims of cyberbullying. Therefore, the present study will be the first to explore developmental assets as a moderator between cyberbullying victimization and self-reported negative outcomes. Thus, the seventh and final research question in the present

study will be, "Do developmental assets moderate the relationship between cyberbullying victimization and self-reported negative outcomes?"

Statement of the Problem and Purpose of the Study

Although researchers have identified a plethora of concerning outcomes for victims of cyberbullying, there is a significant gap in the literature surrounding strengths-based research and protective factors for such victims. Specifically, there is paucity in the literature that investigates variables that may protect children and adolescents from the impact of cyberbullying (Ubertini, 2011). Research in the area of cyberbullying is still in the early formative stages as its prevalence, frequency among particular groups, and negative outcomes have been identified (Tokunaga, 2010). However, in order to increase society's overall understanding of this type of aggression and to develop and implement school-wide preventative programs, research must continue its momentum in this domain. The present study intends to close the gap in the literature and investigate the protective nature of perceived social support and developmental assets for victims of cyberbullying. Building upon limitations from previous research, cyberbullying victimization will be exclusively examined as oppose to the addition of traditional bullying victimization. To date, there have been no studies conducted using a Canadian sample to investigate potential protective factors for cyberbullying victims. Therefore, the present study is comprised of adolescents from Canada.

Hypotheses

1. It is hypothesized that the amount of time engaging in online activities will be positively correlated with the frequency of cyberbullying victimization one may experience.
2. It is hypothesized that significant sex, age, and grade differences will be found for those who report cyberbullying victimization.

3. It is hypothesized that being cyberbullied, as measured by the *Revised Olweus Bully/Victim Questionnaire* (OBVQ; Olweus, 1996), will predict the following:
    a. Lower levels of self-esteem, as measured by the *Rosenberg Self-Esteem Scale* (RSES; Rosenberg, 1965).
    b. Lower levels of life satisfaction, as measured by *The Brief Multidimensional Students' Life Satisfaction Scale* (BMSLSS; Seligson, Huebner, & Valois, 2003).
    c. Lower levels of school connectedness, as measured by *The School Connectedness Scale* (SCS; Resnick et al., 1997).
4. Compared to adolescents who are cyberbullied and have low levels of perceived social support, as measured by *The Multidimensional Scale of Perceived Social Support* (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988), it is hypothesized that adolescents with high levels of perceived social support who are cyberbullied will report:
    a. Higher levels of self-esteem, as measured by the *Rosenberg Self-Esteem Scale* (RSES; Rosenberg, 1965).
    b. Higher levels of life satisfaction, as measured by *The Brief Multidimensional Students' Life Satisfaction Scale* (BMSLSS; Seligson, Huebner, & Valois, 2003).
    c. Higher levels of school connectedness, as measured by *The School Connectedness Scale* (SCS; Resnick et al., 1997).
5. Compared to adolescents who are cyberbullied and have low levels of developmental assets, as measured by the *Developmental Assets Profile* (DAP; Search Institute, 2004), it is hypothesized that adolescents with high levels of developmental assets who are cyberbullied will report:

a. Higher levels of self-esteem, as measured by the *Rosenberg Self-Esteem Scale* (RSES; Rosenberg, 1965).
b. Higher levels of life satisfaction, as measured by *The Brief Multidimensional Students' Life Satisfaction Scale* (BMSLSS; Seligson, Huebner, & Valois, 2003).
c. Higher levels of school connectedness, as measured by *The School Connectedness Scale* (SCS; Resnick et al., 1997).

Chapter 2: Method

Participants

One-hundred-sixty-five participants were recruited from two schools representing a large public school district in Calgary, Alberta. Both junior high and high school students (grades 7 to 12) were included in the study, and the majority of participants were in grade 11 (34.5%), followed by grade 7 (29.7%), grade 8 (24.2%), and grade 12 (11.5%). Of the participants, 41.8% (n = 69) were male students and 58.2% (n = 96) were female students. Participants ranged from 12 to18 years old. The majority of participants were 13 years old (27.3%), followed by 16 years old (23.6%), 12 years old (23%), 17 years old (18.8%), 14 years old, and 18 years old (3.6%, respectively). The average age of participants was 14.4 years old. In all, 73.9% of participants self-reported as being of Caucasian ethnicity and 26.1% a minority race (7.9% Chinese, 4.2% South Asian, 2.4% Southeast Asian, 2.4% West Asian, 2.4% Latin American, 2.4% Aboriginal, 3.2% all other races, and 1.2% of participants reported they do not know which race they belong to). Of the 165 participants, 47 (28.5%) identified themselves as being victims of cyberbullying.

Measures

Demographic information. The initial portion of the online survey was comprised of several questions related to participants' demographic information. Information gathered included participants' age, sex, grade, ethnicity, and frequency of technology use (See Appendix E).

Cyberbullying victimization. The Revised Olweus Bully/Victim Questionnaire (OBVQ; Olweus, 1996) was modified by the primary researcher to assess cyberbullying victimization among participants. The original OBVQ includes 36 main questions for the measurement of various aspects of bully/victim problems. Furthermore, an explanation of bullying is included that

outlines the main components of bullying (i.e., the intention to harm the victim, the repetitive nature of bullying, and the imbalance of power between the victim and the perpetrator). Examples of items include: "*Bullied with mean names about my race or colour*" and "*Other students told lies about me or tried to make others dislike me*" (Kyriakides, Kaloyirou, & Lindsay, 2006). Participants respond to items using a 5-point Likert scale, ranging from (1) *It hasn't happened to me in the past couple of months* to (5) *Several times a week.* Psychometric analyses have been conducted for the original OBVQ on large representative samples and have yielded positive results. Such analyses include internal consistency, test-retest reliability, and validity. Moreover, analyses have been conducted at the individual and school-wide level. It has been found that both individuals and schools can be adequately differentiated, as reliability coefficients are in the .80's or higher and in the .90's, respectively (Solberg & Olweus, 2003). It has also been found that the Revised Olweus Bully/Victim Questionnaire (Olweus, 1996) has strong construct validity.

To measure cyberbullying victimization, the Revised Olweus Bully/Victim Questionnaire (Olweus, 1996) was modified by the primary researcher, with the permission of the original author, to pertain to this type of aggression. Participants were asked to report on the extent of cyberbullying victimization they have experienced within the past three months through various forms of technology including: text messaging, phone calls, email, social networking websites, and instant messaging. A brief description of cyberbullying was included at the beginning of the survey to ensure participants understood what constituted this type of aggression. The modified measure is comprised of 33 items and examples include, "*I was called mean names, was made fun of, or teased in a hurtful way through instant messaging*" and "*Other students told lies or spread rumors about me and tried to make others dislike me through social networking websites*

(e.g., Facebook, Twitter, etc.)." In line with the original Revised Olweus Bully/Victim Questionnaire, participants completed the majority of the items on a 5-point Likert Scale from (1) *It hasn't happened to me in the past couple of months* to (5) *Several times a week* (See Appendix F). A total cyberbullying score was calculated by summing each participant's responses, with higher scores indicating higher frequencies of victimization. The primary researcher conducted reliability analyses on the modified version of the Revised Olweus Bully/Victim Questionnaire and found adequate reliability. Alpha coefficients for the subscales were as follows: text messaging (.79), phone (.77), email (.76), instant messaging (.80), and social networking websites (.80).

Perceived Social Support. The Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988) was used to assess perceived social support in terms of family, friends, significant other, and overall social support. The MSPSS consists of 12-items that include, "*I can count on my friends when things go wrong*" and "*I can talk about my problems with my family*." Participants rated their responses on a 7-point Likert scale from (1) *Very Strongly Disagree* to (7) *Very Strongly Agree*. A total perceived social support score was calculated by summing each participant's responses, with higher scores indicating higher levels of perceived social support. The MSPSS has been found to be psychometrically sound as the alpha coefficients for each component are: family (.81), friends (.92), significant other (.83), and total score (.84) (Zimet, Powell, Farley, Werkman, & Berkoff, 1990). Furthermore, the overall alpha coefficient that was calculated for the present study is .91 (See Appendix G).

Developmental Assets. The Developmental Assets Profile (DAP; Search Institute, 2004) is a strengths-based measure used to gain information on participants' internal and external development assets such as, support, empowerment, boundaries and expectations, constructive

use of time, commitment to learning, positive values, social competencies, and positive identity. The DAP consists of 58-items that include, "I *have friends who set good examples for me*," "*I am encouraged to help others*," and "*I overcome challenges in positive ways*." Participants rated their responses on a 4-point Likert scale from (1) *Not At All or Rarely* to (4) *Extremely or Almost Always*. A total developmental assets score was calculated by summing each participant's responses, with higher scores indicating higher levels of developmental assets. In addition, total scores were calculated for internal and external assets following the same procedure. The DAP has been found to be psychometrically sound as the alpha coefficients for each component are: internal assets (.93), external assets (.95), and total assets (.97) (Jimerson, Sharkey, Nyborg, & Furlong, 2004). Furthermore, the alpha coefficients that were calculated for the present study include: internal assets (.92), external assets (.91), and total assets (.95) (See Appendix H).

Life Satisfaction. The Brief Multidimensional Students' Life Satisfaction Scale (BMSLSS; Seligson, Huebner, & Valois, 2003) is designed for children and adolescents between the ages of 8 to 18 and was used to assess overall life satisfaction of participants. Modified from the Multidimensional Students' Life Satisfaction Scale (MSLSS; Huebner, 1994), the BMSLSS is a 6-item scale that can be used to assess life satisfaction in specific domains such as family, friends, school, living environment, and self. When calculated, the BMSLSS produces a score for general life satisfaction. Examples of items include, "*I would describe my satisfaction with my friendships as*" and "*I would describe my satisfaction with my school experience as*." Using a 7-point Likert scale, participants rated their level of life satisfaction from (1) *Terrible* to (7) *Delighted*. A total life satisfaction score was calculated by summing each participant's responses, with higher scores indicating higher levels of life satisfaction. The internal consistency for the BMSLSS is .75 and the test-retest reliability is .91 (Funk, Huebner, & Valois,

2006). Furthermore, the overall alpha coefficient that was calculated for the present study is .80 (See Appendix I).

Self-Esteem. The Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) is a 10-item measure that was used to assess participants' degree of self-esteem. Participants responded on a scale ranging from *Strongly Agree* to *Strongly Disagree* for questions such as, "*I take a positive attitude toward myself*" and "*At times, I think I am no good at all*." Items were assigned values as follows: *Strongly Agree* = 1, *Agree* = 2, *Disagree* = 3, *Strongly Disagree* = 4. A total self-esteem score was calculated by summing each participant's responses, with lower scores indicating higher levels of self-esteem. The RSES is a highly recognized and widely used measure. The RSES is psychometrically sound as reliability is .85 (Rosenberg, 1965) and test-retest reliability is .87. Furthermore, the overall alpha coefficient that was calculated for the present study is .89 (See Appendix J).

School Connectedness. The School Connectedness Scale (SCS; Resnick et al., 1997) is a measure designed to assess the degree of connectedness children and adolescents feel toward school (Libbey, 2004). The SCS is a 5-item measure in which participants respond (1) *Strongly Disagree* to (5) *Strongly Agree*. Examples of items include, "*I feel close to people at this school*" and "*The teachers at this school treat students fairly*." A total school connectedness score was calculated by summing each participant's responses, with higher scores indicating higher levels of school connectedness. Research has suggested that the SCS has adequate internal consistency, as the alpha coefficient is reported as .79 (McNeely, Nonnemaker, & Blum, 2002). Furthermore, the overall alpha coefficient that was calculated for the present study is .76 (See Appendix K).

Social Desirability. The Marlowe-Crowne Social Desirability Scale – Form C (Crowne &

Marlowe, 1960) was used to assess whether or not participants responded in a socially desirable manner. The Marlowe-Crowne Social Desirability Scale is a measure in which participants answer either *True* or *False*. This measure asks questions such as, "*No matter who I am talking to, I'm always a good listener*" and "*I am always courteous, even to people who are disagreeable.*" Items were assigned values as follows: *True* = 1, *False* = 2. A total social desirability score was calculated by summing each participant's responses, with lower scores indicating less socially desirable responses were given. The reliability coefficient is acceptable (.65). In terms of validity, Form C was found to correlate highly with the standard Marlowe-Crowne Social Desirability Scale (Reynolds, 1982) (See Appendix L).

Procedure

After approval from the Conjoint Faculties Research Ethics Board was obtained, permission for data collection was sought from two public schools in Calgary, Alberta. The principal of each school was contacted via email with a letter that introduced them to the primary researcher and provided them with details of the study (See Appendix A). The goal of the present study was to include students in grades 7 through 12. Therefore, the schools that were contacted included Valley Creek School, which is comprised of students in grades 7 through 9, and William Aberhart High School, which is comprised of students in grades 10 through 12. Each school that was contacted expressed interest in having students from their respective schools participate. Each principal was responsible for forwarding the study information to the teachers of their schools to see which teachers were interested in having their students participate (See Appendix A). Teachers were asked to dedicate a portion of class time to data collection, therefore, their consent to participate was necessary. Following, the primary researcher met with the principal and lead teachers that were facilitating the study at Valley Creek School. At this

time, the primary researcher outlined the details of the study, and the dates and times of data collection were established. The primary researcher then had a telephone conversation with the lead teacher at William Aberhart High School, who agreed to have three of her classes participate. Again, at this time, the details of the study were discussed with the teacher and the dates and times of data collection were established. In total, 7 teachers agreed to have their students participate in the present study.

Approximately two weeks prior to data collection, the primary researcher provided parent consent forms (See Appendix B) to the participating schools. Participants were asked to have a parent and/or guardian read and sign the parent consent form to be eligible to participate in the study. Parents were also provided with the contact information of the primary researcher and her supervisor, if any questions and/or concerns were to arise. Only those participants who returned a signed parent consent form were eligible to participate in the study. On the day of data collection, the primary researcher provided participants with a child assent form (See Appendix C) to read and sign. During this time, participants were described the procedure of the study, were informed that their participation was voluntary, and that they were free to withdraw from the study at any time without penalty. In addition, participants were instructed not to provide any identifiable information on their assent form in order to protect confidentiality. After assent forms were collected, each participant was assigned to a computer that was located in the library of both participating schools. At each school, participants were able to access the link to the online survey (created on Survey Monkey) through their individual student portal, which had been set up by the participating teachers. The link was only accessible to students between one hour prior to data collection and the completion of the survey. The online survey took approximately 45 minutes to complete.

After completing the online survey, participants were debriefed and provided with a list of community resources (See Appendix D). At this time, participants had the opportunity to ask any questions they had regarding the study or specific items on the survey. Approximately two weeks following data collection, the primary researcher returned to the participating schools and conducted an educational seminar on internet safety and positive online relationships. During this time, preliminary results were presented and students had the opportunity to ask questions related to cyberbullying and internet safety.

