Cyberbullying in social networking sites: An adolescent victim's perspective.

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Submitted in total fulfilment of the requirements of the degree of Doctor of Philosophy

August, 2014

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Australian Catholic University.

Abstract

In a series of four studies, the aim of the current research project was to examine cyberbullying victimisation in adolecents in social networking sites (SNS). The first study investigated adolescent victims' definition of cyberbullying, the specific types of cyberbullying experienced in SNS and the associated impact . Results showed that participants' definition of cyberbullying was more complex than had been reported in previously published research. The most referenced criterion was impact on victim. It was also found that 68% of victims reported experiencing a combined emotional, social and behavioural impact for each cyberbullying experience and 12% reported no impact at all. The second study, using a qualitative inductive approach, found a set of strong themes relating to factors that either increased the severity of impact of cyberbullying victimisation or buffered victims against the impact. Themes related to publicity, anonymity of perpetrators, features of the medium, presence of bystanders, and individual-level factors were identified as potential influences upon impact severity. The aim of the third study was to develop and investigate the psychometric properties of a measure of exposure to and impact of cyberbullying victimisation in SNS in adolescents, whilst taking into consideration previous measurement limitations. Both qualitative and quantitative methods were used in the development and validation of the Social Networking Experiences Questionnaire (SNEQ). Preliminary psychometric analyses showed that the SNEQ was a valid and reliable measurement tool and has multiple uses in research, education and clinical settings. The aim of the fourth study was to explore whether specific online self-presentation behaviours in SNS increase the likelihood of cyberbullying victimisation for adolescents. This study focused on whether information in SNS profiles contributed to risk of being cyberbullied. Using a comprehensive coding scheme, the contents of adolescents' Facebook pages were numerically recorded and used

to predict cyberbullying victimisation. A number of self-presentation behaviours that predicted victimisation were found. It was concluded that the findings need to be integrated into preventative education programs to assist adolescents in decreasing their risk for cyberbullying victimisation.

Declaration

This thesis contains no material that has been accepted for the award of any other degree or diploma in any university or other institution and, to the best of my knowledge and belief, it contains no material previously published or written by another person, except where due reference is made.

The ethical principles and procedures specified by the Australian Catholic University's policy document on Human Research and Experimentation have been adhered to in the preparation of this report

Signed .....

Date .....

Acknowledgments

There are many people that I am grateful to for their invaluable support throughout my nine years of academic pursuits. Specifically regarding this research project, I would like to thank my two powerhouse supervisors Professor John Gleeson and Dr Xochitl de la Piedad Garcia. I thank them both for their wisdom, perseverance, and good humour. They worked tirelessly with me over the years and I thank them for their professionalism. I also thank the other academic staff in the School of Psychology for their continued support and encouragement throughout the years. In particular, thanks go to Professsor Sheryl Hemphill and Dr Leah Kauffman.

Second, I would like to thank my family. Words cannot describe the enduring love, support, and reassurance that my mother Jan, father Peter, and brother Oli, have provided me during many home-cooked meals and SOS phone calls. I would not have finished this research project without their humour and perspective.

Gratitude must also be extended to the many friends near and far who have supported me in different ways when I needed support and encouragement the most. Undoubtedly, a very special type of support came from the other PhD students I have had the pleasure of studying (and complaining) with: Kim, Joel, Tina, Susan, and Dave. They have made this experience much more enjoyable and filled it with fun, food, wine, coffee, debriefing sessions, and lots and lots of understanding.

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Chapter 1. Introduction and Thesis Outline

1.1 Introduction to Chapter

The World Health Organisation (WHO; 2014) defines adolescence as the "period in human growth and development that occurs after childhood and before adulthood, from ages 10 to19" (p.1). Adolescence is characterised by changes in physical, cognitive, personal and social development. Milestones such as the emergence of abstract thought, self-concept differentiation, and an increase in parent-child relationship equality are achieved during this developmental period (Sigelman & Rider, 2012). Although biological factors associated with adolescence can be considered universal, there are other cultural and socioeconomic factors that can lead to the developmental period of adolescence extending beyond 19 years old (WHO, 2014). For example, in recent decades the transition from adolescence to adulthood has been marked by a "postponement of important developmental markers" (Skaletz & Seiffge-Krenke, 2010, p. 72) such as establishing long-term relationships, careers, and independent residential living. This has led researchers to recognise another distinctive developmental period called emerging adulthood that extends from 18 into the mid-twenties (Arnett, 2000). The term 'adolescence' will be used when referencing both the WHO definition of adolescence and the emerging adulthood period throughout this thesis.

Adolescence is considered a critical period for the development of a personal, individuated identity (Erikson, 1968). During this period, adolescents experiment with their values, morals and where they fit in the world around them (Davis, 2010). Researchers have conceptualised this process as involving an exploration of potential selves/identities and then after some consideration, a commitment to a subset of the alternative identities (Marcia, 1966). Part of this process involves identity exploration through peer interactions (Manago, Graham,

Greenfield, & Salimkhan, 2008). Emerging adulthood has also been conceptualised as a developmental period in which identity exploration and experimentation with different options and directions regarding love, work, and world perception are central (Arnett, 2000). In fact, Arnett (2004) argued that although identity formation begins in adolescence, the period of emerging adulthood is when individuals partake in this process in earnest.

Gaining and maintaining interpersonal relationships is fundamental to the identity formation process (Erikson, 1968). Adolescents and emerging adults engage in interpersonal relationships within numerous social contexts. The rise of information and communications technology (ICT) has seen the development of new social contexts such as chatrooms, online games, and social networking sites (SNS), where adolescents and emerging adults can experiment with and explore different aspects of their identity. Gonzales and Hancock (2008) noted that how individuals present in online environments can act as a "medium for facilitating identity construction" (p. 179). Identity construction involves a process of both the individual claiming an identity in public and of others endorsing that identity (Stone, 1981). Identity construction on the Internet has been investigated for more than a decade and began with studies focusing on how identity is constructed in anonymous environments such as chat rooms and bulletin boards (e.g., Zhao, Grasmuck, & Martin, 2008). More recently, research focus has shifted to include the investigation of self-presentation in less anonymous online environments such as Internet dating sites (e.g., Ellison, Heino, & Gibbs, 2006). Livingstone (2008) highlighted the potential role of the Internet in adolescence:

> The online realm may be enthusiastically adopted because it represents 'their' space, visible to the peer group more than to adult surveillance, an exciting yet relatively safe

> opportunity to conduct the social psychological task of adolescence – to construct, experiment with, and present a reflexive project of the self in a social context (p. 396).

Despite being an environment where users can experiment with aspects of their identity, debate continues within the research literature over the benefits and costs associated with Internet use in adolescence. For example, a cross-sectional study conducted by Selfhout, Branje, Delsing, ter Bogt, and Meeus (2009) found that using the Internet for communication purposes (e.g., talking with friends) was associated with a reduction in the rates of depression and social anxiety. The authors surmised that this was due to an increased sense of social support online. On the other hand, as part of a longitudinal study, van den Eijnden, Meerkerk, Spijkerman, and Engels (2008) found that Internet use, in particular instant messaging, was associated with an increase in depression scores 6 months later. This disparity places adolescents in a position where they must engage in "a careful negotiation between the opportunities (for identity, intimacy, sociability) and risks (regarding privacy, misunderstanding, abuse) afforded by Internet-mediated communication" (Livingstone, 2008, p. 407).

The negotiation between opportunities and risk online can be difficult for adolescents. The Internet affords users the opportunity to communicate and interact with other users anonymously. As a result, Internet users can feel that their online actions will be masked by the millions of other actions taking place at the same time (McKenna & Bargh, 2000), which leads to deindividuation. Deindividuation has been defined as a "psychological state of decreased self-evaluation and decreased evaluation apprehension causing antinormative and disinhibited behavior" (Postmes & Spears, 1998, p. 238). Such a state can produce difficulties managing behaviour, making rational judgments, planning, and regulating emotions rather than reacting to

immediate cues (McKenna & Bargh, 2000, p. 61). Although the period of adolescence sees the beginning of abstract thought, the effects of deindividuation can lead to impulsive and disinhibited behaviours (Zimbardo, 1970). One example of an online behaviour that can be disinhibited is cyberbullying.

1.2 Introduction to Cyberbullying

Traditional bullying and its impact has been the focus of bullying research leading up to the beginning of the 21st century. Traditional bullying has three central definitional criteria: deliberate hurtful behaviour, that is repeated, and where the target finds it difficult to defend themselves (Aalsma & Brown, 2008). It has now become apparent that Internet and mobile phone technologies can also become tools to harass and bully others. Numerous terms describe this phenomenon, including cyberbullying (Belsey, 2005), online harassment (Ybarra, Diener-West, & Leaf, 2007), cyberstalking (Alexy, Burgess, Baker, & Smoyak, 2005), and electronic harassment or online social cruelty (Kowalski & Limber, 2007). Cyberbullying is the term that will be used throughout this thesis.

Cyberbullying is an important phenomenon to research for many reasons. First, although varying prevalence rates have been reported, cyberbullying victimisation has been found to occur at frequencies that are cause for concern. The highest prevalence rates were reported by Juvonen and Gross (2008) who found that 72% of 12-17-year-old participants reported at least one bullying victimisation experience online in the preceding year. Another study found 17.6% of 12-20-year-olds reported being a cyberbullying victim in the 'past couple of months' (Slonje & Smith, 2008). Despite this clear disparity in reported prevalence rates, most studies report that 6-30% of adolescents have experienced cyberbullying victimisation at some point in their lives

(Sabella, Patchin, & Hinduja, 2013). However, prevalence rates are measured across varying time frames which makes cross-study comparisons difficult.

