

Exploring the Impact of Anonymity on Cyberbullying in Adolescents:

An Integrative Literature Review

By

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Abstract

Adolescents are vulnerable to the risks associated with failing to protect their online privacy and becoming involved with risky online behaviours such as cyberbullying. The ability to remain anonymous on Social Networking Sites when committing acts of cyberbullying is a major influencing factor on adolescents' motives and response to cyberbullying. An integrative literature review explores the perceptions of adolescents aged 10-19 regarding anonymity in their online behaviours in order to understand its impact on cyberbullying. The author presents the results using Albert Bandura's Social Learning Theory (1977) and John Suler's Online Disinhibition Effect (2005). Anonymity is found to alter adolescent coping strategies and increase the perceived distress of the incident. Anonymity impacts the environment by blurring intention and reception, creates dissociation, and reduces empathy in adolescents. Anonymity alters adolescent behavior through the perceived minimization of consequences, the creation of a power imbalance and encourages bystander participation in cyberbullying further increasing distress. Recommendations for Advanced Practice Nurses are made using a health promotion perspective that includes: building capacity for adolescent resilience and providing education regarding online risks and management. In addition, the importance of advocating for standardized legislation and nation wide anti-bullying policies and programs designed to reduce the incidence and impact of cyberbullying in adolescents will be discussed.

Keywords: anonymity, cyberbullying, adolescent, social networking, nursing, resilience

Dedication

I would like to dedicate this paper to my biggest source of support, my wonderful husband Kyle. Without his constant support, reassurance, humor, and prayers I would not have been able to complete this work. He brings balance and happiness to every aspect of my life.

I would also like to dedicate this paper to my parents who have been a constant source of inspiration. They have taught me the drive and discipline to tackle any task with enthusiasm and determination. They have taught me the importance of helping others. Without their love, support and reassurance this project would not have been possible.

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Exploring the Impact of Anonymity on Cyberbullying in Adolescents:

An Integrative Literature Review

Introduction and Background

In the new millennium, adolescents are increasingly facing challenges to how they interact socially and relationally. With the creation of social networking sites (SNS) such as “Facebook”, “Twitter” and “My Space”, communication has evolved from face-to-face contact to include digital interactions. Social networking is the use of dedicated websites and applications used to communicate with one another (Boyd & Ellison, 2007). There are many benefits to adolescents using SNS, however there are concerns over safety and the implications of online aggression. As a Registered Nurse working with adolescents over the past seven years I have gained interest in the topic as many patients and families are reporting issues with SNS and are describing bullying that is occurring online; this is also known as cyberbullying. Cyberbullying is defined as “the use of email, cell phones, text messages, internet sites and chat rooms to physically threaten, verbally harass or socially exclude an individual or group (Government of Canada, 2012, p.1)”. In my experience, adolescent health issues are increasingly related to psychological issues such as anxiety, depression, suicidal ideation and the inability to cope. More frequently, adolescent patients and their families are requesting information on managing cyberbullying. However, health care providers including nurses struggle to provide research informed information, as the topic is relatively new. Worldwide cyberbullying research is beginning to evolve such as that from Dr. LeBlanc at Dalhousie University in Halifax (Helwick, 2012) on cyberbullying and suicide. An interesting aspect of cyberbullying is the concept of anonymity that may have implications for adolescent mental health and online safety (Leblanc, 2002). In this integrative literature review I plan to explore the impact of online

anonymity on cyberbullying to address its effects on adolescent safety and mental health. This synthesis will assist Advanced Practice Nurses (APN's) to understand the effects of anonymity related to cyberbullying and the potential impact on adolescents. To understand the significance of cyberbullying one must first have an understanding of adolescent development.

Adolescent Development

Adolescence is an important developmental transition period that involves physical changes, cognitive, emotional and social development (American Psychological Association [APA], 2002). There is no standard age range for defining adolescence as for some it can start as early as 10 years of age and some aspects of adolescence may continue past the age of 18. The World Health Organization (WHO) defines all aspects of adolescent development as occurring between the ages of 10-19 years of age (WHO, 2013). For the purpose of this paper, the WHO definition of adolescent development will be adopted. Adolescent health problems are mainly related to their environmental stressors, risky behaviours, and psychosocial needs, as opposed to illness process (Saewyc, 2000). These health problems occur in the context of the developing adolescent brain and are impacted by cognitive development, psychosocial development and emotional developmental changes.

Cognitive Development

Cognitive development refers to “the development of the ability to think and reason” (Lucile Packard Children’s Hospital at Stanford, 2013, p.1). In their own time, adolescents move from concrete thinking to logical operations where they develop advanced reasoning skills, the ability to see and consider multiple points of view, and develop abstract thinking. While the adolescent develops these important skills, emotional issues can interfere with their ability to think in more complex ways (Lucile Packard Children’s Hospital at Stanford, 2013).

Emotional Development

Emotional development in the adolescent involves “establishing a realistic and coherent sense of identity in the context of relating to others and learning to cope with stress and manage emotions” (APA, 2002, p.15). Erik Erikson (1968), a seminal researcher focusing on adolescent development, believes that the central task of adolescence is identity formation that involves forming relationships through interactions with others. Assisting adolescents in developing a sense of “emotional intelligence” supports them in recognizing and managing emotions, developing empathy, and resolving relationship conflicts constructively (APA, 2002). Consistent with developmental psychologists, empathy has proven to be essential in adolescent development. Recent research by Steffgen et al., (2011) found that cyberbullies showed less empathy for those being bullied than non-cyber bullies. In addition, Ang and Goh (2010) also found that both boys and girls who demonstrated low cognitive empathy were more likely to engage in the act of cyberbullying. Supporting emotional development, in particular empathy may be beneficial to prevent the initiation of cyberbullying. In addition to emotional development, social development is another critical aspect of the adolescent’s development.

Social Development

Adolescent social development occurs in the context of peers, family, school, work and community (APA, 2002). The most obvious change in adolescence is the need for independence from their parents and leads to a greater emphasis on the peer group. While positive peer interactions are associated with positive psychosocial development, teens that struggle with peer groups have been linked to negative interactions such as dropping out of school and delinquency (APA, 2002). This can also place them at greater risk of psychosocial difficulties extending into adulthood (APA, 2002). The intense need to belong can become consuming to teens and can

influence them to go along with activities in which they would not normally engage in (APA, 2002). Considering that adolescents spend a significant part of their day communicating with peers through online interactions, difficulty with social development may extend into their online community. This may be seen through the use of online aggression such as cyberbullying either as a bully, victim or both. In addition, peer groups both online and offline temporarily provide youth with a reference point for a developing sense of identity. Role-playing with online anonymity may be observed as youth develop their identity and explore new behaviours.

Behavioural Development

Exploratory behaviours, such as risk taking, help adolescents shape their identity, use their decision-making skills and develop assessments of themselves and others (APA, 2002). As outlined by the APA (2002), young people sometimes overestimate their capacities to handle new situations, and with the influence and need to gain acceptance of their peers, they may partake in risky behaviours that they themselves judge as being “too risky.” While there is normal spectrum of experimentation, health care professionals, including APN’s need to identify the difference between normal experimentation and behaviours that can threaten their long-term wellbeing, such as risky online behaviours. These online behaviours can be observed by mass amounts of people on SNS at any time and youth may not understand the impact that their online behaviours can have.

Adolescents and Online Media

Media provide adolescents with unlimited access to their peer group and is considered an important part of their community (Roberts, 2000). Rideout, Foehr & Roberts (2010) found that in the past five years, adolescents have increased the amount of time they spend consuming media from 6:21 to 7:38 an increase of an hour and seventeen minutes. They are also

increasingly using more than one form of media at a time (i.e. texting from a cell phone, while on the computer using social media) and are able to pack a total of 10 hours and 45 minutes worth of media content into those seven and a half hours. (Rideout, Foehr & Roberts, 2010). The AAP found that older children and teenagers spend greater than 11 hours per day and that the presence of media in the bedroom increases these figures even more (. This growing influence of media may have significant impact on the development of adolescents and as the APA (2002) reports: “the ultimate effects will depend on the extent to which positive possibilities can be harnessed and negative influences minimized (p. 27)”. The vast majority of adolescents in North America have access to computers and the Internet and much of their online activity consists of talking with people via e-mail, instant messaging, chat rooms and using social networking sites such as Facebook. Adolescents’ intent for using the internet is simply a form of interacting with their peers to form relationships however they may become involved with aggressive online behaviours and may not know how to handle the situation. This is also a time that adolescents begin to show a greater interest in their privacy and may not want to share what is happening online (American Academy of Child and Adolescents Psychiatry, 2011). The AAP describes that nearly all children and adolescents have Internet access, often high-speed and nearly 29% of adolescents have access to the Internet from a computer in the bedroom, where parents are unable to monitor use (American Academy of Child and Adolescents Psychiatry [AACAP], 2011 & AAP 2013). In a study completed of internet use among girls aged 13-18, most had reported that they received very little advice from adults about internet use and wished that adults would provide them with help to avoid emotionally charged situations (APA, 2002). Adolescents can benefit from having protective skills against the negative influences of the media, including cyberbullying. There is a clear role here for APN’s to assist other health care

professionals and families assist adolescents in navigating the potential risks of being online and identifying ways to deal with situations such as cyberbullying.

Cyberbullying

The effect of cyberbullying at this developmental stage can have profound, long-lasting effects on social-emotional development as adolescent's transition into adulthood (AACAP, 2011). As an example, in 2012, Amanda Todd, a 15-year-old Canadian student from British Columbia, used YouTube (a popular social media site) to post a video describing her experience of cyberbullying. The 9 minute video entitled *My Story: Struggling, bullying, suicide and self-harm* was viewed over 1.6 million times by users around the world on the popular video site. One month after Todd posted the video online she was found in her home where she hung herself; police deemed her death as a suicide ("Amanda Todd tribute", 2012). The investigation revealed that Todd experienced anxiety, depression and panic disorder, self-mutilation and multiple suicide attempts due to the persistent cyberbullying. Even after her death, negative comments continued to be posted on SNS's which were eventually removed by website administrators. A recent Canadian study by Dr. John Leblanc reviewed 41 adolescent deaths from Canada, the US, Australia and the UK found that 78% of the adolescents who committed suicide were bullied both at school and online and suggests that certain SNS, by virtue of allowing anonymity, may encourage cyberbullying (Leblanc, 2012). John Suler's (2004) "Online Disinhibition Effect" explains the many negative comments on Todd's video: Anonymity makes people feel less inhibited. Anonymity will be described below as it may play an important role in the adolescent's perception of their online behaviours including cyberbullying.

Anonymity

The Merriam-Webster dictionary defines anonymity as “the quality or state of being unknown to most people (2013)”. Some researchers believe that the ability to remain anonymous when committing acts of cyberbullying is a major influencing factor for perpetrators, as they believe they will be able to conduct such behaviour without risk of being caught (O’Brien, 2012). Price and Dalglish (2010) also support this by reporting, “One of the key attractions of cyberbullying is reported to be the perceived anonymity that the Internet and other communication technologies can provide (p. 51)”. In addition, Schneider et al (2012) believe that the perception of anonymity gives the perpetrator a greater sense of power and a lesser sense of accountability. SNS allow users to create their own usernames allowing the user to become anonymous. They also provide the opportunity for anyone to send anonymous threatening messages, photos, spread false rumours, and disclose personal information to purposely harm and discredit another person. In addition, the bully can engage in these activities in a relentless fashion without regard to time, days of the week, or location (Betz, 2011). For adolescents who have access to SNS at multiple points during the day (i.e. at school on the computer, at home on their cell phone) the bullying can become relentless as it did with Amanda Todd. Not knowing who is the offender can also increase the feeling of threat. As adolescents experiment with online behaviours they may become involved in these activities either as the bully, victim, or as a bystander without the knowledge of how to deal with these complex and potentially legal issues. Adolescents can benefit from exploring their perceptions regarding anonymity in their online behaviours in order to understand the issues.

Significance

Accurate estimates of the prevalence of cyberbullying are difficult to report because of the methods for obtaining the data, the accuracy in self-reported data, sample sizes, and design methods (O'Brien, 2012). There are, however, studies that show the significance and impact of the issues. A cross-national research study conducted by Queens University in 2010 in collaboration with the World Health Organization examined 26,078 young Canadians across 436 schools bullying through the Health Behaviour in School-Aged Children survey (Craig, Schumann, Edge, & Teske, 2010). The results show that 41% of students self-report their involvement in bullying as both a victim and a bully. The Canadian Institutes of Health Research (2012) reports that in Canada one in at least three adolescents report being bullied recently. Kowalski and Limber (2007) conducted a study of 3767 elementary school children in America. 18% of respondents advised they had been victims of cyberbullying and of these 48% did not know who the perpetrator was. There is discrepancy in data between parents who reported their adolescents being bullied versus the self-report of adolescents themselves, which may lead one to question the amount disclosure to adults regarding cyberbullying. In addition to the issue being common to adolescents, it also has negative effects on their mental health.

Price and Dalgliesh (2010) reported that findings from their study in Australia showed that the biggest impact of cyber bullying was on self-confidence and self-esteem. O'Brien (2012) supported this data with an online survey of over 20,000 adolescents where it found that there was a high risk factor of mental health issues developing for those individuals who were victims of cyberbullying. Of the responses received, the majority of victims reported that they had experienced depressive episodes and 9.4% (1880 people) had attempted suicide. This data is supported by Kids Helpline who report that young people impacted by cyberbullying are more

likely to experience suicidal thoughts as a reaction to cyberbullying, more so than with traditional bullying (BoysTown, 2009). Campbell (2005) found that the impact of cyberbullying may be more severe than traditional bullying due to the wider audience for public humiliation to occur, and the increased level of invasiveness felt as the bullying can enter the victims home and/or bedroom (i.e. on a computer or cell phone).

This is significant to nursing since adolescent mental health and safety is impacted by cyberbullying. APN's can assist families, patients and other health care professionals to recognize the prevalence and the impact of anonymity on cyberbullying. In addition, APN's can be involved in advocating for preventative programs and legislation as well as working with youth to explore their perceptions and experiences with cyberbullying.

Statement of the Problem/Phenomena

During adolescence, youth with underdeveloped social skills are vulnerable to the risks associated with failing to protect their online privacy and becoming involved with risky online behaviours such as cyberbullying (Moscardelli & Divine, 2007). The role of the APN is to help adolescents anticipate and identify safety issues as they occur. The APN can synthesize the research to generate new nursing knowledge regarding the impact of anonymity on cyberbullying in adolescents and adolescent perceptions of online anonymity. This information will assist APN's to provide clinical guidance to families and the health care team on safe Internet use. APN's need to recognize that the complex development of the adolescent occurs within their environmental context including their "online community". The APN will be able to use their expert knowledge and skills to assess and provide interventions based on the translation of this new knowledge in hopes to reduce the impact of cyberbullying.

Purpose of the Project

Cyberbullying is a relatively new concept and little is known about adolescents' perception of anonymity in peer relationships when they use social networking sites. I will focus on youth aged 10-19 to gain a broad perspective on this age group as this range covers differing stages of adolescence. The purpose of the project is to complete a literature review to explain the role of the APN in relation to anonymity in adolescent cyberbullying. This project will assist nurses by transferring knowledge into practice to meet the needs of adolescents in response to evolving technology.

The main objectives of the project are to:

- 1) To review and critically appraise literature regarding anonymity on social networking sites and how it affects adolescent users' mental health
- 2) To consider the literature using Albert Bandura's Social Learning Theory
- 3) To inform Advanced Practice Nurses regarding adolescents' online anonymity concerns in relation to cyberbullying and its impact on their mental health

Ethical Considerations

This project does not involve the research of human subjects but instead a review of the literature and therefore ethical approval was not sought.

Theoretical Perspectives

Albert Bandura has thoroughly studied child and adolescent aggression and through his research he became fascinated with the impact of modeling, imitation and learning. Bandura's Social Learning Theory (1977) describes that we learn by modeling others behaviour, including negative behaviours. Bandura's famous Bobo Doll Experiment (1961) showed that children learn aggressive social behaviours through observational learning. This theory will be used to describe

the antecedent to cyberbullying. Adolescents spend a significant amount of time online using SNS and may be exposed to aggressive online behaviours such as cyberbullying and have the opportunity to model their own online aggression. Bandura has further explored aggressive behaviours and developed the Social Learning Theory of Aggression (1978, 2001).

Bandura (1978) illustrates:

People ordinarily do not aggress in conspicuous direct ways that reveal causal responsibility and carry high risk of retaliation. Rather, they tend to harm and destroy in ways that diffuse or obscure responsibility for detrimental actions to reduce self-reproof and social reprisals. (p.13)

In addition to modeling cyberbullying, SNS allow their users to choose their name, personal information without regard to true identity and provide a means to anonymity, which decreases personal responsibility for actions.

Having an anonymous profile (including creating a profile that is not truthful) may loosen one's social restrictions and inhibitions that would normally be present in a face-to face interaction (Ball-Rokeach & DeFleur, 1976). Bandura confirms this idea as he explains that under conditions of the displacement of responsibility (1978), people behave in ways they normally would not since they are spared self-prohibiting reactions which is also in line with Suler's (2004) online disinhibition effect. Adolescents may choose to explore their identity using an anonymous profile and the perceived social pressure (whether positive or negative) towards cyberbullying may affect the outcome of their behaviour. As described earlier, the effect of cyberbullying on adolescents is perceived as greater when the bully is anonymous. Ajzen (1991) describes as a general rule that "the more favourable the attitude and subjective norm with respect to behaviour, and the greater the perceived behavioural control, the stronger should be an

individuals intention to perform the behaviour under consideration (p. 188)”. This can make a case for peer modeling and bystander involvement in developing cyberbullying interventions; however, the adolescents’ perception of anonymity must also be explored.

Bandura’s theory will be used to inform the findings of the project in regards to adolescents’ perception of anonymity issues and its impact on their mental health. This theory can guide nursing research related to health behaviour changes in online communication. This perspective will be used to explain how building capacity through positive online choices and positive bystander involvement can potentially influence behavioural intention and attitudes and mental health of adolescents. An outline of how the project was completed is described next.

Methodology

Integrative literature reviews are the broadest category of research reviews that may include empirical and theoretical literature (Whittemore & Knafl, 2005). In this project I used an integrative literature review to complete a comprehensive and thorough exploration of the topic of interest. Whittemore and Knafl (2005) suggest that the integrative review contributes to the presentation of varied perspectives on a phenomenon linking research and practice together. This project used an integrative literature review to evaluate the strength of the current evidence, identify the gaps in the literature, and identify further research questions and theoretical topics. The methodology outlined by Whittemore and Knafl (2005) is based on an explicit and systematic process to ensure rigor, a criticism of integrative reviews. Research reviews are considered research of the research and therefore will need to meet the same standards as primary methodological rigor (Whittemore & Knafl, 2005). Whittemore and Knafl’s methodology identifies five steps to the integrative review: Problem identification, literature search, data evaluation, data analysis and presentation.

Problem Identification

Clarity of the purpose of the review is important as the integrative review can encompass many variables (Whittemore & Knafl, 2005). The purpose of this review was to explore issues, identify challenges and offer relevant recommendations assisting APN's in addressing adolescent anonymity in online use.

The questions that were addressed are:

- 1) What does the literature say about how anonymity relates to cyberbullying?
- 2) Does anonymity impact adolescent relationships developed using social networking sites?
- 3) What is the role for Advanced Practice Nurses in addressing anonymity on social networking sites with adolescents and their families?
- 4) What are areas for future research aimed at addressing cyberbullying in relation to anonymity?

Literature Search

The literature search strategy captured published theoretical and empirical evidence related to the context of cyberbullying in adolescents. A computerized search was completed using the databases CINAHL, Medline, Cochrane Database of Systematic Reviews and PsychInfo, Google Scholar and Science Direct to identify the relevant literature. Search terms included: Social media, Computer mediated communication, communications media, mass media, internet, social networking, mobile, electronic, bullying, cyberbullying, adolescent, child, youth, teen, anonymity, privacy, nursing. Publication dates were not limited as the terms "social media" and "cyberbullying" are relatively new. Only articles written in the English language were used. The articles were limited to scholarly (peer reviewed) journals to ensure accuracy and

high quality information. The abstracts of each article were read to determine if it was relevant to the literature review. The full article was retrieved if it met the following inclusion criteria: focused specifically on cyberbullying in adolescents and included an objective aimed at describing or examining aspects of anonymity (including theoretical aspects) and adolescent mental health. Articles were excluded if they discussed solely traditional face-to-face bullying or were focused on adults. Adolescence does not have a specified age group as it begins with the onset of physiologically normal puberty, and ends when an adult's identity and behaviour are accepted (Canadian Paediatric Society, 2003). This period of development generally corresponds to the period of age between 10 and 19 years, which is consistent with the World Health Organization's definition of adolescence and was used for the purposes of the literature review. Reference lists of relevant articles were examined to search for additional relevant literature. A total of 21 articles met inclusion criteria and were included in the review.

Data Evaluation

Whittemore and Knafl (2005) have found that data evaluation in integrative reviews is complex and evaluating the quality of primary sources must be addressed in a meaningful way. The relevant literature was evaluated using the Critical Appraisal Skills Programme (CASP) tool (Public Health Resource Unit, 2006) that was developed specifically for sustaining methodological and theoretical rigor in health research (Appendix A). Specifically, the CASP tool assists the user in evaluating the following research indices: aims, sample, design, data collection, reflexivity, ethics, analysis, findings and value of the research. Comments were also added regarding scholarly approach. In addition to evaluating the strength of the research, relevance to the topic was assessed using the CASP tool. This approach was taken because the topic is relatively new to the research and it is beneficial to include as many types of studies as

possible to get a comprehensive look at the topic. The articles were rated with the goal of finding relevance related to anonymity in adolescent online use.

The articles were rated as:

- 1) Highly relevant and strong research
- 2) Highly relevant and weak research
- 3) Low relevance and strong research
- 4) Low relevance and weak research

Relevance was considered high if it met one or more of the following criteria:

- 1) Explores the impact of online anonymity on adolescents
- 2) Describes the relationship of online anonymity and cyberbullying in adolescents
- 3) Describes adolescents experience with anonymity while using online communications
- 4) Describes adolescents experience with anonymous cyberbullying (i.e. bystander, victim or perpetrator)

All other studies were labeled as low relevance.

Research was considered strong if it met the following criteria:

- 1) According to its quality appraisal tool the study is methodologically sound and findings were relevant to the research question
- 2) According to the quality appraisal tool the study described the methods of data collection and sample selection

All other research was labeled as having weak research quality.

All included articles from the literature search were then placed into a table (Appendix B) and organized to be able to identify and compare each study, methodology, rating, etc. This table

gives the reader a quick and clear way to see all the articles included in the review and data evaluation.

Data Extraction and Analysis

The strategy for data analysis in an integrative review requires a systematic analytic method that is allowed for constant comparisons across all of the primary data (Whittemore & Knafl, 2005). The method to approach data analysis according to Whittemore and Kanfl (2005) consists of data reduction, data display, data comparison, conclusion drawing, and verification and will be discussed below.

Data reduction. Data reduction refers to the “process of selecting, focusing, simplifying, abstracting and transforming the data that appear in written-up field notes or transcriptions” (Miles & Huberman, 1994, p.10). Whittemore and Knafl (2005) suggest that the primary sources included in the review need to be divided into subgroups according to some logical system for analysis. The data found in each study under ‘findings’ or ‘results’ were compiled as the raw data and were placed into the following major categories for the review (Appendix C): Prevalence of cyberbullying, type of cyberbullying experienced, psychological/psychosocial impact, characteristics of victim, bully and bystander, motives of bully, medium of online communication, coping methods, and reporting cyberbullying and seeking help. The next step according to Whittemore and Knafl (2005) is to identify a reliable and valid coding procedure to ensure methodological rigor while reducing and coding the data. Thematic analysis was conducted using the procedures outlined by Thomas and Harden (2008) suggested in Whittemore and Knafl’s method. Thomas and Harden (2008) describe thematic synthesis as having three stages: the coding of text line by line, the development of descriptive themes (concepts), and the subsequent generation of analytical themes (constructs). This procedure was chosen because it

outlines a detailed process for thematic synthesis while ensuring rigor and transparency. The coding of text line-by-line was used to translate the concepts from one study to another. Coding is the process of combing the data for themes, ideas and categories and then marking similar passages of text with a code label so that they can easily be retrieved at a later stage for further comparison and analysis (Gibbs & Taylor, 2005). A list of codes was developed and when new codes appeared they were compared with existing ones to check for consistency of interpretation. These codes were organized into a working ‘codebook’ that was used as a means to organize text for subsequent interpretation as recommended by Fereday & Muir-Cochrane (2006). The codes were examined to look for similarities and differences between these codes and organize them into related areas to construct descriptive themes. New codes were created to capture the meanings of the groups of initial codes. This synthesis was kept very close to the original findings of the included studies however there was a need to go beyond the content of the original studies to generate additional concepts, understandings and hypotheses (Thomas & Harden, 2008). This was the most controversial step as it is dependent on the insight of the reviewer and is the most difficult to describe according to Thomas and Harden (2008). A limitation of the project is that due to the nature of this Masters level review; one person only identifies all codes and themes. While analysis was discussed with the supervisor, it does not provide multiple perspectives with differing experience.

Data display. Miles and Huberman (1994) describe data display as “an organized, compressed assembly of information that permits conclusion drawing and action” (p.11). From the detailed working codebook, the data was placed into a conceptual hierarchical tree structure representing the multiple primary sources reviewed (Appendix D & E). All preliminary thoughts regarding categories and themes were kept close to the original data and written in a diary record

to follow the thought process. Following the findings, the major categories of data that emerged were organized in to the following categories:

- 1) Type of cyberbullying experienced
- 2) Psychological/psychosocial impact of anonymity
- 3) Characteristics of victim, bully, bystander
- 4) The medium of online communication
- 5) Coping methods

Data Comparison. The next step in the data analysis was examining the data displays to search for patterns, themes and relationships as recommended by Whitemore and Knafl (2005). Thomas & Harden (2008) recommend generating analytical themes by using the descriptive themes and trying to answer the research questions. Once patterns began to emerge they were contrasted and compared and described in the final write up titled findings. A concept map was drawn representing an initial visual interpretation of the analytical themes (Appendix F).

Conclusion drawing and verification. The thought process for patterns, themes and relationships were identified in a diary record throughout the analysis process to document data analysis decisions, analytical hunches, thoughts and ideas related to interpretation of the data. This diary was helpful to critically self-reflect on how the data transformed from preliminary thoughts to higher level thinking as well as to identify any bias that the thinking may have brought. It also helped to identify how small aspects of the original proposed methodology needed to change in light of the data. The final phase of the data analysis was to move the interpretive effort from the description of patterns, themes and relationships, to higher levels of thinking and abstraction (Whitemore & Knafl, 2005). Dixon-Woods, Agarwal, Jones, Young & Sutton (2005) describe: “if thematic analysis is limited to summarizing themes reported in

primary studies, it offers little in the way of theoretical structure within which to develop higher order thematic categories beyond those identified in the literature (p. 47)” which supports abstract analysis. Conclusions were drawn and revised to ensure inclusiveness of as much of the data as possible as recommended by Whitemore & Knafl (2005). A common critique with thematic synthesis is the lack of transparency (Dixon-Woods et al, 2005). To minimize these types of concerns, a construct map was created that presents the higher-level abstraction processes that situates the context of the primary concepts reviewed during the data analysis. Thomas & Harden’s (2008) method demonstrates how to develop higher order thematic categories clearly. All themes and outliers were verified with the primary source data for accuracy and confirmability as they are conceptualized at higher levels of abstraction. A concept map including the final themes was created (Appendix G) and compared with the initial themes.