Chapter 3: Results

The present study explored cyberbullying victimization among youth, and its potential relationship with self-esteem, life satisfaction, and school connectedness. This study also examined whether victimized youth with high degrees of self-reported perceived social support and developmental assets would report higher levels of self-esteem, life satisfaction, and/or school connectedness. The results are based on 165 students, 12 to 18 years old, recruited from two public schools in Calgary, Alberta. To examine the impact of cyberbullying, five hypotheses were investigated. Data screening and descriptive statistics are presented below in addition to the outcomes of each hypothesis.

Data Screening

A total of 175 participants completed the online survey. Participants were removed from the database if they did not complete large portions of any of the measures provided. This resulted in a final sample size of 165 youth.

The Marlowe-Crowne Social Desirability Scale – Form C was included in the present study to measure levels of social desirability. That is, participants' tendency to respond to items in a socially desirable manner. Scores for social desirability ranged from 14 to 25, with higher scores indicating higher levels of social desirability. The average score for this sample (N = 165) was M = 18.9736, SD = 2.45224. To determine whether the present study's results were significantly impacted by social desirability, a correlational analysis was conducted to examine the strength of relationships among the variables and the Marlowe-Crowne Social Desirability Form – C scores. Although all but two (perceived social support and cyberbullying victimization) of the variables were significantly correlated with social desirability, the values were quite weak (.170 - .266). Therefore, it was concluded that the study may be slightly

impacted by social desirability, and results should be interpreted accordingly. A correlation matrix of all variables is displayed in Table 1.

Descriptive Statistics

Table 2 displays the frequencies and percentages of the demographic variables for the total sample. As previously mentioned, the majority of participants were in grade 11 (34.5%). Of the participants, 41.8% (n = 69) were male students and 58.2% (n = 96) were female students and the average age was 14.4 years old. In all, 73.9% of participants self-reported as being of Caucasian ethnicity and 26.1% a minority race.

An overwhelming proportion of participants currently live with both of their parents and their siblings (72.7%), followed by participants currently living with only their parents (26.1%). In terms of the family structure of participants, 68.5% have a two-parent (biological) household, 16.4% have a single-mother household, and 15.1% reported a different type of household (e.g., single-father, two-parent [adoptive], two-parent [blended], or other). Furthermore, 49.7% of participants reported being the eldest child in their family, whereas 35.8% reported being the second child, 7.9% reported being a middle child, 3.6% reported being the fourth or youngest child, and 3% reported being an only child.

Table 1

Correlation Matrix of SD, SC, LS, SE, PSS, DA, and CB (N = 165)

		1	*2*	*3*	*4*	*5*	*6*	*7*
1	SD	1.00						
2	SC	.234**	1.00					
3	LS	.170*	.485**	1.00				
4	SE	-.218**	-.349**	-.735**	1.00			
5	PSS	.048	.404**	.625**	-.420**	1.00		
6	DA	.266**	.359**	.555**	-.488**	.553**	1.00	
7	CB	-.129	-.286**	-.259**	.290**	-.155*	-.125	1.00

Note. 1 = Social Desirability. 2 = School Connectedness. 3 = Life Satisfaction. 4 = Self-Esteem. 5 = Perceived Social Support. 6 = Developmental Assets. 7 = Cyberbullying
***p = <.01. *p = <.05.*

Table 2

Frequency Data of Demographics Variables for Total Sample (N = 165)

Demographic Variable	Frequency	Percentage
Age		
12	38	23.0
13	45	27.3
14	6	3.6
16	39	23.6
17	31	18.8
18	6	3.6
Sex		
Male	69	41.8
Female	96	58.2
Grade		
7	49	29.7
8	40	24.2
11	57	34.5
12	19	11.5
Ethnicity		
Caucasian	122	73.9
Chinese	13	7.9
South Asian	7	4.2
Southeast Asian	4	2.4
West Asian	4	2.4
Latin American	4	2.4
Aboriginal	4	2.4
Other	5	3.2
Don’t know	2	1.2
Living Arrangements		
With Parent(s)	43	26.1
With Parent(s) and Siblings	120	72.7
Other	2	1.2
Family Structure		
Two-Parent Household (Biological)	113	68.5
Two-Parent Household (Step-Family)	7	4.2
Two-Parent Household (Adoptive)	5	3.0
Single-Father Household	7	4.2
Single-Mother Household	27	16.4
Other	6	3.6
Family Membership		
First Child	82	49.7
Second Child	59	35.8
Third Child	13	7.9
Fourth Child or Youngest	6	3.6
Other	5	3.0

Table 3 displays the frequencies and percentages of the demographic variables for those who self-reported cyberbullying victimization. Of the 165 participants, 47 (28.5%) reported experiencing cyberbullying victimization. After thorough review of those who reported experiencing this type of aggression, the majority were 13 years old (34%), followed by 17 years old (21.3%), 12 years old (19.1%), 16 years old (17%), 14 years old (6.4%), and 18 years old (2.1%). In addition, an equal proportion of grade 8 and grade 11 students (31.9%, respectively) reported cyberbullying victimization, followed by grade 7 students (27.7%) and grade 12 students (8.5%). In terms of sex differences, 55.3% of those reporting cyberbullying victimization were female, whereas, 44.7% were male. An overwhelming percentage (80.9%) of Caucasian students reported experiencing cyberbullying, followed by South Asian (6.4%), and equal proportion of Chinese, Southeast Asian, West Asian, Latin American, and Aboriginal students reporting victimization (2.1%, respectively). The majority of participants, who experienced cyberbullying victimization, reported that they currently live with their parents and siblings (76.6%). Furthermore, 87.2% reported living in a two-parent (biological) household, 10.6% reported living in a single-mother household, and 2.1% reported living in a single-father household. Finally, 55.3% of those who reported cyberbullying victimization indicated that they are the eldest child in their family, 34% indicated that they are the second child, 8.5% indicated that they are the third child, and 2.1% indicated "other" in terms of family membership.

Table 3

Frequency Data of Demographics Variables for Youth Reporting Cyberbullying (n = 47)

Demographic Variable	Frequency	Percentage
Age		
12	9	19.1
13	16	34.0
14	3	6.4
16	8	17.0
17	10	21.3
18	1	2.1
Sex		
Male	21	44.7
Female	26	55.3
Grade		
7	13	27.7
8	15	31.9
11	15	31.9
12	4	8.5
Ethnicity		
Caucasian	38	80.9
Chinese	1	2.1
South Asian	3	6.4
Southeast Asian	1	2.1
West Asian	1	2.1
Latin American	1	2.1
Aboriginal	1	2.1
Don’t know	1	2.1
Living Arrangements		
With Parent(s)	11	23.4
With Parent(s) and Siblings	36	76.6
Family Structure		
Two-Parent Household (Biological)	41	87.2
Single-Father Household	1	2.1
Single-Mother Household	5	10.6
Family Membership		
First Child	26	55.3
Second Child	16	34.0
Third Child	4	8.5
Other	1	2.1

Participants also reported on the number of technological devices that are currently available to them in their home, the number of devices they personally own, and the number of devices in their bedroom. Tables 4, 5, and 6 present summaries of the descriptive statistics illustrating technology use among the total sample. It was found that 89.6% of participants have 0-2 personal computers (PCs) in their home and 69.7% of participants 0-2 laptops in their home. As for technological devices personally owned by participants, 67.3% own a cell phone that is equipped with internet accessibility and 68.5% of participants own a laptop or computer. Furthermore, 46.1% of participants have a PC in their bedroom and of those, 70.9% have internet access. Participants also reported on the extent of their daily technology use such as hours spent on a cell phone per day, number of text messages sent per day, hours spent on a computer per day, and the types of online activities they engage in on a daily basis. It was reported that 35.2% of participants spend less than two hours on a cell phone per day, and 32.1% of participants spend 2-6 hours on a cell phone per day. It was reported that 48.5% of participants send more than 25 text messages per day and 21.8% spend more than 1-3 hours on the internet per day. Moreover, 53.3% of participants reported that when they partake in online activities, they are unsupervised. Furthermore, 92.7% of participants reported that they have personal email addresses and of those, 71.5% have more than one email account. Lastly, 77.6% of participants engage in online instant messaging (e.g., MSN Messenger, Facebook Chat) and 80% are members of a social networking website (e.g., Facebook, Twitter).

Table 4

Frequency Data of Available Technological Devices for Total Sample (N = 165)

Demographic Variable	Frequency	Percentage
Devices in the Home		
Personal Computer (PC)		
0-2	148	89.6
3-4	15	9.1
5-6	2	1.2
Laptop		
0-2	115	69.7
3-4	41	24.9
5-7	9	5.4
Devices with Internet Access		
0-2	83	50.3
3-4	46	27.9
5-6	24	14.6
7-8	12	7.2
Personally Owned Devices		
Devices with Internet Access		
Yes	111	67.3
No	54	32.7
Cell Phone with No Internet Access		
Yes	42	25.5
No	123	74.5
Laptop		
Yes	77	46.7
No	88	53.3
Personal Computer (PC)		
Yes	36	21.8
No	129	78.2
Devices in Bedroom		
Personal Computer (PC)		
Yes	76	46.1
No	89	53.9
Internet Access		
Yes	117	70.9
No	48	29.1

Table 5

Frequency Data of Technology-Based Activities for Total Sample (N = 165)

Demographic Variable	Frequency	Percentage
Text Messages Sent Per Day		
Less than 5	13	7.9
5-10	18	10.9
10-15	13	7.9
15-20	8	4.8
20-25	9	5.5
More than 25	80	48.5
I do not send text messages	24	14.5
How Often Did You Use the Computer with Someone Else		
I did not use the computer yesterday	16	9.7
Most of the time	11	6.7
Some of the time	12	7.3
A little bit of the time	37	22.4
Never, I used the computer by myself	88	53.3
Do You Have an Email Account?		
Yes	153	92.7
No	5	3.0
Don’t know	1	0.6
Number of Email Accounts		
0-2	117	70.9
3-4+	48	29.1
Number of Emails Sent Per Day		
Less than 5	124	75.2
5-10	2	1.2
I do not send emails	39	23.6
Do You Use Instant Messaging?		
Yes	128	77.6
No	36	21.8
Don’t know	1	0.6
Do You Use Social Networking Websites?		
Yes	132	80.0
No	30	18.2
Don’t know	3	1.8

Table 6

Frequency Data of Time Spent on Technology-Based Activities for Total Sample (N = 165)

Demographic Variable	Frequency	Percentage
Hours Spent on Cell Phone Per Day		
Less than 2	58	35.2
2-4	24	14.5
4-6	29	17.6
6-8	17	10.3
8-10	5	3.0
More than 10	6	3.6
I do not own a cell phone	26	15.8
Time Spent on Internet Yesterday		
None	3	1.8
5 minutes - less than 30 minutes	37	22.4
30 minutes – 1 hour	62	37.6
More than 1 hour – 3 hours	36	21.8
More than 3 hours	20	12.1
Don't know	4	2.4
Time Spent on Computer Yesterday		
None	13	7.9
5 minutes - less than 30 minutes	42	25.5
30 minutes – 1 hour	47	28.5
More than 1 hour – 3 hours	43	26.1
More than 3 hours	16	9.7
Don't know	3	1.8
Hours Spent on Instant Messaging		
Less than 2	99	60.0
2-4	21	12.7
4-6	5	3.0
8-10	2	1.2
More than 10	1	0.6
I do not use instant messaging	37	22.4
Hours Spent on Social Networking Websites Per Day		
Less than 2	83	50.3
2-4	46	27.9
4-6	6	3.6
6-8	1	0.6
8-10	1	0.6
I do not have a social networking website	28	17.0

Tables 7, 8, and 9 present summaries of the descriptive statistics illustrating technology use among participants who reported cyberbullying victimization. As aforementioned, participants reported on the number of technological devices that are currently available to them in their home, the number of devices they personally own, and the number of devices in their bedroom. It was reported that 89.4% of cyberbullied youth have 0-2 PCs in their home and 10.6% have 3 PCs in their home. In addition, 66.1% have 0-2 laptops in their home, and 34% have 3-4 laptops in their home. Furthermore, of those who reported cyberbullying victimization, 44.7% have 1-2 devices with internet accessibility in their home, followed by 5-6 devices (23.4%), 3-4 devices (21.2%), and 7-8 devices (10.3%).

As for technological devices personally owned by participants who self-reported experiencing cyberbullying, 66% indicated that they own devices with internet accessibility, 25.5% indicated they own a cell phone with no internet access, 44.7% indicated they own a laptop, and 21.3% indicated that they own a PC. Furthermore, of the 46.8% who reported having a PC in their bedroom, 66% have internet accessibility in their bedroom.

Participants also reported on the extent of their daily technology use such as hours spent on a cell phone per day, number of text messages sent per day, hours spent on a computer per day, and the types of online activities they engage in on a daily basis. Of those who reported cyberbullying victimization, 23.4% spend less than two hours on a cell phone per day and 28% spend 2-6 hours on a cell phone per day. In addition, 70.2% send more than 25 text messages per day and 23.4% spend more than 1-3 hours on the internet per day. Moreover, 51.1% of cyberbullied participants reported that when they partake in online activities, they are unsupervised. An astounding 95.7% of participants reporting cyberbullying victimization have personal email accounts and of those, 70.2% have more than one email account. Lastly, 87.2%

reported that they engage in online instant messaging (e.g., MSN Messenger, Facebook Chat) and 91.5% are members of a social networking website (e.g., Facebook, Twitter).

Primary Analyses

Hypothesis one. In the first hypothesis, it was predicted that significant positive correlations would be found for the amount of time engaging in online activities and frequency of cyberbullying victimization. Bivariate correlations between cyberbullying victimization and time spent engaging in online activities were examined. Specifically, the following online activities were examined: hours spent on a cell phone per day, hours spent on a computer per day, hours spent on the internet per day, text messages sent per day, number of emails sent per day, hours spent on instant messaging per day, and hours spent on social networking websites per day. No support was found for hypothesis one, as no significant correlations were found between cyberbullying victimization and time spent engaging in online activities (See Table 10).

Hypothesis two. In the second hypothesis, it was predicted that significant sex, age, and grade differences would be found for those who report cyberbullying victimization. An independent samples t-test was conducted to investigate whether or not there were significant sex differences for those who reported cyberbullying victimization, whereas, one-way ANOVA analyses were conducted to examine any grade or age differences for victims of cyberbullying. In terms of sex differences, results suggest that there are significant differences for cyberbullying victimization through text messaging, phone calls, emails, instant messaging, and social networking websites $t(45) = 3.274$, $p = .001$, with males ($M = 7.8170$, $SE = .50273$) reporting higher frequencies of cyberbullying victimization than females ($M = 6.1077$, $SE = .23644$).