Second, it is important to research cyberbullying victimisation experiences because many victims experience a range of negative outcomes as a consequence. These outcomes include various emotional and psychological impacts (e.g., Dempsey, Sulkowski, & Nichols, 2009; Gradinger, Strohmeier, & Spiel, 2009) and behavioural impacts (e.g., Price & Dalgleish, 2010). Cyberbullying victimisation has also been reported to have an association with suicidal thoughts and behaviours. Hinduja and Patchin (2010) found that cyberbullying victims (10-16 years old Americans) were more likely to experience suicidal thoughts and behaviours than those who had not experienced victimisation. More specifically, cyberbullying victims were also found to be 1.9 times more likely to attempt suicide than those who were not cyberbullying victims. Price and Dalgleish (2010) found similar results in 10-25 year old Australians. The high-profile cases of 'cyberbullicide'– "suicide indirectly or directly influenced by experiences with online aggression" (Hinduja & Patchin, 2010, p. 207) reported throughout the international media (e.g., ABC, 2007; Moor, 2009), are consistent with these findings regarding the most negative outcomes associated with cyberbullying victimisation.

Third, it is important to research cyberbullying, particularly in adolescence, because of the various risks associated with this developmental period. Adolescence has been characterised by a high prevalence of mental health disorders (26% of 16-24 year olds), suicide (37% of deaths amongst 15-24 year olds; Australian Institute of Health and Welfare, 2011a), deliberate self-harm (6.2% of 14-18 year old Australians; De Leo & Heller, 2004), and high risk drug and alcohol use (Australian Institute of Health and Welfare, 2011b). Considering some of these risks associated with the developmental period of adolescence can also be associated with Internet use

and cyberbullying victimisation, it is vital that researchers remain up-to-date with how young people use ICT technology, and the impact of that use.

1.3 Introduction to Cyberbullying in Social Networking Sites

Cyberbullying can occur across numerous media such as e-mail, instant messaging, chat rooms, discussion boards, SNS, blogs, text messages, or pictures and videos sent to mobile phones (Kowalski, Limber, & Agatston, 2008). This thesis focuses on cyberbullying that occurs in SNS. It is important to investigate cyberbullying that occurs specifically in SNS for numerous reasons. SNS use is widespread in teens, young adults, and older adults. As part of the Pew Research Center's Internet and American Life Project, Madden et al. (2013) reported that 81% of American participants aged 12-17 years use SNS. As part of the same project, Duggan and Smith (2013) reported that 73% of adults (above 18 years old) have at least one SNS account. More specifically, participants aged 18-29 years reported the highest SNS use compared to older age groups for Facebook, Twitter, Instagram, and Pinterest. SNS also appear to be used with high frequency. Madden et al. (2013) reported that 73% of 14-17 year olds access their SNS accounts daily and Duggan and Smith (2013) reported that 63% of over 18 year olds access SNS daily. So, if SNS use is widespread within all age groups and plays a central role in the day-to-day lives of users, it is important that more is understood about what occurs within these networked communities. More specifically, it is important to investigate any risks that SNS users are vulnerable to whilst accessing their SNS accounts, such as cyberbullying.

In one of the earliest studies focusing on risks specific to SNS, Ybarra and Mitchell (2008) investigated whether SNS were environments in which young people were vulnerable to sexual solicitation and/or Internet victimisation. Sexual solicitation was defined as being

provided with sexual information or being requested to talk about sex or engage in a sexual activity. Internet harassment was defined as someone spreading rumours or saying rude or nasty comments online. Overall, 14.7% of participants (10-15 years old) reported being the victim of unwanted sexual solicitation and 34% reported experiencing Internet harassment in the preceding year. Of those who reported being targeted, 33.6% reported being targeted for sexual solicitation and 27.3% reported Internet harassment that occurred in SNS specifically.

Lenhart et al. (2011) also investigated cyberbullying in SNS. Although 69% of 12-17 year olds (teens) reported that users are mostly kind to other users on SNS, 88% reported witnessing other users being mean or cruel on SNS (Lenhart et al., 2011). Furthermore, 15% of teens and 13% of adults (18 years and older) reported being the target on 'online meanness' in SNS in the past 12 months. Furthermore, these experiences in SNS reportedly led to various negative outcomes such as the termination of friendships, face-to-face arguments with others, problems with parents, nerves related to school attendance, and physical altercations with others (Lenhart et al., 2011). Consequently, there are concerns from parents, education personnel, policy makers, and law makers about the nature of cyberbullying encounters between adolescents on SNS. Jaishankar and Shariff (2008) reviewed the experience of cyberbullying across multiple countries and noted that research is needed to inform the policy vacuum that exists internationally in order to best manage this form of harassment.

1.4 The Current Research Project

The overall objective of this research project was to investigate cyberbullying victimisation in SNS amongst adolescents and emerging adults. This research project consists of four separate studies, described in four individual journal articles, which address specific

objectives. Each of these separate studies are connected by a unified body of supporting research literature, and apart from the first study, build on the study that came before it.

The first study was designed based on the research literature that outlined the controversies in the current definition and conceptualisation of cyberbullying. It is argued that the research literature on cyberbullying provided little clarity regarding how adolescents conceptualised cyberbullying and the criteria they used to define cyberbullying. It was also found that there was limited information about what types of victimisation experiences adolescents were experiencing in SNS specifically, and the impact of these experiences. Therefore, using a qualitative design, the specific objectives of the first study of this project were:

1. To develop a definition of cyberbullying based on the experiences of adolescent cyberbullying victims;
2. To determine the specific types of victimisation behaviours experienced by adolescent SNS users in SNS;
3. To identify areas in which adolescent cyberbullying victims report having been impacted as a result of cyberbullying victimisation in SNS.

The results of the first study indicated that another gap in the understanding of the impact of cyberbullying victimisation existed. The first study found that there were many cyberbullying victims who reported having been affected by their experience(s), but there was also a group that reported no affect. Considering that the factors that influence differences in cyberbullying impact remains unclear in the research literature, the objective of the second study of this project was:

4. To identify the factors that influence impact severity associated with cyberbullying victimisation in SNS according to adolescent cyberbullying victims.

The third study was designed based on the research literature that outlined the variety of approaches to the measurement of cyberbullying. Previously there had been many inconsistent approaches to the measurement of cyberbullying victimisation which subsequently affected measurement accuracy and estimates of prevalence rates and related constructs such as impact. In order to reliably estimate prevalence rates of victimisation, a reliable and valid measurement tool was needed. This tool was also developed to measure the associated impact of victimisation experiences given the inconsistent approaches to measuring impact. The qualitative data collected from adolescent SNS users about their victimisation experiences and associated impact from the first study of this project, was used to inform the construction of draft items for this measurement tool. Then, as part of the third study, these draft items were pre-tested and piloted on other samples of adolescent SNS users until the final questionnaire was produced. The objective of the third study of this research project was:

5. To develop a reliable and valid measure of the frequency and impact of cyberbullying victimisation in SNS.

Finally, the rationale for the fourth study was designed based on the research literature regarding the factors that place victims at more risk of being targeted by cyberbullying perpetrators. Previous research had focused on risk factors such as the experience of traditional bullying victimisation, gender and Internet use characteristics (e.g., frequency of use); however it

remained unclear whether there were online behaviours that SNS users engaged in that placed them at more risk of being targeted. This study also used the measurement tool developed as part of the third study to measure the victimisation experiences of Facebook users in the preceding 6 months. Consequently, the objective of the final study of this project was:

6. To identify specific online self-presentation behaviours on Facebook that are associated with an increased risk of cyberbullying victimisation;
7. To establish the frequency with which cyberbullying victimisation occurs in SNS in the preceding 6 months for adolescent SNS users.

1.5 The Structure of the Thesis

This thesis includes an introductory chapter followed by three separate literature review chapters; each focusing on the research literature relevant to each of the four studies. The first literature review chapter evaluates the progress and limitations in the previous research literature regarding the definition and impact of cyberbullying. The purpose of this review was to support the design of the first two studies of this project. The first study entailed an investigation into how adolescent SNS users defined cyberbullying and the different impacts associated with experiences of cyberbullying victimisation using semi-structured interviews. The second study also used semi-structured interviews to examine the factors that increased or decreased impact severity associated with experiences of cyberbullying victimisation according to adolescent SNS users.

The second literature review chapter evaluates the progress and limitations of past approaches to the measurement of cyberbullying. The purpose of this chapter was to support the

design of the third study of this project. The third study developed and validated a questionnaire that measured the frequency of cyberbullying victimisation in SNS over the preceding 6 months and the impact of victimisation experiences for adolescent SNS users.

A final literature review chapter is then presented which includes a review and evaluation of the research literature related to self-presentation in SNS and predictors of cyberbullying victimisation. Its purpose was to support the design of the final study of this project which investigated the role of online self-presentation behaviours in SNS on risk of cyberbullying victimisation in adolescent SNS users. Each of the four journal articles is preceded by a brief introduction chapter that reminds the reader of the relevant research literature used to develop the study rationale. These chapters also outline the key findings and conclusions associated with each study. Finally, this thesis concludes with an overall review and discussion chapter. This final chapter reviews the findings, limitations and conclusions of each study and discusses general implications and future directions. The ethics approval letters from the Australian Catholic University Ethics Board and the Department of Education and Early Childhood Development Ethics Board that cover all four studies are included in Appendices A and B.

Chapter 2. Literature Review One

2.1 Introduction to Chapter

New information and communication technologies using the Internet continue to be developed by corporations, government agencies, and individuals. These new technologies then change the way people communicate. According to the Australian Bureau of Statistics (ABS), 79% of Australian households had home Internet access in 2010-11 and 79% of people aged over 15 years accessed the Internet in 2010-11 (ABS, 2011). More specifically, 96% of persons aged 18-24 years and 94% of persons aged 15-17 years had access to the Internet. These two age groups represent the groups with the most Internet access compared to any other age group. The positive aspects of Internet and mobile technologies such as mass mobilisation, real-time communication and widespread access to information and resources should be recognised. Yet, such technologies also provide new opportunities for individuals to use the medium as a vehicle to harass and bully. This phenomenon is typically referred to as cyberbullying.