Presentation

Synopses of the findings are reported to capture the breadth and depth of the topic; explicit details from the primary sources were provided to follow the chain of evidence. Limitations of the review are described as well as the implications for nursing practice and further research. While there is no one accepted template for writing integrative review results, I will report the findings using the following format: findings, limitations and discussions. In this process, accuracy and comprehensiveness of the review will be transparent, sustaining validity of the review.

Findings

Adolescent Perceptions of Anonymity

The present review explored adolescent perceptions of anonymity in regards to cyberbullying in the literature by evaluating both qualitative and quantitative studies. Adolescents reported many benefits to computer-mediated communication including the ability to establish and maintain relationships, communicate frequently with peers, speak openly and honestly, share their feelings, and its entertainment value. Adolescents were also able to identify important concerns regarding computer-mediated communication including divulging their privacy online, cyberbullying and the impact that anonymity has on online communication and behaviour. The findings also revealed that adolescents are aware of and concerned about the influence of mediated communication on social norms and its facilitation of cyberbullying (Bryce & Fraser, 2013). Exploring adolescent perspectives regarding the impact of anonymity on cyberbullying was helpful to gaining insight into a commonly faced problem that can have serious health effects. The prevalence of anonymity in cyberbullying will be discussed first.

Prevalence

The prevalence of adolescents being victimized by an anonymous cyberbully ranged from 10% to 38.9% (Dehue, Bolman & Vollink, 2008; Huang & Chou, 2010; Sourander, Klomek, Ikonen, Lindroos, Luntamo, Koskelainen, Ristkari & Helenius, 2010). The different methodologies used by researchers and the difference in the way each study defined cyberbullying, and the age variances used makes it difficult to compare prevalence rates. A few studies showed that a difference in age impacts the prevalence of cyberbullying victimization. One study reported the incidence of primary school children reporting anonymous cyberbullying was 33.9% versus 38.9% of adolescents in secondary school (Dehue et al., 2008). Another study supported this idea and found that sixth graders are somewhat less likely than seventh or eighth graders to be victims

(Kowalski & Limber, 2007). The slight increase in cyberbullying experiences in secondary school students compared to primary school students could be related to the frequency of exposure and access to online technology (i.e. through home computers, cell phones etc.). In addition to age, there were also differences in gender relating to cyberbullying.

Females were twice as likely to report distress, feel hurt, and to report a sadder and less joyous mood than males (Fenaughty & Harre, 2012; Pettalia, Levin & Dickinson, 2013; Pieschl, Porsch, Kahl & Klockenbusch, 2013). These findings were described in the context of cyberbullying without specifically referring to anonymity, however, female relationships with one another are viewed as a very important aspect in their lives and therefore females may be more sensitive to relational aggression. This finding supports the need to address the impact of anonymity on gender independently to determine if there is a need for gender specific intervention programs. The findings on the impact of anonymity on cyberbullying and adolescent mental health will be described next.

Impact of Cyberbullying on Adolescent Mental Health

Examining how adolescents believed cyberbullying impacted their mental health assists health care professionals understand how it can affect their lives. The research found that cyberbullying impacts adolescents in multiple areas of their lives and will be discussed in terms of its psychological, social and school impact.

Psychological impact. The studies examined in this review described the overall psychological impact of cyberbullying on adolescents. The psychological impact on adolescents victimized by cyberbullying included a wide range of emotions including: fear (Baas, de Jong & Drossaert, 2013; Bryce & Fraser, 2013; Mishna, Saini & Solomon, 2009; Sevcikova, Smahel & Otavova, 2012; Slonje, Smith & Frisen, 2012), emotional pain (Bass et al., 2013; Mishna et al.,

2009; Pettalia et al., 2013), severe depression (Bass et al., 2013; Dehue et al., 2008; Mishna et al., 2009; Pieschl et al., 2013; Sevcikova et al., 2012; Slonje et al., 2012), attempted or completed suicide (Bass et al., 2013), anger (Dehue et al., 2008; Pieschl et al., 2013; Slonje et al., 2012), powerlessness (Vandebosch & Van Cleemput, 2008), helplessness (Sevcikova et al., 2012), defenselessness (Pieschl et al., 2013; Sevcikova et al., 2012; Slonje et al., 2012), embarrassment (Slonje et al., 2012, Sticca & Perren, 2012), loss of sleep (Slonje et al., 2012) and a decline in self-confidence (Bass et al., 2013). In addition to the psychological impact, the research describes the social impact that cyberbullying has on adolescent victims.

Social impact. There were four major themes that emerged regarding the social impact of cyberbullying. First, social exclusion was found to increase the feelings of distress from cyberbullying. This may include the bully not letting the victim communicate, or befriend others (Fenaughty & Harre, 2012; Slonje et al., 2012; Sticca & Perren, 2012) where a student may also seek social support. Second, the victims worried about the potential for their reputations to be damaged if the bully impersonated the victim (Bryce & Fraser, 2013). This also led to a decreased ability to trust others within peer networks (Bass et al., 2013; Bryce & Fraser, 2013; Nocentini et al., 2010). Thirdly, rumours were associated with increased distress felt by the victim (Fenaughty & Harre, 2012). Lastly, adolescents were found to avoid certain people and often times for a prolonged period of time. One student described that “even one and half years later after the incident occurred she still avoided her perpetrator if she saw her on the street at a distance (Slonje et al., 2012, p.30)”. In addition to the victimization affecting their social lives, it can also have a significant impact on their school attendance, further reducing their social contacts.

School impact. Two major themes emerged from the data regarding the impact of the adolescent and their attendance at school. First, adolescents reported that decreased school attendance in the form of detentions, suspensions, ditching or skipping school were associated with those being bullied online (Ybarra, Dierner-West & Leaf, 2007). Some reasons for skipping school included that students were afraid of going to school as well as not liking to go to school (Ybarra et al., 2007). Secondly, one study reported that weapon carrying to school was more frequently reported by youth being harassed online. Analysis of the type of Internet harassment experienced indicated that 27% of youth targeted by rumours and 21% of youth targeted by threats monthly or more often also reported carrying a weapon to school at least once in the previous 30 days (Ybarra et al., 2007). There was only one study suggesting the correlation between being harassed online and weapon carrying, however this would need to be empirically explored further.

Impact of Anonymity on Cyberbullying

While much of the literature does not differentiate much of the impact of anonymous cyberbullying from known offender cyberbullying, the data did reveal that there were some distinct differences. The research found that anonymity was not a definitional criterion to discriminate cyberbullying from non-bullying incidents; however, adolescents believed that anonymity is important for the impact on the victim (Nocentini, Schultze-Krumbholz, Scheithauer, Ortega & Menesini, 2010) and will be described in further detail.

Anonymity has a more negative impact on the victim. Adolescents believed that the anonymous situation is more serious and has a more negative impact on the victim (Bryce & Fraser, 2013; Nocentini et. al, 2010; Slonje et al., 2012; Sourander et al., 2010; Sticca & Perren, 2012). They believed that anonymity increases feelings of insecurity and fear (Bass et al., 2013;

Bryce & Fraser, 2013; Fenaughty & Harre, 2012; Mishna et al., 2009; Sevcikova et al., 2012; Slonje et al., 2012; Sourander et al., 2010) creates more confusion, (Bryce & Fraser, 2013) and frustration for the victim (Slonje et al., 2012; Vandebosch & Van Cleemput, 2008); and increases the feeling of powerlessness (Vandebosch & Van Cleemput, 2008). Exploring reasons for these findings may be explained by one student's quote: "I was afraid of what would happen, of how it could be solved, who could help me out of it, and what that guy could do (Sevcikova et al., 2012, p.323)". This student describes the fear of the unknown and uncertainty of what the bully could do, which was acknowledged in a study by Sevcikova, Smahel & Otavova (2012). Adolescents are uncertain about what the bully could potentially do to the victim and if the bully could realistically carry out the threat.

In contrast, some students felt that not knowing the bully was easier to deal with. One student described that "if it was one of your friends then you would be hurt but you don't know them so you don't really have to care as much (Bryce & Fraser, 2013, p. 785)". This comment reveals that the adolescent's perception of harmful experiences can be varied. Livingstone et al. (2011) describe in their work that online victimization has a wide variety of manifestations, which may explain why certain adolescents consider the online attacks harmful while others do not. Exploring the research further to identify why adolescents perceive some attacks as harmful and others do not would be beneficial. In addition to perceiving anonymity as creating more confusion, fear and frustration, adolescents also described the impact of anonymity on cyberbullying more harmful when the bully connected their online world with their offline or real world.

Distress increases when aggressors connect the virtual world with the real world.

Multiple studies in this review described that the impact of online attacks by anonymous people was increased when the aggressors connected their virtual threats with the real world (Dehue et al., 2008; Sevcikova et al., 2012). One study involved in this review found that perpetration was less bothering for adolescents if it was not transferred offline or if it did not interfere with the adolescents offline relationships (Sevcikova et al., 2012). Suler (2004) supports the concept that Internet users in general tend to dissociate experiences in the online world from their offline lives. The spread of cyberbullying from one environment to another such as from school to the Internet and vice versa increased their distress (Sevcikova et al., 2012). Adolescents felt powerless to control the situation and when the bully was unknown and they would not be able to stop the bullying (Sevcikova et al., 2012). Interestingly, the data showed that while adolescents believed that their bully was anonymous, the research revealed the opposite.

Perceived versus actual anonymity. While adolescents believe that anonymity has a greater and more serious impact on its victims, victimization within known peer networks was found to be the most prevalent. The research shows that there was uncertainty about whether online technologies provide actual or perceived anonymity for the aggressor (Mishna et al., 2009). The actual prevalence of anonymous bullying was found to be in contradiction to what students believed and reported in focus groups. These findings are consistent with other studies suggesting that the majority of cyberbullying victims actually know the identity of their perpetrator (Bryce & Fraser, 2013). Most students depicted anonymity as integral to cyberbullying but much of the cyberbullying they discussed actually took place within the context of their social groups and relationships (Mishna et al., 2009). The research supports this in that the bully usually knows who the victim is and was often someone they knew in the real

word such as friends or former friends (Vandebosch & Van Cleemput, 2008). Ultimately, the victim may gain clues about the identity of the perpetrator due to the content of the messages, the way others in their environment behaved or could be informed of the identity by the perpetrator themselves or a third party (Vandebosch & Van Cleemput, 2008). One student wrote that while they may have not been certain of who the bully was initially, they were able to eventually identify the perpetrator: “I knew it was probably them from the way they wrote...and I was told by a friend who knew (Sevcikova et al., 2012, p.324)”. In many cases, the bully was a person from school (Kowalski & Limber, 2007; Pettalia et al., 2013), a friend or sibling. Bullies also describe that the victims were often people that they also knew in the real world (Vandebosch & Van Cleemput, 2008). This suggests that anonymity may not have a uniform impact on the dynamics of the behaviour. A study by Bryce and Fraser (2013) discuss that other factors such as trait characteristics, platforms etc. are also likely to influence the perceived seriousness of victimization by anonymous or known perpetrators.

Using an audience to increase perceived distress. Multiple studies examined in this review described public cyberbullying as the most serious incident making the impact of cyberbullying especially strong for some adolescents (Nocentini et. al, 2010; Sevcikova et al., 2012; Slonje et al., 2012; Sticca & Perren, 2012). The wide circle of people in front of whom the bullying occurs, also known as bystanders, can deepen the victim’s perceived trauma (Sevcikova et al., 2012). Adolescents consider it distressing when the bully carries out cyberbullying in a public scenario such as a social network site where the bullying can be witnessed by a large audience, especially in front of people whom the victim knows (Nocentini et. al, 2010). In addition to being publicly embarrassed or threatened, even a one-time event can be repeated over and over as it spreads to more viewers also increasing the distress.

Repetition increases distress. Repetition was a common theme discussed by adolescents with conflicting ideas as to how it affects cyberbullying (Bass et al., 2013; Mishna et al., 2009; Nocentini et. al, 2010; Pettalia et al., 2013; Sevcikova et al., 2012; Slonje et al., 2012). One student explained repetition as “Just a couple of pranks is not so bad, it can even be funny. But if it happens more often, it is not nice anymore (Bass et al., 2013, p. 251)”. Some students did experience repetitive cyberbullying (Bass et al., 2013; Sevcikova et al., 2012; Slonje et al., 2012) and some of the bullying was prolonged which was also found to increase distress (Bass et al., 2013; Sevcikova et al., 2012; Slonje et al., 2012). One student described, “They prank call very, very often. Three, four times per day for about a year (Slonje et al., 2012, p. 29).” It could be that with the lack of direct feedback provided by online communication technologies the bully may feel less empathy or remorse and continue bullying for a longer period of time. A unique phenomenon to cyberbullying is that online one-time actions may have repetitive effects through bystanders forwarding the messages or photos and bullies may not be aware of the lasting consequences (Bass et al., 2013). While some adolescents agreed that the criterion of repetition could differentiate between a joke and an intentional attack, other students believe that it is not repetition but the intention and content (Nocentini et. al, 2010). One of the German focus groups believed that the behaviour could not be unintentional if it is repeated and believe that repetition and intention are related. The bully’s intention and victim’s perception play vital roles in the impact of cyberbullying and will be discussed next.

The Impact of Intention and Perception

Adolescents not only recognize the benefits of computer-mediated communication such as its social benefits, they also recognize the disadvantages that a virtual world creates such as the lack of eye contact and direct relationships (Mishna et al., 2009). Adolescents describe the

difficulties victims may have perceiving if the act is intentional or not (Bass et al., 2013; Bryce & Fraser, 2013; Huang & Chou, 2010; Mishna et al., 2009; Nocentini et. al, 2010; Vandebosch & Van Cleemput, 2008). Intention and perception are essential to the victim's feelings of whether the act was done in a threatening way versus a joke. They understand that online messages can be misunderstood and that the communication may be superficial (Nocentini et. al, 2010). This can be exaggerated when the bully is anonymous as intention and perception are even more difficult to determine. There is much discussion between the studies regarding intention and perception as playing key roles in cyberbullying.

Bully's intention. The research affirmed that the bully's intention was to create harm and if the victim was not hurt then the goal was not attained (Nocentini et. al, 2010; Vandebosch & Van Cleemput, 2008). The research also revealed multiple factors influencing the motivations for cyberbullying and can be divided into two categories: intrinsic and extrinsic motivations. The intrinsic motivations of a bully included an internally felt drive to bully (Bass et al., 2013), the need to belong (Bass et al., 2013), feeling boredom (Bass et al., 2013; Vandebosch & Van Cleemput, 2008), for pleasure (Bass et al., 2013) and for stress reduction (Bass et al., 2013). The extrinsic motivations included: revenge or retaliation (Bass et al., 2013; Mishna et al., 2009; Vandebosch & Van Cleemput, 2008), proving their technological skills (Bass et al., 2013; Vandebosch & Van Cleemput, 2008), having a negative experience with the victim (such as a fight, argument or ending of a relationship) (Bass et al., 2013; Slonje et al., 2012; Vandebosch & Van Cleemput, 2008), jealousy (Bass et al., 2013), or the bully did not like something about the victim's appearance or personality (Bass et al., 2013; Vandebosch & Van Cleemput, 2008). There were no specific findings discussed in the research about the impact of anonymity on the bully's intention to hurt the victim, however, the very nature of social media provides the means

of anonymity which may encourage the bully to repeatedly target his or her victim. The victim's perception of the incident also plays an important role on the impact for the victim.

Victim's perception. Adolescents described the difficulty involved in differentiating between cyberbullying and innocent pranks (Bass et al., 2013; Bryce & Fraser, 2013; Huang & Chou, 2010; Mishna et al., 2009; Nocentini et. al, 2010; Vandebosch & Van Cleemput, 2008). One student explains: "It may be a joke for you, but how does the other child know it's a joke? Its only a nice joke when he knows it's one (Bass et al., 2013, p. 251)". This student raises the question about how the victim should know that the act was not meant seriously. Adolescents echo this challenge as they describe the difficulty in understanding the perpetrators intention (humour vs. threat) as a result of the lack of visual social cues (Bryce & Fraser, 2013). In addition to the lack of social cues, other factors were discussed as potentially influencing the perception of the attack including: audience, personal trait characteristics, the content of the message and the victim's relationship to the bully (Bryce & Fraser, 2013). If the anonymous cyberbullying occurs in front of a large audience, it was found that the victim has more difficulty perceiving if the act is intentional or not and was most likely perceived as harmful (Nocentini et. al, 2010). In addition, not knowing the perpetrator can also make it more difficult for the victim to put the action into perspective (Vandebosch & Van Cleemput, 2008). Adolescents also believe that anonymity does influence and empower those unlikely to become bullies for a variety of reasons that will be discussed next.

Adolescent Perceptions of Disinhibition Provided by Anonymity

Adolescents believe that anonymity empowers those who are unlikely to cyberbully as it allows individuals to behave in ways they might not otherwise since they can remain anonymous and have more power. Adolescents report that anonymous bullying provides the least chance that

they will get caught which also minimizes the consequences they will face (Mishna et al., 2009; Pettalia et al., 2013).

Minimized consequences. Adolescents believe that there is less chance of getting caught if anonymous and have less fear of repercussions or being traced. Interestingly, one study showed that 75% of participants at least somewhat agreed that cyberbullies would receive consequences for their behaviours (Pettalia et al., 2013). Of self-reported cyberbullies and cyberbully victims, they all produced lower ratings of the likelihood of cyberbullies receiving consequences than the victims and those not involved. They also reported that participants rated the likelihood of cyberbullies being hurt by the cyberbully behaviour significantly higher than the likelihood that the cyberbully would receive consequences (Pettalia et al., 2013). This suggests that cyberbullying is perceived to elicit harm to a significantly greater degree than it is likely to elicit consequences for the perpetrator. This same study found that regardless of the participant's role in cyberbullying, the majority (94%) of students perceived the cyberbully behaviors as harmful to the victim; however they were significantly less (75%) likely to believe that the bullies would receive consequences (Pettalia et al., 2013). This reveals that adolescents are aware that cyberbullying can occur without consequence, possibly creating a disinhibition effect. The type of consequences that the bully faced were not discussed in any of the research but this may be an area for further research and it would be beneficial to research the sources (i.e. parent, teacher) of the consequences as well.

Hiding behind the keyboard. One of the primary themes regarding disinhibition was the concept of the cyberbully "hiding behind the keyboard". Adolescents believe that owing to the nature of communication technology, bullies can easily hide behind the computer screen (Huang & Chou, 2010; Mishna et al., 2009; Pettalia et al., 2013), which makes it easier for the person to

bully and hide (Huang & Chou, 2010; Mishna et al., 2009). Students believe that because you don't have to talk to the face that it is easier for one to bully another (Pettalia et al., 2013).

Examining Individual Roles of the Participants Involved in Cyberbullying

Interrelated roles. The research showed that the bullies, victims and bystanders roles are highly related to each other (Huang & Chou, 2010). While there were certain characteristics associated with the bully, bully-victim, victim or bystander as seen in the data display, one person could potentially become any or all of these roles. There is a high correlation between victims and bullies that indicate there may exist a bully-victim phenomenon in cyberspace (Huang & Chou, 2010; Slonje et al., 2012). The findings did reveal that there could be a role turning cycle where a victim can become the bully and vice versa as the imbalanced power relationship is eliminated (Huang & Chou, 2010). The hurt victim can now retaliate or seek revenge on the bully. The bystander could also choose to participate in the cyberbullying and their involvement will be discussed next.

Bystander involvement. Bystanders were the group the most frequently involved in bullying episodes (Huang & Chou, 2010) and can easily become members of the victim group or the bully group based on their action as a witness. Bystanders who receive the negative messages may consider themselves members of the victim group while bystanders who forward the message on to others can be considered members of the bully group (Huang & Chou, 2010). Bystanders can become part of the bullying by sharing, repeating or simply knowing about the bullying. The ability and number of the many bystanders viewing these negative interactions could potentially take positive actions to stop the transmission, which could be a powerful key to cyberbullying prevention (Huang & Chou, 2010). It is very possible that anyone in cyberspace could put a permanent stop or temporarily stop the spread of messages, photos, videos that are

out in the open, however one could also choose to willingly forward these messages (Huang & Chou, 2010). In addition to the potential unlimited number of viewers, this bullying can happen at any time and any place, increasing the feeling of distress. As well, the research shows that in the online environment, adolescents seem to succumb more easily to collective participation in bullying and even known friends to the victim can become a part of the bullying (Sevcikova et al., 2012).

Factors Unique to Cyberbullying that Create Further Distress

Bullying can happen at any time and at any place. Adolescents recognize that cyberbullying can become a repetitive, relentless cycle that can occur continuously. Adolescents who perceived cyberbullying to be worse compared to traditional bullying gave the reason of anonymity of the bully and that it could happen at any time and at any place (Slonje et al., 2012). Bullying that starts at school can continue online when the student returns home at the end of the day (Mishna et al., 2009). Technology has extended schoolyard bullying to home computers and cell phones making it possible for “non-stop bullying”. In addition to the bullying now taking place 24/7, the very nature of online messaging including text messaging allows for messages to travel very quickly. In addition to the fact that bullying can happen around the clock, adolescents fear for their safety and feel that they have nowhere safe to get away from the bullying.

No safe place to hide. Adolescents feel that their home is supposed to be safe and protected from bullying (Mishna et al., 2009). Cyberbullying is unique in that adolescents who have computers or cell phones at home may experience the continuation of school bullying become cyberbullying at home, and often in their own bedroom. Adolescents feel that this is particularly invasive (Mishna et al., 2009). Other types of cyberbullying experienced by adolescents will be described next.

Types of Cyberbullying Experienced

Adolescents described the many different ways that they have been cyberbullied or ways to cyberbully others. Five major themes that emerged from the research were found from examining the results. First, adolescents experienced threats to their personal harm in the form of receiving threatening or harassing messages (Bass et al., 2013; Huang & Chou, 2010; Mishna et al., 2009; Slonje et al., 2012; Vandebosch & Van Cleemput, 2008). Secondly, adolescents explained that their privacy was invaded when perpetrators accessed the victim's personal computers, phones or hacked into personal accounts (Bass et al., 2013; Bryce & Fraser, 2013; Mishna et al., 2009; Sevcikova et al., 2012; Vandebosch & Van Cleemput, 2008). Adolescents found that bullies would also masquerade themselves (Bass et al., 2013; Bryce & Fraser, 2013; Mishna et al., 2009; Vandebosch & Van Cleemput, 2008) using other or new identities or contact their victims anonymously. Victims also reported that there was occasionally a sexual invasion by pedophilic attempts (Vandebosch & Van Cleemput, 2008), stalking (Bass et al., 2013; Vandebosch & Van Cleemput, 2008), luring (Bass et al., 2013), blackmailing (Bass et al., 2013; Mishna et al., 2009; Sevcikova et al., 2012) coercing (Bass et al., 2013; Huang & Chou, 2010; Mishna et al., 2009) sexual intimidation (Vandebosch & Van Cleemput, 2008) or even raping. Thirdly, the loss of control over personal property was felt when messages, photos, conversations (Bryce & Fraser, 2013; Vandebosch & Van Cleemput, 2008) were distributed to an audience or altered (Bryce & Fraser, 2013; Huang & Chou, 2010; Mishna et al., 2009; Sevcikova et al., 2012; Vandebosch & Van Cleemput, 2008) and forwarded (Huang & Chou, 2010; Mishna et al., 2009; Nocentini et al., 2010; Slonje et al., 2012; Vandebosch & Van Cleemput, 2008). Fourth, a compromised reputation was experienced via rumour spreading (Huang & Chou, 2010; Mishna et al., 2009; Slonje et al., 2012; Sourander et al., 2010), gossip, ridiculing (Bass et al., 2013;

Huang & Chou, 2010; Vandebosch & Van Cleemput, 2008), name calling (Bass et al., 2013; Dehue et al., 2008; Huang & Chou, 2010; Slonje et al., 2012; Sourander et al., 2010), scolding, discriminating (Bass et al., 2013; Mishna et al., 2009; Sevcikova et al., 2012) or backstabbing (Mishna et al., 2009). Lastly, adolescents experienced what they felt was random bullying, which was aimed at total strangers (Bass et al., 2013; Vandebosch & Van Cleemput, 2008). While the research articles did not describe how anonymity affected the ways the bully chose to victimize others it does emphasize the wide range of methods they can use to induce hurt and fear in its victims. Adolescents used various coping mechanisms when faced with cyberbullying experiences.

Adolescent Coping Mechanisms

While not one of the direct research questions, it is worth discussing how the research described aspects of how adolescents coped with being cyberbullied online to discover if there are differences in how it impacts them. Active coping and Passive coping were the two major themes used by adolescents to cope and they will be described below in further detail.

Active coping. The research found that overall females were more likely to actively cope than males (Pieschl et al., 2013). There were also many gender differences between the types of coping each gender occupied however, for the purpose of this review it will not be defined by gender as the studies revealed many contradictions and the purpose of this review is to gain a broad perspective. Five main themes emerged as the major types of active coping employed by adolescents. These five themes included social coping, aggressive coping, technical coping, legal coping and reporting (Pieschl et al., 2013). In the one study that identified coping mechanisms the themes were not defined and therefore it is difficult to comment on each aspect

independently. Reporting was discussed in the literature more commonly and was coded to observe commonalities and differences amongst the literature.

Reporting cyberbullying. Adolescents described many different aspects of reporting cyberbullying to others that echo the importance and impact anonymity has on cyberbullying. The prevalence of reporting was quite low as described by one study: “while 32.4% of students reported that they had either witnessed or personally experienced cyberbullying, only 12.5% reported the incident to someone” (Lazuras et al., 2013 p.884). Adolescents who chose to report usually would do so to peers but would also report to parents, sibling’s teachers, and lastly police (Lazuras et al., 2013). It is interesting to note that many more victims were found to have reported cyberbullying events than the bystanders (Huang & Chou, 2010). Bystanders, although the largest group involved in cyberbullying actually were the least likely to take action (Huang & Chou, 2010). In fact, bystanders were found to not feel any responsibility to reporting the incidents and suggested that these events are constitute other’s privacy in which they should not get involved (Huang & Chou, 2010). More research in this area could provide some helpful insight into cyberbullying prevention efforts. Some victimized adolescents feel that reporting would be their last course of action, if done at all (Slonje et al., 2012). This is a method of passive coping that will be examined further.

Passive coping. Passive coping was discussed more in depth in the literature. The main themes found in passive coping will be explored. First, avoidance was the major theme encompassing many smaller themes that explain one of the ways adolescents choose to cope.

Avoidance. Adolescents used avoidance by ignoring, deleting or watching and waiting as a method of coping with the online bullying. Looking deeper, there were some reasons for choosing avoidance. First, adolescents held the belief that others do not care about the incidents

(Huang & Chou, 2010; Mishna et al., 2009; Slonje et al., 2012). A study by Mishna et. al., (2009) illustrates how one student felt:

Sometimes their mom doesn't actually care if they're bad at school, so they won't do anything about it. It happened to my friend, like they told the principal and the principal called their mom and then they're like 'oh, my mom doesn't care anyways;' so they never stop, as much as you tell, as much as you do, nothing will happen to the bully. (p. 1225).