As for grade and/or age differences, one-way ANOVA analyses revealed significant grade differences amongst victims in grades 7 to 12, $F(3, 43) = 4.207$, $p = .011$. Specifically,

participants in grade 8 (M = 8.211, SE = .59902) reported higher frequencies of cyberbullying victimization compared to those in grade 7 (M = 6.3846, SE = .36336), grade 11 (M = 6.1193, SE = .43259), and grade 12 (M = 6.2500, SE = .30957). Furthermore, significant differences were found between victims in junior high school compared to victims in high school, $F(1, 45) = 4.718$, $p = .035$, with participants in junior high (M = 7.3631, SE = .39705) reporting higher frequencies of cyberbullying victimization than participants in high school (M = 6.1468, SE = .34413). However, no significant differences were found for age, $F(4, 41) = 2.043$, $p > .05$ (See Table 11). Therefore, hypothesis two was partially supported. Of note, in further analyses, grade differences were analyzed at the level of junior high and high school.

Hypothesis three. In the third hypothesis, it was predicted that significant negative correlations would be found between cyberbullying victimization and self-reported negative outcomes (i.e., lower levels of self-esteem, life satisfaction, and school connectedness). To examine this hypothesis, bivariate correlations were conducted between cyberbullying victimization and self-esteem, life satisfaction, and school connectedness. As significant sex and grade differences were found for those reporting cyberbullying victimization (hypothesis two), these variables were controlled for in all analyses to follow. In order to strengthen support for this hypothesis, partial correlations examining the relationship between cyberbullying victimization and negative outcomes for the participants who did not report experiencing victimization were also conducted. As displayed in Table 12, no significant correlations were found between participants who did not report cyberbullying victimization and negative outcomes (i.e., self-esteem, life satisfaction, and school connectedness).

However, in support of hypothesis three, significant correlations were found between cyberbullying victimization and negative outcomes (i.e., lower levels of self-esteem, life

satisfaction, and school connectedness) when bivariate correlations were conducted for only those who reported experiencing this type of aggression. Specifically, a moderate negative relationship (r = -.451; p < .01) was found between cyberbullying victimization and life satisfaction. Moreover, a moderate negative relationship (r = -.562; p < .01) was found between cyberbullying victimization and school connectedness. Finally, a moderate positive relationship (r = .405; p < .01) was found between cyberbullying victimization and self-esteem (See Table 13). Of note, due to the scoring criteria for the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965), higher scores on this scale are interpreted as lower levels of self-esteem. Alternatively, lower scores are interpreted as higher levels of self-esteem. Therefore, results suggest full support for hypothesis three, as significant relationships were found between cyberbullying victimization and self-reported negative outcomes (i.e., lower levels of self-esteem, life satisfaction, and school connectedness).

Table 7

Frequency Data of Available Technological Devices for Cyberbullied Youth (n = 47)

Demographic Variable	Frequency	Percentage
Devices in the Home		
Personal Computer (PC)		
0-2	42	89.4
3	5	10.6
Laptop		
0-2	31	66.1
3-4	16	34.0
Devices with Internet Access		
1-2	21	44.7
3-4	10	21.2
5-6	11	23.4
7-8	5	10.3
Personally Owned		
Devices with Internet Access		
Yes	31	66.0
No	16	34.0
Cell Phone with No Internet Access		
Yes	12	25.5
No	35	74.5
Laptop		
Yes	21	44.7
No	26	55.3
Personal Computer (PC)		
Yes	10	21.3
No	37	78.7
Present in Bedroom		
Personal Computer (PC)		
Yes	22	46.8
No	25	53.2
Internet Access		
Yes	31	66.0
No	16	34.0

Table 8

Frequency Data of Technology-Based Activities for Cyberbullied Youth (n = 47)

Demographic Variable	Frequency	Percentage
Text Messages Sent Per Day		
Less than 5	4	8.5
5-10	1	2.1
10-15	3	6.4
15-20	1	2.1
20-25	1	2.1
More than 25	33	70.2
I do not send text messages	4	8.5
How Often Did You Use the Computer with Someone Else		
I did not use the computer yesterday	6	12.8
Most of the time	3	6.4
Some of the time	3	6.4
A little bit of the time	11	23.4
Never, I used the computer by myself	24	51.1
Do You Have an Email Account?		
Yes	45	95.7
No	2	4.2
Number of Email Accounts		
0-2	33	70.2
3-4+	14	29.8
Number of Emails Sent Per Day		
Less than 5	37	78.7
I do not send emails	10	21.3
Do You Use Instant Messaging?		
Yes	41	87.2
No	5	10.6
Don’t know	1	2.1
Do You Use Social Networking Websites?		
Yes	43	91.5
No	4	8.5

Table 9

Frequency Data of Time Spent on Technology-Based Activities for Cyberbullied Youth (n = 47)

Demographic Variable	Frequency	Percentage
Hours Spent on Cell Phone Per Day		
Less than 2	11	23.4
2-4	18	15.3
4-6	15	12.7
6-8	9	7.6
8-10	5	4.2
More than 10	2	1.7
I do not own a cell phone	22	18.6
Time Spent on Internet Yesterday		
5 minutes - less than 30 minutes	11	23.4
30 minutes – 1 hour	17	36.2
More than 1 hour – 3 hours	11	23.4
More than 3 hours	6	12.8
Don't know	2	4.3
Time Spent on Computer Yesterday		
None	5	10.6
5 minutes - less than 30 minutes	15	31.9
30 minutes – 1 hour	11	23.4
More than 1 hour – 3 hours	12	25.5
More than 3 hours	2	4.3
Don't know	2	4.3
Hours Spent on Instant Messaging		
Less than 2	28	59.6
2-4	9	19.1
4-6	3	6.4
I do not use instant messaging	7	14.9
Hours Spent on Social Networking Websites Per Day		
Less than 2	22	46.8
2-4	19	40.4
4-6	3	6.4
I do not have a social networking website	3	6.4

Table 10

Correlations Among Cyberbullied Youth and Time Spent Online (n = 47)

	CBV	CP	Comp	TM	Internet	Email	IM	SNW
CBV	1.00							
CP/Day	.073	1.00						
Comp/Day	-.050	.033	1.00					
TM/Day	-.053	.514**	-.226	1.00				
Int/Day	-.034	.031	.731**	-.194	1.00			
Emails/Day	-.199	-.248	-.182	-.162	-.086	1.00		
IM/Day	.014	.086	-.085	.189	-.100	.221	1.00	
SNW/Day	.062	.101	-.038	.257	.034	-.005	.595**	1.00

Note. CBV = Cyberbullying Victimization. CP/Day = Hours spent on cell phone per day. Comp/Day = Hours spent on computer per day. TM/Day = Text messages sent per day. Int/Day = Hours spent on internet per day. Emails/Day = Emails sent per day. IM/Day = Hours spent on instant messaging per day. SNW/Day = Hours spent on social networking websites per day.
**$p < .01$.

Table 11

Developmental Differences Among Youth Reporting Cyberbullying Victimization (n = 47)

Variable	*df*	*t*	*p*	*M*	*SE*
Sex	45	3.274	.001	-	-
Male	-	-	-	7.8170	.50273
Female	-	-	-	6.1077	.23644

Variable	df_1	df_2	*F*	*p*	*M*	*SE*
Grade	3	43	4.207	.011		
7	-	-	-	-	6.3846	.36336
8	-	-	-	-	8.211	.59902
11	-	-	-	-	6.1193	.43259
12	-	-	-	-	6.2500	.30957
JH/HS	1	45	4.718	.035		
JH	-	-	-	-	7.3631	.39705
HS	-	-	-	-	6.1468	.34413
Age	4	41	2.043	.06		
12	-	-	-	-	6.6000	.48074
13	-	-	-	-	8.0479	.58703
14	-	-	-	-	6.0000	.50332
16	-	-	-	-	6.0500	.37938
17	-	-	-	-	6.2190	.59919
18	-	-	-	-	6.2000	-

Note. JH/HS = Junior High / High School.

Table 12

Correlations Among Non-Cyberbullied Youth and Negative Outcomes (n = 118)

	CBV	SE	LS	SC
CBV	1.00			
SE	.129	1.00		
LS	-.039	-.715**	1.00	
SC	.111	-.341**	.496**	1.00

Note. CBV = Cyberbullying Victimization. SE = Self-Esteem. LS = Life Satisfaction. SC = School Connectedness.
**$p < .01$.

Table 13

Correlations Among Youth Reporting Victimization and Negative Outcomes (n = 47)

	CBV	SE	LS	SC
CBV	1.00			
SE	.405**	1.00		
LS	-.451**	-.780**	1.00	
SC	-.562**	-.308*	.390**	1.00

Note. CBV = Cyberbullying Victimization. SE = Self-Esteem. LS = Life Satisfaction. SC = School Connectedness.
**$p <$ .01. *$p <$ .05.

Hypothesis four. In the fourth hypothesis, it was predicted that adolescents who are cyberbullied and have high levels of perceived social support, compared with adolescents who have low levels of perceived social support, will report higher levels of self-esteem, life satisfaction, and school connectedness. A hierarchical linear regression was conducted in order to test perceived social support as a moderator. Cyberbullying victimization and perceived social support were centered as these are continuous variables. Sex (male = 1, female = 2) and grade (junior high = 1, high school = 2) were dummy coded and controlled. Hierarchical regression models were constructed for each of the three criterion variables (i.e., self-esteem, life satisfaction, and school connectedness) following the guidelines of Aiken and West (1991). At Step 1, sex and grade were entered. At Step 2, cyberbullying victimization was entered. At Step 3, main effects for perceived social support were entered. Finally, at Step 4, the cyberbullying x perceived social support interaction term was entered. Perceived social support did not moderate any of the results for the criterion variables. Therefore, hypothesis four was not supported. See Tables 14, 15, and 16.

Hypothesis five. In the fifth hypothesis, it was predicted that adolescents who are cyberbullied and have high levels of developmental assets, compared with adolescents who have low levels of developmental assets, will report higher levels of self-esteem, life satisfaction, and school connectedness. A hierarchical linear regression was conducted in order to test developmental assets as a moderator. Cyberbullying victimization and developmental assets were centered as these are continuous variables. Sex (male = 1, female = 2) and grade (junior high = 1, high school = 2) were dummy coded and controlled. Hierarchical regression models were constructed for each of the three criterion variables (i.e., self-esteem, life satisfaction, and school connectedness) following the guidelines of Aiken and West (1991). At Step 1, sex and grade

were entered. At Step 2, cyberbullying victimization was entered. At Step 3, main effects for developmental assets were entered. Finally, at Step 4, the cyberbullying x developmental assets interaction term was entered. Developmental assets did not moderate the relationship between cyberbullying and life satisfaction or school connectedness. However, developmental assets did moderate the relationship between cyberbullying and self-esteem (p = .05). Therefore, hypothesis five was partially supported. Figure 1 displays the effect of cyberbullying x developmental assets interaction on adolescents' self-esteem. In order to further explore the moderating effect of developmental assets on self-esteem, the developmental assets variable was divided into its two components, internal assets and external assets. Interestingly, it was found that internal assets moderated the relationship between cyberbullying victimization and self-esteem (p = .027), however, external assets did not. Figure 2 displays the effect of cyberbullying x internal assets interaction on adolescents' self-esteem. See Tables 17, 18, 19, 20, and 21. This means that adolescents who experience cyberbullying victimization and have high levels of developmental assets, compared to those who have low levels of developmental assets, report heightened levels of self-esteem. Furthermore, adolescents who experience cyberbullying victimization and have high levels of internal assets, compared to those who have low levels of internal assets, report heightened levels of self-esteem.

Table 14

Hierarchical Regression Models of Cyberbullying Predicting Self-Esteem with Perceived Social Support as Moderator

Self-Esteem as Dependent Variable		β	SE_b	*t*	$\triangle R^2$	$\triangle F$
Step 1	Sex	-.037	.086	-.474	.000	1.027
	Grade	-.103	.085	-1.317	.000	1.027
Step 2	Sex	.025	.085	.322	.071	5.181
	Grade	-.058	.083	-.752	.071	5.181
	Cyberbullying	.286	.030	3.651**	.071	5.181
Step 3	Sex	-.007	.079	-.097	.210	11.906
	Grade	-.025	.077	-.360	.210	11.906
	Cyberbullying	.225	.028	3.079**	.210	11.906
	PSS	-.383	.004	-5.417**	.210	11.906
Step 4	Sex	-.010	.078	-.135	.214	9.907
	Grade	-.024	.077	-.336	.214	9.907
	Cyberbullying	.265	.031	3.350**	.214	9.907
	PSS	-.400	.004	-5.575**	.214	9.907
	Cyberbullying X PSS	.101	.002	1.305	.214	9.907

Note. PSS = Perceived Social Support.
** $p < .01$

Table 15

Hierarchical Regression Models of Cyberbullying Predicting Life Satisfaction with Perceived Social Support as Moderator

Life Satisfaction as Dependent Variable		β	SE_b	*t*	$\triangle R^2$	$\triangle F$
Step 1	Sex	-.008	.784	-.101	-.007	.434
	Grade	.073	.776	.931	-.007	.434
Step 2	Sex	-.066	.779	-.849	.055	4.171
	Grade	.030	.762	.392	.055	4.171
	Cyberbullying	-.269	.279	-3.404**	.055	4.171
Step 3	Sex	-.016	.620	-.263	.404	28.792
	Grade	-.020	.607	-.325	.404	28.792
	Cyberbullying	-.174	.224	-2.733**	.404	28.792
	PSS	.600	.028	9.764**	.404	28.792
Step 4	Sex	-.016	.622	-.250	.401	22.947
	Grade	-.020	.609	-.332	.401	22.947
	Cyberbullying	-.084	.243	-2.671**	.401	22.947
	PSS	.604	.028	9.650**	.401	22.947
	Cyberbullying X PSS	-.028	.013	-.408	.401	22.947

Note. PSS = Perceived Social Support.
** $p < .01$.

Table 16

Hierarchical Regression Models of Cyberbullying Predicting School Connectedness with Perceived Social Support as Moderator

SC as Dependent Variable		β	SE_b	*t*	$\triangle R^2$	$\triangle F$
Step 1	Sex	-.024	.539	-.313	.032	3.704
	Grade	.209	.533	2.719**	.032	3.704
Step 2	Sex	-.084	.533	-1.104	.098	6.936
	Grade	.165	.522	2.194*	.098	6.936
	Cyberbullying	-.277	.191	-3.586**	.098	6.936
Step 3	Sex	-.055	.499	-.767	.216	12.280
	Grade	.136	.488	1.925	.216	12.280
	Cyberbullying	-.221	.180	-3.027**	.216	12.280
	PSS	.354	.022	5.018**	.216	12.280
Step 4	Sex	-.056	.500	-.778	.212	9.819
	Grade	.136	.490	1.928	.212	9.819
	Cyberbullying	-.206	.196	-2.606**	.212	9.819
	PSS	.348	.023	4.839**	.212	9.819
	Cyberbullying X PSS	.036	.011	.465	.212	9.819

Note. SC = School Connectedness. PSS = Perceived Social Support.
*$p < .05$. **$p < .01$.