Cyberbullying has received research attention because of the various negative impacts it is associated with (see Tokunaga, 2010 for a review) and because of its close relationship with traditional bullying victimisation and perpetration (e.g., Walrave & Heirman, 2011). However, there is no agreement on a universal definition of cyberbullying. This creates several challenges. First, it is difficult to measure a phenomenon that has not been clearly defined. Second, the absence of a widely accepted definition leads to the development of measures used only in specific studies, and meaningful cross-study comparisons (e.g., of prevalence rates) become problematic. Accurately measuring cyberbullying is important as a basis for valid empirical research and to inform clinical and educational interventions.

As well as difficulties in defining cyberbullying, the research literature has reported a diverse range of impacts associated with cyberbullying victimisation. Such impacts can oscillate between severe impact and no impact, or can fall on a continuum in between. For example, some studies have reported that there is an association between victimisation and suicidal thoughts and behaviours (e.g., Hinduja & Patchin, 2010), and others have reported that victims are not affected by their experiences at all (e.g., Ybarra, Mitchell, Wolak, & Finkelhor, 2006). Furthermore, little is known about the factors that influence these varied responses to similar victimisation experiences.

This chapter presents a review of the progress and limitations in the definition of cyberbullying in the available research literature, and a review of the impact of cyberbullying victimisation. First, this chapter outlines the different approaches to defining cyberbullying both in the research literature and from the perspective of young people and ICT technology users. As the phenomenon of cyberbullying has been generally defined using the definitional criteria used to define traditional bullying, the advantages and disadvantages of each of these criteria will be reviewed. These criteria are (a) repetition, (b) power imbalance, and (c) intent to harm. This chapter will also include a review of the experience of cyberbullying for victims with a particular focus on the impact of victimisation experiences. Finally, the technological features related to the experience of cyberbullying such as anonymity, limited feedback and infinite audience are presented. The implications that these unique features may have on the impact of cyberbullying victimisation will also be discussed. This literature review will lead to a clear rationale for the first and second articles in this research project.

2.2 The Definition of Cyberbullying

The development of technologies such as the Internet, mobile phones and SNS has seen the users of these technologies engage in behaviours that can lead to various negative consequences for themselves and others. Such behaviours include the harassment of other users through words, pictures, videos, or by hacking. There are a number of different terms used throughout the research literature to describe this phenomenon; however there are often no clear definitional differences between each term. This creates a problem of poor discrimination between the terms as well as a lack of definitional clarity. Such terms include cyberbullying (e.g., Smith et al., 2008), online harassment (Finkelhor, Mitchell, & Wolak, 2000; Ybarra et al., 2007), cyberstalking (Alexy et al., 2005; Finn, 2004), Internet bullying (Williams & Guerra, 2007), cyber aggression (Pornari & Wood, 2010), and electronic bullying (Kowalski & Limber, 2007).

Bullying or harassing someone else online has also been recognised within the aggression literature. Sugarman and Willoughby (2013) noted that inconsistencies remain in the research literature concerning whether or not the construct of cyberbullying is being distinguished from online aggression. Offline aggression has been defined as behaviour that is "aimed at harming or injuring another person or persons" (Parke & Slaby, 1983, p. 50) which differs from definitions of traditional, or offline, bullying in that as well as intent to harm, it includes the two other definitional criteria of repetition and power imbalance (Olweus, 1993). This distinction between aggression and bullying in the offline world has also been supported online, with an experience to be considered cyberbullying if it meets all three bullying criteria (as mentioned above) and cyber-aggression if only intent to harm is present (Sugarman & Willoughby, 2013). However, due to the difficulties encountered when applying the repetition and power imbalance criteria to

bullying in an online world, cyberbullying has been more recently used as the term to capture both experiences where all definitional criteria are met *and* where repetition and power imbalance are not met (Bauman & Newman, 2013). Jones, Mitchell and Finkelhor (2013) noted that experiences online that are not repeated and do not have a clear power imbalance between perpetrator and victim, should be called online harassment. Cyberbullying, however, is the most frequently used term in the peer-reviewed research literature and will be used throughout this thesis.

Just as there are many different labels for overlapping behaviours, the label 'cyberbullying' is associated with multiple definitions. Different studies have defined cyberbullying in various ways and the lack of consensus has been described as "the most pervasive methodological drawback in cyberbullying research" (Tokunaga, 2010, p. 283). The definition of cyberbullying in the research literature often consists of extending the 'traditional' definition of bullying to include bullying that occurs in electronic media. In doing so, the most common definitions of cyberbullying include the three basic components of traditional bullying, namely: repetition, power imbalance and deliberate intent to harm (Olweus, 1993). Repetition implies the repetition of the bullying behaviour and power imbalance implies that the victim has difficulty defending him or herself, (Guerin & Hennessy, 2002). Intent has been defined as a "desire to hurt another" (Tattum, 1997, p.10).

Some of the cyberbullying definitions used in the literature are provided in Table 2.1. The table draws attention to the progression of cyberbullying definitions over time and the differences between each definition. This selection of definitions was chosen because they are the most representative of the different approaches to the definition of cyberbullying.

Table 2.1

Definitions of Cyberbullying Used in the Research Literature.

Author (Year)	Cyberbullying Definition
Patchin & Hinduja (2006)	Wilful and repeated harm inflicted through the medium of electronic text (p.152)
Agatston, Kowalski, & Limber (2007)	Using the Internet to harass and bully others (p. S59)
Kowalski & Limber (2007)	Bullying through e-mail, instant messaging, in a chat room, on a website, or through digital messages or images sent to a cell phone (p. 22)
Smith et al. (2008)	An aggressive, intentional act carried out by a group or individual, using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend him or herself (p. 376)
Slonje & Smith (2008)	Aggression which occurs through modern technological devices, and specifically mobile phones or the Internet (p. 147)

The differences between definitions that use all or only certain criteria from the traditional bullying definition can be seen in Smith et al. (2008) and Patchin and Hinduja's (2006) definitions (see Table 2.1). Smith et al.'s (2008) definition incorporated the three components of traditional bullying and has been used in multiple studies as the preferred

cyberbullying definition (e.g., Menesini & Nocentini, 2009). Patchin and Hinduja (2006) suggested cyberbullying is "wilful and repeated harm inflicted through the medium of electronic text" (p.152). This definition references repetition and intent. Power imbalance was addressed by including a direct reference to electronic text. The authors believed that cyberbullies have power over their victims due to their ability to use technology to harass others. However, this definition did not reference the perpetrator's intent.

Other researchers have detailed specific technologies in their definition as can be seen in Kowalski and Limber's (2007) definition (see Table 2.1). This approach to definitional clarity is problematic because future technological advancements will reduce the relevance of these specific modalities of communication. Consequently, there remains a need for an enduring definition that will not require continual revision as new technologies emerge (Spears, Slee, Owens, & Johnson, 2009). Moreover, other research has defined cyberbullying very broadly without mentioning specific definitional criteria (Agatston et al., 2007; Slonje & Smith, 2008).

One approach used in the traditional bullying literature to improve definitional clarity has been to consider the views of young people who are potential victims and perpetrators. This approach has been essential because research has found that in practice, there are often differences in the definitions provided to research participants in questionnaires (Guerin & Hennessy, 2002). This has consequences for the valid measurement of bullying. It is also important to understand how those involved define bullying as "whether or not an incident is seen as bullying influences how an individual reacts, for instance whether a child tells and how an adult responds" (Mishna, Pepler, & Wiener, 2006, p. 260). Mishna et al. (2006) investigated the factors associated with perceptions of traditional bullying situations by interviewing 18 victimised children in Grade 4 and 5, 20 parents, 13 teachers and 6 school principals. The study

used the Safe School Questionnaire to measure prevalence of bullying and semi-structured interviews to discuss the experience of bullying with the children and their parents. The results from the qualitative study indicated that traditional bullying victims decided that an experience was bullying based on their own definition of bullying. For example, one child reported that she had not been bullied at her current school until she discovered that verbal exclusion was considered bullying. Other key factors in determining an experience as bullying for all participants were whether the perpetrator intended to hurt the victim and whether there was a power imbalance. The study also emphasised the added complexity of identifying bullying amongst friends, as parents reported difficulties distinguishing normal conflict amongst friends from bullying. This is particularly relevant to the measurement of cyberbullying in SNS where individuals connect with others with whom they may share a connection, often a friendship (boyd, 2007). This study showed that there are key differences between personal definitions of bullying as each person has a different view of what separates experiences of bullying from non-bullying. Personal definitions also vary from research literature definitions.

Considering the differences in definitions of cyberbullying, it is important to outline the specific criteria entailed within common definitions, how they are applied to an online environment, and associated challenges to their application. These criteria are repetition, power imbalance and intent and are extended from the conventional definition of bullying.

2.3 Definitional Criteria of Cyberbullying

2.3.1 Repetition.

Traditional bullying behaviour is defined as repetitive in nature rather than occurring only once (Smith, 2011). However, there are a number of problems applying the repetition criterion as it stands for traditional bullying directly to cyberbullying. These problems include distinguishing

between an incident that starts with one victimisation act that is disseminated by others, and those that start with one victimisation act and are seen or accessed by others. Regarding the first problem, Dooley, Pyzalski and Cross (2009) noted that there is often a difference between the perpetrator and victim's perception of the frequency of cyberbullying incidents. For example, repetition is clear when a perpetrator sends a victim more than one threatening instant message. However, the degree of repetition becomes unclear when this same singular message is reposted via SNS by other individuals. In this case, repetition becomes confounded with dissemination. Consequently, the cyberbullying act or behaviour may in fact repeat itself with no repeated involvement from the original perpetrator (Smith, 2011). From the perspective of the victim, this dissemination may be experienced as the original act being repeated even though the perpetrator did not repeat it him/herself.