Secondly, adolescents worry that reporting it will remove their access to the Internet (Bass et al., 2013; Mishna et al., 2009; Slonje et al., 2012). Adolescents feel that having Internet access is a necessity of life and feel that losing your Internet connection is like losing your soul (Bass et al., 2013, p. 252)". Third, adolescents worry about the effect it will have on their self image including: having to admit that they are disliked by their peers (Bass et al., 2013), appearing weak (Huang & Chou, 2010) or feeling that asking for help lessens their independence (Bass et al., 2013; Mishna et al., 2009). Fourth adolescents do not trust others easily, especially adults, and their ability to keep the discussion confidential. One student describes it like this: "well I don't trust her (counsellor) because she says that it is confidential but I don't believe her. I don't trust she will really keep it (Slonje et al., 2012, p. 30)". Bass et al. (2013) also found that adolescents are worried about the disclosure of the cyberbullying issue in front of others: "My mother will immediately contact my teacher, or the bully's parents and that's something I really don't want (Bass et al., 2013, p. 252)". They are also fearful of being socially excluded by their peers (Huang & Chou, 2010). Fifth, adolescent's worry that they cannot prove the bullying occurred since the bullies are unwilling to admit it (Huang & Chou, 2010). They recognize the role that masquerading has on providing anonymity for the bully as the bully can pretend it wasn't him or her. Adolescents describe that others attribute their own cyberbullying of others to

someone else having accessed their password (Mishna et al., 2009). Sixth, adolescents believe that others may be unable to deal with the matter effectively. Some students don't believe teachers can handle the matter effectively and that if it happens of school grounds teachers are unable to help anyways (Mishna et al., 2009). Other students believe that reporting it to the school was successful and that they should and can deal with it (Mishna et al., 2009; Slonje et al. 2012). In terms of telling parents, adolescents don't report because they feel that adults don't understand the cyber world or don't want their parents to worry (Huang & Chou, 2010). Students also fear the consequences of reporting the cyberbullying for fear of getting into trouble if they had already been warned to stay off the computer, fear of further bullying occurring (Bass et al., 2013; Mishna et al., 2009) or feel that reporting is useless (Mishna et al., 2009).

In addition to avoidance, other methods of passive coping were employed. Some adolescents felt that they were inadequate to respond to cyberbullying incidents and felt helpless (Bryce & Fraser, 2013; Pieschl et al., 2013; Slonje et al., 2012). In addition they may have held the belief that the incidents should be kept to oneself (Slonje et al., 2012). Another coping mechanism described in the literature was using depreciation or devaluation (Pieschl et al., 2013). Some students tried to cope by rationalizing or normalizing the behaviour. Some adolescents reported that cyberbullying is bound to happen and an inevitable and relatively routine occurrence that they accepted as a normative dimension of online relationships and experiences (Barlett, 2013; Bryce & Fraser, 2013). Lastly, some adolescents blamed themselves or felt at least partially responsible for the bullying for a few reasons including that they were choosing to go online (Bass et al., 2013), they had already been warned about the risks and had chosen to still go online despite limits and rules being set (Bass et al., 2013; Dehue et al., 2008). Adolescents reported that they were often discouraged by their parents or caregivers to go online

in the first place and expect reactions like: “I told you so” (Bass et al., 2013, p.251). Adolescents who are coping passively may internalize their feelings more and feel that there may not be a way to stop the bullying which may increase their feelings of distress. Exploring the reasons why adolescents choose not to report the incidents is important to nurses to identify where efforts could be focused.

Limitations

The present review provides insightful information on adolescent’s perspectives of anonymity on cyberbullying; however, there are a few limitations that must be noted. There were age variations amongst the studies included in the review. Some studies used a wide age range of sample 9-19 years while other studies only used a small age range such as 9-11 years. The findings are not generalizable to a specific age as the findings reviewed a broad range. There may be differences between age groups that could provide more insight and deserves further exploration. There was also no discussion in the research about at what age the cyberbullying occurred and could have been based on current or previous experiences with cyberbullying.

In addition, the research was not limited in geographical location therefore the types of social networking sites adolescents may be using across the world may differ. It is unknown to what extent adolescents’ perspectives apply to adolescents in specific geographical locations and the differences between geographical locations were not explored. Further geographic-specific research would benefit the development of specific prevention programs.

The complexity and evolution of new technologies provide challenges for identifying and defining cyberbullying and specific cyberbullying behaviors. This paper has identified the added complexity of ones perception of cyberbullying as an aspect of defining what one believes is cyberbullying behavior. This may affect the adolescent’s report of the phenomenon. While a

small number of cyberbullying definitions have become widely accepted and are cited regularly in new publications it is still unclear and there is much controversy within the research (Nocentini et al., 2010).

Another limitation is that many of the studies used within this review are limited by the correlational nature of the data and therefore a causal relationship cannot be established. The different methods of research used to triangulate some of the findings however were successful in gaining perspective and making suggestions for future research. In addition, many of the studies are self-reported studies and recent work using the “cyber-behavior scale” with children suggests teenagers and pre-teenagers self-report using cyberbullying tactics more than late adolescents (Barlett and Gentil, 2012). In addition, self-report and focus group research is subject to the effects of social desirability responding among other biases and inconsistencies (Sheperis, Doggett, Ota, Erford, & Salisbury, 2007; Smithson, 2000). In addition, while many of the surveys were anonymous, participants may have under-reported their victimization and experiences (Cross et. al., 2009). The benefit of a mixed method review is the triangulation to reduce bias and gain a more thorough understanding of the phenomenon of anonymity in cyberbullying. These limitations hope to provide avenues for further exploration and research.

Discussion

Integrating the findings to Albert Bandura’s Social Learning Theory (1960) it is clear that his major concept of reciprocal determinism supports the findings in that there is a dynamic reciprocal interaction of the person (with a self of learned experiences), environment (external social context) and behaviour (responses to stimuli to achieve goals). This will be described in further detail next.

Anonymity's Impact on the Person

Using the Social Cognitive Theory the person refers to the adolescent who has past experiences which factor into whether behavioural action will occur (Bandura, 1977). This occurs in the presence of the adolescent who is developing physically, emotionally, socially and cognitively. The adolescent is learning to explore their identity mainly through social relationships. Three major categories were found to describe the impact that anonymity has on the person: Individual characteristics, psychological impact and coping.

Individual characteristics. Adolescents have a set of learned experiences that have shaped their being and have developed certain characteristics that may determine their potential involvement in cyberbullying. The data display (Appendix E) describes the individual characteristics that were found to be associated with being a bully, victim, bully/victim or bystander. John Suler explores the impact of the individual personality differences as determining when and how people become disinhibited. He discusses how personality types vary greatly in the strength of reality testing, defense mechanisms, and tendencies towards inhibition or expression. He believes that through the interaction of individual personality variables, some people will have a small deviation from a person's offline behaviour, while others will have dramatic changes (Suler, 2005). Adolescents, in the presence of a potentially anonymous environment may make dramatically different decisions online through the online disinhibition effect impacted by their individual characteristics. While there were certain characteristics of adolescents that were associated with their involvement in cyberbullying as a bully, bully-victim, victim or bystander, often adolescents were seen to overlap more than one role.

Psychological impact. The research findings describe and illuminate how adolescents feel about cyberbullying and the impact that anonymity plays in increasing the perceived

distress. It also highlights the importance of recognizing the interplay of many factors, not just anonymity, which impacts adolescents. The findings showed that anonymity impacts the adolescent not only psychologically but also socially and affects their school life. Anonymity was found to increase the perceived distress in adolescents when the perpetrator connects their offline world with their online world and vice versa. In addition, it impacts the adolescent more negatively when the bully uses an audience and/or the incident repeats itself.

Coping. The adolescent person will perceive their victimization differently which, in turn, elicits different coping responses that may be impacted by one's personal characteristics, namely their self-efficacy and resilience. The adolescent who can cope effectively with stress can use adaptive coping strategies to gain relief from the stressful situation such as cyberbullying. The findings showed that adolescents most frequently use avoidance as the main coping mechanism. While in some cases avoidance can be negative, it also may be an adaptive mechanism that allows the adolescent to choose when they want to confront the issue. This may be beneficial when safety is a concern, or when the adolescent needs to devise a strategy to deal with the cyberbullying. Addressing appropriate coping mechanisms through resilience and self-efficacy will assist the adolescent to cope effectively when faced with cyberbullying situations. The interaction between the person and their environment involves beliefs and cognitive competencies developed and modified by social influences.

Avoidance. The findings described that most victims and bystanders used avoidance as the most common reaction to cyberbullying. They also usually chose not to report incidents of cyberbullying because they felt that reporting was useless or that they were afraid of the consequences of reporting the cyberbullying (getting in trouble, further cyberbullying, and social exclusion). Ensuring that the adolescent feels safe to report the incident, has full control over any

actions taken and ensuring that the matter will be taken seriously is important to build a trusting relationship. Addressing proper reporting of serious incidents to the proper authority is a great challenge but needs to be identified, modeled and reinforced to create a culture change. A zero tolerance attitude from parents, teachers and authorities that cyberbullying is to be reported just as would aggressive physical acts would be beneficial. Consistency from parents, caregivers, teachers, and authorities to follow through with problems is essential to gaining the trust of adolescents and eliminating the current belief of the uselessness of reporting. Advocating for adolescents to not use avoidance as a strategy to cope but to assist them with identifying the next steps is critical to empowering the adolescent to decide how they will deal with the incident. There is a challenge experienced by caregivers of also understanding intention by the bully of a joke vs. threat but the impact that it has on the adolescent victim should guide the need for intervention. There needs to be programs developed to assist students in self-identifying when the cyberbullying is having a negative impact on them and how and to whom they should report.

Anonymity's Impact on the Environment

The evidence is clear that anonymity increases the distress felt by the victim and can affect adolescents for a long time after the incident. The Internet eliminates face-to-face contact and the ability to read others reactions. This can lead to disinhibition that can affect the way adolescents may act in online social situations. John Suler (2004) describes several factors that may lead to the online disinhibition.

Dissociative anonymity. Suler (2004) describes dissociative anonymity where the online self becomes a compartmentalized, dissociative self. He explains that when accompanied by hostility the person can evade responsibility and they detach from their in-person lifestyle and identity, feeling less vulnerable about self-disclosure or acting out (Suler, 2005). Adolescents

believe that the lack of face-to-face interaction and the inability to witness the direct impact of behaviours on the victim has greater importance than anonymity (Bryce & Fraser, 2013). One student describes that:

Stuff you wouldn't say to someone in the street, like you wouldn't go up to someone and say something offensive to them, I don't think you should say on the internet because it's the same thing really, you just cant see each other. (Bryce & Fraser, 2013, p.785)

Patchin & Hinduja (2006) describe that anonymity may free the cyberbully from normative and social constraints on their behaviour, Traditional inhibitions displayed on school grounds are absent in electronic settings, which levels the online playing field (Ybarra & Mitchell, 2004b). In addition to dissociative anonymity, anonymity creates an invisibility that impacts adolescent behaviors.

Invisibility. Suler (2005) describes that invisibility gives people the courage to go places and act in ways that they would not normally do. He explains that even with a known identity, physical invisibility may create the online disinhibition effect as the lack of face-to-face eye contact may encourage people to express themselves more freely. During online communications, adolescents discussed that they felt freer to be open and more honest as they felt less judgment from others. The Internet makes adolescents more confident, and trusting and they may give out private information (including passwords, photos etc.) as a sign of friendship and trust to people they may not normally have or may not know outside of their "online relationship". This puts adolescents at higher risk of becoming a victim of cyberbullying, as they may not really know the person behind the computer. In addition to feeling more confident, adolescents believe that being anonymous or hiding behind a keyboard gives one more confidence to say more negative things than they would face to face (Bryce & Fraser, 2013;

Slonje et al., 2012). One study explains that “Disinhibition was perceived to increase the confidence of the perpetrator and escalate the extremity of online comments and behaviour compared to equivalent offline situations (Bryce & Fraser, 2013, p.785)”. This supports Suler’s concept of invisibility (2005) and explains how adolescents feel disinhibited to behave in ways they may not normally choose to.

Blurred perception and intention. The anonymous environment is unique to cyberbullying and can occur without regard to time of day as online messages can be sent and received twenty four hours a day and seven days a week. This environment has few enforced rules and altered social norms that potentially have an unlimited audience. Adolescents are aware of the difficulty with perception and intention of messages received and sent and how not seeing face-to-face makes it difficult to put the message into context (Bass et al., 2013; Bryce & Fraser, 2013; Huang & Chou, 2010; Mishna et al., 2009; Nocentini et. al., 2010; Vandebosch & Van Cleemput, 2008). Online messaging makes it difficult for the victim to understand the bully’s intentions, however it is clear that when the bully intends to create harm he or she may use the ambiguity of online messaging to minimize the seriousness or hide behind their actions. This shows that anonymity likely lessens the impact of empathy and that bullies may underestimate the effects of their actions.

Empathy reduction. Empathy according to the Oxford Online Dictionary is defined as a person’s ability to understand and share other peoples feelings or emotional states (Oxford Dictionaries, 2014). A person uses empathy to shape and modify his or her behaviours based on another persons reactions. Empathy has been studied extensively regarding adolescents and aggressive behaviours and the findings suggest that lower levels of empathy are strongly related to higher levels of aggression and bullying incidents in the traditional setting (Endresen &

Olweus, 2002; Jolliffe & Farrington, 2006; Olweus, 1993). During online communications, empathy is greatly diminished as the lack of visual cues is eliminated. This alters how one can understand another persons' emotional state and modify their behaviour accordingly. Studies further explored the issue in relation to online cyberbullying and found that adolescents with lower empathy levels scored higher in cyberbullying behaviour (Ang & Goh, 2010; Campbell, 2005). Lazuras and Ourda (2012) found that self-efficacy beliefs mediated the effects of empathy on cyberbullying intentions among Greek adolescents. Lazuras and Ourda (2012) also explored the effect of empathy and found that the effect of empathy in cyberbullying intentions turned non-significant when other predictors, such as normative beliefs (attitudes) and self-efficacy were taken into account. Adolescent attitudes towards cyberbullying as well as their self-efficacy towards being a bully or coping with the bullying may be important aspects to consider when developing interventions. Also, social cognitions (how adolescents perceive the incident) were found to have a mediation effect, which reduced the effects of moral disengagement and turned the effect of empathy non-significant. In addition to the reduction of empathy, the environment increased the size of the audience, which was also found to have a unique impact on cyberbullying.

Audience. The potential for an unlimited audience increases the distress felt by the victim. The audience can forward messages, photos and other private aspects of the victims life that the victim does not want shared. Anonymity increases as the victim does not know, nor has control over who sees the private messages, photos etc. The bystanders can also forward the messages which leads to group bullying which also increases distress for the victim and further disseminates the personal information. Adolescents are also aware that the environment makes them feel more confident, feel able to speak more openly and honestly and they feel less

judgment. This also may encourage adolescents to share private or secret information as a sign of friendship with someone they may “trust” but are unaware of the consequences. The results showed that adolescents are aware of the role that the anonymous environment provides in minimizing consequences for the bully and potentially encouraging those who would not normally become the bully. The interaction between the environment and the behavior involves the person’s behavior determining their environment, which in turn affects their behavior.

Anonymity’s Impact on Adolescent Behavior

Behavior, according to Bandura (1977), refers to the responses to stimuli to achieve goals. One learns from the consequences of behavior, which in turn affects the environment they live in. The adolescent’s expectations of their behavior or anticipated consequences of their behavior influence the successful completion of behaviors such as cyberbullying. Bullies have the expectation to hurt the victim, which is influenced by their personal motives. If the victim is not hurt then the goal has not been attained.

Consequences minimized. Anonymity provides a way to behave while the consequences can be minimized both on purpose (by hiding behind the keyboard) as well is indirectly since the bully does not see the effects of the cyberbullying victim. This may allow some perpetrators to remain unconvinced that they are actually doing any harm to their target which protects them from knowing that they are morally doing something wrong (Kowalski & Limber, 2007). This reflects Albert Banduras (1996) theory that moral disengagement leads to aggression proneness.

Power imbalance. The absence of online status symbols and cues reduces their impact of authority in cyberspace. Suler (2005) describes this as attenuated status and authority where authority figures express status in their dress, body language and embellishments in their settings. This supports the idea that the online environment can give equal opportunity to

individuals to express themselves regardless of offline status, wealth, race and gender.

Adolescents recognize that in traditional bullying, the victims can hardly fight back because of an imbalanced physical-power relationship between victims and bullies (Huang & Chou, 2010).

Adolescents feel that online communications levels the playing field and empowers those who were unlikely to become real-life bullies or who were even victims of traditional bullying (Huang & Chou, 2010). They report that in cyberbullying the imbalanced power relationship is no longer an issue and therefore there may be more bully-victims in cyberspace leading to a role turning cycle between the bully and victim online (Huang & Chou, 2010). This supports the idea that since the power imbalance is eliminated, it may empower those who were unlikely to become bullies.

Online SNS eliminate the traditional power imbalance between adolescents (i.e. physical strength, attractiveness) and most importantly, the physical power imbalance is no longer a threat. The elimination of this power imbalance was found to encourage those who may have been unlikely to bully and may also encourage the victim to retaliate and become a bully-victim, due to the elimination of the physical risk. The victim may try to retaliate as they may have the skills, knowledge and have observed what to say and do to hurt a victim. This encourages those unlikely to bully and a role-turning cycle can be observed. The bully-victim now anticipates the bully to be hurt and may be reinforced if the behavior is successful. While the power imbalance seems to be eliminated, it was interesting to note that the perpetrator still usually sought out a victim who was weaker, different, or was someone who the bully did not like, when known to them. While much of the research pointed to the elimination of a perceived power imbalance, some of the research was contradictory and described the establishment of power differential

though technical abilities. Some students described that those who had advanced computer skills were better able to use technology to victimize others.

Alternatively, the bully can use anonymity to create a power imbalance over the victim by using their technological skills to remain anonymous and/or can connect the victim's online world with their offline world leading to increased distress. The victim also feels more threatened if they do not know whom the perpetrator is as they have no way of stopping them. The bully usually knows the victim, however, the victim may not initially know who the bullier is and perceives it as anonymous. It would be beneficial to test how perceived anonymity versus actual anonymity affects adolescent social behaviours since adolescents perceived that their perpetrator was anonymous, however it mostly occurred from someone they knew. These findings could argue that the perceived anonymity is more important than the actual anonymity, however this would need to be further tested empirically.

Modeling Cyberbullying Behaviors. Bystanders in the online environment may model cyberbullying behaviour as they succumb more easily to collective participation in bullying (Sevcikova et. al., 2012). Adolescents are observing online responses to cyberbullying both by the victim and the bully. Adolescents may remain as a bystander and watch from the sidelines or they may choose to participate. The bystander may reinforce cyberbullying behaviour by choosing to forward on the messages or participate directly in the bullying. If the bystander chooses to ignore or stop transmission they will likely still not report the incident, which also may reinforce the bully's behaviour. The victim and bystander who does not report the behaviour also reinforces the bully to continue to anticipate not getting caught. In addition, the size of the potential audience to whom the bully can use to receive praise or recognition further reinforces

the behavior as well as gain power over the victim. Focusing on reporting for both the victim and the bystander may improve support for the victim if handled properly.

The cycle of interplay between the three factors of person, environment and behaviour support Banduras theory of the social cognitive theory and how cyberbullying relates to behaviour modeling. Some limitations of the theory is that it does not directly focus on motivation or emotion which in this case could have a substantial impact on the adolescent at the time the behaviour is being carried out.

Implications for Advanced Practice Nurses

This project has highlighted that cyberbullying is a significant health issue for adolescents as it can have serious, long-term consequences affecting them psychologically, socially and at school. The Canadian Nurses Associations (CNA)' framework for Advanced Practice Nurses identifies the key roles of APN's including: clinical expert, leadership, research and consultation (CNA, 2008). The role of the APN in addressing anonymity in cyberbullying will be discussed in each of these areas. Clinical expertise integrates advanced knowledge and clinical experience with theory, research and in depth nursing and related knowledge (CNA, 2008). Leadership is enacted by the APN through advocacy, program development and mentoring (CNA, 2008). The APN contributes to and uses research to improve systems and care for clients (CNA, 2008). Lastly, the APN has the ability to consult and collaborate with colleagues across sectors and at the organizational, provincial, national and international level. The APN can use all of these roles to assist adolescents and their families in navigating the potential risks of being online and identifying ways to deal with situations such as cyberbullying. APN's can assist other health care professionals to recognize that cyberbullying is not normal childhood behavior and can be identified outwardly with evidence of physical symptoms or

injury, mental health symptoms, or poor school performance. APN's need to be able to understand the unique aspects of adolescent psychological, social and cognitive development, normal risk taking behavior and anticipate the need to support adolescent's and their families. The APN recognizes that peer groups both online and offline temporarily provide youth with a reference point for a developing sense of identity and that role-playing using online anonymity may be observed as youth develop their identity and explore new behaviours. The APN needs to prepare adolescents and their families that newer technologies can promote healthy identity exploration but collaborate with the family to identify the potential safety concerns and risks of online social media. APN's need to be able to assist adolescents and their families to navigate through cyberbullying issues as well as recognize the need to promote online safety early on.

Building Capacity

This project acknowledges the benefits to adolescent relationship formation using SNS and recognizes both its benefits and importance to adolescents' identity development. The potential risks of online communication have been described and it is clear that online conflict can occur; most adolescents use avoidance as a coping method. APN's can assist adolescents to develop effective strategies in dealing with cyberbullying incidents through capacity building. Capacity building contains the concept of enabling individuals, organizations or systems for positive changes, to strengthen their capacities to solve problems effectively (WHO, 2007). Building capacity in adolescents using an individual strengths based approach can help adolescents prepare to deal with online conflict effectively as well as provide further conflict resolution tools that can be used to address other common adolescent risk taking behaviours. APN's can provide early interventions for adolescents and their families and assist them to gain tools that will be needed to successfully navigate and address online conflict. Building resilience

through strength and risk-based approaches can promote protective factors in adolescent's lives to reduce their engagement in risky behaviors such as cyberbullying. Ginsburg et. al., (2014) report: "A growing body of research has demonstrated that positive youth development (PYD) and resilience-based strategies designed to develop youth capabilities are also promising means to simultaneously reduce risky behaviors (p.9)". A longitudinal study by Lerner and colleagues: 4-H study of PYD empirically verified the existence of the PYD constructs (i.e. the "Five Cs" of competence, confidence, character, connection and contribution). The results also demonstrated that youth who participated in a PYD program had better grades, greater expectations to go to college, higher self-esteem, higher levels of civic engagement and contributions to their communities and most importantly, they were less likely to experience depression or engage in risk behaviors such as tobacco use, alcohol use and bullying (Lerner, Lerner & Phelps, 2013). These same factors are linked to health outcomes and thus these frameworks are increasingly gaining momentum in health care settings (Ginsburg et. al., 2014). APN's can use a strengths-based approach to communicate the expectation of engaging in positive behaviors rather than the current distorted perceptions of the adolescent risk taker who engages in bad behaviors. Ginsburg et al., (2014) suggest that a strength-based approach "allows us to convey high expectations even while addressing risk" and recognizes the adolescent as the expert in their own life. APN's can support school systems and families to recognize the importance of building capacity in adolescents to promote healthy online use. In addition, APN's can support parents, caregivers, and teachers etc. to foster supportive connections with adolescents. The AAP (2014) reports that a "meaningful connection with adults is one of the core protective factors and the one most tightly linked to resilience (p. 32)". Further research is warranted into protective factors to identify other links to resilience in adolescents, specifically in regards to cyberbullying. In

addition to promoting resilience, it may be beneficial to address the risks of avoidance with adolescents as the most common coping method.

The results of the review showed adolescents typically avoid dealing with cyberbullying. Avoidance allows one to choose the timing of when to confront an issue, which may be wise until safety is ensured, skills are developed and strategies are formed, but it may also be maladaptive if one never faces the issue (Ginsburg, 2014). Adolescents choose not to report to adults, mainly because they feel that reporting is useless, as they believe that adults are not aware of what occurs online. Adolescents, in their quest for independence may be resentful toward adults informing them of their unwise online decision-making skills and may resist guidance from parents, caregivers or nurses (Ginsburg et al., 2014). Assisting adolescents to come to their “own” solution will help them believe that they have the ability and skills to tackle problems and have some control will assist them in building confidence to deal with the cyberbullying. Teaching adolescents that they can cope with cyberbullying if they become a victim is essential for gaining a sense of control over what is happening to them (Barkoukis, Lasuras, & Tsorbatzoudis, N.D). One method of assisting adolescents to come to their own healthy solutions includes role-playing. This can be applied spontaneously during routine conversations. As an example, by suggesting “what if...” or “what’ll happen when...” during conversations, you can allow the adolescent to explore hypothetical situations regarding cyberbullying and allows them to identify how their decisions or actions determine outcomes. It is important for the APN to avoid confrontational dialogue and not to jump in with the answer, as the goal is to have the adolescent reach his or her own healthy conclusion. In addition, having a sense of control over ones environment leads to having the capacity to act independently (AAP, 2014). Assisting adolescents to believe they have the ability to avoid risky behaviours such as cyberbullying

despite peer pressure may be beneficial to promote self-regulation and to reduce the bystander effects. Role-playing can also help adolescents avoid risky behaviors by addressing common online issues. For example asking “What if you are with a group of your friends and they ask you for your best friends Facebook password so they can send messages to others - What might you say?” or “What would you do if someone spreads a rumour about you online?” Addressing common online issues from a primary prevention perspective can assist adolescents to explore their behavior prior to becoming involved. In addition to building capacity and exploring alternative coping methods rather than avoidance, the APN has a role in providing education to the adolescent and those involved in adolescents lives.

Education

The APN has a role in educating the adolescent, family, other caregivers and other health care professionals about online risks, including cyberbullying and the role that anonymity plays. This project shows that adolescents believe they do not have the skills they need to address their cyberbullying concerns (Slonje et al., 2012; Bryce & Fraser, 2013). They also did not believe that teachers or parents would handle the matter effectively (Mishna et al., 2009) and were fearful that the issue would not remain confidential (Slonje et al., 2012). Confidentiality is a cornerstone of adolescent health care as it involves highly personal and sensitive subjects (Ginsburg et al., 2014). Many adolescents described fear of their issues becoming public and therefore need confidentiality protection. Health care providers need to discuss confidentiality with the adolescent and their families and must describe under what situations the provider is required by law to inform a parent or the authorities. This is especially important when discussing cyberbullying in case the patient’s safety or that of others is threatened, or if the adolescent is suicidal or homicidal. Ginsburg et al., (2013) describe that some teens can talk to

their parents and some cannot. APN's can assist parents, teachers and health care professionals in understanding why adolescents may not report cyberbullying and provide them with education regarding privacy and how to navigate a plan with the adolescent. The APN recognizes that it is always better to communicate directly with the adolescent without a third person in the room but that it is also key to help parents feel involved and included in health care decisions (Ginsburg et al., 2013). APN's must familiarize themselves with their confidentiality laws and also advocate for adolescent privacy laws to improve access to services for adolescents.

Adolescents need to know that that cyberbullying can be managed successfully. This may help to reduce fear, uncertainty, and powerlessness that were described by adolescents in this project. Adolescents lack a fully developed pre frontal cortex that develops executive functions and may lack self-control, inhibition of irrelevant information, planning, self-organization and cognitive flexibility (Kaufman, 2006). Adults and health care professionals need to be able to parent adolescents in the online domain however, adults generally feel uncomfortable talking with their children about online communications because they themselves may lack their own online skills. Parents inability to provide guidance and oversight with their adolescent's SNS's creates an environment where the teen assumes that this is their private space in which their parents have no business. APN's can provide guidance to parents and caregivers that they have the right and responsibility to monitor and guide the adolescent's use of SNS's. APN's can foster a positive parenting relationship by educating parents to use their children to teach them the online world by saying comments such as "teach me what it is like". This not only boosts the adolescents self-esteem and self-efficacy, it provides an informal discussion about the online world and its inherent risks, which the parents can observe for themselves.

Lastly, APN's can provide expert consultation and educate parents, caregivers, teachers and other health care professionals to assist those supporting adolescents. APN's can facilitate caregivers to be knowledgeable about online issues and be able to provide timely, quality support to adolescents and their families affected by cyberbullying.