Table 17

Hierarchical Regression Models of Cyberbullying Predicting Self-Esteem with Developmental Assets as Moderator

Self-Esteem as Dependent Variable		β	SE_b	*t*	$\triangle R^2$	$\triangle F$
Step 1	Sex	-.037	.086	-.474	.000	1.027
	Grade	-.103	.085	-1.317	.000	1.027
Step 2	Sex	.025	.085	.322	.071	5.181
	Grade	-.058	.083	-.752	.071	5.181
	Cyberbullying	.286	.030	3.651**	.071	5.181
Step 3	Sex	-.024	.075	-.347	.279	16.875
	Grade	-.069	.073	-1.025	.279	16.875
	Cyberbullying	.215	.027	3.082**	.279	16.875
	DA	-.463	.002	-6.890**	.279	16.875
Step 4	Sex	-.022	.074	-.320	.292	14.524
	Grade	-.072	.073	-1.071	.292	14.524
	Cyberbullying	.254	.028	3.534**	.292	14.524
	DA	-.474	.002	-7.090**	.292	14.524
	Cyberbullying X DA	.136	.001	1.975*	.292	14.524

Note. DA = Developmental Assets.
*$p < .05$. **$p < .01$.

Figure 1. The effect of Cyberbullying X Developmental Assets interaction on adolescents' self-esteem.

Table 18

Hierarchical Regression Models of Cyberbullying Predicting Life Satisfaction with Developmental Assets as Moderator

Life Satisfaction as Dependent Variable		β	SE_b	*t*	$\triangle R^2$	$\triangle F$
Step 1	Sex	-.008	.784	-.101	-.007	.434
	Grade	.073	.776	.931	-.007	.434
Step 2	Sex	-.066	.779	-.849	.055	4.171
	Grade	.030	.762	.392	.055	4.171
	Cyberbullying	-.269	.279	-3.404**	.055	4.171
Step 3	Sex	-.010	.659	-.158	.330	21.227
	Grade	.044	.642	.670	.330	21.227
	Cyberbullying	-.188	.237	-2.789**	.330	21.227
	DA	.531	.014	8.200**	.330	21.227
Step 4	Sex	-.011	.659	-.173	.330	17.178
	Grade	.045	.642	.689	.330	17.178
	Cyberbullying	-.207	.247	-2.955**	.330	17.178
	DA	.536	.014	8.254**	.330	17.178
	Cyberbullying X DA	-.067	.007	-.994	.330	17.178

Note. DA = Developmental Assets.
** $p < .01$.

Table 19

Hierarchical Regression Models of Cyberbullying Predicting School Connectedness with Developmental Assets as Moderator

SC as Dependent Variable		β	SE_b	*t*	$\triangle R^2$	$\triangle F$
Step 1	Sex	-.024	.539	-.313	.032	3.704
	Grade	.209	.533	2.719**	.032	3.704
Step 2	Sex	-.084	.533	-1.104	.098	6.936
	Grade	.165	.522	2.194*	.098	6.936
	Cyberbullying	-.277	.191	-3.586**	.098	6.936
Step 3	Sex	-.050	.505	-.688	.200	11.233
	Grade	.174	.492	2.444*	.200	11.233
	Cyberbullying	-.226	.182	-3.081**	.200	11.233
	DA	.328	.011	4.635**	.200	11.233
Step 4	Sex	-.049	.506	-.675	.198	9.095
	Grade	.172	.492	2.426*	.198	9.095
	Cyberbullying	-.210	.189	-2.736**	.198	9.095
	DA	.324	.011	4.549**	.198	9.095
	Cyberbullying X DA	.059	.006	.800	.198	9.095

Note. SC = School Connectedness. DA = Developmental Assets.
** $p < .05$. * $p < .01$.

Table 20

Hierarchical Regression Models of Cyberbullying Predicting Self-Esteem with Internal Developmental Assets as Moderator

Self-Esteem as Dependent Variable		β	SE_b	*t*	$\triangle R^2$	$\triangle F$
Step 1	Sex	-.037	.086	-.474	.000	1.027
	Grade	-.103	.085	-1.317	.000	1.027
Step 2	Sex	.025	.085	.322	.071	5.181
	Grade	-.058	.083	-.752	.071	5.181
	Cyberbullying	.286	.030	3.651**	.071	5.181
Step 3	Sex	-.011	.075	-.161	.285	17.344
	Grade	-.068	.073	-1.020	.285	17.344
	Cyberbullying	.233	.027	3.366**	.285	17.344
	IDA	-.467	.003	-7.013**	.285	17.344
Step 4	Sex	-.010	.074	-.148	.303	15.226
	Grade	-.064	.072	-.972	.303	15.226
	Cyberbullying	.261	.027	3.762**	.303	15.226
	IDA	-.474	.003	-7.206**	.303	15.226
	Cyberbullying X IDA	.149	.002	2.239*	.303	15.226

Note. IDA = Internal Developmental Assets.
* $p < .05$. ** $p < .01$.

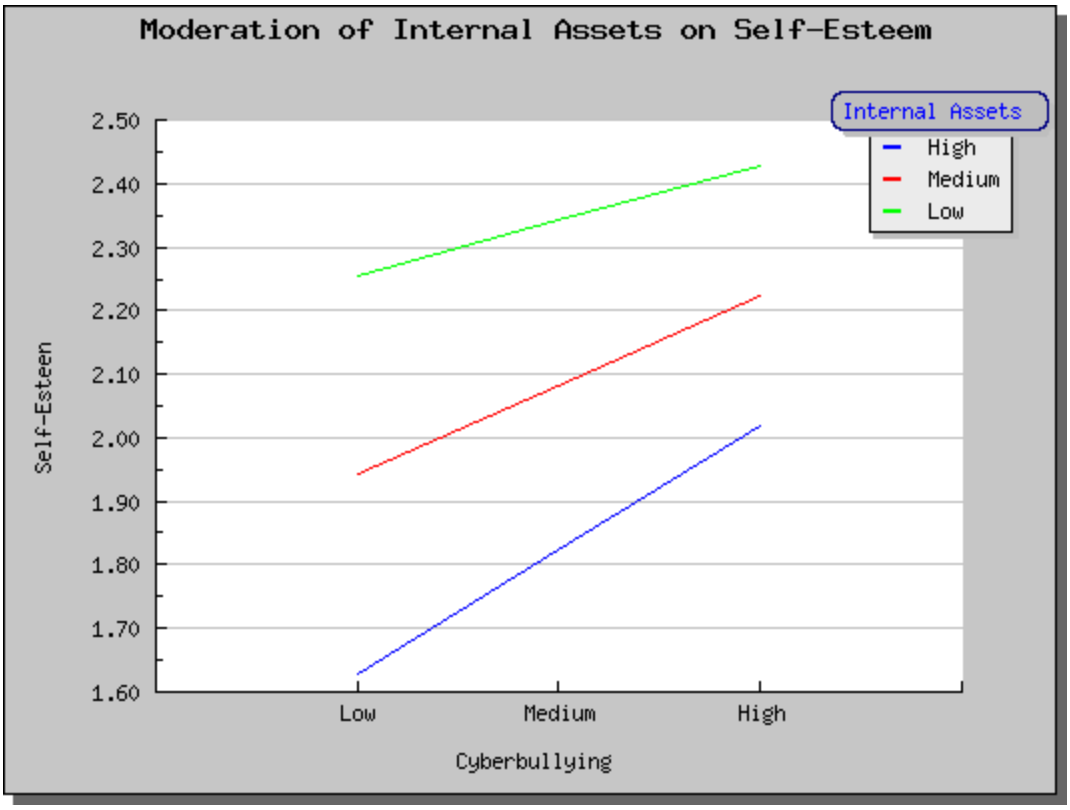

Figure 2. The effect of Cyberbullying X Internal Assets interaction on adolescents' self-esteem.

Table 21

Hierarchical Regression Models of Cyberbullying Predicting Self-Esteem with External Developmental Assets as Moderator

Self-Esteem as Dependent Variable		β	SE_b	*t*	$\triangle R^2$	$\triangle F$
Step 1	Sex	-.037	.086	-.474	.000	1.027
	Grade	-.103	.085	-1.317	.000	1.027
Step 2	Sex	.025	.085	.322	.071	5.181
	Grade	-.058	.083	-.752	.071	5.181
	Cyberbullying	.286	.030	3.651**	.071	5.181
Step 3	Sex	-.023	.078	-.321	.218	12.456
	Grade	-.067	.076	-.951	.218	12.456
	Cyberbullying	.217	.028	2.978**	.218	12.456
	EDA	-.394	.003	-5.599**	.218	12.456
Step 4	Sex	-.021	.078	-.295	.224	10.463
	Grade	-.073	.076	-1.045	.224	10.463
	Cyberbullying	.254	.030	3.304**	.224	10.463
	EDA	-.407	.003	-5.761**	.224	10.463
	Cyberbullying X EDA	.109	.002	1.463	.224	10.463

Note. EDA = External Developmental Assets.
** $p < .01$.

In summary, the relationship between amount of time engaging in online activities and cyberbullying victimization was examined. Hypothesis one was not supported, as there was no relationship found between time spent online and cyberbullying victimization. In addition, developmental differences (i.e., sex, grade, and age) among adolescents reporting cyberbullying victimization were investigated. Hypothesis two was partially supported, as results indicated that there are sex and grade difference between victims of cyberbullying, however, no differences were found for age. Specifically, males reported higher frequencies of cyberbullying victimization compared to females and participants in grade 8 reported higher frequencies of cyberbullying victimization compared to participants in grades 7, 11, or 12. Furthermore, junior high school students reported higher rates of cyberbullying victimization compared to high school students. Cyberbullying was examined regarding its impact on adolescents' self-esteem, life satisfaction, and school connectedness. Hypothesis three was fully supported, as significant relationships were found among cyberbullying victimization and all negative outcomes investigated (i.e., self-esteem, life satisfaction, and school connectedness). Furthermore, perceived social support did not moderate the relationships between cyberbullying victimization and any of the negative outcomes examined (i.e., self-esteem, life satisfaction, and school connectedness), therefore hypothesis four was not supported. Conversely, developmental assets did not moderate the relationship between cyberbullying victimization and life satisfaction or school connectedness. However, developmental assets did moderate the relationship between cyberbullying victimization and self-esteem. Therefore, hypothesis five was partially supported. Further investigation revealed that internal assets also moderated the relationship between cyberbullying victimization and self-esteem, however, external assets did not. The discussion

section will further explore the consequences of cyberbullying and other factors to be considered in protecting adolescents against the adverse impact of cyberbullying.

Chapter 4: Discussion

It is becoming much more common for youth in today's society to rely on technology to communicate with others. It has, for instance, been reported that over 80% of adolescents own at least one form of technology (e.g., cell phone, computer for internet access), and that they are using this technology to communicate via text, instant messaging, email, and social networking websites (e.g., Facebook, MySpace) (Lenhart, Madden, & Hitlin, 2007). Although technology has substantially increased society's communication techniques and multi-media exploration, it has also created a new means for youth to experience a hidden type of victimization, known as cyberbullying. Despite the growing incidence of cyberbullying, this type of aggression is still a relatively understudied area in today's research.

Cyberbullying has been linked to a number of maladaptive emotional, psychological, and behavioural outcomes for children and adolescents who experience this type of aggression (Hinduja & Patchin, 2007). Alarmingly, cyberbullying victimization often goes unnoticed by authority figures, due to the fact that it is frequently done in private domains. Although cyberbullying research remains in its infancy, traditional bullying has been investigated for a number of years. For instance, researchers have studied and identified variables that serve as protective factors against traditional bullying victimization, however, specific variables that may buffer against cyberbullying victimization have only minimally been investigated (Ubertini, 2011). The goal of the present study was to gain additional information on the negative outcomes associated with cyberbullying victimization and to identify potential moderators that reduce the impact of this type of aggression.

Discussion of Present Study

A number of studies have highlighted the negative outcomes and harmful effects associated with cyberbullying victimization (Tokunaga, 2010; Ubertini, 2011; Ybarra, Mitchell, Wolak, & Finkelhor, 2006). The present study investigated the personal, psychological, and school-based impact of cyberbullying victimization on today's youth. Specifically, adolescents' self-reported self-esteem, life satisfaction, and school connectedness were examined. To date, only one study (Ubertini, 2011) has examined variables that may protect adolescents from the adverse impact of cyberbullying victimization. Therefore, to add to the literature in this understudied area, perceived social support and developmental assets were examined as moderators. In the present study, participants were recruited from two schools representing a large public school district in Calgary, Alberta. This study was exploratory in design, and sex and grade variables were controlled in all main analyses. The findings of this study add to the growing literature on cyberbullying while providing valuable information on the outcomes that may be associated with electronic victimization. Furthermore, this study presents findings about personal and social factors that may buffer against the negative outcomes associated with cyberbullying.

Hypotheses and Past Research

Several hypotheses were proposed to investigate the negative impact of cyberbullying victimization and potential protective factors for this type of aggression. The results indicate that some hypotheses were fully and partially supported, while others were not supported. In the first hypothesis, it was suggested that youth who spend more time engaging in online activities are at heightened risk for experiencing cyberbullying victimization. Results did not support this hypothesis as there were no significant relationships found between hours spent on a cell phone

per day, hours spent on a computer per day, hours spent on the internet per day, text messages sent per day, number of emails sent per day, hours spent on instant messaging per day, hours spent on social networking websites per day and cyberbullying victimization. This finding is quite surprising as it has been hypothesized by a number of researchers (e.g., Juvonen & Gross, 2008; Patchin & Hinduja, 2006; Ybarra, 2004) that the amount of time one spends engaging in online activities is predictive of victimization. For instance, Berson, Berson, and Ferron (2002) have suggested that adolescents who spend time online are putting themselves at a greater risk of encountering bullying and harassment. Furthermore, Mesch (2009) explored the relationship between internet use and cyberbullying victimization and found that the types of online activities that adolescents partake in, may put them at greater risk of experiencing online aggression. Specifically, Mesch (2009) found that adolescent's who participate in social networking websites, have an online profile, and/or engage in conversations through chat rooms are at a heightened risk of experiencing cyberbullying victimization. Although the present study did not find any relationships between technology use (i.e., text messaging, emails, social networking websites, etc.) and cyberbullying victimization, perhaps this is due to the fact that in today's society, adolescents are constantly "connected" to the online world. Whether this is through cell phones or computers, it is quite rare that an adolescent is not exposed to some form of online communication, making it much more difficult to elucidate the amount of time engaging in online activities for victims compared to non-victims.

In the second hypothesis, it was suggested that there are significant developmental differences (i.e., sex, grade, and age) between those who report cyberbullying victimization. The results partially supported this hypothesis as sex and grade differences were found among those who reported cyberbullying victimization. However, no age differences were found for this type

of aggression. Research on cyberbullying victimization has produced mixed findings in relation to developmental differences for those who experience this type of aggression. In line with a number of studies (e.g., DeHue et al., 2008; Kowalski & Limber, 2007; Ybarra & Mitchell, 2008; Ybarra et al., 2007), the present study revealed support that there are significant sex differences among victims of cyberbullying, as males reported higher frequencies of victimization than females. Although the majority of studies suggest females are victims of cyberbullying more often than males (DeHue et al., 2008; Kowalski & Limber, 2007; Li, 2007), an explanation for the present study's finding relates to online activities. For instance, perhaps males are online game users more than females, which may increase their exposure to victimization.