Regarding the second problem, the criterion of repetition is not very useful when a single offensive comment is posted on a website where multiple people can access it at various time points (Leishman, 2005). This can potentially lead to an increase in the number of potential perpetrators and/or bystanders. Smith et al. (2008) conducted semi-structured focus groups with 11-15 year old students and found that participants believed that when singular acts of cyberbullying are dispersed to an undisclosed audience, there is an increase in harm and psychological impact. These results show the importance of recognising the impact of both singular and repeated experiences on victims and also the role of publicity in these experiences.

The traditional bullying literature has also attempted to contextualise the repetition criterion. Regarding one off traditional bullying victimisation experiences, Arora (1996) argued that a singular attack or threat to a victim who feels powerless may lead to harm that can last for

a “considerable length of time” (p. 319). Such harm can be due to the emotional impact associated with the attack or threat, or the potential for further attacks. Arora concluded that:

> It would therefore be more precise to consider that it is possibly the lasting or *long-term effect* on the victim rather than the systematic or repeated nature of the action/threat which is the more essential feature of bullying. (p. 319)

Other researchers have arrived at similar conclusions. For example, Guerin and Hennessy (2002) conducted semi-structured interviews with 10-13 year old students on their perceptions of what behaviours do and do not constitute traditional bullying. Just over 50% of respondents reported believing that behaviours were not required to be repetitive in nature to constitute bullying. However, just over 25% of respondents reported that a behaviour must occur frequently to be considered bullying. Despite only focusing on a narrow participant age range, this discrepancy highlights the potential need for both repetitive and singular acts to be considered within the cyberbullying research literature. Vandebosch and Van Cleemput (2008) also noted that when considering the definitional requirements of cyberbullying, a single act may be adequate to meet the definition, particularly if the singular act stemmed from a series of face-to-face bullying acts.

Difficulties with the application of the repetition criterion are also evident when focusing on the actions of the cyberbullying perpetrators. France, Danesh and Jirard (2013) focused on self-identified cyberbullying/cyber-aggression perpetrators (14-54-year-olds) and divided them into two groups: those who reported their perpetration ‘episode’ had lasted one day (brief), and those who reported their perpetration ‘episode’ had lasted more than one day (extended). Using an online questionnaire format, more than a third of participants were classified as brief cyber-

aggression perpetrators. This suggests that there is a group of associated victims that are being perpetrated against but whose victimisation does not meet the current definitional criterion of repetition. In a definition of cyberbullying, shorter or single experiences should be captured as well as longer or repeated ones.

Another complexity in the application of the repetition criterion to an online environment is whether or not the cyberbullying experience is direct or indirect. Langos (2012) argued that direct cyberbullying only occurs in communication between the perpetrator and the victim and that indirect cyberbullying occurs in a public cyberspace. Consequently, for an experience of direct cyberbullying to meet the repetition criterion, the experience needs to involve multiple contacts, whereas the repetition criterion is automatically met in indirect cyberbullying because the experience is repeated by virtue of it taking place on a public forum. Langos (2012) also stated that without the repetition criterion being met, experiences should be described as "cyberjoking or playful cyberteasing in the virtual world" (p. 286). However, this distinction may devalue the experiences of those who have a single experience indirectly but experience significant harm as a result. Previous research (as mentioned above) has consistently supported the idea that negative impact is not isolated to repeated experiences online.

With these varying perspectives held by researchers within the research literature, it is challenging to define what is and what is not cyberbullying based only on the repetition criterion. Therefore, it seems that the value of repetition as a criterion for a definition of cyberbullying, based on a traditional bullying interpretation, is limited.

2.3.2 Power imbalance.

Another criterion for cyberbullying that has also been informed by the traditional bullying research literature is power imbalance. An imbalance of power between victim and perpetrator enables discrimination between aggression and bullying (Dooley et al., 2009). A power imbalance in traditional bullying is typically manifested as physical strength or age (Grigg, 2010), "psychological confidence" (p. 97) in face-to-face encounters, or the number of perpetrators against the victim (Smith, 2011). Conceptualising a power imbalance in cyberspace is potentially more complicated. Thus far, power imbalance in cyberspace has been understood as occurring when a perpetrator has more advanced technological skills or media expertise than the victim (Dooley et al., 2009; Grigg, 2010; Nocentini et al., 2010). However, considering the widely reported overlap between traditional and cyber bullying victimisation (e.g., Hinduja & Patchin, 2008), cyberbullying victims may know their perpetrator offline. Consequently, the characteristics that indicate a power imbalance offline may become more relevant online.

To explore power imbalance online, Hinduja and Patchin (2008) used an online survey methodology to collect data from Internet users under 18-years-old in order to identify characteristics of users who were cyberbullying victims, perpetrators, or both. The study results showed that computer proficiency and the amount of time spent online were predictors of both cyberbullying victimisation and perpetration; however beta weights were much smaller for victimisation. Despite conclusions being limited due to relying on a cross-sectional design, such results support not only the idea that perpetrators can create a power imbalance online utilising their online skills, but that victims can often match these skills themselves. Wolak, Mitchell and Finkelhor (2007) explored incidents of online harassment in 10-17-year-olds recruited as part of a national telephone survey. Forty one percent of victims reported retaining some control over

the medium by leaving a website or blocking the perpetrator when the perpetrator was a known peer compared to 75% when the perpetrator was an online only contact. According to Wolak et al. (2007), cyberbullying victims have more power than traditional bullying victims. This suggests that the issue of power imbalance may be unrelated to skills.

However, another perspective on what leads to a power imbalance between victim and perpetrator online concerns the features of online communication. Kowalski et al. (2008) noted that being able to assume a false identity, having the ability to widely disseminate rumours and lies to a potentially endless audience, and being able to access victims anytime and anywhere provides power to a cyberbully. Such technological affordances may also contribute to the power of the perpetrator as they are seen to control the uploading and removal of this material within cyberspace (Langos, 2012). This indicates that the power imbalance may not always be created by the relationship between perpetrator and victim, but rather by an interaction between the perpetrator and the medium. Or, it may mean that in order for an experience to meet the definition of cyberbullying, a power imbalance does not need to exist.

2.3.3 Intent.

The final criterion based on the traditional bullying definition, is the intention to cause harm to another. Intent has been less controversial than repetition and power imbalance within the traditional bullying research literature as most researchers are in consensus about its importance (Guerin & Hennessy, 2002). Olweus (1993) defined any negative action as "when someone intentionally inflicts, or attempts to inflict, injury or discomfort on another" (p.9). Such a definition emphasises that when distinguishing bullying from non-bullying behaviour, there needs to be a clear intent to harm on the part of the perpetrator. However, identifying whether

there is an intention might not always be clear. In terms of cyberbullying, it is often difficult to identify the intention associated with the behaviour. This raises the question of whether or not incidents associated with an intent to cause harm that do not cause harm, or incidents without intent to harm that do cause harm to the victim, should be considered cyberbullying. One factor that adds to the complexity of assessing intent is that perpetrators may be unaware of the impact of their actions on others due to limited feedback from other ICT technology users (Menesini & Nocentini, 2009). Another factor is that victims can be harmed without a clear intent from the perpetrator. Moreover, the traditional and cyber bullying research literature has consistently suggested that for a behaviour to constitute cyberbullying, the victim must be negatively impacted (Guerin & Henessey, 2002; Nocentini et al., 2010).

With the aim of examining 10-13 year old students' definitions of traditional bullying in school, Guerin and Hennessy (2002) supported the above claim. They found that nearly two thirds of respondents who participated in individual interviews did not believe intent was necessary for a behaviour to be defined as bullying. Forty percent of respondents reported that the impact on the victims was more important than the perpetrator's intent when defining a situation as bullying. More specifically, approximately 14% of respondents stated that their decision to consider non-repetitive behaviour as bullying was influenced by the impact of that behaviour on the victim. The same percentage also reported that the impact on the victim was the reason they considered actions that were unintentional as bullying.

It appears that the nature of intent in cyberbullying victimisation experiences can be very subjective according to both victim and perpetrator. Langos (2012) suggested that the most effective way of determining perpetrator intent may be to use the legal framework drawn from

the ‘reasonable person argument’. Langos (2012) argued that comparing perpetrator conduct against the conduct of a “hypothetical reasonable person placed in a similar position as the victim” (p. 288) would be a more objective measurement of intent and would set limitations in the establishment of intention.

2.4 The Impact of Cyberbullying on Victims

Researching and measuring the impact of cyberbullying on victims is important not only because inconsistencies remain in the research literature regarding what type of impact cyberbullying has on victims, but also because an accurate understanding of the associated impact can inform focused and effective education and intervention programs. As discussed below, the lack of definitional clarity and other unique features of online communication can also affect how the impact of cyberbullying is measured and conceptualised.

Research conducted on the impact of cyberbullying on victims has either compared perceived impact of cyberbullying relative to other forms of bullying, or has provided emotional or behavioural correlates of cyberbullying victimisation. In their study on 11-16-year-old London students, Smith et al. (2008) asked participants to rate the perceived impact of cyberbullying compared to traditional bullying (i.e., less, the same, more). Results showed that picture/video clip and phone call bullying were perceived to have a greater impact on the victim compared to traditional bullying. Website and text message bullying were perceived as having the same impact as traditional bullying and chat room bullying. Finally, results showed that instant messaging and email bullying were perceived to have less of an impact than traditional bullying. One limitation of this study was that the perceived impact of cyberbullying victimisation was not operationalised. Therefore, limited conclusions could be drawn regarding the actual experience of impact for the victims.