Research and Program Development

In addition to education, APN's have unique skills and knowledge to design and implement research based programs to improve outcomes for adolescents experiencing cyberbullying. APN's are able to identify gaps in current research and/or programs designed to prevent or address issues with cyberbullying. They can lead or assist with the creation and evaluation of programs and research to enhance the knowledge regarding anti-bullying programs. The Olweus Bullying Prevention Program (OBPP), based on the work of Norwegian researcher Dr. Dan Olweus, is an evidence-based program proven to decrease the prevalence of bullying. It is a comprehensive program that makes changes at the individual, classroom, school and community to create an environment where bullying is not acceptable. APN's can use the core tenants of the model to apply it to the online environment. This would require changes in larger systems and advocating to major SNS administrators, local and national governments to adopt anti-cyberbullying policies. The biggest challenge will be keeping up with evolving technology as creating policies and cyberbullying laws take a long time. A community wide approach both online and offline would benefit adolescents experiencing cyberbullying.

The findings of the review suggest that anti-cyberbullying programs should include building capacity and resilience to support the adolescent and caregivers affected by cyberbullying. While many programs have been designed and implemented in schools over the years to address traditional bullying such as the OBPP, and while there is some overlap between

cyberbullying and traditional bullying, there are also vast differences. One of the most important differences is the number of people exposed to cyberbullying, namely the number of bystanders. This project found that bystanders are the largest group of people exposed to cyberbullying and yet the least likely group to report incidents of online harassment. Interestingly, 47 states in the United States of America have passed school anti-bullying legislation with many mandating anonymous bullying reporting, however there are no federal laws dealing directly with school bullying. This has left schools searching for effective anti-bullying programs to address the problem. Another program that is being used in the United States addresses the issues of confidentiality in reporting. The Cyberbully Hotline Program created by SchoolReach (2013) offers an automatic number for students to call or text anonymous tips to encouraging victims and bystanders to report without fear of retaliation. While this does not address cyberbullying directly, it may have implications for adolescents who may choose to report online behaviour offline. Canada does have some laws to protect adolescents from feeling threatened or harassed and one could be charged under the *Criminal Code*. In addition, Canada recently adopted the *Protecting Canadians from Online Crime Act (2013)* that addresses the sharing of intimate or sexual images without consent of the person in the image or video. Many provinces including Ontario, Quebec, Manitoba, Alberta, Nova Scotia, and New Brunswick has also recently passed laws specifically dealing with online and offline bullying. Interestingly, most provinces have completely different mandates ranging from mandatory student reporting with possibility for expulsion if not reported (Alberta) to making the parents of perpetrators responsible if they are under the age of 18. There is a clear lack of standardized, evidence-based recommendations to support anti-cyberbullying programs in Canada. The findings of this review emphasize the

complexity of variables affecting cyberbullying (including anonymity), which demonstrates a need for more formalized supportive programs to address the issues.

Future Areas for Research

In light of the current findings a few areas for future research can be suggested. This paper illuminated that while most adolescents believed that their bullier was anonymous, they were in fact someone they knew. It was found that much of the interpretation was in the context of the relationship between the victim and bully. Future studies are needed to explore perceived versus actual anonymity and its impact on cyberbullying motives and outcomes. This may alter the bully's motives and may impact the degree of perceived harm by the victim. The findings also support future research that explores why some adolescents consider some cyberbullying attacks as harmful and others do not. This project also identified some personal characteristics that were protective and/or mediated the effects of the bullying on victims and support the need to further exploring the relationship between cyberbullying and resilience.

An important consideration for APN's is to further the research on the effectiveness of anti-bullying programs and policies and to advocate for standardized recommendations to reduce the incidence of cyberbullying.

Conclusion

This project examined the literature to assist the APN to understand the adolescent's perspective of anonymity issues in cyberbullying. The information presented here will assist APN's in providing information to adolescents and their families regarding online anonymity issues and its effects on cyberbullying. The health effects of cyberbullying and victimization on young Canadians is clearly documented and has led to serious tragedies from mental health issues including adolescent suicide. Cyberbullying is unique in that it is also often hidden from

adult knowledge to prevent negative consequences or to maintain their privacy needs. APN's need to be aware that adolescents may not self-report cyberbullying despite being exposed to online aggression because adolescents believe that neither they, nor caregivers have the skills or knowledge about how to deal with the problem. The American Academy of Paediatrics' (AAP) clinical report on the impact of social media on children, adolescents and families (2011), reports that health care professionals, including nurses, have an important role in educating adolescents and their families about the challenging social and health issues that youth experience with online relationships. APN's need be prepared to support other health care professionals, those involved in the education system (i.e. teachers, principals and curriculum development teams) and caregivers to address cyberbullying issues as youth navigate online anonymity. Encouraging healthcare professionals, teachers and caregivers to face the core issues of identity development, cyberbullying, adolescent mental health, risk-taking and sexual development is beneficial to understanding the underlying core aspects of adolescence. Adolescents need to be mentored in the healthy ways to explore their identity using online social networking sites and APN's can help parents, schools and the community to understand that what is happening online is an extension of adolescent development. Lastly, this review provides APN's with information to support the creation of programs and policies to meet the needs of this unique group. APN's will be able to use this paper to continue to educate the profession and political bodies around issues with digital technology and its effects on adolescents to support adolescent safety.

References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Process*, 50, 179-211.
- Amanda Todd tribute pages haunted by bullies amid police probe. (2012, October 14). The National Post. Retrieved from <http://news.nationalpost.com>
- American Academy of Paediatrics (2011). Clinical report on the impact of social media on children, adolescents and families. *Paediatrics*, 127(4), 800-804. doi: 10.1542/peds.2011-0054).
- American Academy of Paediatrics (2013). Children, adolescents, and the media. *Pediatrics*, 132(5), 958–961. doi:10.1542/peds.2013-2656
- American Academy of Child and Adolescent Psychiatry, (2011). Bullying. Retrieved from http://www.aacap.org/cs/root/facts_for_families/bullying.
- American Psychological Association. (2002). A reference for professionals: Developing adolescents. Retrieved from <http://www.apa.org/pi/families/resources/develop.pdf>
- Ang, R.P. & Goh, D.H. (2010). Cyber bullying Amongst Adolescents: The Role Affective and Cognitive Empathy, and Gender. *Child Psychiatry Human Development* 41(1), 387–397.
- Anonymity. 2013. In *Merriam-Webster.com*. Retrieved from <http://www.merriam-webster.com/dictionary/anonymity>
- Baas, N., de Jong, M. D. T., & Drossaert, C. H. C. (2013). Children's perspectives on cyberbullying: Insights based on participatory research. *CyberPsychology & Behavior*, 16(4), 248-253. doi:10.1089/cyber.2012.0079
- Ball-Rokeach, S., & DeFleur, M. (1976). A dependency model of mass media effects. *Communication Research*, 3, 3-21.

- Barlett, C. P. (2013). Anonymously hurting others online: The effect of anonymity on cyberbullying frequency. *Psychology of Popular Media Culture*. doi:10.1037/a0034335
- Barlett, C. P., & Gentile, D. A. (2012). Attacking others online: The formation of cyberbullying in late adolescence. *Psychology of Popular Media Culture*, 1(2), 123-135.
doi:10.1037/a0028113
- Bandura, A. (1977). *Social Learning Theory*. Englewood Cliffs, NJ: Prentice Hall.
- Bandura, A. (2001). Social cognitive theory of mass communication. In K. Bryant, & D.Zillman (Eds.) *Media effects: Advances in theory and research* (2nd ed., 121-153). Hillsdale, NJ: Lawrence Erlbaum.
- Bandura, A. (1978). Social learning theory of aggression. *Journal of Communication* 28(3), 12-29.
- Bandura, A., Barbaranelli, C., Caprara, G.V., & Pastorelli, C. (1996). Mechanisms of moral disengagement in the exercise of moral agency. *Journal of Personality and Social Psychology*, 71, 364-374.
- Bauer, N., Lozano, P., Rivara, F.P. (2007). The effectiveness of the Olweus Bullying Prevention Program in public middle schools: A controlled trial. *Journal of Adolescent Health*, 40(3), 266-274.
- Black, S.A., Jackson, E. (2007). Using bullying incident density to evaluate the Olweus Bullying Prevention Programme. *School Psychology International*. 28, 623-638.
- Betz, C (2011). Cyberbullying: The virtual threat. *Journal of Pediatric Nursing*, 26(4), 283-284.
- Boyd, D., & Ellison, N.B. (2007). Social network sites: Definition, history and scholarship. *Journal of Computer Mediated Communication* 13(1), 210-230. doi: 10.1111/j.1083-6101.2007.00393.x

- BoysTown. (2009). Inquiry into bullying and young people, Submission to the General Purpose Standing Committee No.2. Retrieved from <http://www.parliament.nsw.gov.au/Prod/parlment/committee.nsf/0/56F6E18CEFA7C854CA2575840017A729>
- Bryce, J., & Fraser, J. (2013). "It's common sense that it's wrong": Young people's perceptions and experiences of cyberbullying. *Cyberpsychology, Behavior and Social Networking*, 16(11), 783-787. doi:10.1089/cyber.2012.0275
- Campbell, M. (2005) Cyber bullying: An old problem in a new guise? *Australian Journal of Guidance and Counselling*, 15(1), 68-76.
- Canadian Institutes of Health Research (2012). Canadian bullying statistics. Retrieved from www.cihr-irsc.gc.ca/e/45838.html
- Canadian Pediatric Society (2003). Position statement: Age limits and adolescents. *Pediatric Child health* 8(9), 577. Retrieved from <http://www.cps.ca/documents/position/age-limits-adolescents>
- Craig, W.M., Schumann, L., Edge, M.E., & Teske, C. (2010). Are bullying and Victimization on the rise in Canada? Department of Psychology, Queens University, Kingston, ON. Retrieved from www.preynet.ca/BullyingFacts
- Dehue, F. (2013). Cyberbullying research: New perspectives and alternative methodologies. introduction to the special issue. *Journal of Community & Applied Social Psychology*, 23(1), 1-6. doi:10.1002/casp.2139
- Dixon-Woods, M., Agarwal, S., Jones, D., Young B., & Sutton, A (2005). Synthesizing qualitative and quantitative evidence: a review of possible methods. *Journal of Health Services and Research Policy*, 10, (45-53).

- Endresen I.M., Olweus D. (2002), Self-reported empathy in Norwegian adolescents: Sex-differences, age trends, and relationship to bullying. In: Stipek D & Bohart A. edited by, Constructive and Destructive Behavior. Implications for Family, School, & Society. American Psychological Association, Washington.
- Erikson, E. (1968). Identity: Youth in Crisis. New York: Norton.
- Ethics. (2013). In Oxford English dictionary online. Retrieved from <http://oxforddictionaries.com/definition/english/ethics>
- Fenaughty, J., & Harre, N. (2013). Factors associated with distressing electronic harassment and cyberbullying. *Computers in Human Behavior*, 29(3), 803-811.
doi:10.1016/j.chb.2012.11.008
- Fereday, K., & Muir-Cochrane, E. (2006). Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. *International Journal of Qualitative Methods*, 5(1). Retrieved from http://www.ualberta.ca/~iiqm/backissues/5_1/pdf/fereday.pdf
- Gibbs, G.R., & Taylor, C, (2005). Online Qualitative Data Analysis: How and what to code. Affiliated with the University of Huddersfield. Retrieved from http://onlineqda.hud.ac.uk/Intro_QDA/how_what_to_code.php
- Ginsburg, K.R., Jablow, M.M. (2011). Building resilience in children and teens: Giving kids roots and wings. 2nd Ed. Elk Grove Village, IL: American Academy of Pediatrics.
- Government of Canada (2012). What is bullying? Retrieved from <http://healthycanadians.gc.ca/kids-enfants/bullying-intimidation/what-quoi-eng.php>
- Helwick, C. (2012). Cyberbullying often accompanied by other harassment. Retrieved from <http://www.medscape.com/viewarticle/773007>

- Hinduja, S., & Patchin, J. (2013). Cyberbullying Research Center. Retrieved from <http://www.cyberbullying.us/aboutus.php>
- Huang, Y., & Chou, C. (2010). An analysis of multiple factors of cyberbullying among junior high school students in Taiwan. *Computers in Human Behavior*, 26(6), 1581-1590.
doi:10.1016/j.chb.2010.06.005
- Joliffe D., & Farrington D. (2006), Examining the relationship between low empathy and bullying. *Aggressive Behavior*, 32, 540-550.
- Kail, R. V., & Cavanaugh, J. C. (2004). *Human development: A life span view*. Belmont, CA: Wadsworth.
- Kowalski, R. M., & Limber, S. P. (2007). Electronic bullying among middle school students. *The Journal of Adolescent Health: Official Publication of the Society for Adolescent Medicine*, 41(6), S22-S30.
- Kaufman, M (2006) Role of adolescent development in the transition process. *Progress in Transplantation* 16(4). 286-290.
- Lazuras, L., Barkoukis, V., Ourda, D., & Tsorbatzoudis, H. (2013). A process model of cyberbullying in adolescence. *Computers in Human Behavior*, 29(3), 881-887.
doi:10.1016/j.chb.2012.12.015
- Lerner, R.M., Lerner, J.V., & Phelps, E. (2013). The positive development of youth technical report the 4-H study of positive youth development: report of the findings from the first four waves of data collection: 2002-2003, 2003-2004, 2004-2005, 2005-2006. Retrieved from http://www.4-H.org/uploadedFiles/About_4-H/Research/4-H-study-of-positive-youth-development.pdf.

Lucile Packard Children's Hospital at Stanford. (2013). Cognitive development. Retrieved from

<http://www.lpch.org/DiseaseHealthInfo/HealthLibrary/adolescent/cogdev.html>

Miles, M.B., & Huberman, A.M. (1994). *Qualitative data analysis*. Thousand Oaks, CA.

Mishna, F., Saini, M., & Solomon, S. (2009). Ongoing and online: Children and youth's perceptions of cyber bullying. *Children and Youth Services Review, 31*(12), 1222-1228.
doi:10.1016/j.chilyouth.2009.05.004

Miyake, A., Friedman, N.P., Emerson, M.J., Witzki, A. H., Howerter, A., & Wagner, T.D. (2000). The unity and diversity of executive functions and their contributions to complex "Frontal Lobe" tasks: a latent variable analysis. *Cognitive Psychology 41*(1), 49-100.

No Author. (2014). Empathy. *Oxford Dictionaries*. Retrieved from

<http://www.oxforddictionaries.com/definition/english/empathy>

Nocentini, A., Calmaestra, J., Schultze-Krumbholz, A., Scheithauer, H., Ortega, R., & Menesini, E. (2010). Cyberbullying: Labels, behaviours and definition in three european countries. *Australian Journal of Guidance and Counselling, 20*(2), 129-142.
doi:10.1375/ajgc.20.2.129

O'Brien, E. (2012). Adolescents and cyberbullying. *The New Researcher, (5)*, 1-5.

Olweus D. (1993), *Bullying at school: What we know and what we can do*. Oxford: Blackwell.

Olweus, D., Limber, S.P. (2010). The Olweus Bullying Prevention Program: Implementation and evaluation over two decades. In K. Ginsburg & S. Kinsman (Eds.), *Reaching Teens: Strength based communication strategies to build resilience and support health adolescent development* (pp. 474). Elk Grove Village, IL: American Academy of Pediatrics

Oprea, C., & Stan, A. (2012). Adolescents' perceptions of online communication. *Journal of Social and Behavioral Sciences, 46*, 4089-4091.

- Patchin & Hinduja 2006. Bullies move beyond the schoolyard: a preliminary look at cyberbullying. *Youth Violence and Juvenile Justice*, 4, 148-169.
- Pettalia, J. L., Levin, E., & Dickinson, J. (2013). Cyberbullying: Eliciting harm without consequence. *Computers in Human Behavior*, 29(6), 2758-2765.
doi:<http://dx.doi.org.ezproxy.library.uvic.ca/10.1016/j.chb.2013.07.020>
- Pieschl, S., Porsch, T., Kahl, T., & Klockenbusch, R. (2013). Relevant dimensions of cyberbullying - results from two experimental studies. *Journal of Applied Developmental Psychology*, 34(5), 241-252.
doi:<http://dx.doi.org.ezproxy.library.uvic.ca/10.1016/j.appdev.2013.04.002>
- Promoting Relationships and Eliminating Violence (2012). Bullying Statistics. Retrieved from www.prevnet.ca
- Public Health Resource Unit (2006). The Critical Skills Appraisal Programme: making sense of evidence. Public Health Resource Unit, England. Retrieved from <http://www.casp-uk.net/>
- Powell, M.D., & Ladd L.D. (2010). Bullying: a review of the literature and implications for family therapists. *The American Journal of Family Therapy*. 38(3), 189-206.
- Rideout, V. J., Foehr, U. G., & Roberts, D. F. (2010). *Generation M²: Media in the lives of 8- to 18-year-olds*. Menlo Park, CA: Henry J. Kaiser Family Foundation. Retrieved from <https://kaiserfamilyfoundation.files.wordpress.com/2013/04/8010.pdf>
- Saewyc, E., M. (2000). Nursing theories of caring: a paradigm for adolescent nursing practice. *Journal of Holistic Nursing* 18(2) 114-128 doi: 10.1177/089801010001800204
- SchoolReach (2013). Cyberbully Hotline. Retrieved from <http://www.cyberbullyhotline.com/components-cyberbully-hotline.html>

- Ševčíková, A., Šmahel, D., & Otavová, M. (2012). The perception of cyberbullying in adolescent victims. *Emotional and Behavioural Difficulties*, 17(3), 319.
doi:10.1080/13632752.2012.704309
- Sheperis, C.J., Doggett, R.A., Ota, M., Erford, B.T., & Salisbury, C. (2007). Behavioral Assessment (pp. 303-317). In B.T. Erford (Ed.), *Assessment for Counselors*. Boston, MA: Houghton Mifflin.
- Slonje, R., Smith, P. K., & Frisé, A. (2012). Processes of cyberbullying, and feelings of remorse by bullies: A pilot study. *European Journal of Developmental Psychology*, 9(2), 244-259.
doi:10.1080/17405629.2011.643670
- Smithson, J. (2000). Using and analyzing focus groups: limitations and possibilities. *International Journal of Social Research Methodology* 3(2), 103-119.
- Sourander, A.M., Brunstein M., Klomek, P., Ikonen, M., Jarna Lindroos, B., Luntamo, M., Koskelainen, P., Helenius, H.M. (2010). Psychosocial risk factors associated with cyberbullying among adolescents: A population-based study. *Archives General Psychiatry*, 67(7), 720-728. doi:10.1001/archgenpsychiatry.2010.79
- Stassen Berger, K. (2007). Update on bullying at school: Science forgotten? *Developmental Review*, 27(1), 90-126.
- Statistics Canada (2011). Self-reported Internet victimization in Canada 2009. Retrieved from <http://www.statcan.gc.ca/pub/85-002-x/2011001/article/11530-eng.htm#a2>
- Steffgen, G., König, M.S., Pfetsch, J. & Melzer, A. (2011). Are Cyber bullies Less Empathic? Adolescents' Cyber bullying Behavior and Empathic Responsiveness. *Cyberpsychology, Behavior and Social Networking*. 14 (11) p. 643- 648

- Sticca, F., & Perren, S. (2013). Is cyberbullying worse than traditional bullying? examining the differential roles of medium, publicity, and anonymity for the perceived severity of bullying. *Journal of Youth and Adolescence*, 42(5), 739-750. doi:10.1007/s10964-012-9867-3
- Suler, J. (2004). The online disinhibition effect. *CyberPsychology and Behavior*, (7), 321-326.
- Thomas, J & Harden, A. Methods of thematic synthesis of qualitative research in systematic reviews. *BMC Medical Research Methodology* 8(1). p.45.
- Vandebosch, H., & Van Cleemput, K. (2008). Defining cyberbullying: A qualitative research into the perceptions of youngsters. *CyberPsychology & Behavior*, 11(4), 499-503. doi:10.1089/cpb.2007.0042
- Werner, E. (1995). Resilience in development. *Current Directions in Psychological Science*, 4(3), 81-85
- Whittemore, R & Knafl, K. (2005). The integrative review: updated methodology. *Journal of Advanced Nursing*, 52(5), 546-553.
- Willard, N. (2003). Off-campus, harmful online student speech. *Journal of School Violence*, 1(2), 65-93.
- World Health Organization (2013). Adolescent health. Retrieved from http://www.who.int/topics/adolescent_health/en/
- Ybarra, M and Mitchell, K. (2004). Youth engaging in online harassment: associations with caregiver-child relationships, Internet use, and personal characteristics. *Journal of Adolescence*. 27(3), 319-336.

Ybarra, M. L., Mitchell, K. J., Wolak, J., & Finkelhor, D. (2006). Examining characteristics and associated distress related to internet harassment: Findings from the second youth internet safety survey. *Pediatrics, 118*(4), e1169-77.

Ybarra, M. L., Diener-West, M., & Leaf, P. J. (2007). Examining the overlap in internet harassment and school bullying: Implications for school intervention. *Journal of Adolescent Health, 41*(6), S42-S50. doi:10.1016/j.jadohealth.2007.09.004

Appendix A: Critical Appraisal Skills Program (CASP)

10 Questions to help you make sense of qualitative research

Screening Questions:

- 1) Was there a clear statement of the aims of the research?
- 2) Is a qualitative methodology appropriate?

Detailed Questions:

- 3) Was the research design appropriate to address the aims of the research?
- 4) Was the recruitment strategy appropriate to the aims of the research?
- 5) Were the data collected in a way that addressed the research issue?
- 6) Has the relationship between researcher and participants been adequately considered?
- 7) Have ethical issues been taken into consideration?
- 8) Was the data analysis sufficiently rigorous?
- 9) Is there a clear statement of findings?
- 10) How valuable is the research?

Appendix B: Literature Search (Stage 2 p. 549)

Table for Characteristics of Study Samples

Citation	Discipline	Purpose	Study Design, or Theoretical Perspective	Sample	Data Analysis	Findings	Limitations of research and Comments on Scholarly Approach	Relevance Rating 1= high relevance strong research 2= high relevance weak research 3= low relevance strong research 4=low relevance weak research (Data Evaluation)
1 Baas, de Jong, & Drossaert (2013)	Psychology	Explore children’s perspectives on the problem of cyberbullying using qualitative research	Participatory Research	N=28 children 11-12 years	Transcribed and analyzed using principals of Grounded Theory (coding, fragmented) Used Qualitative analysis program Atlas.ti	<ul style="list-style-type: none"> -Cyberbullying may have a large impact on victims -Fear, fear of escalations to physical violence, fear of going to school -Anonymity of bully one of most frightening features -Loss of trust in friends and classmates as anyone could be the anonymous bully -Other effects noted: sadness, emotional pain, decline in self-confidence -Difficulty differentiating between cyberbullying and innocent pranks (intention is a subjective notion with interpretation problems for bullies and victims) -Bullies seem to prefer harassing children who are different and/or have less social or physical power 	<ul style="list-style-type: none"> Limitations not discussed -likely social pressure -Random selection of participants by teachers -Saturation of data not described -Relationship of researcher described -Does not describe ethical approval but informed consent, clear expectations and withdrawal option explained to parents and children -Sufficient data presented to support findings -No triangulation in findings but discusses ambiguities to be addressed 	1

<p>2</p> <p>Barlett, C. (2013)</p>	<p>Psychology</p>	<p>To determine how anonymity is related to cyberbullying frequency by further testing and validating the Barlett and Gentile (2012) model focusing on how anonymity is related to cyberbullying frequency</p>	<p>Not described but: Questionnaires used to assess variables then path analysis using MPLUS</p>	<p>N=181 students Average age 19.47 yrs. (80% in first or second year) USA</p>	<p>Moderation tests, mediation tests</p>	<p>-Cyberbullying frequency positively correlated with positive attitudes towards cyberbullying, perceived anonymity, and instant messaging frequency -Although the relation between traditional bullying and anonymity was significant, this relation was stronger when cyberbullying was the predictor -Anonymity is an important predictor of cyberbullying behaviour -Suggests that when individuals learn that CB is anonymous and that the negative consequences are rare, CB is likely to occur</p>	<p>-Data is correlational -University aged sample (not adolescents)</p>	<p>3</p>
<p>3</p> <p>Barlett & Gentile (2012)</p>	<p>Psychology</p>	<p>Study 1: To test a long-term model of cyberbullying that predicts that cyberbullying is a function of positive attitudes toward cyberbullying, formed by attitudes toward strength and anonymity that exists in aggressing against other in the mediated world</p>	<p>Study 1: Correlational Study Study 2: Longitudinal design</p>	<p>Study 1: N=493 students Average age 19.36 yrs. Study 2: N=181 USA</p>	<p>Data collected using Survey Monkey and unknown analysis</p>	<p>-Positive attitudes and reinforcement mediated the stability in cyberbullying -When people are positively reinforced to cyberbully and when individuals endorse a positive attitude towards cyberbullying (d/t positive attitudes towards the strength differential and anonymity) cyberbullying is more likely to occur</p>	<p>-Only a two months between administration -University aged sample -Cyberbullying behaviour limited to internet only (not including texting, mobile phone –not as anonymous anyways)</p>	<p>3</p>