Furthermore, the present study revealed that participants in grade 8 reported higher frequencies of victimization compared to those in grades 7, 11, or 12. Moreover, participants in junior high school reported experiencing victimization at higher frequencies than participants in high school. Although research in the area of age and/or grade differences for cyberbullying victimization has produced mixed findings, some researchers have suggested that cyberbullying victimization is in fact more prevalent in junior high school and/or middle school (12-15 year olds) compared to high school (15-18 years old) (Slonje & Smith, 2008). While significant grade differences were found in the present study for those who experience cyberbullying, no significant age differences were found. In line with the present study, the majority of cyberbullying studies reveal a lack of association between cyberbullying victimization and age (Beran & Li, 2007; Didden et al., 2009; Juvoven & Gross, 2008; Katzer et al., 2009; Patchin & Hinduja, 2006; Smith et al., 2008; Varjas, Henrich, & Meyers, 2009; Ybarra, 2004). As previously mentioned, cyberbullying studies have produced incredibly inconsistent findings

regarding age and grade differences among those who experience online victimization. It is therefore not surprising that the present study has revealed inconsistency in its findings pertaining to developmental differences.

In the third hypothesis, it was suggested that adolescents who are cyberbullied will report lower levels of self-esteem, life satisfaction, and school connectedness. The results fully support this hypothesis. Specifically, adolescents who reported cyberbullying victimization also reported significantly lower levels of self-esteem which has been supported by previous literature (Didden et al., 2009; Katzer et al., 2009). This finding is not surprising given the association between both traditional bullying and cyberbullying victimization, and depreciated levels of self-esteem that has been consistently highlighted in the psychological literature (Patchin & Hinduja, 2010). It has also been supported in the literature that as one's frequency of bullying victimization increases, the more their self-esteem decreases (O'Moore & Kirkham, 2001).

Additionally, adolescents who reported cyberbullying victimization also reported significantly lower levels of life satisfaction. Although past studies have examined life satisfaction as serving as a protective factor against the negative outcomes of cyberbullying victimization (Ubertini, 2011), this is the first known study to investigate how adolescents' life satisfaction is impacted following online victimization. Traditional bullying literature has suggested that there is a relationship between peer victimization and life satisfaction. Therefore, it is not surprising that a relationship would be found between cyberbullying victimization and depreciated levels of life satisfaction. In particular, You, Furlong, Felix, Sharkey, and Tanigawa (2008) have suggested that bullying victimization is a significant school-based experience that can result in depreciated levels of life satisfaction for children and adolescents. Furthermore, in a study conducted by Ash and Huebner (2001), it was found that adolescents who experience

persistent negative life experiences, such as bullying victimization, report decreased levels of life satisfaction.

Research in the area of bullying victimization and life satisfaction has suggested that positive daily life events in children and adolescents' lives largely contribute to overall life satisfaction (McCullough, Huebner, & Laughlin, 2000). Therefore, regardless of the form, peer victimization is considered a negative life event. Thus, it can be assumed that victimization leads to reduced life satisfaction. Furthermore, Flaspohler, Elfstrom, Vanderzee, Sink, and Birchmeier (2009) conducted a large scale study of 4,331 middle-school students in which life satisfaction was explored as an outcome of bullying victimization. In accordance with other studies in this area, it was confirmed that those who experience bullying victimization report lower levels of life satisfaction when compared to their non-victimized peers. Interestingly, in a study conducted by Gilman and Huebner (2006), it was found that adolescents who reported the highest level of life satisfaction among participants (top 20%) reported no clinical levels of emotional and/or behavioural problems. However, in contrast, of adolescents who reported the lowest levels of life satisfaction among participants (bottom 20%), 42% had clinical levels of emotional and/or behavioural problems. As confirmed by the literature, one's overall life satisfaction is associated with positive social and emotional functioning. Therefore, it is imperative that research continues in this domain and researchers investigate the relationship between cyberbullying victimization and life satisfaction.

Results from the present study found that adolescents who reported cyberbullying victimization also reported significantly lower levels of school connectedness. Minimal studies are available that explore the impact of cyberbullying victimization on adolescents' school connectedness. However, there is no denying the importance of adolescents' feelings of

connectedness towards school. For instance, it has been strongly supported in the literature that those who feel close to others at school and perceive themselves as treated fairly by school personnel, are less likely to engage in risky behaviours compared to their counterparts (Resnick et al., 1997). However, to date, the majority of research (e.g., Taylor-Seehafer & Rew, 2000) has focused on how one's school environment and degree of school connectedness acts as either a protective or risk factor for experiencing peer victimization.

Although limited, research exploring the relationship between peer victimization and school connectedness has consistently supported the notion that students who are mistreated by peers have a decreased desire to be at school (Eisenberg, Neumark-Sztainer, & Perry, 2003), which ultimately impacts the degree of school connectedness victimized students feel. Furthermore, it has also been suggested that adolescents who frequently experience relational aggression (e.g., name-calling, social exclusion, etc.), report decreased levels of school connectedness compared to their non-victimized peers (Urbanski, 2007). Although incredibly sparse, it has been suggested that one's feelings of school connectedness significantly declines following online victimization. Specifically, Shariff (2005) suggested that cyberbullying victimization can negatively impact one's learning in the school environment by creating an aggressive and intimidating environment where victimized youth feel unwelcome and unsafe. Although the present study is the first to specifically investigate the relationship between cyberbullying victimization and the outcome of school connectedness, findings are in line with those found within the traditional bullying literature. As highlighted in the psychological literature, the benefits of school connectedness as well as a positive school climate are abundant. Therefore, it is important to extend research and explore the school-based outcomes associated

with cyberbullying victimization in order to aid in the development and implementation of school-wide preventative programs.

In the fourth hypothesis, it was suggested that adolescents who are cyberbullied and have higher levels of self-reported perceived social support will report higher levels of self-esteem, life satisfaction, and school connectedness. The results did not support this hypothesis. This is the second study within the cyberbullying literature to examine potential protective factors against the devastation of online aggression. Although research has been conducted on various factors that protect children and adolescents from the negative outcomes associated with traditional bullying (Haynie, et al., 2001; Hodges, Boivin, Vitaro, & Bukowski, 1999; Raskauskas & Stoltz, 2007), there is a significant paucity in the area of cyberbullying. As suggested by Ubertini (2011), this may be due to "the novelty of the phenomenon and because cyberbullying is difficult to control or contain" (p. 74). Though the results of the present study do not signify that perceived social support buffers against the negative outcomes of cyberbullying victimization, these findings are surprising given the evidence of the positive impact of perceived social support on adolescents following traditional bullying (Davidson & Demaray, 2007). Specifically, Davidson and Demaray (2007) found that when adolescents have support from a parent, teacher, classmate, and/or school support, they are less likely to report internalizing distress following traditional bullying victimization.

In the fifth hypothesis, it was suggested that adolescents who are cyberbullied and have higher levels of developmental assets will report higher levels of self-esteem, life satisfaction, and school connectedness. The results partially supported this hypothesis. This was the first known study to explore the protective nature of developmental assets on negative outcomes following cyberbullying victimization. As previously discussed, developmental assets did not

moderate the relationship between online victimization and life satisfaction or school connectedness. However, the present study revealed that developmental assets do in fact moderate the relationship between online victimization and self-esteem. Although previous research has yet to investigate the degree to which developmental assets moderate the relationship between peer victimization and negative outcomes (i.e., lower levels of self-esteem, life satisfaction, and school connectedness), it has been postulated in the psychological literature that adolescents who report high levels of developmental assets are considerably more likely to overcome adversity (Scales, Benson, Leffert, & Blyth, 2000). In addition, research has suggested that developmental assets have been shown to reduce adolescents' susceptibility to a number of risk factors (Harlow & Roberts, 2010). Therefore, in accordance with this literature, it was theorized that the impact of cyberbullying victimization would be negatively related to self-reported developmental assets. The present study yielded support in regards to developmental assets moderating the relationship between cyberbullying victimization and self-esteem. Thus, it appears that developmental assets have a greater impact on personal outcomes following victimization as opposed to psychological or school-based outcomes.

In order to further explain the degree to which developmental assets moderate the relationship between cyberbullying victimization and self-esteem, additional analyses were conducted by dividing developmental assets into its two components, internal assets and external assets. As highlighted previously, internal assets were shown to moderate the relationship between cyberbullying victimization and self-esteem, however, external assets were not. For review, external assets refer to the positive experiences children and adolescents encounter and opportunities that are provided to them by their family, schools, and the larger community

(Leffert et al., 1998). Conversely, internal assets are a set of skills and self-perceptions that are developed over time through observation and socialization experiences (Leffert et al., 1998). Taken together, the developmental assets that comprise the internal component are largely influenced by the positive inherent qualities one possesses (e.g., positive identity, social competence, positive values, and commitment to learning). It is therefore believed that as adolescents build upon and develop internal assets, this will in turn lead to a more positive evaluation of one's self (i.e., self-esteem), even following victimization through electronic devices. In addition, further investigation into this relationship revealed that perceived social support and external assets are highly correlated (r = .61). Therefore, because perceived social support did not moderate the relationship between cyberbullying victimization and any of the negative outcomes examined, it is not surprising that the same result was found for external assets and negative outcomes.

The present study revealed valuable findings regarding the personal, psychological, and school-based outcomes associated with cyberbullying victimization, as well as the protective nature of developmental assets for this population. Though mixed findings were discovered, it is essential that research continues in this domain in order to uncover various factors that protect adolescents following victimization. In turn, this will assist educators and clinicians in the development of programs that will shield the youth in today's society from this hidden form of aggression.

Strengths of Present study

There are several strengths of the present study that are worth noting. Though some studies have examined the impact of cyberbullying victimization on adolescents' self-reported self-esteem, this was the first known study to examine the impact of cyberbullying on

adolescents' self-reported life satisfaction and school connectedness. Furthermore, minimal studies have investigated potential variables that moderate the relationship between cyberbullying victimization and outcomes related to adolescents' overall well-being. In turn, this study provides useful information regarding various factors that can be utilized in the development and implementation of school-wide preventative programs to protect youth from cyberbullying.

The present study has also highlighted the importance of strengths-based research in the domain of cyberbullying, and has provided researchers with valuable information pertaining to personal factors that can ameliorate the outcomes of online aggression for adolescents. Furthermore, a considerable strength of the present study was the development of a modified version of the Revised Olweus Bully/Victim Questionnaire (Olweus, 1996). In terms of traditional bullying research, the Revised Olweus Bully/Victim Questionnaire is a very well-known and psychometrically sound measure. Although there remains to be no measures available to exclusively investigate cyberbullying victimization, the present study has constructed a valuable tool that can be used to explore this type of aggression. Though the impact of traditional bullying on adolescents has been studied extensively for a number of years, this study positively contributes to the cyberbullying literature and goes one step further in an effort to identify protective factors against this form of aggression.

Limitations of Present study

A number of limitations to the present study should be noted. For instance, given that data was collected from a sample of 165 junior high and high school students, in a middle-to-upper class school district, generalizability is limited. In order to gain a broader understanding of the issue of the prevalence of cyberbullying, outcomes associated with this type of aggression,

and potential protective factors for victims, a larger and more varied sample would have been beneficial. It is also important that cyberbullying be examined using an older population (e.g., young adults, adults) and with more ethnically diverse samples. In particular, of the 165 participants recruited, an overwhelming 73.9% self-reported as being of Caucasian ethnicity. In addition, unfortunately no teachers of grade 9 or 10 classes agreed to have their students participate in the present study. Therefore, there is a significant gap in the sample in terms of grades investigated, and it would be have been beneficial to gain information on cyberbullying victimization among a representative sample of participants in grades 7 through 12. Furthermore, the main analyses of the present study involved using the data of those participants who self-reported as being victimized online, and of the 165 participants, only 47 participants reported cyberbullying victimization. Thus, a small number of participants were involved in the main statistical analyses of the present study, which may have yielded non-representative findings.

Another significant limitation to the present study is the reliance on self-report measures. Although self-report measures are dominantly used within the area of cyberbullying research, an alternative means of measurement (i.e., structured interviews) alongside self-report measures would have been valuable. Moreover, self-report measures are considered more unreliable when used with children and adolescents, as this population is restricted in their personal insight. There is also an increased risk for children and adolescents to misunderstand what is being asked of them, and for them to answer a question without fully understanding how to properly respond.

Lastly, a clear limitation of the present study is the significant lack of previous literature in the area of protective factors for victims of cyberbullying. Although there has been research conducted in the area of protective factors for those who experience traditional bullying, research

has not extended into the cyber domain as of yet. In turn, this made it difficult to derive hypotheses and support the present study's findings, in spite of a thorough review of the literature.

Implications of Study Findings

It is important that parents, teachers, and especially the adolescents in today's society understand that cyberbullying can lead to a number of serious and debilitating outcomes for those who experience this type of aggression. By further examining the outcomes associated with cyberbullying as well as potential protective factors that moderate the relationship between victimization and negative outcomes, intervention measures can be put in place within the education system in order to guard adolescents against the harmful effects of cyberbullying. Although there are various anti-bullying campaigns and programs in schools throughout Canada, it is important to know that more attention needs to be focused on the personal, psychological, and school-based outcomes of cyberbullying among adolescents. Without a full understanding of factors that may act as buffers against cyberbullying victimization, adolescents are not being fully informed of the personal factors that can help them overcome the dangers they face through online aggression.

Recommendations for Future Research

A more comprehensive study regarding the outcomes associated with cyberbullying and potential protective factors for victims would be a wonderful way to generalize findings from the present study. For instance, although participants recruited for the present study were asked about their family structure and their family membership (e.g., eldest child, middle child, etc.), this information was not assessed. Therefore, in the future, it would be interesting to investigate whether or not one's family structure or their membership within their family affects how they

perceive personal and social factors (i.e., developmental assets, perceived social support), and also if the structure of a family has any impact on the frequency of cyberbullying victimization one may experience. In addition, participants were asked to report on the number of electronic devices that are currently present in their home, in their room, and that they personally own, however, this information was not assessed. Therefore, in the future, it would be interesting to investigate whether or not the number of electronic devices to which one has accessibility impacts cyberbullying victimization.

The present study revealed significant findings regarding personal, psychological, and school-based outcomes associated with cyberbullying victimization. Furthermore, developmental assets were identified as serving as a buffer against the negative outcome of lower levels of self-esteem following victimization. Since 28.5% of participants in the present study were found to be victims of cyberbullying, this type of aggression among adolescents is an issue that deserves considerable attention. Also, as both male and female participants from the present study were found to exhibit personal, psychological, and school-based problems following victimization, it is supported that cyberbullying can lead to a host of negative outcomes that impact victims in a number of domains, and future research should continue its momentum in this area and be dedicated to this topic.