More recently, Bauman and Newman (2013) constructed a questionnaire with pairs of items describing similar experiences, each of which occurred either offline (traditional bullying) or online (cyberbullying). Respondents were asked to indicate how upset they would be by each experience on a 7-point scale. Results indicated that the extent of distress associated with an experience of bullying is not based on the form (i.e., cyber or traditional), but rather the nature of the experience (e.g., name calling, naked photos or exclusion). Such results indicate that future research on the impact of bullying generally should focus more on the context of the particular incident rather than comparing whether it occurred online or offline. Sticca and Perren (2013) investigated both the influence of form (i.e., cyber and traditional) and the influence of publicity and perpetrator anonymity on the perceived impact of hypothetical bullying scenarios using an online questionnaire format. Participants were in Grades 7-8. Results indicated that regardless of form, experiences that occurred publicly and anonymously were perceived as worse. Contrary to the Bauman and Newman (2013) study, Sticca and Perren (2013) found that experiences that occurred online were perceived as worse than offline experiences. Variance in the results of these two studies may be due to the use of different samples (Grade 7 compared to university students) or because of a different approach to the measurement of impact. Bauman and Newman (2013) measured the impact of specific offline or online victimisation experiences on a seven point response scale ranging from ‘not at all upset’ to ‘extremely upset’. However, Sticca and Perren (2013) instructed participants to rank order a series of hypothetical scenarios from most to least severe.

Other research has suggested that cyberbullying victimisation is correlated with significant emotional and psychological impacts. For example, emotional responses reported in research by victims after cyberbullying are anger, sadness, embarrassment, frustration,

annoyance, fear and feeling terrified (Beran & Li, 2005; Dehue, Bolman, & Vollink, 2008; Price & Dalgleish, 2010; Topcu, Erdur-Baker, & Capa-Aydin, 2008). Dempsey et al. (2009) found that amongst 11-16-year-old American students, cyberbullying victimisation, as measured by four self-report questions regarding whether or not participants had experienced specific behaviours online, was associated with symptoms of social anxiety but, contrary to predictions, not with depression. However, Finkelhor et al. (2000) found that 18% of 10-17-year-old victims of cyberbullying reported five or more depressive symptoms after cyberbullying had occurred. This was more than twice the rate for the overall sample of study participants (victims and non-victims). Furthermore, Hinduja and Patchin (2010) found that cyberbullying victims (10-16 year olds) experienced more suicidal thoughts and behaviours compared to cyberbullying perpetrators. Cyberbullying victims and traditional bullying victims were also found to experience more suicidal thoughts and behaviours than those who had not experienced either form of peer aggression. Cyberbullying victims were 1.9 times more likely to attempt suicide than those who were not cyberbullying victims. Price and Dalgleish (2010) also studied the relationship between cyberbullying victimisation and suicidal thoughts in 10-25-year-old Australians. Of the respondents recruited from the Kids Helpline website and email counselling service, 3% reported having suicidal thoughts and 2% self-harming behaviour which they attributed to the effects of cyberbullying victimisation. These behaviours were measured using an online questionnaire which included both quantitative and qualitative questions. Such results are consistent with high-profile cases of 'cyberbullicide'– "suicide indirectly or directly influenced by experiences with online aggression" (Hinduja & Patchin, 2010, p. 207). Other studies have found that cyberbullying victimisation is associated with low self-confidence (78%

of respondents) and self-esteem (70% of respondents) (Price & Dalgleish, 2010), and loneliness in friendships (i.e., 'I feel left out by my friends'; Ortega, Elipe, & Monks, 2012).

One limitation to the measurement of impact and emotional correlates of cyberbullying is that emotional or psychological indices have been typically scored dichotomously (present/absent) (e.g., Patchin & Hinduja, 2006; Topcu et al., 2008). This does not capture victims who have responded differently to each of their victimisation experiences. It also neglects the fact that the impact of the experience of cyberbullying victimisation may fall on a severity continuum. Furthermore, limited inferential statistics have been used to assess the statistical significance of relationships between cyberbullying victimisation and emotional states; instead frequencies of those who report certain impacts have been reported (Dempsey et al., 2009). There also appears to be an overreliance on hypothetical victimisation scenarios rather than measurement of the impact of real life experiences, limiting the external validity of the results. Furthermore, studies investigating the consequences of cyberbullying victimisation have relied on cross-sectional rather than longitudinal studies. The disadvantages of cross-sectional data collection are well known (e.g., inability to infer causation; Rindfleisch, Malter, Ganesan, & Moorman, 2008). Recently, Schultze-Krumbholz, Jakel, Schultze, and Scheithauer (2012) explored the longitudinal impact of cyberbullying victimisation on students in Grades 7-9. Path analyses showed that for both genders, those with higher victimisation scores at time one (baseline) had higher instrumental aggression scores ("aggressive behaviours used to achieve self-serving goals" (p. 340)) at time two (approximately four months later). For females, only, those with higher victimisation scores at time one scored higher on reactive aggressive and depression measures at time two. Further longitudinal research on the impact of cyberbullying victimisation is required. Lastly, previous research on the impact of cyberbullying has included

victim only samples *or* participants regardless of their experience with cyberbullying victimisation. This also limits the external validity of impact related results.

Ortega, Elipe, Mora-Merchan, Calamaestra and Vega (2012) specifically investigated the emotional impact of both traditional and cyber bullying in adolescent Spanish, Italian and British victims with the aim of producing emotional impact profiles for each type of bullying. Using cluster analysis, 'cyberbullying via the Internet' was found to produce two distinguishable groups: those who indicated no emotional impact and those who reported a wide variety of negative emotions simultaneously. A similar profile was found for 'cyberbullying via mobile phone'. The results showed that across all cultures, 43.9% of respondents indicated they were not bothered by their experience on the Internet and 35.8% were not bothered by their experience via mobile phones. For the participant group that experienced multiple negative emotions, the most referenced emotions for both types of cyberbullying were anger, feeling upset, stressed and worried.

Cyberbullying victimisation is also associated with specific behavioural outcomes. Price and Dalgleish (2010) reported that of cyberbullying victims (10-25-year-old Australians), 35% experienced a negative effect on school grades, 28% on school attendance and 19% on family relationships. In their descriptive study on the experiences of cyberbullying in grades 7-9 students, Beran and Li (2005) reported that of those who reported cyberbullying victimisation, 56% had experienced poor concentration, 21% low school achievement and 13% absenteeism.

Despite the research that has reported the negative impact associated with cyberbullying victimisation, there is also research that has suggested that not all victims of cyberbullying experience negative impact. For example, using an online questionnaire, Patchin and Hinduja

(2006) found that 43% of a group of 9-18 year old victims reported being unaffected by their experience of cyberbullying. Furthermore, the severity of the negative impact may not always be large. Ybarra et al. (2006) found that 62% of victims felt not at all or only a little upset, as reported in telephone interviews. Burgess-Proctor, Patchin, and Hinduja (2009) also found that over half of respondents (12-18-year-old females) reported not being affected by cyberbullying victimisation in any part of their life (measured using a mixed-methods online questionnaire). Qualitative data indicated that many cyberbullying victims exhibited "attitudes of dismissal" (p. 17) towards cyberbullying victimisation which included beliefs such as cyberbullies are "stupid, pathetic and bored", and that they "don't have anything better to do" (p. 17). Such attitudes may explain the often large percentages of respondents who report little to no impact associated with cyberbullying victimisation. Despite this, the reasons behind the different moderating factors influencing impact of cyberbullying victimisation remain unclear.

2.5 Factors that Influence the Impact of Cyberbullying Victimisation

2.5.1 Definitional criteria.

Whether cyberbullying victims can recognise an incident of cyberbullying according to the operational definition may be a contributing factor to the discrepant findings regarding impact. Vandenbosch and Van Cleemput (2008) called for a definition of cyberbullying that was congruent with the perceptions of those who were experiencing cyberbullying. They used the perceptions and experiences of focus groups of 10-18-year-old students, regardless of their direct experience with cyberbullying, and compared these to each behavioural feature of a cyberbullying definition. Participants reported that repetition should be included in a definition of cyberbullying because it enabled the distinction between cyberbullying and cyber-teasing

which was considered to be less severe. Regarding the power imbalance criterion, the members of the focus groups indicated that not knowing the perpetrator was often frustrating and associated with feelings of powerlessness. Such results indicate that there are potential factors related to the cyberbullying definition used that may moderate or mediate the relationship between cyberbullying and various impacts.

Vandebosch and Van Cleemput's (2008) focus groups also explored the concept of intent and its relationship to perceived harm. How cyberbullying was perceived by the victim depended on the relationship between the perpetrator and victim and the degree to which victims felt personally attacked. Participants (see above) in the focus groups also acknowledged that there can be a difference between the way behaviours are intended and how they are perceived. For example, it is unclear if there is a difference between the outcomes from cyberbullying that occur when the perpetrator intends to harm their victim compared to when the perpetrator unintentionally causes harm. In the latter context, the perpetrator may engage in such behaviours for fun or as a joke, yet do not recognise that the victim may interpret the behaviour as harmful. Patchin and Hinduja (2006) noted that cyberbullying should only be considered a problem when it produces harm to the victim. This is important when considering cyberbullying that occurs when the perpetrator has a clear intent to harm, yet the behaviour is not experienced as harmful.