		Study 2: Longitudinal design to further test the existing model						
Bryce & Fraser (2013) 4	Psychology	Examine perceptions and experiences of cyberbullying focusing on the influence of the characteristic of mediated communication on the dynamics of the behaviour	Focus group methodology	N=108 (18 semi structured focus groups) Age 9-19 United Kingdom	Tapes transcribed, anonymized and analyzed using Nvivo thematic analysis	-Cyberbullying is wrong and can have potentially serious impact on victims -Results in confusion, fear and anxiety -Anonymity was discussed and perceived as having more serious and negative impacts on victims -Contrasting evidence that victimization within existing peer network by known perpetrator was more prevalent and perceived as more serious -Anonymity does not have a uniform impact on the dynamics of the behaviour. Other factors (trait characteristics, platforms) are likely to influence the perceived seriousness of victimization by both anonymous and known perpetrators -Participants perceived lack of face-to-face interaction and inability to witness the direct impact of behaviours on the victim to have greater importance than anonymity. -Disinhibition was perceived to increase the confidence of the perpetrator and escalate the extremity of online comments	-Limitation includes peer influence in group setting -Not clear how participants were selected -Clear data collection methods and justification but data saturation not discussed -Relationship with facilitator discussed to minimize bias -Addresses ethical issues with participants clearly but does not describe ethical approval -Sufficient data presented to support findings and description of methods -Findings are explicit with evidence of triangulation and relate to original research question	1

						and behaviour compared to equivalent offline situations -Difficulty in determining intention (humour or threat) as a lack of visual social cues -Highlights online communication as blurring traditionally understood boundaries between humour threat, intention and reception, as well as acceptable vs. unacceptable behaviour.		
Dehue, Bolman & Vollink. (2008)	Psychology	Describes the prevalence/nature of cyberbullying, reactions to cyberbullying among youngsters and caregivers' estimation of the prevalence of cyberbullying of and by their children	Questionnaire	N=1211 Mean age 12.7 yrs. (primary and secondary school) Netherlands	Not described	-34.8% did not know who the bullier was in total (38.9 in secondary school vs. 33.9% in primary school) -Most of bullies engaged in bullying while at home (85.6%) most were alone (62.97%) or with friends (24.6%) -Most reported feeling angry, sad, and not liking to go to school -Links anonymity to Social Identity Model of Deindividuation (SIDE) - visual anonymity can increase the social influence exerted by group norms and depersonalization	-Describes anonymity in terms of SIDE -Results discuss prevalence but findings not explored in further detail regarding anonymity. -Measurement and sample group clearly identified -Consent obtained from participants and parents -Reliable scales used that were previously used and translated and pretesting completed. -Statistical significance discussed (confidence intervals not discussed) -Findings and discussion relevant to research question	1
Fenaughty & Harre (2012)	Psychology	Explore electronic harassment on the internet and mobile phones and the distress	Questionnaire	N=1673 Age 12-19 New Zealand	Pearson's Chi-Square test, Fisher's exact test, logistic regression	-52.9% of the young people who reported electronic harassment indicated that at least one of those experiences was distressing -Distress was associated with:	-Addresses clear research questions -Ethical approval and consent obtained -Study design appropriate for	1

		associated with it			analysis	<p>receiving mean, nasty and hurtful communications, rumours being spread, socially ostracising the target by not letting them communicate with or befriend others, threatening with physical ham, threatening the target with the dissemination of embarrassing information, threatening to damage someone or something of value to target, or harassment produced by a boyfriend, girlfriend or ex.</p> <p>-Perpetrators associated greater distress included people at school, more than one harasser and those who were a good friend.</p> <p>-Anonymous harassment was not associated with distress – serious harassment may be about exercising one’s power over another and they may want the target to know who is in control.</p>	<p>answering questions</p> <ul style="list-style-type: none"> -Selection of participants clearly described and represented all different regions and Socio-economic status -Statistical power not described -Only 53% response rate -Used a combination of previous study questions and previous focus group research for language -Difficult to identify validity and reliability -Statistical significance described and confidence intervals given for results -Limited definition of electronic harassment that may confound factors results and generalizability outside study group 	
Huang & Chou (2010) 7	Education	Identify if anonymity is a unique feature of bullying in cyberspace	Survey and 6 open-ended questions added	N=545 Age grades 7-9 Taiwan	T-tests, bivariate-correlations test, multivariate repeated one-way ANOVA, SPSS used for statistical analyses	<p>-Most of the teens knew the given bully’s identity (25.1% did not know)</p> <p>-Inconsistent with some research identifying anonymity as a characteristic of cyberbullying</p> <p>-Majority of CB over IM (which account names identify user)</p> <p>-The assertion that anonymity is a universal characteristic of cyberbullying should remain in</p>	<p>-Describes prevalence and definition of cyberbullying</p> <p>-Anonymity described in terms of defining cyberbullying, not impact on adolescents</p>	2

						doubt		
8	Kowalski & Limber (2007) Psychology	Examines the prevalence of electronic bullying	Survey	N=3767 Age = grades 6-8 USA	Pearson's Chi-Square, Multivariate analysis of variance (MANOVA)	-Victims and bully/victims were electronically bullied most frequently by a student at school (46.7%) then a stranger (45.5%)	-Only 3 grades included -Purposeful sampling -Discusses only prevalence -Approved by ethics review and consent obtained -Method and measures appropriate for questions. -Valid and reliable tool to measure -Statistical significance met -Findings in line with research question	3
9	Lazuras, Barkoukis, Ourda & Tsorbatzoudis (2013) Education	Examines items that would predict cyberbullying intentions and assess an integrated theory-driven process model.	Survey	N=355 Age= Mean 14.7 Greece	Multiple mediation analysis, Linear regression analysis	-Moral disengagement and affective empathy significantly predicted cyberbullying expectations. -Social norms, prototype similarity and situational self-efficacy directly predicted cyberbullying expectations -Normative influences mediated the effects of moral disengagement and affective empathy on cyberbullying expectations -Highlights the relationship between normative processes and moral self-regulation (important to building self-efficacy skills)	-Hypothesis clearly described -Method appropriate -Selection of participants described (part of a larger scale project) with minimal bias and representative -Ethical approval and consent obtained -Power not described -71% response rate -Measurements (scales) checked for validity and reliability -Results statistically significant and confidence intervals given	1
	Mishna, Saini, & Social Sciences	Explores	Focus groups	N=38 (in 7	Grounded	-Most of the students depicted	Limitations include:	1 (Theory)

<p>Solomon (2009)</p> <p>10</p>		<p>technology, virtual relationships and cyberbullying from the perspectives of students</p>		<p>focus groups) Age= 5-8 grade</p> <p>Canada</p>	<p>theory framework, thematic analysis</p>	<p>cyberbullying as anonymous</p> <ul style="list-style-type: none"> -Students stressed that a large part of the power and impact of cyberbullying is because the person who bullies is anonymous -Students believe that anonymity lets individuals behave in ways they might not otherwise and that would not otherwise be tolerated. -Students associate the power of anonymity to individuals feeling more comfortable in their homes with little fear of being traced and repercussions. -Students believe anonymity enables aggressors to threaten, harass or denigrate others and to assume new personas or characters online. -Students believe that the lack of social cues make it easier because they don't see how others are hurt. -Greater fear experience by students who are threatened by someone whose identity they do not know but they know them. -Describes students assuming a friends identity through passwords (Masquerading) -Discrepancy in beliefs as they self-report that anonymity is integral to cyberbullying, however much of the cyberbullying takes place within the context of the students' social groups and 	<p>Students spoke in generalized terms not specific personal experience with cyberbullying</p> <ul style="list-style-type: none"> -Self-report -Not generalizable -Design appropriate and recruitment strategy appropriate to the aim of the research and clearly described -Data collection clearly described and supported by category saturation -Bias described and influence of researchers on participants -Ethical approval obtained and consent from parents and children -Analysis described and sufficient data used in results to support findings -Findings discussed clearly in relation to original question and triangulation used. 	
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						relationships.		
Nocentini, Schultze-Krumbholz, Scheithauer, Ortega & Menesini (2010) 11	Psychology	Examine students perception of the term used to label cyberbullying, the perception of different forms and behaviours and the criteria used for its definition	Focus group	N=70 (9 focus groups) Age= adolescent s not specified Europe (Italy, Spain, Germany)	Thematic analysis	-Anonymity increases fear and insecurity -Not required for definitional criteria of cyberbullying -If the perpetrator is someone the student knows, it can hurt more if it was someone they trusted or were friends with -Coping is easier if the bully is known to them -Anonymous scenarios are perceived as worse than the control scenario	-Age of participants not described (only as “adolescents”) -Research design seems appropriate to address aim, but not discussed by researchers “why” -Recruitment done by teachers who selected students who they thought would be comfortable in a group setting – may be biased -Data collection clearly described (structure, questions) -No discussion on relationship between researcher and participants -Consent obtained but do not describe obtaining ethical approval -Data analysis not described as reaching saturation but provide raw data to support findings -Findings are in relation to original research question but credibility not described in depth.	1
Oprea & Stan (2012)	Psychology	Identifies adolescent	Survey-open ended	N=23 Age= 15-	Thematic analysis	-Describes advantages to online communication i.e.	-Limitations not described by researchers	3

12		perceptions of virtual communications	questions	18 years Romania		socialization, information, entertainment -Easier to communication online, quicker, low cost, can speak <i>Open and Honestly</i> , can say things that usually do not say in face to face interactions (positive aspect of anonymity) -Negative aspects: Addiction to online world, lack of eye contact and direct relationships, creating a false image, wasting time, misinterpretation of online messages, superficiality of online communication	-Methodology appropriate but not described in terms of why chosen -Small sample and no description of how participants were selected -Few direct examples of raw data, no saturation described -Data collection not justified but clear methods -No discussion regarding ethical issues being addressed -Data analysis not credible with minimal data presented to support findings and no limitations or bias discussed -Poorly conducted and described research	
13	Psychology	Explores adolescent perceptions of the likelihood of cyberbullying behaviour eliciting harm and the likelihood of perceived consequences	Survey	N=260 Age= Mean age 12.88 Canada	Pearson's chi square, Logistic regression	-75% of participants at least somewhat agreed that cyberbullies would receive consequences for their behaviours -Participants rated the likelihood of cyber victims being hurt by the cyberbully behaviour significantly higher than the likelihood that the cyberbully would receive consequences. (Perceived to elicit harm to a greater degree then likely to elicit	-Does not discuss anonymity within paper or unknown perpetrator -Method appropriate for type of data to collect. -Scales used have good validity -Results show statistical significance	3

						consequences for the bully) -Describes issues in reporting bullying		
Pieschl, Porsch, Kahl & Klockenbusch (2013) 14	Psychology	Explores in 2 separate studies: 1) Is power imbalance relevant to cyberbullying? 2) Are cyber-specific issues such as media and type relevant for the experience of cyber incidents?	Experimental study using vignettes and questionnaires General aggression model framework	Study 1: N=186 Age = 12-19 Study 2: N=127 Age=11-15 Germany	Study 1: Pearson's chi square, ANOVA, MANOVA, McNemar, Logistic regression Study 2: Logistic regression, MANOVA, ANOVA, Pearson's Chi Square tests	Study 1: -Being harassed by a popular cyber-bully is more distressing than an un-popular bully (elicited a more negative mood, more helpless cognitions and a different pattern of coping strategies -Distress was more pronounced if the student was unpopular (personal characteristics of the victim moderate the effects of cyber incidents) -Power balance may be relevant to the experience Study 2: -Videos used in the cyber incident scenarios are more distressing for cyber-victims than texts and result in more negative behaviour	-Recruitment via social networking sites, no information regarding representativeness of the sample, -Hypothetical scenarios -no validity to this approach -Includes an aspect of anonymity (power imbalance) but does not explicitly address anonymity	4
Sevcikova, Smahel & Otavova (2012) 15	Psychology	Explores how victims of cyberbullying perceive aggressive attacks and when they see them as	Interviews Grounded theory	N=16 Age=15-17 Czech Republic	Thematic analysis, axial coding, constant comparison	-In anonymous contact, the greater the connection between the online aggression and the real world the greater the victim's perceived harm -Lack of acquaintance with the offender also played a role in	-Interviews completed online using ICQ -Research design appropriate -Clear description of recruitment strategy and appropriate for purpose	4

		harmful				<p>that the victim could not be sure whether the offender would be able to carry out their threats</p> <ul style="list-style-type: none"> -Worse harm is perceived when the victimization spreads from one environment to another (i.e. from school to internet) -Discusses dissociation effects (Suler) 	<ul style="list-style-type: none"> -Justified methods for data collection -Consent obtained but no ethics approval described -Raw data presented supporting themes -Minimal description on how themes were formed -Findings clear 	
<p>Slonje, Smith & Frisen (2012)</p> <p>16</p>	Human Behaviour	Explores definitional criteria of cyberbullying, impact of cyber victimization and coping strategies	Semi-structured in depth interviews (individual)	<p>N=9</p> <p>Age= 13-15</p> <p>United Kingdom</p>	Not described	<ul style="list-style-type: none"> -The students that had been cyberbullies described that they did not know initially who was bullying them. -All of the interviewees, when knowing eventually who targeted them, stated it was someone from their school or local area. -Describes one pupil being “threatened, worried and hardly dares to go to school” -Most students reported that no matter what form they had been bullied through, it all felt equally bad, resulting in similar feelings. -Reported that the incidents of cyberbullying continued for longer than incidents of traditional bullying -When asked which form they perceived as harmful 4 reported anonymity of the bully that it could happen at any time at any place. 	<ul style="list-style-type: none"> -Research design appropriate but not justified -Recruitment done by authors for participants from a previous study and justified -Data collection and analysis not described -No description of relationship between participants and facilitator -Ethical issues not described -Data analysis showed some rigor as validated from other findings and supported in the literature -Difficult to determine original research versus secondary research -Findings clear overall from review but not from this study in particular 	1

<p>Sourander, Klomek, Ikonen, Lindroos, Luntamo, Koskelainen, Ristkari, Helenius (2010)</p> <p>17</p>	<p>Psychology</p>	<p>Examines cross-sectional associations between cyberbullying and psychiatric and psychosomatic problems among adolescents</p>	<p>Population based cross sectional study</p>	<p>N=2215 Age =13-16 years Finland</p>	<p>Logistic regression analysis, Multinomial logistic regression analysis, SAS</p>	<p>-Of those who identified themselves as cyber victims, 22.8% reported that they had been scared for their safety indicating possible trauma. -Being cyberbullied by a same-sex or opposite sex adult, by an unknown person, and by a group of people were associated with being scared for their safety. -Adolescents who were cyber victims were more likely to have psychosomatic problems (headaches, recurring abdominal pain, sleeping problems), have high levels of perceived difficulties, have emotional and peer problems and feel unsafe at school.</p>	<p>-Self-report, cross-sectional, cannot draw causation between cyberbullying and psychosocial factors, difficulty in defining cyberbullying -Does not directly address anonymity but discusses unknown bully -Aims of study clear and design appropriate -Sample described and will minimize bias -Power not described -Some scales used are valid and reliable -Statistical significance discussed with confidence intervals</p>	<p>1</p>
<p>Sticca & Perren (2012)</p> <p>18</p>	<p>Psychology</p>	<p>Investigates the relative importance of medium (traditional vs. cyber), publicity (public vs. private), and bully's anonymity (anonymous vs. not anonymous) for the perceived severity of hypothetical bullying scenarios</p>	<p>Self-report questionnaire</p>	<p>N= 881 Age= 12-15 years Switzerland</p>	<p>SPSS, General estimating equations, reverse, reverse coding's</p>	<p>-Anonymous scenarios were perceived as -worse than not anonymous ones -Public cyberbullying is perceived as worse than private bullying -Inability to control the situation makes it worse: In public interaction there is less controllability than in private interaction. -Anonymity is more important than the medium for the perception of bullying severity</p>	<p>-Only included the following types of cyberbullying: exclusion, humiliation and threatening) -Hypothetical scenarios used, clear hypothesis for both studies -Ethical consent obtained -Method appropriate -Sample random and representative -Power not described -Response rate not described -Uses ranking tools (does not describe reliability)</p>	<p>1</p>

							<ul style="list-style-type: none"> -Statistical significance described, but not confidence intervals -Contextual variables not taken into account (personal involvement in bullying) 	
<p>Vandebosch & Van Cleemput (2008)</p> <p>19</p>	Communications	Explores adolescent perceptions about experiences with cyberbullying	Focus groups	<p>N=279 (53 Focus groups)</p> <p>Age= 10-18</p> <p>Belgium</p>	<p>Tape-recorded and transcribed, used Atlas-TI and coded.</p>	<ul style="list-style-type: none"> -Most concerning for adolescents was being contacted by strangers, cyberbullying and threats -Students reported being contacted in the middle of the night, being threatened on the phone -Perpetrators want to hurt the feelings of another person -Difficulties in perception and intention -Repetition not required, a single negative act can also be cyberbullying -Indicated that the respondents who cyber bullied had mostly operated anonymously or disguised themselves and that their victims were often people they knew in the real world. The victims were perceived by the perpetrator as weaker, equal strength, or stronger, also considered equals. -The anonymity of the internet seemed to empower those who were unlikely to become real-life bullies -Not knowing the person behind the cyber attacks was often frustrating and increased 	<ul style="list-style-type: none"> -Research design justified and appropriate -Participant selection clearly described -Data collection method described and justified and type of data clear -Ethical issues not described -Data analysis described and raw data supported by themes -Findings discussed in relation to original research question 	1

						<p>the feeling of powerlessness. Knowing the individual behind the action made it possible to put the action into perspective (and to perceive it as negative or not) and react accordingly.</p> <ul style="list-style-type: none"> -In the case of friends, the perpetrators themselves often gave up the initial anonymity. -In many instances, the victim did have a clue about the identity of the perpetrator or was informed of the identity by the perpetrator or a third party. 		
<p>Ybarra, Mitchell, Wolak & Finkelhor (2006)</p> <p>20</p>	Psychology	Identifies the characteristics of youth who are targets of internet harassment and characteristic related to reporting distress as a result	Telephone survey	<p>N=1500</p> <p>Age= 10-17 years</p> <p>USA</p>	Logistic regression, stepwise modeling, parsimonious model	<ul style="list-style-type: none"> -35% of victims reported felt threatened or embarrassed because of information that was posted or sent to someone else about themselves (indicating harassment was not direct) -45% of the targets knew the harasser in person before the incident -38% reported emotional distress, feeling very or extremely upset or afraid -25% who experience an internet harassment incident reported an aggressive offline contact (i.e. telephoned, came to the youths home or gave gifts) -Aggressive contact made offline (going to the targets house) was associated with a two fold increase in likelihood of reporting distress 	<ul style="list-style-type: none"> -Cross-sectional data-inferences cannot be made -Issues with telephone survey (i.e. do not call list, Caller ID, cell-phone only household) -Clear research question and method -Participants received 10\$ (Biases voluntary participation?) -Consent obtained -Sample representative nationally -Power discussed and minimum number of sample size -Response rate 45% (do not call list, caller ID, cell phone) -Statistical significance and confidence intervals shown in data and 	2

						-Increasing emotional distress: preadolescence, adult harasser asked to send a photo, aggressive offline contact	results	
Ybarra, Diener-West, Leaf (2007) 21	Psychology	Examines the potential overlap in online and school harassment as well as the concurrence of internet harassment and school behaviour problems	Online survey	N=1588 Age=10-15 years USA	Design-based F-Statistics, weighted survey design	-The report of psychosocial problems was related to significantly elevated odds of also reporting being targeted by frequent Internet harassment -Almost half of youth who reported receiving rude or nasty comments or rumours spread about them online by the same people as those who harassed or bullied them at school reported distress by the internet incident. -20% of youth targeted online with different or no overlapping harassment or bullying at school reported being distressed by the online incident (? Isolated incident decreases distress) -Detentions, suspensions, skipping school and weapon carrying were each more frequently reported by youth who were reported being harassed online -Youth reported Internet harassment were eight times as likely to concurrently report carrying a weapon to school in the last 30 days -27% of youth targeted by	-Cross-sectional data-inferences cannot be made -Clear question and appropriate methodology to answer question -Data from previous baseline survey and sample clearly described -Some non-random selection but propensity weighting completed -26% response rate -Measures valid and reliable -Statistical significance reached along with confidence intervals provided -One error in survey left a question immeasurable regarding distress being related to being targeted by threatening or aggressive comments online. -Definition of internet harassment not common among all people	3

						rumours and 21% of youth targeted by threats monthly or more often also reported carrying a weapon to school at least once in the last 30 days (could also be unrelated) -13% of youth harassed online report not personally knowing the harasser		
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Shaded studies = Qualitative Research

Non-Shaded studies = Quantitative Research

Appendix C: Code Assignments

–Prevalence of Cyberbullying

Code	(Study Number) Text Example
Almost everyone has had experience with it	(1) Almost all participants had been confronted with cyberbullying as a witness, victim or bully (7) 346 (63.4%) of the students reported having witnessed or having been aware of cyberbullying
Bullying others	(1) Five reported having cyberbullied someone else (5) 16% of the pupils had themselves bullied someone. (7) 111 (20.4%) had cyberbullied others. (8) 4% (n=151) fell into the bullies only category (13) Thirteen participants (5%) reported that they perpetrated cyberbullying at least once (17) 7.4% were cyberbullies only
No experience with electronic bullying	(8) 78% (n=2961) had no experience with electronic bullying (13) The remaining participants did not report any participation in cyberbully behaviours and were categorized as not involved (n=86, 33.1%)
Bully/Victims	(8) 7% (n=248) were bully/victims (13) participants who reported at least one incident of perpetrating cyberbully behaviour and at least one incident of receiving cyberbully behaviour were categorized as cyberbully victims (n=116, 44.6%) (17) 5.4% were cyberbully victims
Bystanders as most frequently involved	(7) the bystander related part of the survey generally presented the highest percentage of cyberbullying experiences (7) bystanders seem to have been the group most frequently involved in bullying episodes (9) 32.4% students reported they had either witnessed or personally experienced cyberbullying
Bullied by others	(1) Half of the children had been victimized (6) a third (33.2%) of participants (n=1673) had experienced electronic harassment in the prior year. (7) 190(34.9%) had been cyberbullied (8) 11% (n=407) qualified as victims only (9) 32.4% students reported they had either witnessed or personally experienced cyberbullying (13) 45(17.3%) participatns reported being the recipient of cyberbully behaviour at least once
Girls vs. Boys	(5) and for boys higher (of being a bully) (18.6%) than for girls (13.4%) (5) the percentage of girls who had been bullied was significantly higher (24.7%) than the percentage of boys (19.1%) (5) The percentage of boys who bullied while alone was significantly higher (69.9%) than of girls (52.7%). (6) 36% of female participants reported electronic harassment compared to 28.4% of male participants (7) In spite of the anonymous and indirect nature of cyberbullying, male student bullying outdid female student bullying in terms of both victimization and bullying experiences (7) Previous studies have not reached agreements on the gender difference in bullying. (8) in all 15% of girls and 7% of boys were victims only, 10% of girls and 4% of boys were bully/victims and 4% of girls and 5% of boys

	<p>reported electronically bullying others (bullies only). (17) The female and male prevalence's were 6% and 3.5% respectively for being a cyberbully victim only, 5.6% and 9,3% respectively for being a cyberbully only and 4.6% and 5.8% respectively for being a cyberbully victim</p>
<p>Primary vs. Secondary school Age differences</p>	<p>(5) The percentage in primary schools was higher (of being a bully) (17.1%) than in secondary schools (13.5%). (5) The percentage (victimization) was higher in primary schools (23.4%) than in secondary schools (18.6%) (8) Sixth-graders were less likely than other students to be involved in electronic bullying. Specifically they were half as likely as seventh or eighth graders to be bullies or bully/victims and were somewhat less likely to be victims only.</p>
<p>Traditional & cyberbullying correlated</p>	<p>(5) The correlation between bullying on the internet and traditional bullying was significant, as was the correlation between being bullied on the internet and being bullied traditionally. (7) The results are consistent with results from previous studies on traditional face to face bullying (e.g. direct physical and direct verbal abuse), but not with results from earlier studies on CB</p>
<p>Text message prevalence</p>	<p>(5) The percentage of pupils who had bullied or been bullied via text messages was very low (2.9%)</p>
<p>Anonymity prevalence</p>	<p>(5) of the pupils who had been bullied, 34.8% did not know who the bullier was. The percentage of secondary school pupils who did not know the identity of the bullier was significantly higher (38.9%) than the corresponding percentage of primary school pupils (33.9%). (7) most of the teenage participants knew the given bully's identity and that bullies in cyberspace did not try to disguise themselves by using the internet as a cover. (7) among those that were bullied (n=281), only 25% of participants had no idea who bullied them (7) Among bystanders of a cyberbullying event, 43.1% were unaware of the given bully's identity, while more than half of each of the two groups claimed that they were aware of the given bully's identity. (17) 10% by an unknown person</p>
<p>Prevalance of location</p>	<p>(5) Most of the bullies engaged in bullying while at home (85.6%) and most of the bullies reported that they were alone whil engaging in bullying (62.9%) or with friends (24.6%)</p>
<p>Mobile phone harassment</p>	<p>(6) a quarter (24.5%) said they had been harassed on mobile phones at least once in the prior year</p>
<p>Internet harassment</p>	<p>(6) Compared to 17.5% who reported internet harassment</p>
<p>Mobile phone harassment more common</p>	<p>(6) This supports the hypothesis 1 which predicted that mobile phone harassment would be the more common harassment modality</p>
<p>Prevalence rare</p>	<p>(10) Although one 13 year old boy thought cyberbullying is "kind of rare"</p>
<p>Distress from electronic harassment</p>	<p>(6) In total, 52.9% of the young people who reported electronic harassment indicated that at least one of those experiences was distressing.</p>

Appendix C:
Code Assignments –Type of Cyberbullying Experienced

Code	(Study Number) Text Example
Threatening	<p>(1)</p> <p>(7) Victim’s most common type of CB experience was being threatened. The bullies most common type of CB experience was to threaten or to harass</p> <p>(7) Compared to making fun of others threatening might generally be perceived as serious and wrong behaviour and for this reason the bully may issue the threat secretly</p> <p>(10) Some forms of cyber and traditional bullying which they considered similar included spreading rumours, making threats and derogatory comments.</p> <p>(16) The most frequent behaviour reported by victims and cyberbullies was threatening or harassment, followed by making jokes about/fun of, and lastly rumor spreading.</p> <p>(16) For bystanders the order was different, with making jokes about/fun of as most frequent, followed by threatening or harassment then rumour spreading.</p> <p>(16) ..some mentioned threats,</p> <p>(16) ..or threatens someone on the Internet maybe.</p> <p>(19) Looking at the number of times that certain negative aspects associated with the internet and with mobile phones were mentioned during the focus groups gives us a rough idea about the problems and dangers that most concerned the youngsters. These were: being contacted by strangers, computer viruses, hacking, pedophilic attempts, cyberbullying, threats, spam, stalking, e-advertising, sexual intimidation, pornographic web sites, people who turn on their webcam unwanted...</p> <p>(19) The students also reported other forms of internet bullying such as sending huge amounts of buzzers or winks to someone, copying personal conversations and sending them to others, spreading gossip, manipulating pictures of persons and sending them to others, making web sites with humiliating comments about a student, sending threatening emails, misleading someone via email, humiliating someone in an open chat room and sending messages with sexual comments</p> <p>(19) being threatened through the telephone</p>
Spam	<p>(19) Looking at the number of times that certain negative aspects associated with the internet and with mobile phones were mentioned during the focus groups gives us a rough idea about the problems and dangers that most concerned the youngsters. These were: being contacted by strangers, computer viruses, hacking, pedophilic attempts, cyberbullying, threats, spam, stalking, e-advertising, sexual intimidation, pornographic web sites, people who turn on their webcam unwanted...</p>
Harassment	<p>(7) Everyone with an email account or other such tools can spread rumors quickly and harass others by text messages, provocative images, and the like</p> <p>(16) The most frequent behaviour reported by victims and cyberbullies was threatening or harassment, followed by making jokes about/fun of, and lastly rumor spreading.</p> <p>(16) For bystanders the order was different, with making jokes about/fun of as most frequent, followed by threatening or harassment then rumour spreading.</p>

<p>Pedophilic attempts</p>	<p>(19) Looking at the number of times that certain negative aspects associated with the internet and with mobile phones were mentioned during the focus groups gives us a rough idea about the problems and dangers that most concerned the youngsters. These were: being contacted by strangers, computer viruses, hacking, pedophilic attempts, cyberbullying, threats, spam, stalking, e-advertising, sexual intimidation, pornographic web sites, people who turn on their webcam unwanted...</p>
<p>Hacking</p>	<p>(1) (4) They can hack into it and leave nasty comments for other people, and when you get back on it, people are asking why you've said that about them (10) Its really scary and there's a virus that can come into your computer and the person who has sent you the virus has the power to turn the web cam on and off, so if your computer is in your room they can watch you sleep and stuff like that (19) Looking at the number of times that certain negative aspects associated with the internet and with mobile phones were mentioned during the focus groups gives us a rough idea about the problems and dangers that most concerned the youngsters. These were: being contacted by strangers, computer viruses, hacking, pedophilic attempts, cyberbullying, threats, spam, stalking, e-advertising, sexual intimidation, pornographic web sites, people who turn on their webcam unwanted... (19) Several students admitted that they (or somebody they knew) had been the victim of hacking. Someone else had broken into their MSN account for instance, and changed their password, deleted their contact list, and sent insulting or strange messages to their contact persons.</p>
<p>Masquerading</p>	<p>(1) (4) There were particular concern about the possibility of having their online identities compromised and used to make nasty or embarrassing postings to friends/contacts (4) The potential reputational impact of impersonation on their online identities and interpersonal trust within peer networks was perceived to be substantial, consistent with previous research (10) Concealing one's actions for example masquerading as someone other than oneself by assuming a peer's, typically a friend's identity (10) Many participants talked about student's cyberbullying their friends, even those considered to be close friends, whereby the students masqueraded online as the person. (10) Friends often use the password to gain access to the students' profile and, pretending to be that person, bully others. (10) I will go to my friend's house and go on MSN on their computer and I'll forget to sign off, and they could easily just change my password and people who know someone else's password can pretend to be them and say terrible things to someone else. ...my friends would like to go and talk to someone that is on my contact list and pretend to be me. (10) they hack into your account and email and say mean things to other people and other people will think its you who did it. (19) Others took on another identity and misled persons whom they met in chat rooms (10) the unique ways through which bullying can occur afforded by anonymity such as a person's ability to assume a friend's identity through the use of passwords</p>