Practical Recommendations

A number of practical recommendations for parents and educators can be made pertaining to the findings from the present study. First, findings suggest that cyberbullying victimization is most prevalent amongst students in junior high school. Therefore, it is recommended that parents and educators begin speaking to children about what cyberbullying entails as well as the repercussions associated with cyberbullying at an early age in order to

begin the discussion regarding this type of aggression. Second, it is imperative that parents and educators become familiar with technological advances and understand the various signs children may display if they are experiencing cyberbullying. There are a number of websites that are currently available (e.g., netsmartz.org, bullyfreealberta.ca) that are designed to outline key definitions, prevalence rates, associated outcomes, and signs/symptoms for parents, educators, and clinicians. Third, the present study revealed promising findings related to developmental assets as moderating the relationship between cyberbullying victimization and self-esteem. As developmental assets are strengthened by positive family, school, and community experiences, it is important that children and adolescents are exposed to constructive socialization experiences at a young age in order to foster the development of both internal and external assets.

Conclusions

The present study sought to examine the role of cyberbullying victimization on adolescents' overall well-being in terms of self-esteem, life satisfaction, and school connectedness. It also sought to identify moderators, in particular perceived social support and developmental assets, against the potentially negative impact of cyberbullying victimization. This is the first known study to investigate personal, psychological, and school-based outcomes of cyberbullying. Moreover, only one previous study (Ubertini, 2011) has examined potential protective factors for adolescent victims of cyberbullying. Though the present study did not identify perceived social support as a moderator between cyberbullying victimization and negative outcomes, it was found that developmental assets moderate the relationship between victimization and self-esteem. In addition, the present study was able to identify personal, psychological, and school-based outcomes associated with cyberbullying victimization. In particular, adolescents who reported cyberbullying victimization also reported lower levels of

self-esteem, life satisfaction, and school connectedness. Furthermore, the present study revealed significant sex and grade differences for those who experience this type of aggression.

There is still much to be discovered in the area of cyberbullying and this type of peer aggression continues to be a serious societal concern with a host of negative repercussions for victims. It is imperative that parents, educators, clinicians, and politicians fully understand what constitutes cyberbullying as well as the short and long-term impact this type of aggression has on children and adolescents. It is hoped that research will continue to unveil various protective factors for cyberbullying, which will in turn, aid in the development and implementation of school-wide preventative programs to protect today's youth.

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Appendix A

Letter to Schools / Purpose of Study

February 1st, 2012

To Whom It May Concern,

My name is Jessica Piitz and I am currently enrolled in the Master's of Science School and Applied Child Psychology program at the University of Calgary. I am in the process of generating my Master's thesis. I am looking for school-aged youth between the ages of 11-17 and am wondering if you would allow the students at your school, who meet the eligibility criteria, to participate in my study. Participation in this study is completely voluntary and you have the ability to withdraw at any time without penalty. Of note, in order to create awareness of the topic of cyberbullying, I am willing to provide an instructional session for students and staff on relevant issues related to this type of aggression. The dates and times of potential instructional sessions can be arranged following data collection with the primary researcher (Jessica A. Piitz). Furthermore, this study is currently under review by the CFREB and CBE and will be approved prior to the study being initiated at school level.

Please refer to the details of the study below.
Thank you for your time and consideration.

Sincerely,

Jessica A. Piitz

Investigating Protective Factors for Cyberbullying

Rationale and Background:

Bullying has long been recognized and discussed in the psychological literature. However, there has been little research conducted investigating social factors that can protect the high percentage of youth that may encounter cyberbullying. It has been found that 20-40% of youth experience cyberbullying in their lifetime (DeHue, Bolman, & Vollink, 2008).

Cyberbullying is defined as "an aggressive intentional act carried out by a group or individual, using electronic forms of contact, repeatedly and over time against a target who cannot easily defend him or herself" (Smith et al., 2008, p. 376). Examples of cyberbullying include sending harassing or threatening emails or text messages, constantly contacting an individual who does not want to be contacted, and posting rumors or lies about a person on a social networking website (SNW). Cyberbullying has been linked to multiple maladaptive psychological and behavioural outcomes (e.g., Hinduja & Patchin, 2007) including low self-esteem and decreased school connectedness (Ybarra, 2004; Haynie et al., 2001). Through research, various outcomes associated with cyberbullying have been identified however there is a need to build upon and extend research in this domain.

Although limited, studies have attempted to highlight specific protective factors that protect children and adolescents who are targets of cyberbullying (Ubertini, 2011). The protective nature of social support from parents and peers has been supported by researchers as promoting positive wellbeing for youth (Malecki & Demaray, 2006). Social support has been defined as, "an individual's perceptions of general support or specific supportive behaviours from people in their social network which enhances their functioning and/or may buffer them from adverse outcomes" (Malecki & Demaray, 2002, p.2). Research conducted on social support has demonstrated that perceived social support can protect youth from the negative outcomes of bullying for males and females (Ubertini, 2011). It has been supported by the literature that the outcomes of cyberbullying can be comparable to or worse than those of traditional bullying (Twyman, Saylor, Taylor & Comeaux, 2010). In a recent study, Ubertini (2011) sought to identify protective factors for those who encounter cyberbullying, such as perceived social support as a moderating variable between cyberbullying experiences and negative outcomes.

Life satisfaction has been studied as an element of subjective well-being and can be defined as one's cognitive evaluation of his or her quality of life (Diener, Suh, Lucas, & Smith, 1999). Life satisfaction has been found to be beneficial to youth as individuals who possess high levels of life satisfaction have increased positive development and overall functioning (Suldo & Huebner, 2006). To date, there has only been one study (Ubertini, 2011) conducted on the protective nature of life satisfaction for targets of cyberbullying. Although research has demonstrated that high overall life satisfaction for children and adolescents may protect them against the adverse effects of life's stressors and negative psychological outcomes, much more research must be conducted in this area to investigate the role life satisfaction has on the positive development of cyberbullying targets.

The purpose of this study is to identify potential protective factors (i.e., perceived social support and life satisfaction) for school-aged targets of cyberbullying and assess the buffering effects such protective factors have on the negative outcomes associated with cyberbullying experiences (i.e., low self-esteem and decreased school connectedness). This will, in turn, aid in

the development and implementation of school-wide cyberbullying preventative programs in order to promote positive youth development.

Design:

Two hundred participants (males and females) between the ages of 11-17 will complete a series of measures online via SurveyMonkey. The measures will include: the Olweus Bully/Victim Questionnaire (Olweus, 1996) which has been modified to assess cyberbullying experiences, the Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988), the Developmental Assets Profile (Search Institute, 2004), the Brief Multidimensional Students' Life Satisfaction Scale (Seligson, Huebner, & Valois, 2003), the Rosenberg Self-Esteem Scale (Rosenberg, 1965), the School Connectedness Scale (Resnick et al., 1997), and the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960). It is estimated that the online survey will take approximately 45 minutes to complete. Two weeks prior to data collection, students will be provided with a Parental Consent Form to have a parent/guardian complete. Only those students who return a signed Parental Consent Form are eligible to participate in this study. On the day of data collection, participants will be given a Child Assent Form to read and sign. It is clearly outlined on both the Parental Consent Form and the Child Assent Form that participation is completely voluntary and that participants are able to withdraw from the study at any time without penalty. Following the completion of the online survey, the primary researcher will debrief the participants at which time they will be described the purpose of the study and what the information collected will be used for. Additionally, participants will be given an Explanation of Study with a list of resources in the Calgary, Alberta area if they experience any distress during or after completing the study.

Implications:

Researchers are only beginning to uncover the prevalence and dangerousness of cyberbullying. The results of this study have implications for parents, educators, and practitioners who work with youth. Due to the covert nature of cyberbullying the negative outcomes of such aggression is often overlooked. This study will add to the literature about the impact cyberbullying has on targeted youth. Furthermore, additional information regarding the consequences of this type of aggression will be identified. This research is highly valuable because very little previous research has adopted a strengths-based approach to cyberbullying in hopes of identifying key factors that deter negative short-term and/or long-term effects. Moreover, the results of this study will aid in the development and implementation of school-wide programs that aim to promote positive youth development.

Appendix B

Parent Consent Form

Name of Researcher, Faculty, Department, Telephone & Email:
Miss Jessica A. Piitz | Faculty of Education | Educational Studies in Psychology | 403 805 9909 | japiitz@ucalgary.ca
Supervisor:
Dr. Kelly Dean Schwartz |Faculty of Education | Educational Studies in Psychology | 403 220 3669 | kdschwar@ucalgary.ca

Title of Project:
Investigating Protective Factors for Cyberbullying

This consent form, a copy of which has been given to you, is only part of the process of informed consent. If you want more details about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information. The University of Calgary Conjoint Faculties Research Ethics Board has approved this research study.
If you have any questions and/or concerns regarding the details of this study, please contact Jessica Piitz at japiitz@ucalgary.ca or (403) 805-9909. All questions and/or concerns will be addressed in order to ensure full understanding of the study details.

Purpose of the Study:

The topic of protective factors for targets of cyberbullying is significantly lacking in today's research literature. The purpose of the study is to investigate potential protective factors (perceived social support and life satisfaction) that increase the likelihood of positive outcomes (self-esteem and school connectedness) for school-aged targets of cyberbullying. Through the identification of protective factors for this type of aggression, school-wide preventative programs can be put in place to enhance positive youth development. This study is not part of the established curriculum. Participation, non-participation or withdrawal will have no impact whatsoever on your child's school grades or on their continuing relationship with their school.

The following provides you with details of the study, the type of information that will be collected for the purposes of the study, and the ways in which this information will be used.

What Will My Child Be Asked To Do?

Your child will be asked to read and sign an assent form on the day of data collection. It will be clearly stated in the assent form that their participation is completely voluntary and that they are able to withdraw from the study at any time without penalty. However, any data collected up to the point of withdrawal will be retained for use in the study. Your child will then complete an online survey via SurveyMonkey that includes questions pertaining to technology use, cyberbullying experiences, perceived social support, life satisfaction, self-esteem, and school connectedness. It is estimated that the questionnaire package will take approximately forty-five minutes to complete. Following, the primary researcher will debrief your child and explain the purpose of the study and what the information collected will be used for. During this time, your child will receive an Explanation of Study form with a list of resources in the Calgary, Alberta area if any distress were to arise during and/or after completion of the online survey.

The information collected will be used by the primary researcher as part of her thesis requirement, and the generation of reports, research publications, or presentations. All information collected will remain confidential. That is, any identifiable information, such as the type of school your child currently attends and his/her grade, will not be displayed and your child shall remain anonymous. Furthermore, in order to protect the confidentiality of your child, you will not be permitted to see any of your child's survey responses.

The online survey is being administered by SurveyMonkey(c), an American software company. As such, your responses are subject to U.S. laws, including the USA Patriot Act. The risks associated with participation are minimal, however, and similar to those associated with many e-mail programs, such as Hotmail(c) and social utilities spaces, such as Facebook(c) and MySpace(c).

What Type of Personal Information Will Be Collected?

Information regarding your child's age, grade, ethnicity, and type of school he/she currently attends will be collected for the purpose of the study. Again, any identifiable information, such as the type of school your child attends or his/her current grade, will not be displayed and your child shall remain anonymous when utilized in the generation of reports, research publications, or presentations.

Are there Risks or Benefits if My Child Participates?

Your child could experience some mild distress when answering questions about cyberbullying they may have experienced in the past and present. However, they are not obliged to answer any questions that they do not want to answer. Furthermore, they will be given a list of community resources at the end of the study if any distress were to arise during or after participating in the study.

Your child will not directly benefit from participating in this study. Information obtained will add to our general knowledge about what protects youth from negative outcomes following online aggression. Such information could be used to help develop prevention and treatment programs aimed at positive youth development. In addition, some people report that they learn something about themselves in the process.

What Happens to the Information My Child Provides?

Information gained from this study will be removed of all identifiable characteristics and remain anonymous. The results will be retained by the primary researcher and will be kept in a locked cabinet at the University of Calgary only accessible to the primary researcher and her supervisor. The data generated from this study will be used by the primary researcher in the creation of her Master's thesis, research publication, and presentations. After a period of seven years, all data collected by the primary researcher will be destroyed.

If you would like clarification on any details of the study before signing this consent form, please contact Jessica Piitz (japiitz@ucalgary.ca or (403) 805-9909) or Dr. Kelly Dean Schwartz (kdschwar@ucalgary.ca). All questions and/or concerns will be addressed in order to ensure full understanding of the study details.

Questions/Concerns

If you have any further questions or want clarification regarding this research and/or your child's participation, please contact:

Primary Researcher
Miss Jessica A. Piitz
Educational Studies in Psychology – Faculty of Education
(403) 805 9909 – japiitz@ucalgary.ca
Or
Supervisor
Dr. Kelly Dean Schwartz
Educational Studies in Psychology – Faculty of Education
(403) 220 3669 – kdschwar@ucalgary.ca

If you have any concerns about the way you've been treated as a participant, please contact the Senior Ethics Resource Officer, Research Services Office, University of Calgary at (403) 220-3782; email rburrows@ucalgary.ca. A copy of this consent form has been given to you to keep for your records and reference. The investigator has kept a copy of the consent form.

If you agree to have your child participate in the above outlined study, please sign below and return this page with your child.

Thank-you!

Signatures (written consent)
Your signature on this form indicates that you 1) understand to your satisfaction the information provided to you about your child's participation in this research project, and 2) agree for your child to participate as a research subject.

In no way does this waive your legal rights nor release the investigators, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from this research project at any time. You should feel free to ask for clarification or new information throughout your participation.

Parent/Guardian's Name: (please print)

_____

Parent/Guardian's Signature: _____Date: _____

Child's Name: (please print)

_____

Researcher's Name: (please print)

_____

Researcher's Signature: _____Date: _____

Appendix C

Child Assent Form

Name of Researcher, Faculty, Department, Telephone & Email:
Miss Jessica A. Piitz | Faculty of Education | Educational Studies in Psychology | 403 805 9909 | japiitz@ucalgary.ca

Supervisor:
Dr. Kelly Dean Schwartz |Faculty of Education | Educational Studies in Psychology | 403 220 3669 | kdschwar@ucalgary.ca

Title of Project:
Investigating Protective Factors for Cyberbullying

This assent form, a copy of which has been given to you, is only part of the process of informed assent. If you want more details about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information. The University of Calgary Conjoint Faculties Research Ethics Board has approved this research study.

Purpose of the Study:
The topic of protective factors for cyberbullying is lacking in today's research. The purpose of this study is to investigate possible protective factors (social support and life satisfaction) that increase the chances of positive outcomes (self-esteem and school connectedness) for school-age youth who are exposed to cyberbullying. Through the identification of protective factors for this type of aggression, school-wide preventative programs can be created to enhance positive youth development.