2.5.2 Anonymity and pseudonymity.

One distinct feature of electronic communication that can influence the impact of cyberbullying victimisation is the potential for anonymity and pseudonymity. Perpetrators often believe that they have anonymity because they can use pseudonymous screen names, email addresses, and accounts. By protecting their identity, individuals can disengage from

traditionally restraining societal pressures, ethical behaviour, and conscientious behaviour (Hinduja & Patchin, 2008). The ability to hide behind fake screen names or to steal someone else's screen name and communicate as that person provides individuals with the opportunity to communicate opinions they would otherwise be reluctant to express (Campbell, 2005; Kowalski & Limber, 2007). As part of the Pew Internet and American Life Project (telephone interviews), Lenhart, Madden and Hitlin (2005) found that more than one in three 12-17-year-old adolescents reported communicating content through instant messaging online that they would not say in face-to-face conversations. According to Willard (2005), this occurs due to online disinhibition from the anonymity provided by the online environment. In such cases, individuals can become more disinhibited online than face-to-face. This may lead to an increased level of hostility in online compared to face-to-face communication. Anonymity can also enable rationalisations of harmful behaviours by the perpetrator due to the decreased likelihood of being detected and punished (Willard, 2005). Furthermore, creating a false identity or using a pseudonym does not require advanced technological skills (McGrath, 2009). This may see the emergence of more individuals harassing and bullying others online as there is potentially much less effort involved.

Not being able to see the perpetrator may mediate the impact of cyberbullying for victims. Victims may not know whether they are being bullied by one individual or a group, or whether they know the bully. In their study of middle school students in the United States, Kowalski and Limber (2007) found that almost half of cyberbullying victims did not know the identity of the cyberbully. Similarly, Slonje and Smith (2008) found that 33% of online perpetrators were unknown to the victim (12-20-year-olds) and Dehue et al.'s (2008) study showed that 35% of victims (primary and secondary students) did not know their harasser. Unknown perpetrators are harder to respond to and may force victims to cease their use of

mobile phones and/or the Internet (McGrath, 2009). However, anonymity can operate differently in SNS because some sites are anonymous (e.g., Qooh.me) while others require each user to have a screen name, which is usually their actual name. Despite this, there are certain victimisation experiences that can occur in SNS where the perpetrator may be unknown (e.g., someone hacking into someone else's SNS account). Therefore, the impact of perhaps not knowing the perpetrator is still relevant in SNS.

Nocentini et al. (2010) proposed two new "cyber-specific" (p. 131) criteria in their study on the perceptions of cyberbullying in 11-18 year olds in Italy, Germany and Spain: anonymity and publicity. The authors suggested that not knowing who the bully was may lead to an increase in impact for the victim. Fauman (2008) also noted that anonymity may lessen the importance of the imbalance of the power criterion. Subsequently, Nocentini et al. (2010) conducted a series of focus groups and asked participants to consider whether five control and experimental hypothetical scenarios, each of which highlighted the factors of intent, power imbalance, repetition, publicity (i.e. sending only to the victim versus sending the message for other people to see) and anonymity (i.e. 'a familiar boy/girl' versus someone 'who didn't know him/her personally) could be considered instances of cyberbullying or not. For example, regarding intentionality, the control condition included a scenario in which the target act was performed 'as a joke', while the experimental condition included a target act that was performed in order 'to hurt him/her'. Results showed that, in all countries, anonymity was not considered a key definitional criterion to discriminate between cyberbullying and non-cyberbullying acts. However, this criterion was shown to be important when the impact on the victim was considered as the anonymous hypothetical scenario was reported as worse than the control

scenario. The authors concluded that although anonymity may not constitute an essential feature of cyberbullying, it seems to moderate the severity of the impact on the victim.

2.5.3 Limited feedback.

Another unique feature of computer mediated communication (CMC) that may affect the impact of cyberbullying victimisation is that the medium only provides limited feedback to perpetrators. This lack of feedback includes reduced social and contextual cues such as body language and tone of voice (Smith, 2011). The extent to which an environment in cyberspace involves visual and/or auditory communication has the potential to significantly affect an individual's behaviour and the development of relationships (Suler, 2004). The feedback from a victim to a bully would be different online compared to offline. Online perpetrators cannot necessarily see the impact, particularly in the short-term, caused by their actions, whereas schoolyard bullies can directly observe any physical harm or impact. Without direct feedback, there may be less chance that the perpetrator will feel empathy or remorse, and there may be less opportunity for bystander intervention (Slonje & Smith, 2008). Therefore, it may be easier for perpetrators to engage in cyberbullying (Smith, 2011). However, in some cases there may be more opportunity for bystander intervention. For example, bystanders may choose to communicate privately with the victim or the perpetrator without the knowledge of others.

The intangible nature of email and instant messages means that once they are sent, they disappear from the composer's computer or mobile and can be forgotten about. This may limit the opportunity for rational decision making and consideration of the subsequent impact of that action on the behalf of the perpetrator. Lack of access to non-verbal cues may also increase the likelihood of misinterpreting a piece of online communication (Vandebosch & Cleemput, 2009).

This may mean that benign online communication can be misconstrued as malevolent. This is relevant for the definitional criteria of intent. As mentioned above, there are incidents associated with intent to cause harm that do not cause harm and incidents without intent to harm that do cause harm to the victim. It may be that some of the experiences that do cause harm are interpreted as such because they lack context and tone.

2.5.4 Publicity.

Unlike traditional forms of bullying in which the audience of bystanders often consists of a handful of others who witness the bullying, the potential size of the audience of cyberbullying acts can be considerable. Cyberbullying is also not confined to the school or work day so cyber-victims cannot escape perpetrators readily (Hinduja & Patchin, 2007). Cyberbullying enters the home and can occur at any time which may heighten an individual's sense of vulnerability. Kift, Campbell, and Butler (2010) described the advances in technology as enabling "a seamlessness of conduct and the blurring of bullying boundaries between school and home" (p. 67). Therefore, the breadth of the potential audience to cyberbullying is increased relative to traditional bullying (Campbell, 2005). This can create the potential for the participation of that audience in the cyberbullying incident. Bystanders may have a greater opportunity to share incidents of cyberbullying with other ICT technology users, thus increasing the number of individuals who see the exchange (McGrath, 2009). Support of cyberbullying from fellow Internet or mobile phone users can be achieved through the sharing of pictures, text and videos (Smith et al., 2008).

As acts of cyberbullying victimisation can be seen by others, the notion of publicity may influence the experience of impact for victims. Publicity in online or mobile communication is related to the difference between private exchanges between victim and perpetrator (i.e., inbox

messages or the instant messenger feature in SNS) and incidents where a large audience is privy to the exchange (i.e., uploading of pictures, posting on individual's profile page walls). Slonje and Smith (2008) found that cyberbullying victimisation experiences that occurred in front of an audience in public were reported as the most severe form of cyberbullying. As part of their focus groups, Nocentini et al. (2010) presented participants with two hypothetical scenarios regarding the outcome of the online posted information. The first scenario involved the information being sent only to the victim. In the second, the information was sent so other people could see it. For Italian males, publicity was found to alter the intention of the cyberbullying act. If the act was public, it was considered to connote blackmail or defamation. Yet in all countries, participants considered public forms of cyberbullying as more serious than private cyberbullying. The differing responses regarding the role of publicity in the perceived impact of cyberbullying victimisation indicates that further research is needed to clarify its role.

2.5.5 Technological permanency.

Another unique feature of cyberbullying is the permanency of the cyberbullying incident. Written threats, uploaded pictures and videos can be accessed into the foreseeable future. Campbell (2005) draws a comparison between traditional and cyber bullying:

> When bullies abuse verbally, the victim might not remember every word, but in the case of emails and text, chat rooms and websites, the target student can read what the bully has said over and over. (p. 71)

This can create a sense of reliving the experience and can contribute to the written word having a greater impact than the spoken word (Campbell, 2005). Moreover, screen-capturing (the process of taking a still photograph of your mobile or computer screen in real time) means that

even if text or photos are deleted from their original source, they can still be accessed by disseminating the screen-capture.

2.6 Summary

It is clear from the literature review that there are considerable differences between what researchers and ICT technology users consider to be cyberbullying. McGrath (2009) noted that due to the variety of "personal, disciplinary, cultural and linguistic factors" (p. 21-22) involved, it may be doubtful that one all-inclusive definition can be agreed upon. This may also mean that the cyberbullying definitional criteria are not necessarily different from the traditional bullying criteria, but that the criteria may manifest differently. However, there remains a need to measure this phenomenon in order to enable comparisons across local and international studies. This means that researchers need to construct measurement tools that can be applied to all or most of the definitions currently available. For example, having reviewed research that has indicated that young ICT technology users believe that one off experiences can also be considered cyberbullying, it will be important to find a way to include such experiences in measurement tools and associated definitions. It is also clear that there are differences in how cyberbullying victimisation is experienced by victims. Without a clear understanding of the most common associated impacts and the factors that influence the impact, it will be difficult to develop and provide relevant and effective cyberbullying intervention programs.

In order to fill the gaps in the cyberbullying research literature, the first study of this research project explored the features of harassment that are used by adolescent SNS users to distinguish cyberbullying experiences that occur in SNS from non-cyberbullying experiences. It was anticipated that participants would define incidents based on their own experiences which

may support an approach to the definition of cyberbullying that is contingent on how each experience has impacted the participant personally. This approach is consistent with Arora's (1996) review paper on the problems associated with the definition of traditional bullying. Arora noted that:

> It is much more fruitful and reliable to investigate which observable actions are actually taking place between young people in school which cause them to feel hurt or under stress or which are in other ways perceived as a problem by them, whether these are called bullying or not. (p. 326)

Baas, de Jong and Drossaert (2013) noted that the cyberbullying research literature "lacks a more in-depth research approach honouring adolescents' perspectives on the problem" (p. 248). Therefore, it was contended that in order to develop a more accurate understanding of what is experienced as cyberbullying in SNS, and to complement the progress made in the research literature, it was necessary to consult the victims of cyberbullying and the users of SNS. This group of participants also provided detail about the impact of cyberbullying victimisation as part of the first study. The second study of this research project investigated the factors that influence impact severity.

Chapter 3. Introduction to Article 1

3.1 Title

Cyberbullying in social networking sites: An adolescent victim's perspective.