<p>Ridiculing</p>	<p>(1) (7) making fun of others most frequent (64%) (7) Both victims and bullies experienced being made fun of or being the butt of jokes quite frequently. A possible explanation for the prevalence of this category in cyberspace is that making jokes and fun of others may not be considered particularly harmful by people in general. (19) Cyber jokes on the other hand were not intended to cause the victim negative feelings they were meant to be funny</p>
<p>Scolding/Name calling</p>	<p>(1) (5) The most frequently mentioned method used in bullying and being bullied was while chatting on MSN. The most frequently mentioned expression was name-calling (7) Making jokes about/making fun of others most frequent (64%) (7) There could be many accessories or followers who forward the cruel words and embarrassing pictures (16) ..nasty words (16) The most frequent behaviour reported by victims and cyberbullies was threatening or harassment, followed by making jokes about/fun of, and lastly rumour spreading. (16) For bystanders the order was different, with making jokes about/fun of as most frequent, followed by threatening or harassment then rumour spreading. (17) Name calling-only and being the target of rumours only were the most common response profiles among both sexes.</p>
<p>Discriminating</p>	<p>(1) (10) Some forms of cyber and traditional bullying which they considered similar included spreading rumours, making threats and derogatory comments. (15) there were swearwords about the nationality of my mum's boyfriend, further pics and texts, also verbal suggestions, so I deleted them (15) They always talk about what admin wrote like that I'm gay and stuff which isn't true.</p>
<p>Provoking/Coercing</p>	<p>(1) (7) Everyone with an email account or other such tools can spread rumors quickly and harass others by text messages, provocative images, and the like. (10) Types of cyberbullying: Posting, coercing and backstabbing (10) Many participants talked about ... in particular girls, taking pictures of themselves with webcams, which they post, usually for a friend or boyfriend and typically after varying degrees of coercion. (10) A boy typically threatens a girl to take a picture on webcam or otherwise run the risk of having her secrets divulged. "If you don't flash I'll tell your secrets". (10) They were on MSN and one of the people they thought were friends that was a male, they had told their secrets to and they had friends over and they said, 'if you don't flash us we'll tell people your secrets'. So, something like that will make them do it because they don't want people knowing their secrets".</p>
<p>Stalking</p>	<p>(1) (19) Looking at the number of times that certain negative aspects associated with the internet and with mobile phones were mentioned during the focus groups gives us a rough idea about the problems and dangers that most concerned the youngsters. These were: being contacted by strangers, computer viruses, hacking, pedophilic attempts,</p>

	cyberbullying, threats, spam, stalking, e-advertising, sexual intimidation, pornographic web sites, people who turn on their webcam unwanted...
Random Bullying	(1)
Blackmail	(1) (10) Guys who have threatened girls, they say oh, 'turn on your webcam' or something and then they will flash or stuff like that and if you don't they'll tell people that you did this and things like that. Its like blackmail. (15) Then he blackmailed me that if I didn't meet up with him or sleep with him or whatever, he'd send the link to my parents, people at school would know and whatever.
Sexual intimidation	(19) Looking at the number of times that certain negative aspects associated with the internet and with mobile phones were mentioned during the focus groups gives us a rough idea about the problems and dangers that most concerned the youngsters. These were: being contacted by strangers, computer viruses, hacking, pedophilic attempts, cyberbullying, threats, spam, stalking, e-advertising, sexual intimidation, pornographic web sites, people who turn on their webcam unwanted...
Luring	(1) A broader spectrum of cyberbullying activities...luring girls to ones house to rape them
Rumours	(7) Spreading rumours was less frequent (60%) (7) Everyone with an email account or other such tools can spread rumours quickly and harass others by text messages, provocative images, and the like (10) Some forms of cyber and traditional bullying which they considered similar included spreading rumours, making threats and derogatory comments. (16) The most frequent behaviour reported by victims and cyberbullies was threatening or harassment, followed by making jokes about/fun of, and lastly rumour spreading. (16) For bystanders the order was different, with making jokes about/fun of as most frequent, followed by threatening or harassment then rumour spreading. (17) Name calling-only and being the target of rumours only were the most common response profiles among both sexes.
Posting	(10) Types of cyberbullying: Posting, coercing and backstabbing (10)...or posting disparaging pictures while remaining hidden. (16) That someone has recorded someone or done something and uploaded it. (19) The students also reported other forms of internet bullying such as sending huge amounts of buzzers or winks to someone, copying personal conversations and sending them to others, spreading gossip, manipulating pictures of persons and sending them to others, making web sites with humiliating comments about a student, sending threatening emails, misleading someone via email, humiliating someone in an open chat room and sending messages with sexual comments
Backstabbing	(10) Types of cyberbullying: Posting, coercing and backstabbing (10) The participants talked about backstabbing friends online... "Let's say you are in a fight with your best friend and she is very mad at you and like she might want to do something to get you back
Alteration of photos/messages	(4) There were particular concern about the possibility of having their

	<p>online identities compromised and used to make nasty or embarrassing postings to friends/contacts</p> <p>(7) Anyone in cyberspace might viciously alter</p> <p>(10) The students added that once posted “anyone can steal the pictures</p> <p>(19) The students also reported other forms of internet bullying such as sending huge amounts of buzzers or winks to someone, copying personal conversations and sending them to others, spreading gossip, manipulating pictures of persons and sending them to others, making web sites with humiliating comments about a student, sending threatening emails, misleading someone via email, humiliating someone in an open chat room and sending messages with sexual comments</p> <p>(15) He made a photo montage where I was naked and uploaded it onto the internet</p> <p>(15) He then took a photo of me and someone mutilated the photo totally and uploaded it to the classmates server</p>
Dissemination	<p>(7) or widely disseminate the out in the open message</p> <p>(7) There could be many accessories or followers who forward the cruel words and embarrassing pictures</p> <p>(11) where the behaviour is done once but is then spread to a large audience through the internet, females said that it can be damaging for the victim although it is a single act.</p> <p>(19) The students also reported other forms of internet bullying such as sending huge amounts of buzzers or winks to someone, copying personal conversations and sending them to others, spreading gossip, manipulating pictures of persons and sending them to others, making web sites with humiliating comments about a student, sending threatening emails, misleading someone via email, humiliating someone in an open chat room and sending messages with sexual comments</p>
Computer viruses	<p>(19) Looking at the number of times that certain negative aspects associated with the internet and with mobile phones were mentioned during the focus groups gives us a rough idea about the problems and dangers that most concerned the youngsters. These were: being contacted by strangers, computer viruses, hacking, pedophilic attempts, cyberbullying, threats, spam, stalking, e-advertising, sexual intimidation, pornographic web sites, people who turn on their webcam unwanted...</p>
Bullying may be one on one (Unnoticed)	<p>(7) might only happen between the victim and the bully, completely escaping the notice of other people.</p> <p>(7) (threatening) may actually be the most frequent but appears to remain unnoticed by most stakeholders including peers, teachers and parents.</p>
May be bullied in secret	<p>(7) Compared to making fun of others threatening might generally be perceived as serious and wrong behaviour and for this reason the bully may issue the threat secretly</p>
Instant messaging (IM)	<p>(7) IM was the dominant tool in all three kinds of cyberbullying experiences.</p> <p>(7) For victims, the most likely bullying tool was IM</p> <p>(7) IM and chat rooms were the two most frequently used spaces in which bullies cyberbullied others.</p> <p>(7) IM the most common space in which teenagers in Taiwan were most likely to experience cyberbullying.</p> <p>(7) Requires log-in identification, participants must be users who have, first, mutually approved both the conversation and its participants.</p>

	<p>(8) Victims reported being electronically bullied most frequently through instant messaging, followed by chat rooms, email messages and on a website</p> <p>(8) Bullies similarly reported using instant messaging most frequently, followed by chat rooms and email messaging</p> <p>(17) The most common locations were computer instant messages (18%)</p>
Social Networking Sites (SNS)	<p>(7) SNS and chat rooms have served as fertile ground for cyberbullying in the United States.</p>
Bully abusing social networks	<p>(15) The aggressor from school thus used the internet to increase the victimization by abusing a social network that connected classmates in the online environment.</p>
Sending Winks, buzzers to someone	<p>(19) The students also reported other forms of internet bullying such as sending huge amounts of buzzers or winks to someone</p>
Copying personal conversations and sending them to others	<p>(4) It can get worse because they can copy all your messages and send it round, and then they send it to someone else and everybody knows about it the next day.</p> <p>(19) The students also reported other forms of internet bullying such as sending huge amounts of buzzers or winks to someone, copying personal conversations and sending them to others, spreading gossip, manipulating pictures of persons and sending them to others, making web sites with humiliating comments about a student, sending threatening emails, misleading someone via email, humiliating someone in an open chat room and sending messages with sexual comments</p>
Websites	<p>(7) Websites were the second most common environment where one would witness cyberbullying.</p> <p>(8) Victims reported being electronically bullied most frequently through instant messaging, followed by chat rooms, email messages and on a website</p> <p>(19) The students also reported other forms of internet bullying such as sending huge amounts of buzzers or winks to someone, copying personal conversations and sending them to others, spreading gossip, manipulating pictures of persons and sending them to others, making web sites with humiliating comments about a student, sending threatening emails, misleading someone via email, humiliating someone in an open chat room and sending messages with sexual comments</p>
Chat rooms	<p>(7) Second most common environment to witness cyberbullying</p> <p>(7) IM and chat rooms were the two most frequently used spaces in which bullies cyberbullied others.</p> <p>(7) For victims, the most likely bullying tool was chat rooms</p> <p>(8) Victims reported being electronically bullied most frequently through instant messaging, followed by chat rooms, email messages and on a website</p> <p>(8) Bullies similarly reported using instant messaging most frequently, followed by chat rooms and email messaging</p> <p>(17) The most common locations were computer instant messages (18%) and discussion groups</p> <p>(19) The students also reported other forms of internet bullying such as sending huge amounts of buzzers or winks to someone, copying personal conversations and sending them to others, spreading gossip, manipulating pictures of persons and sending them to others, making</p>

	web sites with humiliating comments about a student, sending threatening emails, misleading someone via email, humiliating someone in an open chat room and sending messages with sexual comments
Email	(8) Victims reported being electronically bullied most frequently through instant messaging, followed by chat rooms, email messages and on a website (8) Bullies similarly reported using instant messaging most frequently, followed by chat rooms and email messaging (19) The students also reported other forms of internet bullying such as sending huge amounts of buzzers or winks to someone, copying personal conversations and sending them to others, spreading gossip, manipulating pictures of persons and sending them to others, making web sites with humiliating comments about a student, sending threatening emails, misleading someone via email, humiliating someone in an open chat room and sending messages with sexual comments
Where cyberbullying occurs	(17) Cybervictimization took place usually only in 1 or 2 sites and included only 1 or 2 types of perpetrators
Bullying aimed at total stranger	(19) Other practices were aimed at total strangers (19) They dialled a random mobile phone number and started insulting the person who picked up the phone. (19) sent insulting or threatening messages to the email address of an unknown person. (19) The victims functioned as an individual but random target (19) In some instances the perpetrators made a more strategic selection based on the presumed real life characteristics of the persons they met online. (19) ..mentioned during the focus groups gives us a rough idea about the problems and dangers that most concerned youngsters. These were: being contacted by strangers (19) Another MSN practice often mentioned by the respondents was being contacted by strangers. These intrusions were often unwelcome and therefore blocked or deleted.
Getting calls in the middle of the night	(19) getting calls in the middle of the night
Home is supposed to be safe	(10) you can say many hurtful things and make you feel really sad, because your in your own safe place, you're in your home (10) According to a number of participants, children expect to feel safe and protected from bullying in their own homes (10) The cyberbullying they experience while on the computer at home, and often in their own bedroom, may feel particularly invasive (16) traditional bullying is something that is really face to face and then one can get rid of it by going home or something.
Loss of control of personal property	(15) In this situation the victim could not defend himself as the photo was published on the internet and the aggressor had control of when the photo and comments were deleted
Direct extension of traditional bullying	(15) through the story of one victimized participant it was clear how the victim had to face bullying both on the internet and at school. (1) Online and offline (21) almost half of youth who reported receiving rude or nasty comments, rumours spread about them online by the same people as

	those who harassed or bullied them at school reported distress by the internet incident.
Cyberbullying does not bother them	(16) However some pupils were 'not bothered', as "I don't give a shit about what they said (16) However some victims report being 'not bothered' about it, in part because it is not 'real' or 'physical'
Physical risk absent in cyberbullying	(16) the physical risk involved in traditional bullying, which was absent in cyberbullying (16) But on the net there one just writes anything. Nothing can happen there (16) However some victims report being 'not bothered' about it, in part because it is not 'real' or 'physical'
Anonymous online messaging	(15) I used to chat with a guy on lide.cz and then suddenly this girl started to message me saying I shouldn't chat with him, that he sleeps with her and stuff. But we only chatted. And when I removed him from my friends, she wrote to me for maybe a year afterwards

Appendix C:
Code Assignments –Psychological/psychosocial impact of anonymity

Code	(Study Number) Text Example
Serious Impact on victim	(1) According to the children, cyberbullying may have a large impact on victims (1) Cyberbullying may have drastic effects on children (4) If you ruin someone's Bebo, its like some people's life (4) The results of the study indicated a consensus among participants that cyberbullying was wrong and could have potentially serious impacts on victims (10) He believed it could be serious as evident by his statement "When it happens it can be really really big" (10) Most considered cyberbullying as a serious problem that could cause damage (16) Some features of cyberbullying, especially anonymity, lack of a safe haven, and embarrassment due to the potentially large breadth of audience, can make the impact of cyberbullying especially strong, for some young people and in some circumstances
Fear	(1) Fear was one of the often-mentioned effects (1) Fear of cyberbullying (4) The resulting experiences of fear and anxiety were discussed (10) Its really scary and there's a virus that can come into your computer and the person who has sent you the virus has the power to turn the web cam on and off, so if your computer is in your room they can watch you sleep and stuff like that (15) I was afraid of what would happen, of how it could be solved, who could help me out of it, what that guy could do (16) The students we interviewed brought up a variety of emotions such as: helplessness, anger, sadness, worrying, loneliness, frustration (16) It is like terrorizing and stuff...
Anxiety	(4) The resulting experiences of fear and anxiety were discussed
Fear of escalation to physical violence	(1) Fear of possible escalations to physical violence stronger than the cyberbullying itself (6) threatening the target with physical harm
Afraid to go to school	(1) Victims were afraid to go to school
Fear from unknown perpetrator	(1) Anonymity of bully was one of the most frightening features (4) You get confused and scared at the same time (10) According to the participants, concealing one's identity usually intended to invoke distress or fear in the victimized child. (10) the greater fear experienced by students who are threatened online by someone whose identity is not known to them but who knows their identity. (11) Not knowing who the contents are from can raise insecurity and fear (16) The impact of cyberbullying is clearly negative, including feelings of anger, fright, depression, and embarrassment
Loss of trust in friends and classmates	(1) A loss of trust in friends and classmates was another (4) Cyberbullying can have a significant impact on trust within peer networks (11) Yes it's actually disappointing when its someone you trust and so on
Bully has strong relationship to victim	(1) Eventually I found out one of the bullies actually was my best friend (6) Perpetrators associated with distress included harassment produced by a girlfriend, boyfriend or from an ex (10) Many participants talked about student's cyberbullying their friends, even those considered to be close friends, whereby the students masqueraded online as the person. (4) Victimization within existing peer networks by known perpetrators was most prevalent and perceived to be more serious (6) Perpetrator associated with greater distress included people at school, and those who were a good friend
Sadness/Depression	(1) Other notable effects included sadness (5) Most pupils reported feeling angry, sad and not liking to go to school (10) you can say many hurtful things and make you feel really sad, because your in your

	<p>own safe place, you're in your home</p> <p>(14) Girls reported sadder mood than boys when confronted with cyber incidents</p> <p>(14) On average students most pronounced mood after reading all cyber scenarios was anger, followed by sorrow, despair, tiredness and positive mood</p> <p>(16) The students we interviewed brought up a variety of emotions such as: helplessness, anger, sadness, worrying, loneliness, frustration</p> <p>(10) When it happens it can be really really big and lead to depression and other things</p> <p>(15) But I was so down that I haven't dared to look at it yet because many people have told me that they've seen it.</p>
Emotional Pain	<p>(1) Emotional pain</p> <p>(10) Some people do cyberbullying as a joke and don't know what it feels to be bullied.</p> <p>(10) You can't physical hurt somebody through cyberbullying, but you can definitely hurt feelings</p> <p>(13) approximately 94% of participants at least somewhat agreed that the behaviours depicted in the cyberbullying scenarios would hurt the victim</p>
Decline in Self-Confidence	<p>(1) Decline in self-confidence</p>
Cry out for help	<p>(1) In a cry for help, the girl had posted an online message</p>
Planned suicide	<p>(1) In a cry for help, the girl had posted an online message in which she hinted at committing suicide.</p>
Bully encourages suicide	<p>(1) Bullies reacted with statements such as "Finally" and "Please do" and posted the cry for help on the websites general message board</p>
Completed Suicide	<p>(1) The girl eventually committed suicide</p>
Anonymous harassment more serious and negative impacts on victims	<p>(4) Previous research suggests that young people perceive anonymous harassment to have more serious and negative impacts on victims and there was evidence of this perception in the groups</p> <p>(4) You don't even know them but they've said something really serious about you</p> <p>(11) Anonymity is important for the impact on the victim</p> <p>(18) The results show that anonymous scenarios were perceived as worse than not anonymous ones in both traditional and cyber scenarios</p>
Friend as bully hurts more	<p>(4) If it was one of your friends then you would be hurt</p> <p>(11) while if the perpetrator is someone the students know it could hurt more if it was someone they trusted or were friends with</p> <p>(15) (being bullied by friends) exacerbates the negative experience connected with the attacks</p>
Unknown bully makes you not have to care as much	<p>(4) but you don't know them, so you don't really have to care that much</p>
Anonymity creates confusion	<p>(4) You're thinking "What's happened here?" you get confused and scared at the same time</p>
Psychological Impact	<p>(4) This indicates that the impacts of cyberbullying are social as well as psychological</p>
Social Impact	<p>(4) This indicates that the impacts of cyberbullying are social as well as psychological</p>
Reputational damage	<p>(4) reputational damage represents both a motivation and outcome of the behaviour.</p> <p>(4) The potential reputational impact of impersonation on their online identities and interpersonal trust within peer networks was perceived to be substantial, consistent with previous research</p>
Anger	<p>(5) Most pupils reported feeling angry, sad and not liking to go to school</p> <p>(14) The videos elicited angrier moods compared to the texts</p> <p>(14) On average students most pronounced mood after reading all cyber scenarios was anger, followed by sorrow, despair, tiredness and positive mood</p> <p>(16) The students we interviewed brought up a variety of emotions such as: helplessness, anger, sadness, worrying, loneliness, frustration</p> <p>(16) Anger and such!</p> <p>(16) The impact of cyberbullying is clearly negative, including feelings of anger, fright, depression, and embarrassment</p>
Not liking to go to school	<p>(5) Most pupils reported feeling angry, sad and not liking to go to school</p>

Videos more distressing	(14) Videos used in the cyber incident scenarios are more distressing for cyber-victims than texts and result in a more negative affect (angry mood) and more planned behaviour (Active coping)
Female gender increases feelings of distress	(6) Hypothesis 5, predicting gender differences in distress was also supported; two thirds (62.2%) of female participants reported distress following harassment compared to 37.7% of male participants. Females' odds of reporting distress were two and a half times higher than males ($\chi^2(1) = 22.08, p < .001; OR = 2.46; 95\% CI = 1.69-3.61$). By modality, 55.7% of females re-reported distress following internet harassment compared to 34.7% of males, indicating they were just over twice as likely to do so ($\chi^2(1) = 11.13, p < .001; OR = 2.37; 95\% CI = 1.42-3.96$). Similarly, 57.9% of females reported distress from mobile phone harassment compared to 40.9% of males. This indicated the odds of female distress following mobile phone harassment were nearly twice that of the male participants ($\chi^2(1) = 8.18, p < .01; OR = 1.99; 95\% CI = 1.24-3.20$). (6) Females were 2x more likely to report distress than males (mobile phone harassment) (6) Females were 2x more likely to report distress (internet harassment) (13) Girls rated the likelihood of cyber victims being hurt significantly higher than boys. (14) Girls reported sadder mood than boys when confronted with cyber incidents (14) Girls reported less joyous mood than boys when confronted with cyber incidents.
Social Exclusion	(16) while others mentioned exclusion (18) In the exclusion block, cyberbullying scenarios seemed to be perceived as comparable to traditional bullying scenarios.
Social Ostracism	(6) Distress was associated with ...socially ostracising the target by not letting them communicate with or befriend others (6) Univariate analyses revealed that nine factors were associated with distress from internet harassment. These included socially ostracising the target by not letting them communicate or befriend others
Damage to something/someone of value to the victim	(6) Distress was associated with ...threatening to damage someone or something of value to the target
Classmate as bully increases distress	(6) Perpetrator associated with greater distress included people at school
Multiple bullies increases distress	(6) Perpetrator associated with greater distress included ...more than one harasser
Spreading Rumours	(6) Univariate analyses revealed that nine factors were associated with distress from internet harassment. These included rumours being spread about the target
Disseminating embarrassing information	(6) Threatening the target with embarrassing information (15) humiliation in front of people who were part of their real lives (15) a girl uploaded my photo to her profile on a social network and wrote a comment, which humiliated and offended me (15) In this case it meant the victim was humiliated in front of a wide circle of people who know both him and the offender.
Using more than one form of technology increases distress	(6) The model shows that each additional form of internet harassment experienced by a participant increases their likelihood of distress by 45.5%. (21) almost half of youth who reported receiving rude or nasty comments, rumours spread about them online by the same people as those who harassed or bullied them at school reported distress by the internet incident. (21) In contrast, less than 20% of youth targeted online with different or no overlapping harassment or bullying at school reported being distressed by the online incident.
Insecurity if perpetrator unknown	(11) Not knowing who the contents are from can raise insecurity and fear (15) I was afraid of what would happen, of how it could be solved, who could help me out of it, what that guy could do
Anonymous scenarios worse	(11) The anonymous scenario was perceived as worse than the control scenario (17) Being cyberbullied by a same-sex or opposite-sex adult, by an unknown person, and by a group of people were associated with being scared for their safety.

Overlapping to the victims “real world” increases harm	<p>(5) The correlation between bullying on the Internet and traditional bullying was significant and vice versa</p> <p>(15) The degree of anonymity and the and overlap of cyberbullying to offline life appeared to be the crucial element in the degree of harm felt by the victim</p> <p>(15) The results showed that in anonymous contact, the greater the connection between the online aggression and the real world the greater the victim’s perceived harm</p> <p>(15) These excerpts document that the impact of online attacks by anonymous people was increased when the aggressors connected their virtual threats with the real world e.g. in the form of attacking the victim offline or humiliation in front of people who were part of their real lives</p> <p>(15) The participant’s experiences with cyberbullying also served to demonstrate that the extent of harm perceived was influenced by the victimization spreading from one environment to another, from school to internet</p> <p>(15) It can also be seen there that the mechanism by which the offline aggressor strengthened his position on the Internet was built on the interconnection between the online and offline lives of today’s adolescents</p> <p>(15) The content of the online victimisation was discussed in the offline environment (at school), which leads to further victimization and thus a deepening of the trauma</p> <p>(15) The others mocked me about being bullied</p> <p>(16) One pupil who started to become victimized in a traditional sense stated: “It is like small things that one becomes enemies for. Then one starts text messaging and then it becomes even more”</p>
Threatening to find online victim offline	(15) she wrote to me for maybe a year afterwards and threatened to find me
Sending threats to victims’ friends	(15) She wrote many insults to my friends too
Uncertainty of what bully could do to victim	<p>(15) I was afraid of what would happen, of how it could be solved, who could help me out of it, what that guy could do</p> <p>(15) Lack of acquaintance with the offender also played a role in that the victim could not be sure whether the offender would be able to carry out their threats</p>
Bully uses bystanders to increase bullying power	(15) The internet intensified the bullying in the sense that classmates who had not before witnessed the bullying became part of the bullying
Public scenarios worse than private ones	<p>(11) In all countries, students rated public cyberbullying as the most serious incident because of the role of bystanders. The victims might worry about what others think about them.</p> <p>(15) It contributed to the widening circle of people in front of whom the victimization was realized, and thus to deepening the victim’s trauma</p> <p>(16) Some features of cyberbullying, especially anonymity, lack of a safe haven, and embarrassment due to the potentially large breadth of audience, can make the impact of cyberbullying especially strong, for some young people and in some circumstances</p> <p>(18) These results suggest that public scenarios were perceived as more severe than private ones</p> <p>(18) Regarding the role of publicity, results showed that public scenarios were perceived as worse than private ones in both traditional and cyber scenarios, with large effect sizes.</p>
Helplessness	<p>(14) On average students most pronounced mood after reading all cyber scenarios was anger, followed by sorrow, despair, tiredness and positive mood</p> <p>(14) Overall, students reported low Helpless Cognitions</p> <p>(14) Bullying resulted in more helplessness</p> <p>(16) The students we interviewed brought up a variety of emotions such as: helplessness, anger, sadness, worrying, loneliness, frustration</p>
Loneliness	<p>(16) The students we interviewed brought up a variety of emotions such as: helplessness, angers, sadness, worrying, loneliness, frustration</p> <p>(16) Then one feels singled out and like totally lonely.</p> <p>(16) One feels like an outsider</p>
Frustration	(16) The students we interviewed brought up a variety of emotions such as: helplessness, angers, sadness, worrying, loneliness, frustration

	(19) From the side of the victim, not knowing the person behind the cyber attacks was often frustrating
Loss of sleep	(16) I didn't sleep the whole evening
Creepy feeling	(16) it was...creepy
Victim avoided perpetrator long after incident	(16) These emotions can also have a long lasting impact; one student explained that even one and a half years later after the cyberbullying occurred she still avoided her perpetrator if she saw her on the street at a distance
Embarrassment	(16) The impact of cyberbullying is clearly negative, including feelings of anger, fright, depression, and embarrassment (16) Some features of cyberbullying, especially anonymity, lack of a safe haven, and embarrassment due to the potentially large breadth of audience, can make the impact of cyberbullying especially strong, for some young people and in some circumstances (18) In the humiliation block, cyberbullying scenarios seemed to be perceived as comparable to traditional bullying scenarios.
Lack of safe place	(16) Some features of cyberbullying, especially anonymity, lack of a safe haven, and embarrassment due to the potentially large breadth of audience, can make the impact of cyberbullying especially strong, for some young people and in some circumstances
Fear for safety	(10) Several participants emphasized that in cyberbullying situations, children were often at home in their room with the expectation of safety, which was especially distressing (17) Cybervictims reported that they had been scared for their safety, indicating possible trauma. (17) Being cyberbullied by a same-sex or opposite-sex adult, by an unknown person, and by a group of people were associated with being scared for their safety.
Perpetrator an adult increases safety concerns	(17) Being cyberbullied by a same-sex or opposite-sex adult, by an unknown person, and by a group of people were associated with being scared for their safety.
Group bullying	(17) Being cyberbullied by a same-sex or opposite-sex adult, by an unknown person, and by a group of people were associated with being scared for their safety. (19) Certain internet and mobile phone practices were not only aimed at individuals or groups but also performed by individuals or groups.
Powerlessness	(15) (being bullied by peers) exacerbates the victim's feelings of powerlessness (19) not knowing the person behind the cyber attacks increased the feeling of powerlessness
Upset	(1) this got me really upset (20) reported feeling very or extremely upset by their most serious incident
School Impact	(21) Detentions and suspensions, ditching or skipping school more frequently reported by youth also reported being harassed online.
Weapon carrying	(21) Weapon carrying was more frequently reported by youth who also reported being harassed online. (21) Youth reported being targeted by Internet harassment were eight times as likely to concurrently report carrying a weapon to school in the last 30 days compared to all other youth (controlling for differences). (21) Analysis of the type of Internet harassment experienced indicated that 27% of youth targeted by rumours and 21% of youth targeted by threats monthly or more often also reported carrying a weapon to school at least once in the previous 30 days
Tiredness	(14) On average students most pronounced mood after reading all cyber scenarios was anger, followed by sorrow, despair, tiredness and positive mood
Defenseless	(15) In this situation the victim could not defend himself as the photo was published on the internet and the aggressor had control of when the photo and comments were deleted

Appendix C:
Code Assignments –Characteristics of Victim/Bully/Bystander

Code	(Study Number) Text Example
Bystanders more likely to be victims	(7) Bystanders were more likely to be victims and bullies
Bystanders more likely to be bullies	(7) Bystanders were more likely to be bullies and victims
Bully-Victim phenomenon in cyberspace	(7) The high correlation between victims and bullies in our results indicates that there may exist a bully victim phenomenon in cyberspace (16) Some of the girls who are traditionally victimized tend to be both cyberbullies and cybervictims
Traditional bullying victim can fight back	(7) In traditional bullying, the victims hardly can fight back
Power imbalance	(3) Strength differential and anonymity were significantly correlated (7) Traditional Victims can hardly fight back because of an imbalanced physical-power relationship between victims and bullies.
Bystanders most commonly involved	(7) bystanders seem to have been the group most frequently involved in bullying episodes, also least likely to report a bullying incident in which they were not directly involved
Age affects method	(8) A main effect of grade was significant for two of the variables: bullied through IM and bullied through text messaging. Sixth graders were bullied via IM significantly less frequently than seventh or eighth graders. Sixth graders were also bullied through text messaging significantly less than eighth graders. (17) Both boys and girls reported being cyberbullied most frequently by their peers of the same age
Gender affects method	(8) Boys show the greatest variation across grade levels. These findings are consistent with previous research showing that sixth grade boys lag behind in their use of the internet and related technologies. (17) 16% of girls reported being bullied by their opposite sex peers compared with only 5% of boys.
Cyberspace changes rules	(7) Cyberspace changes the rules so that everyone with an email account or other such tools...
Cyberspace eliminates physical power imbalance	(7) (Cyberbullying) The imbalanced power relationship is no longer a matter of course; therefore, there could be more bully-victims in cyberspace, and the role-turning cycle gains strength
Role-turning cycle between bully and victim online	(7) (Cyberbullying) The imbalanced power relationship is no longer a matter of course; therefore, there could be more bully-victims in cyberspace, and the role-turning cycle gains strength
Bystanders as bullies	(7) Bystanders who forward the ill-intentioned messages to others can be considered members of the bully group
Bystanders as victims	(7) Bystanders who receive the ill-intentioned messages about their friends may consider themselves members of the victim group.