The following provides you with details of the study, the type of information that will be collected for the purposes of the study, and the ways in which this information will be used.

What Will I Be Asked To Do?
You will be asked to read and sign an assent form. Your participation in this study is completely voluntary and you are free to stop participating at any time without penalty. You will then be asked to complete an online survey via SurveyMonkey. The online survey includes a series of questions, and will take approximately forty-five minutes to complete. Following, you will be debriefed by the primary researcher at which time you will be described the purpose of the study and what the information will be used for. During this time, you will receive an Explanation of Study form with a list of resources in the Calgary, Alberta area if you feel sad, worried, or angry during or after completing the online survey.

The information collected will be used by the primary researcher as part of her Master's thesis requirement, and the making of reports, research publications, or presentations. All information collected will remain confidential. That is, any identifiable information, such as the type of school you currently attend and your grade, will not be displayed and you will remain anonymous. Furthermore, your parents, guardians, and/or teachers will not be able to see any of your survey responses.

What Type of Personal Information Will Be Collected?
Information about your age, grade, ethnicity, and type of school you currently attend will be collected for the purpose of this study. Again, any information that may reveal your identity, such as the type of school you attend and/or your current grade, will not be displayed and you will remain anonymous.

Are there Risks or Benefits if I Participate?
You may experience some mild distress (i.e., feeling sad, worried, angry, etc.) when answering questions about any cyberbullying you have experienced in the past and/or present. However, you do not have to answer any questions

that you do not want to answer. In addition, you will be given a list of community resources at the end of the study if you experience any distress during or after participating in this study.

You will not directly benefit from participating in this study. Information gathered from this study will add to our general knowledge about what protects youth from negative outcomes following online aggression. Such information could be used to help develop prevention and treatment programs aimed at positive youth development. In addition, some people report that they learn something about themselves in the process.

What Happens to the Information I Provide?
Information gained from this study will be removed of all identifiable characteristics and remain anonymous. The results will be retained by the primary researcher and will be kept in a locked cabinet at the University of Calgary only accessible to the primary researcher and her supervisor. The data generated from this study will be used by the primary researcher in the creation of her Master's thesis, research publication, and presentations. Furthermore, after a period of seven years, all data collected by the primary researcher will be destroyed.

Signatures (written assent)
Your signature on this form indicates that you 1) understand to your satisfaction the information provided to you about your participation in this research project, 2) agree to participate as a research subject, and 3) understand the results generated from this study will be used for a Master's thesis.

In no way does this waive your legal rights nor release the investigators, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from this research project at any time. You should feel free to ask for clarification or new information throughout your participation.

Child's Name: (please print) _____

Child's Signature: _____Date: _____

Researcher's Name: (please print) _____

Researcher's Signature: _____Date:_____

Questions/Concerns
If you have any further questions or want clarification regarding this research and/or your participation, please contact:

Primary Researcher
Miss Jessica A. Piitz
Educational Studies in Psychology – Faculty of Education
(403) 805 9909 – japiitz@ucalgary.ca
Or
Supervisor
Dr. Kelly Dean Schwartz
Educational Studies in Psychology – Faculty of Education
(403) 220 3669 – kdschwar@ucalgary.ca

If you have any concerns about the way you've been treated as a participant, please contact the Senior Ethics Resource Officer, Research Services Office, University of Calgary at (403) 220-3782; email rburrows@ucalgary.ca. A copy of this assent form has been given to you to keep for your records and reference. The investigator has kept a copy of the assent

Appendix D

Explanation of Study

Thank you for participating in the study **Investigating Protective Factors for Cyberbullying**. Your participation is greatly appreciated. By participating in this study, you are providing information regarding protective factors such as perceived social support and life satisfaction, along with information regarding online aggression. Information gathered will be used for a Master's thesis project.

It is expected that individuals who have higher levels of perceived social support and life satisfaction will be less likely to experience negative outcomes following exposure to cyberbullying. A number of studies have investigated various outcomes that are associated with cyberbullying. However, this study will fill a gap in the literature by using a strengths-based approach to identify key factors that can protect youth. Furthermore, this study will increase our understanding of cyberbullying and lend support to the development and implementation of school-wide preventative programs.

If you have any questions or concerns regarding this research, please contact Jessica Piitz at japiitz@ucalgary.ca or Dr. Kelly Dean Schwartz at kdschwar@ucalgary.ca. If you feel any negative emotions related to participation in this study, please contact someone from one of the following resources below, or tell Jessica Piitz or Dr. Kelly Dean Schwartz so they can direct you to an appropriate resource.

Sometimes when youth have questions or problems they may not know who to talk to or where to get help. We have included a list of services that are available to youth in your area. If you, a friend, or a family member have questions, would like someone to talk to, or need help with a problem, one of these resources may be able to help.

- **Bullying Help Line**
  1-888-456-2323

- **Child Abuse Hotline**
  1-800-387-KIDS (5437)

- **Kids Help Phone**
  1-800-668-6868

- **Teen Central**
  www.teencentral.net

- **LGBT Support Groups**
  www.youthsafe.net

Appendix E

Demographic Questionnaire

What is your gender?

a. Male
b. Female

What grade are you in?

What is your age (in years)?

To which racial or cultural group do you belong? (CIRCLE ALL THAT APPLY)

a. White
b. Chinese
c. South Asian (for example, East Indian, Sri Lankan, etc,)
d. Black
e. Filipino
f. Latin American
g. Southeast Asian (for example, Vietnamese, Cambodian, etc.)
h. Arab
i. West Asian (for example, Iranian, Afghan, etc.)
j. Japanese
k. Korean
l. Aboriginal
m. Don't know

What type of school do you attend?

a. Public
b. Catholic
c. Private (subject or specialty)
d. Private (religious)
e. Other (please specify)

What is your current living arrangement? I live…

a. With my parent(s)
b. With my parent(s) and siblings
c. Other (please specify)

What is your family structure?

a. Two-parent household (biological)
b. Two-parent household (step-family – children from one or both parents)
c. Two-parent household (adoptive)
d. Two-parent household (blended – children from one or both parents and new children)
e. Two-parent household (same-sex)
f. Single-mother household
g. Single-father household

h. Other (please specify)

In your present family, what type of member are you?

a. First child
b. Second child
c. Third child
d. Fourth or younger child
e. Other (please specify)

I am

a. The youngest of my brothers/sisters
b. The oldest of my brothers/sisters
c. In between

How many of the following items are there in <u>your home</u>? (CIRCLE ONE ANSWER NEXT TO <u>EACH</u> ITEM)

a. TV's	0	1	2	3	4	5	6	7	8	9 or more
b. VCRs or DVD players	0	1	2	3	4	5	6	7	8	9 or more
c. CD or tape players	0	1	2	3	4	5	6	7	8	9 or more
d. iPods or MP3 players	0	1	2	3	4	5	6	7	8	9 or more
e. PC's (personal computer)	0	1	2	3	4	5	6	7	8	9 or more
f. Laptop Computers	0	1	2	3	4	5	6	7	8	9 or more
g. Internet access	0	1	2	3	4	5	6	7	8	9 or more
h. Videogame console	0	1	2	3	4	5	6	7	8	9 or more
i. Hand-held videogame	0	1	2	3	4	5	6	7	8	9 or more

Do you have any of the following items in <u>your bedroom</u>? (Please include portables that you use <u>mainly</u> in your bedroom.) (CIRCLE AS MANY ANSWERS AS YOU NEED)

a. TV
b. VCR or DVD player
c. CD or tape player
d. IPod or MP3 player
e. Computer
f. Internet access
g. Video game player (handheld or console)

Which of the following items do you, <u>personally</u> have? (CIRCLE AS MANY ANSWERS AS YOU NEED.)

a. CD or tape player
b. MP3 player or iPod
c. TV
d. DVD or VCR
e. A laptop computer
f. PC (personal computer)
g. A handheld video game player (such as a Gameboy)
h. Video game console

i. Any handheld device that connects to the Internet (a Blackberry, a cell phone with Internet connection, etc.)
j. A cell phone that *does not* connect to the Internet
k. None of these

Approximately how many hours do you spend on a cell phone per day?
a. Less than 2
b. 2-4
c. 4-6
d. 6-8
e. 8-10
f. More than 10
g. I do not own a cell phone

Approximately how many text messages do you send per day?
a. Less than 5
b. 5-10
c. 10-15
d. 15-20
e. 20-25
f. More than 25
g. I do not send text messages

Thinking only about yesterday, about how much time did you spend on the computer?
a. None
b. 5 minutes – less than 30 minutes
c. 30 minutes –1 hour
d. More than 1 hour – 3 hours
e. More than 3 hours
f. Don't know

Thinking only about yesterday, about how much of this time did you spend on the Internet?
a. None
b. 5 minutes – less than 30 minutes
c. 30 minutes –1 hour
d. More than 1 hour – 3 hours
e. More than 3 hours
f. Don't know

When you used the computer yesterday, how often were you using it with someone else?
a. I did not use the computer yesterday
b. Most of the time
c. Some of the time
d. A little of the time
e. Never, I used the computer by myself the whole time

When you used a computer with someone yesterday, with whom did you use it?

a. I was mainly by myself
b. Mother
c. Father
d. Brother(s) or sister(s)
e. Friend(s)
f. Grandparent(s)
g. Cousin(s)
h. Someone else

Which of the following is true for you?

a. My parents have rules about how long I can use the computer
b. My parents have rules about what I can do on the computer
c. My parents usually know which websites I'm going to when I go on the Internet
d. I use an email account or social networking site that my parents do not know about
e. None of these

How often do you follow the computer rules?

a. Often
b. Sometimes
c. Hardly ever
d. Never
e. I do not have any rules about using the computer

Overall, how much do you think your parents know about what you are doing online, such as who you are communicating with, what web sites you are going to, what, if anything, you have posted?

a. A lot
b. Some
c. Only a little
d. Nothing at all
e. Don't know

Do you have an E-mail account or use e-mail

a. Yes
b. No
c. Don't know

If you do have an E-mail account, how many do you have?

a. 0
b. 1
c. 2
d. 3
e. 4 or more

How often do your parents read your E-mail or look in your inbox?

a. Often
b. Sometimes
c. Hardly ever
d. Never
e. Don't know

Approximately how many emails do you send per day?

a. Less than 5
b. 5-10
c. 10-15
d. 15-20
e. 20-25
f. More than 25
g. I do not send emails

Do you use Instant Messaging (e.g., MSN Messenger, Facebook Chat, etc.)?

a. Yes
b. No
c. Don't know

Approximately how many hours do you spend on Instant Messaging (e.g., MSN Messenger, Facebook Chat, etc.) per day?

a. Less than 2
b. 2-4
c. 4-6
d. 6-8
e. 8-10
f. More than 10
g. I do not use Instant Messaging

Do you use social networking sites like Facebook, Twitter, or blogs?

a. Yes
b. No
c. Don't know

Approximately how many hours do you spend on a social networking website (e.g., Facebook, Twitter, blogs, etc.) per day?

a. Less than 2
b. 2-4
c. 4-6
d. 6-8
e. 8-10
f. More than 10
g. I do not have a social networking website

Do your parents know that you use these sites?

a. Yes
b. No
c. Don’t know
d. I do not have a social networking website

Have your parents ever asked to look at your profile on these sites?

a. Yes
b. No
c. Don’t know
d. I do not have a social networking website

Appendix F

The Modified Revised Olweus Bully/Victim Questionnaire

- Please answer the following questions by marking an X in the box next to the answer that best describes how you feel about school. Only mark *one* of the boxes.
- *Do not* put your name on this booklet.
- If you have questions, raise your hand.
- When you answer the questions, you should think of how it has been during the past 2 or 3 months and not only how it is just now.

We say someone is being cyberbullied when another student, or several other students:

- say mean and hurtful things or make fun of him or her through technology
- call him or her mean and hurtful names through technology
- tell lies or spread false rumors about him or her through technology
- when someone is teased repeatedly in a mean and hurtful way through technology

We *do not* call it bullying when the teasing is done in a friendly and playful way.

Please be honest when answering the following questions.

1. How much do you like school?

___ I dislike school very much

___ I dislike school

___ I neither like nor dislike school

___ I like school

___ I like school very much

2. How many good friends do you have in your class(es)?

___ None

___ I have 1 good friend in my class(es)

___ I have 2 or 3 good friends

___ I have 4 or 5 good friends

___ I have 6 or more good friends in my class(es)

3. How often have you been cyberbullied in the past couple of months?

___ I haven’t been cyberbullied in the past couple of months

___ It has only happened once or twice

___ 2 or 3 times a month

___ About once a week

___ Several times a week

4. I was called mean names, was made fun of, or teased in a hurtful way through text messaging

___ It hasn't happened to me in the past couple of months

___ Only once or twice

___ 2 or 3 times a month

___ About once a week

___ Several times a week

5. I was called mean names, was made fun of, or teased in a hurtful way through phone call(s)

___ It hasn't happened to me in the past couple of months

___ Only once or twice

___ 2 or 3 times a month

___ About once a week

___ Several times a week

6. I was called mean names, was made fun of, or teased in a hurtful way through email(s)

___ It hasn't happened to me in the past couple of months

___ Only once or twice

___ 2 or 3 times a month

___ About once a week

___ Several times a week

7. I was called mean names, was made fun of, or teased in a hurtful way through instant messaging (i.e., MSN Messenger, Facebook Chat, etc.)

___ It hasn't happened to me in the past couple of months

___ Only once or twice

___ 2 or 3 times a month

___ About once a week

___ Several times a week

8. I was called mean names, was made fun of, or teased in a hurtful way through social networking website(s) (i.e., Facebook, Twitter, etc.)

___ It hasn't happened to me in the past couple of months

___ Only once or twice

___ 2 or 3 times a month

___ About once a week

___ Several times a week

9. Other students told lies or spread false rumors about me and tried to make others dislike me through text messaging

___ It hasn't happened to me in the past couple of months

___ Only once or twice

___ 2 or 3 times a month

___ About once a week

___ Several times a week

10. Other students told lies or spread false rumors about me and tried to make others dislike me through phone call(s)

___ It hasn't happened to me in the past couple of months

___ Only once or twice

___ 2 or 3 times a month

___ About once a week

___ Several times a week

11. Other students told lies or spread false rumors about me and tried to make others dislike me through email(s)

___ It hasn't happened to me in the past couple of months

___ Only once or twice

___ 2 or 3 times a month

___ About once a week

___ Several times a week

12. Other students told lies or spread false rumors about me and tried to make others dislike me through instant messaging (i.e., MSN Messenger, Facebook Chat, etc.)

___ It hasn't happened to me in the past couple of months

___ Only once or twice

___ 2 or 3 times a month

___ About once a week

___ Several times a week

13. Other students told lies or spread false rumors about me and tried to make others dislike me through social networking websites (i.e., Facebook, Twitter, etc).