3.2 Objectives

Within the cyberbullying research literature, there is a lack of definitional clarity regarding the construct of cyberbullying. The most common approach to its definition has been to apply the three traditional bullying criteria (repetition, power imbalance, and intent to harm) to victimisation experiences in cyberspace. However, numerous studies have consistently found that by virtue of occurring in cyberspace, the nature of cyberbullying is different from traditional bullying, and consequently the direct application of the three above mentioned criteria is problematic. Therefore, the first objective of this study was to investigate how adolescent cyberbullying victims classify experiences as cyberbullying.

There is also little research on the victimisation experiences of adolescents in SNS. As SNS use is pervasive amongst adolescents, it is important that prevalence rates of victimisation and types of victimisation behaviours in SNS are known. Consequently, the second objective was to examine the specific victimisation experiences of adolescent SNS users.

Finally, mixed findings regarding the impact of cyberbullying victimisation have been consistently reported in the research literature. For example, some research has suggested that victimisation is associated with a range of negative outcomes such as social anxiety (Dempsey et al., 2009), depression (Finkelhor et al., 2000), and poor school attendance (Price & Dalgleish, 2010). Other research has found that cyberbullying victimisation does not always have a negative impact on the victim (e.g., Patchin & Hinduja, 2006). However, no research has investigated the

impact of victimisation experiences specifically in SNS. Therefore, the final objective of this study was to identify the impact of victimisation experiences in SNS for adolescent SNS users.

3.3 Method

Participants were 25 SNS users who self-identified as having had at least one negative victimisation experience in SNS. Participants (15-24 years old) took part in a semi-structured interview and were asked about their definition of cyberbullying, what type of victimisation they had experienced in SNS, and the impact of those experiences. Interview data was then transcribed and analysed using template analysis. A priori themes for each research question were established after an extensive review of the literature and the coding of a random sample of the interviews. After numerous revisions, a final template was developed and used to code the remaining interviews.

3.4 Results

Regarding the definition of cyberbullying, the results showed that the most referenced criterion used by adolescent cyberbullying victims to define cyberbullying was impact on the victim. Also of importance were the criteria of intent and repetition. However, as well as referencing how these criteria are applied in the traditional bullying literature (i.e., an experience must be repeated and be intended to harm the victim), participants also reported that an experience could be considered cyberbullying if it was a once off experience and if the perpetrator did not intend to harm the victim. The third traditional bullying definitional criterion, power imbalance, was not referenced at all by participants.

The current study also obtained frequencies of 13 different victimisation behaviours that occur in SNS. Finally, regarding the impact of cyberbullying victimisation, results from this

study showed that the most commonly referenced impacts across the whole sample were emotional, behavioural and social. Other reported impacts were coded into cognitive, physical, and no impact areas. The emotional, behavioural and social pattern of impact was also found within each participant's set of experiences.

3.5 Conclusions

Although some previous research has noted that the impact on the victim is important in the conceptualisation of cyberbullying by young people (e.g., Menesini et al., 2012), it has not previously been considered a key definitional criterion in the cyberbullying research literature. Furthermore, no definition of cyberbullying has included both repeated and once off experiences, or experiences that have been intended to harm and those that have not. The results of the current study show that adolescent SNS users have a more complex understanding of what does and does not constitute cyberbullying compared to the research literature. This means that future measurement approaches of victimisation prevalence rates need to be less rigid in their application of definitional criteria to avoid missing certain victimisation experiences.

Results also showed that there were numerous impacts associated with cyberbullying victimisation in SNS, but that mostly these impacts were emotional, social and behavioural. Such knowledge relating to the most common impact areas is essential for the development of cyberbullying prevention and/or intervention programs. Impact results can also inform clinical interventions if victims seek professional support. The results of this study were also used to inform the third study in this research project. Results regarding the impact of victimisation experiences were used in the development of draft items for a measurement tool that aims to

measure cyberbullying victimisation prevalence rates and the impact of victimisation experiences in adolescent SNS users.

Chapter 4. Article 1

Cyberbullying in social networking sites: An adolescent victim's perspective.

Current status: Accepted for publication in *Computers in Human Behavior*.

Appendices

Appendix C: Information Letters and Consent Forms for Adult and Minor Participants (Study 1 and 2)

Appendix D: Interview Schedule for Study 1

Tables

Table 1 *Examples of Participant Responses for Definitional Criteria*

Figures

Figure 1. Percentage of participants who referenced specific definitional criteria.

Figure 2. Percentage of participants who reported experiences of each behaviour on SNS.

Figure 3. Percentage of experiences on SNS for each impact area.

Computers in Human Behavior 36 (2014) 13–20

Contents lists available at ScienceDirect

Computers in Human Behavior

journal homepage: www.elsevier.com/locate/comphumbeh

Cyberbullying in social networking sites: An adolescent victim's perspective

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ARTICLE INFO

Article history:
Available online 6 April 2014

Keywords:
Cyberbullying
Impact
Social networking sites
Definition
Victim perspective

ABSTRACT

Online social networking sites (SNS) are a ubiquitous platform for communication. However, SNS can provide opportunities for abuse and harassment, typically referred to as cyberbullying. The current study examined adolescent victims' understanding of cyberbullying, the specific types of cyberbullying events experienced in SNS and the impact of these events. Twenty-five adolescents (15–24 years old) who responded to an invitation for participants with previous negative experiences in SNS took part in individual semi-structured interviews. Results showed that the basic criteria for the definition of cyberbullying published in previous research were either not referenced by participants, or they were more complex than initially anticipated. The most referenced criterion was the extent to which the experience had an impact on the victim, which is not a current definitional criterion. It was also found that 68% of victims reported experiencing a combined emotional, social and behavioural impact for each cyberbullying experience, and 12% reported no impact at all. These findings will contribute to the measurement of cyberbullying from the perspective of victims, and will also aid the development of intervention strategies based on the most common impact areas.

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1. Introduction

The use of social networking sites (SNS), such as Facebook, Twitter and MySpace, has proliferated during the last decade. A SNS is defined as "a networked communication platform in which participants (1) have uniquely identifiable profiles that consist of user-supplied content, content provided by other users, and/or system-provided data; construct a public or semi-public profile within a bounded system, (2) can publicly articulate connections that can be viewed and traversed by others, and (3) can consume, produce, and/or interact with streams of user-generated content provided by their connections on the site" (Ellison & boyd, 2013, p. 158). SNS enable users to communicate with their extended social network in new ways, and provide opportunities to meet new people who share similar interests, demographics or location (boyd & Ellison, 2008). However, SNS have also been used as a tool for harassment and abuse of other SNS users (Lenhart et al., 2011). Despite the existence of multiple terms, the term *cyberbullying* is most frequently used throughout the literature to describe this phenomenon, and will be used in the current study.

1.1. Definition of cyberbullying

The cyberbullying literature has consistently applied the definition of 'traditional' bullying to the realm of electronic media. Therefore, the most common definitions of cyberbullying are based on the three basic components of traditional bullying definitions, namely: repetition, deliberate intent to harm and power imbalance (Olweus, 1993). While cyberbullying has been consequently defined as "an aggressive, intentional act carried out by a group or individual, using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend him or herself" (Smith et al., 2008, p. 376), there is much variability in the definitions used in the literature. Most of the differences lie in (a) how explicit each of the traditional bullying criteria are (if included at all), (b) the extent to which the definition includes or does not include the technology being used, and (c) the connection to other related concepts such as aggression. This lack of definitional clarity creates a problem of poor discrimination and has been described as "the most pervasive methodological drawback in cyberbullying research" (Tokunaga, 2010, p. 283). It has been noted that due to the variety of "personal, disciplinary, cultural and linguistic factors" (McGrath, 2009, p. 21–22) involved, it may be difficult for an all-inclusive definition to be developed. However, it is still a priority that a reasonable degree of consistency and consensus is reached in the research literature regarding the cyberbullying phenomenon.

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http://dx.doi.org/10.1016/j.chb.2014.03.026
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The choice to define cyberbullying as 'bullying in cyberspace' relies on the assumption that the two forms of bullying only differ in terms of the medium in which the behaviour occurs. However, by virtue of occurring in cyberspace, the nature of cyberbullying may differ from that of traditional bullying. Nocentini et al. (2010) examined the perception of each definitional criterion in a sample of 70 European 12–18 year old students. Interview data indicated that students used the repetition criterion to differentiate between intentional and non-intentional acts. Further, some reported a relationship between repetition and publicity. In particular, participants noted that an act does not need to be repeated at the hands of the perpetrator if it is made public and can be sent or showed to others. One example of this would be when a comment ridiculing a person is posted on Facebook and is seen by hundreds of acquaintances of that person. This is one act on the part of the perpetrator that may be considered a repeated act by virtue of the number of comments it generates. The majority of participants in the Nocentini et al. (2010) study also reported that the effect that a particular SNS behaviour has on the victim and his/her perception of the act(s) can be a more relevant criterion of whether the act is a form of cyberbullying than the intent of the perpetrator. This shows that similar problems extend to the criterion of intent.

A victim may interpret an experience as a form of cyberbullying regardless of whether or not the perpetrator intended for their action(s) to have a negative impact on the recipient. Using groups of young people across six European countries, Menesini et al. (2012) systematically investigated the role of the three traditional bullying criteria and two new cyberbullying-specific criteria (i.e. publicity and anonymity) in the definition of cyberbullying. The authors found that participants identified power imbalance as the most relevant definitional criterion when defining cyberbullying, followed by intentionality and anonymity. Importantly, the researchers defined power imbalance not only as an individual being unable to defend him/herself, in line with how traditional bullying definitions define this criterion, but also as making the victim feel upset; effectively combining two separate elements (impact and powerlessness) in one definitional criterion.

The question of whether or not the definition of traditional cyberbullying should be applied to cyberspace remains unclear. The need for further investigation on what constitutes cyberbullying has been highlighted by many researchers (e.g.,Kowalski, Limber, & Agatston, 2012). In order to improve clarity of the definition, it is suggested that in addition to recruiting research participants from the general adolescent population, participants should be selectively recruited from users of SNS and from self-identified victims of cyberbullying. Therefore, an objective of this study is to turn to the victims of cyberbullying and the users of SNS in order to develop a more accurate understanding of what is experienced as cyberbullying in SNS.