Bully/Victim/Bystander role inter-related	(7) These three roles are highly related to each other in this study.
Bully more technologically advanced	(10) aspects of power imbalance as the cyberbully can be characterised by higher levels of technological skills compared to the victim. (15) The offline aggressor who was seen as the star of the class, mastered the Internet environment by becoming an administrator of the class site at the Czech social networking site...
Cycle of willingly forwarding messages	(7) Thereby creating a vicious cycle that does not rest on an initial act of will
Forwarding or stopping an act of will	(7) In contrast, it is also very possible that anyone in cyberspace might put either a permanent stop or temporary stop to vicious acts in the open messages that do, indeed rest on an act of ill will
Cyberbullying at school using cell phones	(10) Most of the students talked about cyberbullying also occurring during the school day. Some children explained that although they are not “permitted” to have cell phones turned on during classes, students find ways around this rule. (10) They reported that many students text message each other while keeping their cell phone hidden under their desk and use cell phones in washrooms.
Cyberbullying prevention	(7) The ability of the many bystanders viewing ill-intentioned materials to take positive actions to stop the spread of the materials could be a powerful key to cyberbullying prevention
Bullied by a student at school	(8) Both victims and bully/victims were electronically bullied most frequently by a student at school (8) Perpetrators indicated that they had electronically bullied another student at school most frequently, followed by a friend and strangers (13) Victims of online bullying were encountered who knew their aggressor or connected them with a person from their real lives. In many cases they were a person from school
Bullied by a stranger	(8) Both victims and bully/victims were electronically bullied most frequently by a student at school, followed by a stranger (8) Perpetrators indicated that they had electronically bullied another student at school most frequently, followed by a friend and strangers (15) I knew it was probably them from the way they wrote...and I was told by a friend who knew
Bullied by friend	(8) More than half of the bully/victims indicated that they had been bullied by a friend (8) A little more than a quarter of the victims said they had been electronically bullied by a friend (8) Perpetrators indicated that they had electronically bullied another student at school most frequently, followed by a friend and strangers
Bullied by sibling	(8) More than 12% of victims and 16% of bully/victims reported that they had been electronically bullied by a sibling.
Ability to Moral disengagement affects cyberbullying	(9) Moral disengagement significantly predicted cyberbullying expectations

Affective Empathy	(9) Affective empathy significantly predicted cyberbullying expectations
Mediations of moral disengagement	(9) Adding social cognitions reduced the effects of moral disengagement and turned the effect of affective empathy non-significant, thus suggesting a mediation effect (9) The effect of moral disengagement was mediated by prototype similarity, situational self-efficacy and class-mate norms
Expectations of cyberbullying	(9)The significant predictors of expectations for CB included: Moral disengagement, prototype similarity, perceived prevalence of cyberbullying among classmates or classmate norms, frequency of witnessing or being aware about cyberbullying incidents committed by same age peers or peer norms, and situational self-efficacy.
Affective (emotional) empathy	(9) The findings showed that the effect of affective empathy on expectations was mediated by prototype similarity and situational self-efficacy but not peer and classmate norms (13) Cyberbully-victims had higher affective empathy scores than cyberbullies and youth not involved.
Cognitive empathy	(13) Cybervictims and cyberbully-victims had higher cognitive empathy scores than youth not involved in cyberbullying.
Bullied by an adult	(17) 2.3% had been bullied by a same sex adult and 3.1% by an opposite sex adult
Younger bullying older	(21) Youth who were targeted by internet harassment tended to be older
Older bullying younger	(16) The students often expressed the view that older students were more often the perpetrators. Yes I think the younger ones bully less... Well I believe they do it more rougher...younger ones don't tend to have these mobiles. They don't know much about it, writing. (19) They targeted weaker strangers (e.g. young)
Older perpetrator more threatening	(16) And older are more like I said that there are more threats
Easier for older perpetrator	(16) that it is easier for older students to have knowledge about what one does actually.
Gender differences	(16) Compared to traditional bullying, girls may be relatively more involved, but gender differences remain inconsistent across studies probably due to different samples, methodologies, definitions, types of CB assessed and historical changes (such as increased use of social networking in girls especially)
Higher level of school difficulty associated with cyberbully	(16) A higher level of difficulties or symptoms had a stronger association with cyberbully status
Conduct problems	(16) Cyberbully only and cyberbully-victim status were independently predicted by conduct and hyperactivity problems
Hyperactivity	(16) Cyberbully only and cyberbully-victim status were independently predicted by conduct and hyperactivity problems

Prosocial problems	(16) Cyberbully only status predicted by prosocial problems (21) The report of psychosocial problems was related to significantly elevated odds of also reporting being targeted by frequent internet harassment.
Emotional problems	(16) Cybervictim only and cyberbully-victim statuses were predicted by emotional problems
Peer problems	(16) Cybervictim only and cyberbully-victim statuses were predicted by emotional problems and peer problems
Victim as weak	(15) He comes up with everything and the others join, he rules over the weaker (19) The weaker victims were usually also the target of traditional bullying. These students were described as strange, shy, small. (19) They targeted weaker strangers (e.g. girls)
Victim as strange	(19) The weaker victims were usually also the target of traditional bullying. These students were described as strange, shy, small.
Victim as shy	(19) The weaker victims were usually also the target of traditional bullying. These students were described as strange, shy, small.
Victim as small	(19) The weaker victims were usually also the target of traditional bullying. These students were described as strange, shy, small.
Victim as equal or stronger	(19) In some instances, persons who were perceived as more powerful in real life were the target of cyber attacks
Victim as inexperienced	(19) They targeted weaker strangers (e.g. inexperienced persons)
Victimized by gender	(17) Being victimized by same sex peers was the most common response profile, while the second most common response profile was being bullied by both same and opposite sex peers (17) Opposite sex victimization alone or in combination with other types of perpetrators was significantly more common among girls (19) They targeted weaker strangers (e.g. girls) (21) Youth who were targeted by internet harassment were less likely to be male.
Bully lies and reports they didn't do it	(10) Participants described children attributing their own cyberbullying of others to someone else having accessed their password.
Victim knows who bully is	(4) It is also consistent with other studies suggesting that the majority of victims know the identity of the perpetrator (19) In many instances, the victim did have a clue about the identity of the perpetrator (because of the content of the messages, the way others in their environment behaved) or was informed of the identity by the perpetrator or a third party.
Bully knows who victim is	(19) their victims were often people they also knew in the real world (19) Many internet and mobile phone practices that might be hurtful to others were directed to people whom the perpetrators also knew in person. (19) These could be friends or former friends.

<p>Relationship between aggressor and victim on a continuum</p>	<p>(15) Relationships between aggressors and victims were differentiated on a continuum from anonymous online communication, through previous online friendship, to relationships within an age group both inside and outside the school environment.</p>
<p>Bully controlling others</p>	<p>(15) and if they don't conform, he bullies them (15) The traditional bullying had reached a state where the members of the group, including the victim himself, had accepted the standards of the aggressor</p>
<p>Bully hides identity</p>	<p>(19) the respondents who admitted they had done things via the internet or mobile phone that might be hurtful to others indicated that they had mostly operated anonymously or disguised themselves (victims were often people they also knew in the real world)</p>
<p>Bullies' victims as equals</p>	<p>(19) The victims were perceived by the perpetrator as weaker, or equal strength or stronger (19) There were people whom the perpetrators considered equals.</p>

Appendix C:
Code Assignments –Motives of bully

Code	(Study Number) Text Example
Internally felt drive	(1) Children may bully other children out of boredom, pleasure, to reduce stress, or to compensate for being cyberbullied themselves, trying to fit in, or trying to belong
Need to belong	(1) trying to belong, trying to fit in
Retaliation	(1) to compensate for being cyberbullied themselves
Boredom	(1) Children may bully other children out of boredom
Bullying for pleasure	(1) pleasure
Bullying to reduce stress	(1) to reduce stress
Negative experience with victim	(1) The second category is based on negative experiences with the victim such as a row, jealousy, or breaking up of a friendship or relationship.
Ending a relationship	(1) breaking up of a friendship or relationship (16) In most cyberbullying cases the bullying had started from a face to face argument
Negative feelings about the victim	(1) a row, jealousy or breaking up of a friendship or relationship
Negative characteristics of the victim	(1) The third category is based on the characteristics of the victim “He is so ugly. Of course he gets cyberbullied” This
Victim’s appearance	(1) this may involve appearance (e.g., clothes, wearing glasses, acne, skin color, out of the ordinary
Victims personality	(1) and personality (shy, insecure, kind-hearted, scared, boring)
Bully has more power	(1) Bullies seem to prefer harassing children who are different and/or have less social or physical power
Benefit outweighs risk	(13) Participants rated the likelihood of cybervictims being hurt by the cyberbully behaviour significantly higher than the likelihood that the cyberbully would receive consequences
Chat rooms provide means of contact	(7) chat rooms provide potential contact with motivated cyberbullies who might be total strangers to the victim

Appendix C:
Code Assignments –Medium of Online Communication

Code	(Study Number) Text Example
Difficulty perceiving intention	<p>(1) A potential problem regarding cyberbullying is that it maybe hard to differentiate between cyberbullying and innocent pranks.</p> <p>(1) Victims experience difficulties in estimating the intentions of the presumed bully. “It may be a joke for you, but how does the other child know it’s a joke? It’s only a nice joke when he knows it’s one”</p> <p>(1) The discussions among children showed that it is harder for those directly involved than for outsiders to estimate the intentions of a presumed bully</p> <p>(4) The young people also highlighted difficulties in determining perpetrator intentions (e.g. Humour or threat) as a result of lack of visual social cues in ambiguous communicative situations.</p> <p>(4) Mediated communication blurs traditionally understood boundaries between humour and threat, intention and reception</p> <p>(7) It is also very possible that the original message provider does not intend to harm</p> <p>(10) If the act is perceived as a joke then it is not considered bullying. However the question was raised and remains unanswered as to how the victim should know that the act was not meant seriously</p> <p>(11) If it’s a joke between two friends; does not care; if other people are involved maybe they can’t understand if it’s a joke or not.</p> <p>(19) The same internet or mobile phone actions that were considered cyberbullying in the case of the more vulnerable targets were in the later instances more often described as cyber teasing, cyber arguing or cyber fighting.</p> <p>(19) The respondents noticed that the same practices could be interpreted in other ways depending on the precise circumstances.</p> <p>(19) The respondents acknowledged however that there might be a difference between the way things were intended and the way things were perceived. What some perpetrators considered an innocent joke might be considered an aggressive attack by the victim (or even the other way around)</p> <p>(19) the relationship between the perpetrator and the victim also played an important role in the way messages were interpreted. Getting a message from a friend that might be considered an insult (by a third party) was often regarded as a joke, a sign of common understanding, or a kind of playful interaction between friends.</p>
Perceived seriousness influenced by multiple factors	<p>(4) Other factors (eg. Trait characteristics, platforms etc.) are also likely to influence the perceived seriousness of victimization by anonymous or known perpetrators.</p>
Bully lies and reports they didn’t do it	<p>(10) Participants described children attributing their own cyberbullying of others to someone else having accessed their password.</p>
Characteristics of CB	<p>(1) Two important characteristics of CB emerged from the discussions, repetition and intention.</p>
Anonymity not a definitional criteria for cyberbullying	<p>(11) In all countries, anonymity is important for the impact on the victim, but not as a definitional criterion to discriminate cyberbullying from non-bullying incidents</p>

Repetition	<p>(1) One time occurrences would be bearable and not directly a form of CB “Just a couple of pranks is not so bad, it can even be funny. But if it happens more often, it is not nice anymore”</p> <p>(1) Online one-time actions may have repetitive effects. Bullies may not be aware of the lasting consequences of one time actions</p> <p>(1) I was bullied for a long time several years ago</p> <p>(1) Two girls actually witnessed this from nearby. Via a Dutch online community they met a girl who had be ceaselessly cyberbullied.</p> <p>(10) non-stop bullying, most expressed concern about the frequency</p> <p>(11) In all three countries, the adolescents agreed that the criterion of repetition can differentiate between a joke and an intentional attack and it can characterise the severity of the action.</p> <p>(11) One of the German focus groups stated explicitly that the behaviour cannot be unintentional if it is repeated. Repetition and intention are perceived as related</p> <p>(11) One of the German focus groups disagreed and said that they bullying does not depend on repetition but on the content of the text messages.</p> <p>(11) where the behaviour is done once but is then spread to a large audience though the internet, females said that it can be damaging for the victim although it is a single act.</p> <p>(13) This was a repetitive form of aggression from a known person with whom the victim was often in everyday contact</p> <p>(15) The participant was continuously bullied at school for two and a half years</p> <p>(16) They prank call very, very often. Three, four times per day for about a year</p> <p>(16) I have been bullied for eight years</p>
Intention	<p>(1) Even more important, according to the children, are the presumed bully’s intentions: They only speak of cyberbullying when the bully has harmful intentions.</p> <p>(1) The problem with intention is that it is a subjective notion, with potential problems of interpretation for both victims and bullies.</p> <p>(11) the aim of the bully is to hurt someone, but if the victim is not hurt this is not bullying because the bully did not gain his/her goal.</p> <p>(11) Imbalance of power cannot be viewed independently of the intent to harm</p> <p>(19) The perpetrator of cyberbullying really wanted to hurt the feelings of another person.</p>
Attitude toward CB	<p>(3) Cyberbullying stemmed from positive attitudes toward cyberbullying anonymity and strength differential</p> <p>(3) Positive attitudes toward cyberbullying predicted cyberbullying behaviour</p>
Anonymity empowers those unlikely to bully	<p>(19) The anonymity of the internet and mobile phone and knowledge of ICT applications indeed seemed to empower those who were unlikely to become real-life bullies or who were even victims of traditional bullying</p>
Victims of traditional bullying use online to retaliate	<p>(19) seemed to empower those who were unlikely to become real-life bullies or who were even victims of traditional bullying.</p>

<p>Trying to hide behind the computer</p>	<p>(7) Owing to the nature of communication technology, bullies can easily hide behind the computer screen (10) cyberbullying is when bullies already bullied someone but got in trouble by a teacher, so they want to make it silent so they go on a computer and they try to be hidden and secretive, but still hurting (10) “cyberbullying is easier to hide” (10) you don’t have to talk to the face, so it’s easier for the person that bullies (10) The image of the cyber aggressor “hiding behind the keyboard,” coined by a participant, emerged as a primary theme. (10) The participants believed that aggressors concealed their identity in order to bully and increase their power by remaining “hidden behind the keyboard”</p>
<p>Anonymity provides least chance of getting caught/consequences</p>	<p>(10) If you say it in person, then that’s you saying it for sure, but if you say it over MSN or something and they tell on you, you can easily just say someone hacked your account or something. It was someone else pretending to be you. (10) Some students attributed this power of anonymity to individuals feeling more comfortable in their homes with little fear of repercussions or of being traced, which the students believed enables aggressors to threaten, harass, or denigrate others and to even assume a new persona or character online. (10) The students articulated effects of the anonymity including: the aggressors perceived power to harass others without consequence (13) 75% of participants at least somewhat agreed that cyberbullies would receive consequences for their behaviours (13) Self reported cyberbullies and cyberbully victims produced lower ratings of the likelihood of cyberbullies receiving consequences than victims and those not involved, these differences were not statistically significant.</p>
<p>Perceived anonymity impacts behaviour</p>	<p>(4) Perceived anonymity was discussed as a factor determining victim-perpetrator relationships and the experiential impacts of the behaviour</p>
<p>Identity mediated by technology</p>	<p>(4) this is unsurprising given the technological mediation of young people’s identities and social relationships in contemporary society</p>
<p>Need to keep up with changing technology</p>	<p>(16) Researchers in the field need to keep up to date with such changes and expansions regarding new modes of cyberbullying and cyberaggression.</p>
<p>Communication rapidly changing</p>	<p>(4) the technological mediation of young peoples identities and social relationships in contemporary society (16) The ways young people communicate through ICT are rapidly changing</p>
<p>Bullying can now happen at any time, any place</p>	<p>(10) Most students stated that bullying now can happen all day since technology has extended schoolyard bullying to home computers and cell phones making it possible for “non-stop bullying” (10) bullying occurring at school and continuing online when the child returns home at the end of the day. (16) Those who perceived cyberbullying to be worse compared to traditional bullying gave the reason of anonymity of the bully and that it could happen at any time at any place</p>

Bully unaware of effects	<p>(1) Presumed bullies do not always seem to consider the effects of their actions “I hacked by friends MSN account for fun. He was at home sitting at his computer saying shit, shit shit I can’t log on anymore. He calls me in panic saying his computer has been hacked. And then I say ‘Joke’”.</p> <p>(1)The discussions among children showed that it is harder for those directly involved than for outsiders to estimate the intentions of a presumed bully or the possible impact on a victim</p> <p>(10) the person who’s doing it doesn’t feel as guilty because they’re not saying it to their face</p> <p>(10)“I think cyberbullying is just a different way that you do it. It’s not face to face. It’s easier to say more hurtful comments because sometimes you don’t like to say things to people’s faces but when you do it for revenge on msn or something, it might be easier to do because you do not see how much they are hurt by it.</p>
Anonymity lets individuals behave in ways they might not otherwise	(10) Anonymity lets individuals behave in ways they might not otherwise and that would not otherwise be tolerated.
Innocent actions	(1) innocent actions mentioned were calling someone a ridiculous name, hacking out of self-interest (stealing someone’s credits), fake fights, criticizing someone, name calling followed by a smiley, death threats in online shooting games, and continuously sending invitation messages.
Parents cannot judge intention	(1) Parents cannot adequately judge the severity of online actions (Sometimes I call my friend funny names on MSN. Names like stupid, asshole, dumbass. When my mom sees this she punishes me. That is so annoying because it’s just a joke and she can’t understand that”
Lack of face to face/ inability to witness direct impact of behaviour	<p>(4) Participants perceived lack of face to face interaction and inability to witness the direct impact of behaviours on the victim to have greater importance than anonymity</p> <p>(4) No, it’s easier; if they say it on MSN they wouldn’t come up to you and say it to your face</p> <p>(4) Stuff that you wouldn’t say to someone in the street, like you wouldn’t go up to someone and say something offensive to them, I don’t think you should say on the internet because it’s the same thing really- you just can’t see each other.</p> <p>(4) You can’t see their emotions when they’re saying things, it can get a bit confusing sometimes and misleading</p> <p>(10) you can’t see her, you can’t really tell to her face how you feel</p>
Online behaviours influence exposure to anonymous harassment	(4) This contrast with previous research may reflect differential participation in online behaviours potentially expose young people to anonymous harassment (e.g. Use of chatrooms, public social networking profiles, etc.) between studies
Disinhibition /More confidence	<p>(4) It’s nastier, ‘cos people feel more confident saying it over the computer than to your face.</p> <p>(4) Disinhibition was perceived to increase the confidence of the perpetrator and escalate the extremity of online comments and behaviour compared to equivalent offline situations.</p> <p>(16) On the net and stuff one dares to say more maybe then one would do in reality</p>

Blurs acceptable/ unacceptable	(4) ...blurs traditionally understood boundaries...as well as acceptable and unacceptable behaviour in online spaces
Alteration of social norms	(4) Its ability to transform or alter existing social norms is central to many concerns about young people and online risk, partly due to the persistent and textual nature of online interactions (4) Participant discussions suggest that young people are aware of the influence of mediated communication on social norms and their facilitation of cyberbullying (4) This was also related to participant discussions about the influence of the characteristics of mediated communication on emergent social norms in online spaces and the dynamics of cyberbullying.
Discrepancy in anonymity (believed a huge part, but normally occurring in social groups)	(10) revealed a discrepancy in the student's expressed beliefs regarding anonymity of the cyber aggressor. Although most of the students depicted anonymity as integral to cyberbullying, much of the CB they discussed appeared to take place within the context of the students social groups and relationships
Having an audience	(11) If the behaviour is done by an anonymous person to a large audience, they cannot perceive if the act is done intentionally or not. (15) Although the attacks happened only in the online world, some aggressors used online applications that allowed others to watch the victimization (15) The participant also considered it distressing that the aggressor chose a social network to carry out this cyberbullying, as in so doing they allowed the content to be made publicly available. In this case it meant that the victim was humiliated in front of a wide circle of people who knew both him and the offender.
Benefits of CMC	(11) dominant were the responses that emphasized the socialization function (the possibility to establish and maintain long distance relationships, talking to friends, share feelings, meet new people, entertainment (11) speak openly and honestly, say things that usually do not say in face to face interactions, not judged.
Disadvantages	(11) creating addiction to virtual world, lack of eye contact and of a direct relationship. Creating a false image, wasting time at the expense of other more productive activities. Online messages can be misunderstood, lack of deep emotional ties, is a superficial communication.
Victim had an idea about who bully was	(15) I knew it was probably them from the way they wrote...and I was told by a friend who knew
Easy to succumb to collective participation in bullying (peer pressure)	(15) In the online environment adolescents seem to succumb more easily to collective participation in bullying (15) even those peers who the victim considers friends can be drawn in.
Bystanders assist bullier by spreading victimizing materials	(15) Classmates who had not before witnessed the bullying became part of the bullying owing to the easy spread of victimizing materials (deformation of photos)

<p>Bullying may be one on one (Unnoticed)</p>	<p>(7) might only happen between the victim and the bully, completely escaping the notice of other people. (7) (threatening) may actually be the most frequent but appears to remain unnoticed by most stakeholders including peers, teachers and parents.</p>
<p>May be bullied in secret if perceived as serious and wrong behaviour</p>	<p>(7) Compared to making fun of others threatening might generally be perceived as serious and wrong behaviour and for this reason the bully may issue the threat secretly</p>
<p>Bullying may be one on one (Unnoticed)</p>	<p>(7) might only happen between the victim and the bully, completely escaping the notice of other people. (7) (threatening) may actually be the most frequent but appears to remain unnoticed by most stakeholders including peers, teachers and parents.</p>
<p>May be bullied in secret</p>	<p>(7) Compared to making fun of others threatening might generally be perceived as serious and wrong behaviour and for this reason the bully may issue the threat secretly</p>
<p>Bullied by group</p>	<p>(7) There could be many accessories or followers who forward the cruel words and embarrassing pictures (15) Another form of cyberbullying in which the aggressors came from the victim's real world was victimization carried out by multiple people. (15) There were several people (aggressors)...they were friends, one of them is sort of my best friend and another is sort of a leader but also the punk of the class if you see, they started it and others followed (17) 5.1% by a group of people</p>
<p>Friends give out passwords as sign of friendship (divulging privacy)</p>	<p>(10) Students often give out their passwords to their friends as a sign of the friendship (10) so you sometimes tell them secrets</p>
<p>Knowing the person helps interpretation</p>	<p>(11) If you know the person, you can have a talk, positively or negatively and you can better understand if it's a joke or not (11) If you know a person, you can know how he/she could behave, but if you don't know... (19) Knowing the individual(s) behind a certain action made it possible to put the action into perspective (and to perceive it as negative or not) and to react accordingly</p>
<p>Anonymity does not have uniform impact on the dynamics of behaviour</p>	<p>(4) suggests that anonymity does not have a uniform impact on the dynamics of the behaviour</p>
<p>Cyberbullying as extension of traditional bullying</p>	<p>(15) As opposed to the previous form of online attack committed by a known person, the third context of cyberbullying was distinctive in that it represented a direct extension of traditional bullying (15) The internet replaced the school playground, where the bullying would move after classes. (15) It was clear how the victim had to face bullying both on the internet and at school. (16) Traditional victimization was associated with cybervictimization, while traditional bullying was associated with cyberbullying. Traditional bully-victim status was associated with cyberbully,</p>

	cybervictim and cyberbully-victim status.
Power imbalance	(10) The participants believed that aggressors concealed their identity in order to bully and increase their power by remaining “hidden behind the keyboard (15) The excerpt also demonstrates how the imbalance of power was established in the online environment.
Cyberbullying continue longer than traditional bullying	(16) There were some indications that incidents of cyberbullying did continue for longer periods than incidents of traditional bullying
Quicker messaging allows time for more messages	(16) One student felt that cyberbullying through instant messaging was worse compared to text messaging because ‘one writes much faster than one does on the mobile. So it comes more and more you know.’
Perception of attack	(19) The degree to which individual’s felt personally attacked thus seemed to play an important role. (19) The line between what was and what was not perceived as a personal attack was often vary vague (19) the relationship between the perpetrator and the victim also played an important role in the way messages were interpreted. Getting a message from a friend that might be considered an insult (by a third party) was often regarded as a joke, a sign of common understanding, or a kind of playful interaction between friends.
Anyone could bully anonymously	(1) Anyone could be the anonymous bully (11) On the other side it’s bad if you don’t know who it is because then, in principle it could be anyone (19) The anonymity of the sender often made it difficult to know whether the person was someone they actually knew or a stranger.
Bully abusing social networks	(15) The aggressor from school thus used the internet to increase the victimization by abusing a social network that connected classmates in the online environment.
Bully connects online with offline to increase power	(15) It can also be seen there that the mechanism by which the offline aggressor strengthened his position on the Internet was built on the interconnection between the online and offline lives of today’s adolescents
Social networking site replicates offline class dynamics, online	(15) Through the social network site the offline relationships of the class were extended to the online environment and thus the class dynamics were reproduced online

Appendix C:
Code Assignments –Coping Methods

Code	(Study Number) Text Example
Videos and coping	(14) Videos elicited more coping than texts (14) Videos used in the cyber incident scenarios are more distressing for cyber-victims than texts and result in a more negative affect (angry mood) and more planned behaviour (Active coping)
Harassment coping	(14) Harassment elicited more coping than outing (14) Students confronted with harassment were more likely to employ social, technical or legal coping and less likely to employ passive coping than students confronted with outing.
Girls actively cope more than boys	(14) Girls reported more coping than boys
Aggressive coping	(14) Aggressive coping as well as rationalization were indicated less frequently. (14) Girls were less likely to employ aggressive coping
Social coping	(14) Most often students indicated coping strategies that were categorized as ...social and technical coping... (14) Girls were more likely to employ social coping.
Technical coping	(14) Most often students indicated coping strategies that were categorized as ...social and technical coping...
Depreciation	(14) Most often students indicated coping strategies that were categorized as ...depreciation
Normalization	(2) Everyone gets hassled. There's always people giving you jib. It does happen, it's bound to happen. You just get used to it after a while (4) The normalization of cyberbullying as an online risk was also reflected in participant awareness of strategies for responding to the behaviour (4) There was a general perception that despite its potential seriousness, cyberbullying was an inevitable and relatively routine occurrence that young people accepted as a normative dimension of online relationships and experiences.
Blocking the perpetrator	(4) participant awareness of strategies for responding to the behaviour, which focused on blocking the perpetrator (4) If someone comments you and you don't like it, you just block them (16) The pupils suggested practical strategies such as blocking...or permanently blocking abusers by contacting administrators of various websites
Changing phone numbers	(16) changing phone numbers
Maintain privacy	(14) Not giving out ones number (16) On the mobile...one should maybe not give ones number to whomever.
Seeking support from peers	(4) participant awareness of strategies for responding to the behaviour which focused on blocking the perpetrator and seeking support from peers, consistent with previous research.
Feel inadequate to respond to cyberbullying	(4) this contrasts with previous qualitative research finding that young people were generally pessimistic about the potential to respond to cyberbullying (16) On the chat room I really don't know.