___ It hasn't happened to me in the past couple of months

___ Only once or twice

___ 2 or 3 times a month

___ About once a week

___ Several times a week

14. I was threatened or forced to do things I didn’t want to do through text messaging

___ It hasn't happened to me in the past couple of months

___ Only once or twice

___ 2 or 3 times a month

___ About once a week

___ Several times a week

15. I was threatened or forced to do things I didn’t want to do through phone call(s)

___ It hasn't happened to me in the past couple of months

___ Only once or twice

___ 2 or 3 times a month

___ About once a week

___ Several times a week

16. I was threatened or forced to do things I didn’t want to do through email(s)

___ It hasn't happened to me in the past couple of months

___ Only once or twice

___ 2 or 3 times a month

___ About once a week

___ Several times a week

17. I was threatened or forced to do things I didn’t want to do through instant messaging (i.e., MSN Messenger, Facebook Chat, etc.).

___ It hasn't happened to me in the past couple of months

___ Only once or twice

___ 2 or 3 times a month

___ About once a week

___ Several times a week

18. I was threatened or forced to do things I didn’t want to do through social networking website(s) (i.e., Facebook, Twitter, etc.).

___ It hasn't happened to me in the past couple of months

___ Only once or twice

___ 2 or 3 times a month

___ About once a week

___ Several times a week

19. I was cyberbullied with mean names or comments about my race or colour through text messaging

___ It hasn't happened to me in the past couple of months

___ Only once or twice

___ 2 or 3 times a month

___ About once a week

___ Several times a week

20. I was cyberbullied with mean names or comments about my race or colour through phone call(s)

___ It hasn't happened to me in the past couple of months

___ Only once or twice

___ 2 or 3 times a month

___ About once a week

___ Several times a week

21. I was cyberbullied with mean names or comments about my race or colour through email(s)

___ It hasn't happened to me in the past couple of months

___ Only once or twice

___ 2 or 3 times a month

___ About once a week

___ Several times a week

22. I was cyberbullied with mean names or comments about my race or colour through instant messaging (i.e., MSN Messenger, Facebook Chat, etc.).

___ It hasn't happened to me in the past couple of months

___ Only once or twice

___ 2 or 3 times a month

___ About once a week

___ Several times a week

23. I was cyberbullied with mean names or comments about my race or colour through social networking website(s) (i.e., Facebook, Twitter, etc.).

___ It hasn't happened to me in the past couple of months

___ Only once or twice

___ 2 or 3 times a month

___ About once a week

___ Several times a week

24. I was cyberbullied with mean names or comments with a sexual meaning through text messaging

___ It hasn't happened to me in the past couple of months

___ Only once or twice

___ 2 or 3 times a month

___ About once a week

___ Several times a week

25. I was cyberbullied with mean names or comments with a sexual meaning through phone call(s)

___ It hasn't happened to me in the past couple of months

___ Only once or twice

___ 2 or 3 times a month

___ About once a week

___ Several times a week

26. I was cyberbullied with mean names or comments with a sexual meaning through email(s)

___ It hasn't happened to me in the past couple of months

___ Only once or twice

___ 2 or 3 times a month

___ About once a week

___ Several times a week

27. I was cyberbullied with mean names or comments with a sexual meaning through instant messaging (i.e., MSN Messenger, Facebook Chat, etc.).

___ It hasn't happened to me in the past couple of months

___ Only once or twice

___ 2 or 3 times a month

___ About once a week

___ Several times a week

28. I was cyberbullied with mean names or comments with a sexual meaning through social networking website(s) (i.e., Facebook, Twitter, etc.).

___ It hasn't happened to me in the past couple of months

___ Only once or twice

___ 2 or 3 times a month

___ About once a week

___ Several times a week

29. By how many students have you usually been cyberbullied?

___ I haven't been cyberbullied in the past couple of months

___ Mainly by 1 student

___ By a group of 2-3 students

___ By a group of 4-9 students

___ By a group of more than 9 students

___ By several different students or groups of students

30. How long has the cyberbullying lasted?

___ I haven't been cyberbullied in the past couple of months

___ It lasted one or two weeks

___ It lasted about a month

___ It lasted about 6 months

___ It lasted about a year

___ It has gone on for several years

31. Where have you been cyberbullied?

___ I haven't been cyberbullied in the past couple of months

___ I have been cyberbullied in one or more of the following places in the past couple of months

Please put an X if you have been cyberbullied:

31a. on the playground/athletic field (during recess or break times) __

31b. in the hallways/stairwells __

31c. in class (when the teacher was in the room) __

31d. in class (when the teacher was not in the room) __

31e. in gym class or the gym locker room/shower __

31f. in the lunch room __
31g. on the way to and from school __

31h. at the school bus stop __

31i. on the school bus __

31j. at home __

32. Have you told anyone that you have been cyberbullied in the past couple of months?

___ I haven't been cyberbullied in the past couple of months

___ I have been cyberbullied, but I *have not* told anyone

___ I have been cyberbullied and I *have* told somebody about it

Please put an X if you have told:

32a. your class (home room) teacher __

32b. another adult at school (a different teacher, the principal/headmaster, the school nurse, the custodian/ school caretaker, the school psychologist/ mental health professional etc) __

32c. your parent(s)/guardian(s) __

32d. your brother(s) or sister(s) __

32e. your friend(s) __

32f. somebody else __

*In this case please write who: _____

33. Has any adult at home contacted your school to try to stop the cyberbullying in the past couple of months?

___ I haven’t been bullied in the past couple of months

___ No, they haven't contacted the school

___ Yes, they have contacted the school once

___ Yes, they have contacted the school several times

Appendix G

The Multidimensional Scale of Perceived Social Support

Instructions: We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement.
Circle the "1" if you Very Strongly Disagree
Circle the "2" if you Strongly Disagree
Circle the "3" if you Mildly Disagree
Circle the "4" if you are Neutral
Circle the "5" if you Mildly Agree
Circle the "6" if you Strongly Agree
Circle the "7" if you Very Strongly Agree

1. There is a special person who is around when I am in need

1 2 3 4 5 6 7

2. There is a special person with whom I can share my joys and sorrows

1 2 3 4 5 6 7

3. My family really tries to help me

1 2 3 4 5 6 7

4. I get the emotional help and support I need from my family

1 2 3 4 5 6 7

5. I have a special person who is a real source of comfort to me

1 2 3 4 5 6 7

6. My friends really try to help me

1 2 3 4 5 6 7

7. I can count on my friends when things go wrong

1 2 3 4 5 6 7

8. I can talk about my problems with my family

1 2 3 4 5 6 7

9. I have friends with whom I can share my joys and sorrows

1 2 3 4 5 6 7

10. There is a special person in my life who cares about my feelings

1 2 3 4 5 6 7

11. My family is willing to help me make decisions

1 2 3 4 5 6 7

12. I can talk about my problems with my friends

1 2 3 4 5 6 7

Appendix H

Developmental Assets Profile

Below is a list of positive things that you might have in yourself, your family, friends, neighbourhood, school, and community. For each item that describes you now or within the past 3 months, check if the item is true:

Not At All/Rarely Somewhat/Sometimes Very/Often Extremely/Almost Always
If you do not want to answer an item, leave it blank. Try to answer all items as best you can.

Not At All or Rarely	Somewhat or Sometimes	Very or Often	Extremely or Almost Always	I...
☐	☐	☐	☐	1. Stand up for what I believe in
☐	☐	☐	☐	2. Feel in control of my life and future
☐	☐	☐	☐	3. Feel good about myself
☐	☐	☐	☐	4. Avoid things that are dangerous/unhealthy
☐	☐	☐	☐	5. Enjoy reading or being read to
☐	☐	☐	☐	6. Build friendships with other people
☐	☐	☐	☐	7. Care about school
☐	☐	☐	☐	8. Do my homework
☐	☐	☐	☐	9. Stay away from tobacco/alcohol/drugs
☐	☐	☐	☐	10. Enjoy learning
☐	☐	☐	☐	11. Express my feelings in proper ways
☐	☐	☐	☐	12. Feel good about my future
☐	☐	☐	☐	13. Seek advice from my parents
☐	☐	☐	☐	14. Deal with frustration in positive ways
☐	☐	☐	☐	15. Overcome challenges in positive ways
☐	☐	☐	☐	16. Think it is important to help other people
☐	☐	☐	☐	17. Feel safe and secure at home
☐	☐	☐	☐	18. Plan ahead and make good choices
☐	☐	☐	☐	19. Resist bad influences
☐	☐	☐	☐	20. Resolve conflict without anyone getting hurt
☐	☐	☐	☐	21. Feel valued and appreciated by others
☐	☐	☐	☐	22. Take responsibility for what I do
☐	☐	☐	☐	23. Tell the truth even when it is not easy
☐	☐	☐	☐	24. Accept people who are different from me
☐	☐	☐	☐	25. Feel safe at school

Not At All or Rarely	Somewhat or Sometimes	Very or Often	Extremely or Almost Always	I AM....
☐	☐	☐	☐	26. Actively engaged in learning new things
☐	☐	☐	☐	27. Developing a sense of purpose in my life

☐	☐	☐	☐ 28. Encouraged to try things that might be good for me
☐	☐	☐	☐ 29. Included in family tasks and decisions
☐	☐	☐	☐ 30. Helping to make my community a better place
☐	☐	☐	☐ 31. Involved in a religious group or activity
☐	☐	☐	☐ 32. Developing good health habits
☐	☐	☐	☐ 33. Encouraged to help others
☐	☐	☐	☐ 34. Involved in a sport, club, or other group
☐	☐	☐	☐ 35. Trying to help solve social problems
☐	☐	☐	☐ 36. Given useful roles and responsibilities
☐	☐	☐	☐ 37. Developing respect for other people
☐	☐	☐	☐ 38. Eager to do well in school and other activities
☐	☐	☐	☐ 39. Sensitive to the needs and feelings of others
☐	☐	☐	☐ 40. Involved in creative things such as music, theatre, or art
☐	☐	☐	☐ 41. Serving others in my community
☐	☐	☐	☐ 42. Spending quality time at home with my parent(s)

Not At All or Rarely	Somewhat or Sometimes	Very or Often	Extremely or Almost Always	I HAVE....
☐	☐	☐	☐	43. Friends who set good examples for me
☐	☐	☐	☐	44. A school that gives students clear rules
☐	☐	☐	☐	45. Adults who are good role models for me
☐	☐	☐	☐	46. A safe neighbourhood
☐	☐	☐	☐	47. Parent(s) who try to help me succeed
☐	☐	☐	☐	48. Good neighbours who care about me
☐	☐	☐	☐	49. A school that cares about kids and encourages them
☐	☐	☐	☐	50. Teachers who urge me to develop and achieve
☐	☐	☐	☐	51. Support from adults other than my parents
☐	☐	☐	☐	52. A family that provides me with clear rules
☐	☐	☐	☐	53. Parent(s) who urge me to do well in school
☐	☐	☐	☐	54. A family that gives me love and support
☐	☐	☐	☐	55. Neighbours who help watch out for me
☐	☐	☐	☐	56. Parent(s) who are good at talking with me about things
☐	☐	☐	☐	57. A school that enforces rules fairly
☐	☐	☐	☐	58. A family that knows where I am and what I am doing

Appendix I

The Brief Multidimensional Students' Life Satisfaction Scale

These six questions ask about your satisfaction with different areas of your life. Circle the best answer for each.

1. I would describe my satisfaction with my family life as:

Terrible
Unhappy
Mostly dissatisfied
Mixed (about equally satisfied and dissatisfied)
Mostly satisfied
Happy
Delighted

2. I would describe my satisfaction with my friendships as:

Terrible
Unhappy
Mostly dissatisfied
Mixed (about equally satisfied and dissatisfied)
Mostly satisfied
Happy
Delighted

3. I would describe my satisfaction with my school experience as:

Terrible
Unhappy
Mostly dissatisfied
Mixed (about equally satisfied and dissatisfied)
Mostly satisfied
Happy
Delighted

4. I would describe my satisfaction with myself as:

Terrible
Unhappy
Mostly dissatisfied
Mixed (about equally satisfied and dissatisfied)
Mostly satisfied
Happy
Delighted

5. I would describe my satisfaction with where I live as:

Terrible
Unhappy
Mostly dissatisfied
Mixed (about equally satisfied and dissatisfied)
Mostly satisfied
Happy
Delighted

6. I would describe my satisfaction with my overall life as:

Terrible
Unhappy
Mostly dissatisfied
Mixed (about equally satisfied and dissatisfied)
Mostly satisfied
Happy
Delighted

Appendix J

The Rosenberg Self-Esteem Scale

Below is a list of 10 statements about your general feelings about yourself. If you strongly agree with the statement, circle Strongly Agree. If you agree, circle Agree. If you disagree, circle Disagree. If you strongly disagree, circle Strongly Disagree.

1. On the whole I am satisfied with myself

Strongly Agree Agree Disagree Strongly Disagree

2. At times, I think I am no good at all

Strongly Agree Agree Disagree Strongly Disagree

3. I feel I have a number of good qualities

Strongly Agree Agree Disagree Strongly Disagree

4. I am able to things as well as most other people

Strongly Agree Agree Disagree Strongly Disagree

5. I feel I do not have as much to be proud of

Strongly Agree Agree Disagree Strongly Disagree

6. I certainly feel useless at times

Strongly Agree Agree Disagree Strongly Disagree

7. I feel that I'm a person of worth, at least on an equal plane as others

Strongly Agree Agree Disagree Strongly Disagree

8. I wish I could have more respect for myself

Strongly Agree Agree Disagree Strongly Disagree

9. All in all, I am inclined to feel like a failure

Strongly Agree Agree Disagree Strongly Disagree

10. I take a positive attitude toward myself

Strongly Agree Agree Disagree Strongly Disagree

Appendix K

The School Connectedness Scale

How strongly do you agree or disagree with the following statements about your school?

1. I feel close to people at this school.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree Strongly	Agree

2. I am happy to be at this school.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree Strongly	Agree

3. I feel like I am part of this school.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree Strongly	Agree

4. The teachers at this school treat students fairly.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree Strongly	Agree

5. I feel safe in my school.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree Strongly	Agree

Appendix L

The Marlowe-Crowne Social Desirability Scale – Form C

1. It is sometimes hard for me to go on with my work if I am not encouraged.

True False

2. I sometimes feel resentful when I don't get my way.

True False

3. On a few occasions, I have given up doing something because I thought too little of my ability.

True False

4. There have been times when I felt like rebelling against people in authority even though I knew they were right.

True False

5. No matter who I'm talking to, I'm always a good listener.

True False

6. There have been occasions when I took advantage of someone.

True False

7. I'm always willing to admit it when I make a mistake.

True False

8. I sometimes try to get even rather than forgive and forget.

True False

9. I am always courteous, even to people who are disagreeable.

True False

10. I have never been irked when people expressed ideas very different from my own.

True False

11. There have times when I was quite jealous of the good fortune of others.

True False

12. I am sometimes irritated by people who ask favours of me.

True False

13. I have never deliberately said something that hurt someone's feelings.

True False