Deletion of messages	(15) there were swearwords about the nationality of my mum's boyfriend, further pics and texts, also verbal suggestions, so I deleted them
Watchful waiting	(4) I would say see how it goes for a bit
Ignoring the bullying	(5) Most pupils who had been bullied reported that they pretended to ignore the bullying, or really ignored the bullying
Retaliation	(5) bullied the bullier
Confrontation	(6) confrontation
Rationalization	(14) Helpless, passive and aggressive coping as well as rationalization were indicated less frequently.
Helpless	(14) Helpless, passive and aggressive coping as well as rationalization were indicated less frequently.
Passive	(14) Helpless, passive and aggressive coping as well as rationalization were indicated less frequently.

Appendix C:
Code Assignments –Reporting Cyberbullying and Seeking Help

Code	(Study Number) Text Example
Reporting will remove their access to the Internet	<p>(1) They are afraid of losing their internet connection if they tell their parents (Taking away the internet is one of the worst punishments there is. Even a bully would not deserve that. It is better to take a beating from all your classmates than to be isolated from the internet)</p> <p>(1) Having Internet access appears to be a necessity of life (“Losing your internet connection is like losing your soul”)</p> <p>(10) Prime reasons for not disclosing to parents or other adults were fear that their computer privileges would be taken away</p> <p>(16) If bullying occurs then one like erases the account or like don’t get to access the home page anymore</p>
Reporting as last course of action	<p>(16) reporting a cybervictimization incident seemed to be the last course of action, if followed at all</p>
Belief it should be kept to oneself	<p>(16) I think that is such stuff that you keep to yourself</p>
Trust issues with adults	<p>(16) Well I don’t trust her (counsellor) because she says that it is confidential but I don’t believe her. I don’t believe she keeps it. I don’t trust she will really keep it.</p>
Belief others don’t care	<p>(16) Because they don’t care about the whole thing. I have been bullied for eight years, so they don’t care about it.</p> <p>(7) feeling a sense of uselessness in looking to adults for assistance</p> <p>(10) “sometimes their mom doesn’t actually care if they’re bad at school, so they won’t do anything about it. It happened to my friend, like they told the principal and the principal called their mom and then they’re like ‘oh, my mom doesn’t care anyways; so they never stop, as much as you tell, as much as you do, nothing will happen to the bully”</p>
School dealing with it	<p>(10) Other participants maintained that even if the cyberbullying happens off school property, the school should and would deal with it</p> <p>(16) The school had taken successful action when she told adults about her experience. ‘We reported it to the school, she went to the same school. They said that this was to be reported to the police..so it stopped in the end.</p>
Police	<p>(9) such as the police (10.5%)</p>
Gender differences in reporting	<p>(6) Significant gender differences were identified for mobile phone harassment. Males were significantly more likely than females to report mobile phone harassment that involved threats to someone or something of value to them, social ostracism, having mean or embarrassing images of themselves sent to others, being sent scary or disgusting images, harassers who were male, and anonymous.</p> <p>(6) In terms of overall likelihood, female participants were 42% more likely to report at least one form of electronic harassment than male participants</p> <p>(6) More female participants reported mobile phone (28.4%) harassment than males (18.3%) and females odds of reporting mobile phone harassment were nearly two times greater than that for males.</p> <p>(6) the same was not true for internet harassment (reported by 17.4% of male participants and 17.6% of female participants, which had no statistical difference in prevalence by gender</p> <p>(6) Females more likely than males to report mobile phone harassment involving mean, nasty or hurtful comments, harassers who were female and around their age.</p> <p>(9) There were no gender differences in reporting cyberbullying</p> <p>(13) tests indicated that girls were more likely than boys to report bullying to friends and parents.</p> <p>(13) girls were more likely to report cybervictimization (61%) as well as cyberbullying-victimization (69%)</p>
Don’t want to admit they are	<p>(1) it is hard for children to admit being disliked by their peers, which would harm their</p>

disliked by peers	self image and the image others have of them (1) I wouldn't tell my mom. I am ashamed to tell her that I am being bullied (1) A reason for their reluctance is because they feel ashamed of being bullied.
Inability to prove bullying	(10) the reluctance to tell adults about victimization because of their strong belief that it is not possible to prove the cyber incident or to identify the aggressor. (10) the belief that if they told, adults would not be able to find evidence of the cyberbullying or to identify the aggressor (10) "some people that may be cyberbullied, if they do tell their principals, a lot of people will just lie and be like 'that wasn't me on msn' that was someone else".
Reporting cyberbullying	(13) Participants were asked whether they believe cyberbully behaviours would be reported to friends, parents/guardians, teachers/principal or police 86% at least somewhat agreed it would be reported to friends, 79% to parent's, 30% to teachers, 19% to police. (13) Internet supervision had no main effect on reporting
Feel they are responsible	(1) Victims may at least feel partially responsible for the bullying because they were the ones online.
Already warned	(1) They were often discouraged by their parents or caregivers to go online in the first place and expect reactions like "I told you so"
Fear of consequences of reporting	(1) Another reason for not seeking help is that victims may be afraid of the consequences. (7) reporting an event might be not only useless but indeed counter productive
Worried about discussion of issue in front of others	(1) The obstacle to talking to their teacher involves the fear of group discussions about their problems, which may have adverse effects (1) The obstacle to going to their parents or caregivers involves the fear of ill-considered actions like contacting the teacher, the bully or the bully's parents (My mother will immediately contact my teacher, or the bully's parents and that's something I really don't want
Fear of more bullying	(1) You're afraid other children will hear about it and start bullying you as well (1) or the fear of being called a mummy's boy (10) fear that telling would exacerbate the cyberbullying
Reporting to a teacher	(5) Hardly any of the bullies and victims talked to their teachers.
Teachers not able to handle matter	(7) The lowest percentage of reporting to teachers shows that students possibly did not believe that teachers would handle the matter effectively
Limits/Rules set	(5) More than half of the parents always or usually set rules for their children about the frequency with which they were allowed to use the Internet and about what they were and were not allowed to do.
Bystanders least likely to take action	(7) Bystanders, as the largest group involved in cyberbullying actually were the least likely to take action (7) also shown in the survey results was that this very same group was the least likely to report a bullying incident in which they were not directly involved.
More victims report than bystanders	(7) many more victims than bystanders reported cyberbullying events.
Bystanders do not feel responsible to report	(7) people considered the act of reporting neither their business nor their responsibility (7) bystanders suggested that these events constitute other's privacy in which the bystanders should not get involved (7) bystanders did not feel responsible for reporting to adults or taking action against cyberbullying events. (7) they did not report the events because the people involved were not their friends (7) the clear and common attitude of apathy and indifference should be a worry for prevention efforts
Fear of getting into trouble	(7) being afraid of getting into trouble (7) fear of getting into trouble might refer to being threatened by the bully, being regarded as an informer or gossip
Fear of social exclusion	(7) fear of being excluded from an "in group"
Uselessness	(10) fear that the adult would advise them to ignore it (10) "sometimes their mom doesn't actually care if they're bad at school, so they won't do anything about it. It happened to my friend, like they told the principal and the principal

	called their mom and then they're like 'oh my mom doesn't care anyways; so they never stop, as much as you tell, as much as you do, nothing will happen to the bully"
Belief that if it happens off school grounds, teachers unable to help	(10) Another reason for not telling adults was some student's belief that because cyberbullying often occurs off school grounds teachers could not do anything. (10) Other participants maintained that even if the cyberbullying happens off school property, the school should and would deal with it
Reporting to Peers	(7) peers, especially classmates who knew the involved people and the corresponding school's context and siblings were the participants to whom victims would most likely turn. (7) Classmates were the students teenagers would like to talk about cyberbullying experiences, regardless of whether they were involved in the event as bystanders, victims, or bullies. (Suggestion to start with schoolmates as focus for prevention) (9) those who reported the cyberbullying incident preferred to do so to their friends (44.7%)
Do not want parents to worry	(7) clearly less likely to turn to adults including parents and teachers because they wanted to avoid both triggering parental concern
Appearing weak	(7) and appearing to be the weak one
Loss of independence	(1) When children are victimized they find it hard to ask for help (10) other reasons for not telling adults included wanting to be independent
Bullies unwilling to admit	(7) the bullies were typically unwilling to admit their own behaviour to people (7) Conforming to the nature of self-report surveys the bullies themselves seemed the least willing to report their own behaviour (7) the participants who were more involved in bullying were less willing to discuss the bullying
Feel that adults are oblivious to cyberworld	(10) The students unanimously depicted adults as oblivious to the cyber world and to the phenomenon of cyberbullying. (10) "they just don't get how it is nowadays"
Prevalence of reporting	(9) while 32.4% students reported they had either witnessed or personally experienced cyberbullying (victimized), only 12.5% reported the incident to someone.
Reporting to parents	(9) 44.7% parents and siblings
Telling a teacher	(4) If it gets worse, tell the teacher

Appendix D: Hierarchical TreeMajor Concepts describing the construct of Cyberbullying:
Types of Cyberbullying Experienced

Threats to Personal Harm

- Threats/Harassment
 - Provoking
 - Coercing
 - Stalking
 - Blackmail
 - Sending spam
 - Sending computer viruses
 - Sending winks, buzzers

Invasion of Personal Privacy

- Intrusion in to the home
 - Getting calls all night
 - Home is supposed to be safe
 - Hacking
 - Accessing email, IM, SNS
 - Stealing or sending photos and/or messages
 - Alteration of personal accounts
- Anonymous online messaging
- Masquerading
- Sexual Invasion
 - Pedophilic attempts
 - Stalking
 - Luring
 - Raping
 - Sexual intimidation

Loss of Control over Personal Property

- Dissemination (to an audience)
 - Copying conversations and sending to others
 - Disseminating photos and messages
 - Posting about another person
 - Alteration of photos and messages

Compromising Reputation

- Rumour spreading
- Gossip
- Ridiculing
- Name calling
- Scolding
- Discriminating
- Backstabbing

Random Bullying

- Aimed at total strangers

Appendix D:
Hierarchal Tree
Major Concepts Describing the Construct of Cyberbullying
Psychological/Psychosocial Impact of Anonymity

- Psychological impact
 - Fear
 - Fear for safety
 - Fear of escalation to physical violence
 - Uncertainty of what bully could do to victim
 - Anxiety
 - Damage to something/someone of value to the victim
 - Fear of unknown perpetrator
 - Insecurity
 - Creepy feeling
 - Lack of safe place
 - Emotional pain
 - Upset
 - Sadness
 - Depression
 - Suicide
 - Planned suicide
 - Crying out for help
 - Encouraged by bully
 - Completed suicide
 - Anger
 - Frustration
 - Powerless
 - Helpless
 - Defenseless
 - Embarrassment
 - Dissemination of embarrassing information
 - Loss of Sleep
 - Tiredness
 - Decline in self-confidence
- Social Impact
 - Social Exclusion
 - Social Ostracism
 - Avoidance of peers
 - Victim avoided perpetrator long after incident
 - Reputational damage
 - Spreading rumors
 - Loss of trust in friends and classmates
 - Loneliness (Lack of belonging)
- School Impact
 - Decreased school attendance
 - Detentions
 - Suspensions
 - Skipping school
 - Afraid to go to school
 - Not liking to go to school
 - Carrying a weapon to school
- Factors Increasing Distress
 - Perpetrator an adult
 - Unknown perpetrator
 - Anonymous harassment more serious and negative impacts on victim
 - Increases insecurity and fear
 - Anonymity creates confusion
 - Unknown bully makes you not have to care as much
 - Anonymous scenarios worse
 - Overlapping to the victims "real world"
 - Replicating offline issues online and vice versa
 - Threatening to find the victim offline
 - Sending threats to the victims friends
 - Bully has strong relationship to victim
 - Friend as bully hurts more
 - Boyfriend/girlfriend or ex
 - Classmate as bully increases distress
 - Using more than one form of technology

- Type of technology
 - Videos more distressing
- Using an audience to increase impact
 - Public scenarios worse than private ones
 - Bully uses bystanders to create Group bullying
 - Multiple bullies' increases distress
 - Humiliation increases in front of an audience
 - Dissemination of embarrassing information
- Female Gender
 - Females have higher feelings of distress
- Lack of a safe place

Appendix D:
Hierarchical Tree
Major Concepts Describing the Construct of Cyberbullying
Characteristics of Victim/Bully/Bystander

Bully

- Personal Characteristics
 - Higher level of school difficulties
 - Conduct Problems
 - Hyperactivity
 - Prosocial Problems
 - Emotional Problems
 - Peer Problems
 - Usually older age
 - Easier, seen as more threatening by victim
 - Ability to Morally Disengage
 - Predicts cyberbullying expectations
 - Adding social cognitions decreases effect of moral disengagement
 - Mediated by prototype similarity, situational self efficacy and classmate norms

Bully/Victim

- Role Turning Cycle
 - Bullied by classmate, friends, siblings
 - Bullies others as power imbalance eliminated
- Personal Characteristics
 - Negative Characteristics
 - Hyperactivity problems
 - Conduct Problems
 - Emotional Problems
 - Peer problems
 - Positive Characteristics
 - Higher affective empathy
 - Higher cognitive empathy

Victim

- Known to bullier
 - Classmate
 - Friend
 - Sibling
- Random Bullying
 - Stranger bullying
- Personal Characteristics
 - Weaker
 - Shy
 - Small
 - Strange
 - Inexperienced
 - Gender (female)
 - Younger Age
 - Equal Strength or Stronger
 - Older Age (or Adult)
 - May be same age peer

Bystander

- Largest group involved
- Reaction to cyberbullying determines involvement as bystander
 - Becomes a bully if forwards message
 - Cycle of willingly forwarding messages
 - Becomes a victim if receives message
 - Becomes a bystander if does not forward message
 - Stops transmission

Appendix D:
Hierarchal Tree
Major Concepts Describing the Construct of Cyberbullying
Medium of Online Communication

Intention

- Difficulty Perceiving Intention
 - Subjective for bullies, victims and witnesses
- Humor Vs. Threat
 - Victim's Perception
 - Perception of attack influenced by multiple factors
 - Audience
 - Trait Characteristics
 - Content
 - Relationship to bully
 - Bully's Intention
 - Intention to create harm
 - If victim not hurt then goal not attained
 - Intrinsic Motivation
 - Need to belong
 - Boredom
 - Pleasure
 - Stress reduction
 - Extrinsic Motivation
 - Revenge/Retaliatio
 - Proving skills
 - Negative experience with victim
 - Ending of a relationship
 - Fighting/Argument
 - Jealousy
 - Doesn't like victim's appearance or personality
 - Exploration of Online Identity
 - Adolescent identity mediated by technology
 - Assuming a new identity or persona
 - Uses another persons identity
 - Anonymity
 - Bully hides behind computer screen
 - Can empower those unlikely to bully
 - Consequences minimized
 - Less chance of getting caught if anonymous
 - Little fear of repercussions or being traced
 - Computer Mediated Communication Blurs Traditionally Accepted Boundaries
 - Acceptable vs. Unacceptable
 - Alteration of Social Norms
 - Benefits of CMC
 - Establish and maintain long term relationships
 - Talk to friends
 - Share feelings
 - Meet new people
 - Entertainment
 - Speak openly and honestly
 - Disadvantages of CMC
 - Divulging privacy as a sign of friendship online (i.e. secrets, passwords)
 - Rapid transmission of information

Repetition

- Single bullying episodes can have repetitive effect if in front of an audience
- Group bullying

Appendix D:
Hierarchical Tree
Major Concepts Describing the Construct of Cyberbullying
Coping Methods

Active Coping

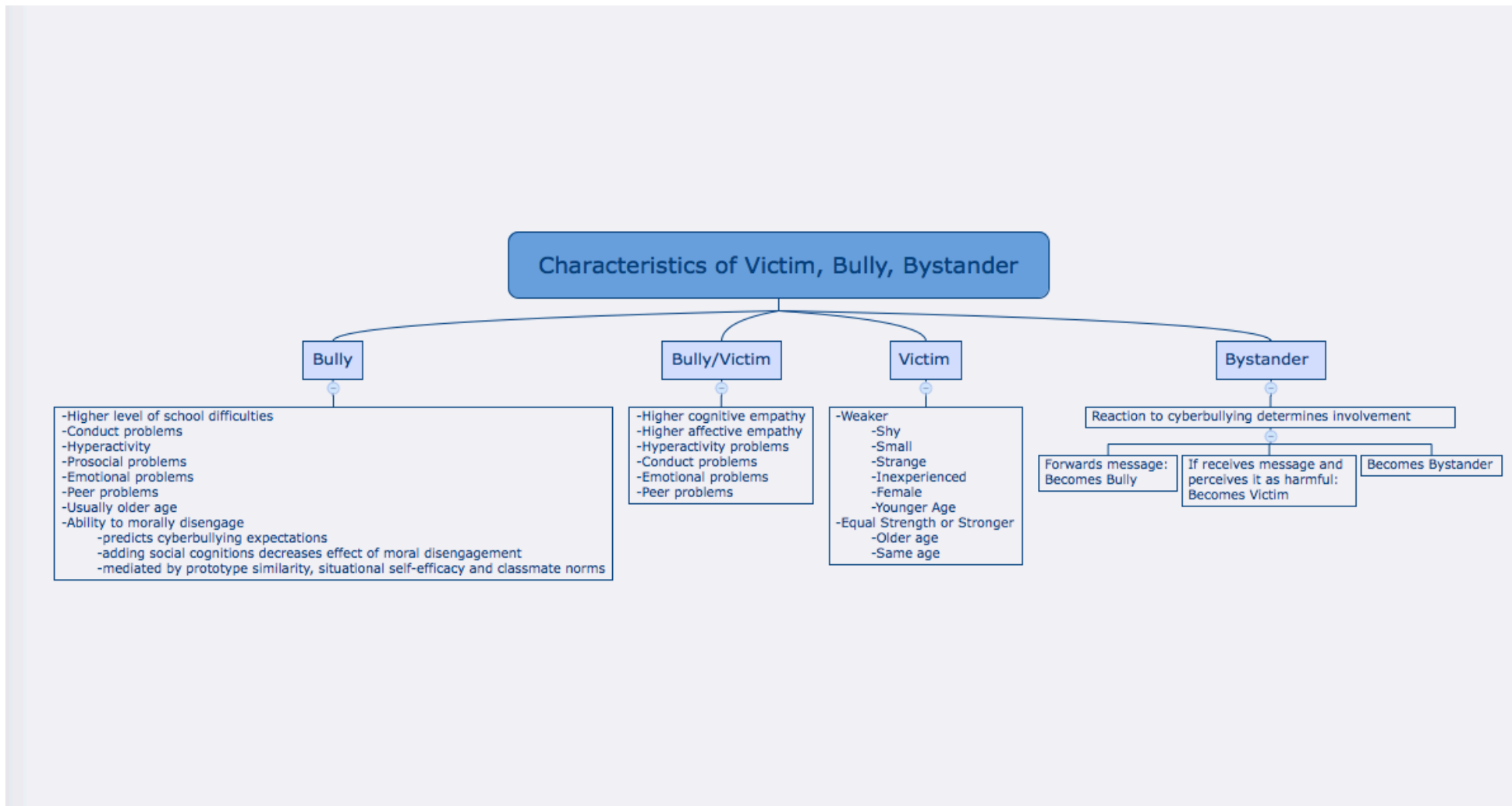
- Girls actively cope more than boys

- Social coping
- Aggressive Coping
- Technological Coping
- Legal Coping
- Reporting to another
 - Teacher
 - School
 - Parents
 - Police
 - Peers

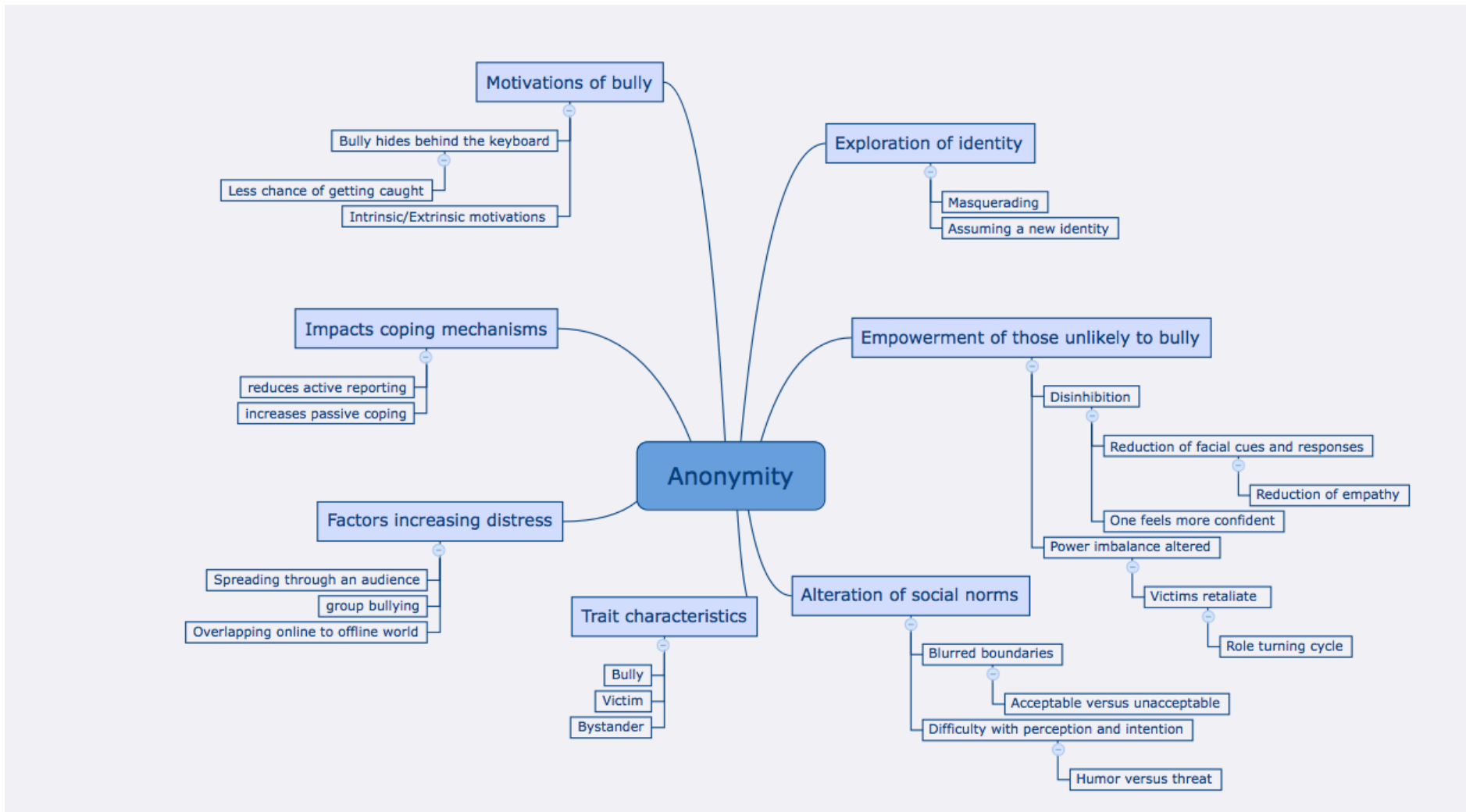
Passive Coping

- Avoidance
 - Ignoring/Denial
 - Deletion of messages
 - Watchful waiting
 - Fear of consequences of reporting (reporting as last course of action)
 - Belief others won't care
 - Uselessness
 - Reporting will remove their access to the Internet
 - Effect on self-image
 - Don't want to admit peers dislike them
 - Appear weak
 - Loss of independence by asking for help
 - Do not trust it will be kept confidential
 - Trust issues with adults
 - Worried about discussion in front of others
 - Fear of social exclusion
 - Inability to prove bullying
 - Bullies unwilling to admit
 - Others unable to deal with matter
 - Teachers not able to handle matter
 - If it happens off school property, teachers unable to help
 - School dealing with it
 - Parents don't understand
 - Further bullying
 - Fear of getting into trouble
 - Do not want parents to worry
- Feel Inadequate to respond
 - Helpless
- Belief that it should be kept to oneself
 - Bystanders do not feel responsible to report
 - Bystanders least likely to take action
- Depreciation/Devaluation
- Rationalization
 - Normalization
- Feel they are responsible
 - Limits/rules had been set
 - Already warned

Appendix E: Characteristics of Victim, Bully and Bystander



**Appendix F:
Preliminary Concept Map Describing Anonymity**



**Appendix G:
Final Concept Map Describing Anonymity**