1.2. Experience and impact of cyberbullying

Despite pervasive use of SNS amongst adolescents (Lenhart & Madden, 2007), there remains little understanding of the types of specific victimisation experiences cyberbullying victims are having in SNS. Previous research has investigated the frequency of SNS use in young people, the type of SNS that they use and the way in which they use their accounts (e.g. posting comments and status updates) (Lenhart et al., 2011). However, there is no research focusing on the ways in which the features of SNS are being used to harass and bully its users. Furthermore, the impact that each different type of victimisation experience is having on victims in SNS is largely unknown.

Two main approaches to investigating the impact of cyberbullying have been adopted in previous research. First, there has been a focus on comparisons between the perceived impact of cyberbullying relative to that of other forms of bullying (e.g. Smith et al., 2008). In their study of 11–16-year-old London students, Smith et al. (2008) asked participants (those who had and had not been victims of cyberbullying) to rate the perceived impact of cyberbullying compared to traditional bullying (i.e., less, the same, more). Results showed that picture/video clip and phone call bullying were perceived to have a greater impact on the victim compared to traditional bullying. Website and text message bullying were perceived as having the same impact as traditional bullying and chat room bullying. Finally, results showed that instant messaging and email bullying had less impact than traditional bullying on participants. Second, research has investigated whether cyberbullying victimisation is correlated with emotional and psychological problems (e.g. Dempsey, Sulkowski, Nichols, & Storch, 2009; Finkelhor, Mitchell, & Wolak, 2000) or behavioural outcomes (Price & Dalgleish, 2010). For example, Dempsey et al. (2009) found that cyberbullying victimisation was associated with symptoms of social anxiety amongst 11–16-year-old American students. However, their hypothesis that victimisation would be associated with depression was not supported. On the other hand Finkelhor et al. (2000) found that 18% of 10–17-year-old victims of cyberbullying reported five or more depressive symptoms after cyberbullying had occurred. This was more than twice the rate of depressive symptoms for the overall sample of participants. However, given that each of these studies used different measures of depression it is difficult to directly compare their results. Research has also studied the relationship between suicidal ideation and cyberbullying victimisation. Price and Dalgleish (2010) found that 3% of 10–25-year-old Australians reported having suicidal thoughts and 2% self-harming behaviour as a result of cyberbullying victimisation. Such results support a link between suicide risk and cyberbullying victimisation.

Cyberbullying victimisation has also been associated with low self confidence and self-esteem (Price & Dalgleish, 2010), somatic symptoms (Gradinger, Strohmeier, & Spiel, 2009) and stress (Finkelhor et al., 2000). Victims typically report emotional responses such as anger, sadness, embarrassment, frustration, annoyance, fear and feeling terrified (Beran & Li, 2005; DeHue, Bolman, & Vollink, 2008; Price & Dalgleish, 2010; Topcu, Erdur-Baker, & Capa-Aydin, 2008). Schultze-Krumbholz, Jäkel, Schultze, and Scheithauer (2012) explored the longitudinal impact of cyberbullying victimisation on students in Grades 7–9. Path analyses showed that there were different outcomes for males and females. For both genders, those with higher victimisation scores at time one (baseline) had higher instrumental aggression scores ("aggressive behaviours used to achieve self-serving goals" (p. 340)) at time two (approximately four months later). For females only, those with higher victimisation scores at time one scored higher on reactive aggression and depression measures at time two. Furthermore, Price and Dalgleish (2010) found that cyberbullying victimisation is associated with specific behavioural problems. For example, they reported that of victims, 35% experienced a negative effect on school grades, 28% on school attendance and 19% on family relationships. In their descriptive study on the experiences of cyberbullying in grades 7–9 students, Beran and Li (2005) reported that of those who reported cyberbullying victimisation, 21% had experienced low school achievement and 13% absenteeism.

Despite the research that has reported negative emotional, psychological and behavioural impacts associated with cyberbullying victimisation, there is also research showing that a large proportion of cyberbullying victims report not being affected by the experience. Patchin and Hinduja (2006) reported that 43% of victims (9–18-year-olds) were unaffected. Ybarra, Mitchell, Wolak, and Finkelhor (2006) found similar results in that 62% of victims felt only a little upset or not at all. Burgess-Proctor, Patchin, and Hinduja (2009) also found that over half of victims (12–18 year-old females)

reported not being affected by cyberbullying victimisation in any part of their life. Qualitative data indicated that many cyberbullying victims exhibited attitudes of dismissal towards cyberbullying victimisation which included beliefs such as cyberbullies are "stupid, pathetic and bored", and that they "don't have anything better to do" (Burgess-Proctor et al., 2009, p. 17). Such attitudes may explain the often large percentages of victims who report little to no impact associated with cyberbullying victimisation. Despite this, the reasons for the disparity amongst studies regarding the impact of cyberbullying victimisation remain unclear.

While there are reports of correlations between cyberbullying victimisation and various emotional and behavioural impacts, definite conclusions regarding the experience and effects of cyberbullying on victims requires further research (Kiriakidis & Kavoura, 2010). Given that the present study will focus on the victim's experience of cyberbullying, it presents an opportunity to provide complementary evidence to the research literature regarding the most common impact areas associated with cyberbullying victimisation in SNS specifically.

1.3. Aims and research questions

In light of the problems with current conceptualisations of cyberbullying, which are based on the extension of bullying constructs to behaviours in cyberspace, the present study aimed to develop an understanding of cyberbullying based on adolescent victims' experiences. More specifically, we investigated how victims classify experiences as cyberbullying and the frequency of experiences of cyberbullying in SNS. Furthermore, the study also focused on identifying whether impact patterns emerged across emotional, behavioural and other impact domains of the victims' experiences.

2. Method

2.1. Participants

Twenty-five SNS users who self-identified as having had a negative experience in SNS participated in the study. Participants were 15–24 years old ($M = 18.72$, $SD = 3.03$). Eight participants were male (32%) and seventeen were female (68%). Participants aged 15–17 years were recruited from a secondary school in the Melbourne metropolitan area. Information about the study was printed in the school's weekly newsletter and students were addressed in their assembly about the study and invited to collect information packs from the school's administration office. Participants aged 18–24 years were recruited from Australian Catholic University, Melbourne Campus. A recruitment email was sent to all students which included contact details for the researchers.

Inclusion criteria for participation in the study included: (1) being aged between 15–24 years; (2) using SNS at least twice a week; and (3) having had negative experience(s) involving the use of SNS. The term 'negative experience' was chosen so that participants were less likely to have a preconceived notion that they had been a *cyberbullying victim*, but rather could identify that at least one of their experiences on SNS had impacted on them negatively. Participants who met these criteria and were interested in participating, contacted the researchers and a time for data collection was organised.

2.2. Measures

Data was collected from a series of individual semi-structured interviews. Semi-structured interviews were chosen as there were several a priori research questions yet it was also essential that the participants were given ample opportunity to express their opinions without leading or prompting. The interviews included seven questions covering the participant's opinions and ideas about the definition of cyberbullying, the behaviours that they had experienced in SNS, whether they believed these behaviours constituted cyberbullying, and the impact these behaviours had on them. However, only information related to three of the questions within the larger interview are reported here (see Appendix A).

As part of the interview, participants were provided with a list of 13 negative behaviours (see Fig. 2) that may occur in SNS. These behaviours were generated from an extensive literature review and participants were asked to indicate which of those behaviours they had experienced. An opportunity to provide alternative behaviours that were not on the list was also provided.

2.3. Procedure

The interview began with participants being asked to select the behaviours they had experienced out of the list of 11 behaviours. After doing this, participants were asked to recount their experiences. At that point, the questions that formed the basis of the semi-structured interview were asked. Interviews were conducted by the researcher at the participant's school or university and took between 30 and 45 min.

2.4. Data analysis

Prior to analysis, all participant interviews were transcribed in full and imported into QSR International's NVivo9 software. Data from the qualitative interviews were analysed using thematic analysis. The current study followed the "hybrid approach" to thematic analysis used by Fereday and Muir-Cochrane (2006, p. 83). A hybrid approach includes a data-driven inductive approach as outlined by Boyatzis (1998), and a deductive a priori template approach (template analysis) as described by Crabtree and Miller (1999). Such an approach to data analysis was chosen because the research questions were exploratory (e.g. "what was the impact of this behaviour on you?") so it was important to allow themes (patterns in the data) to emerge directly from the data (inductive coding). Deductive coding was also chosen because some of the questions from the semi-structured interviews were designed to test specific elements of the definition of cyberbullying (i.e., power imbalance, intent and repetition). Therefore, whether or not these definitional features were referenced by participants was of interest to the researchers so became a priori themes in the data analysis process.

Steps in template analysis were sourced for the current study from King (2012) and Crabtree and Miller (1999). Some considerations were also derived from Fereday and Muir-Cochrane's (2006) article on inductive and deductive coding and theme development. A priori themes for each research question were established using two different methods. Firstly, an extensive review of prior research literature was conducted and secondly a random sample ($n = 5$) of transcribed data was taken and coded based on its relevance to the research question(s). This process of deductive coding, which included coding the broad themes imperative to the research questions (i.e., definition of cyberbullying, impact of cyberbullying) and subthemes to each question (i.e., criteria for power imbalance, intent and repetition for the question on the cyberbullying definition), led to the development of the initial template. This template was then used to code all of the transcribed data, linking relevant sections of the text to the suitable codes. During this process, limitations of the initial template were revealed and subsequently modified. Specifically, these limitations led to the addition of subthemes to the 'definition of cyberbullying' theme (i.e. medium, no repetition needed, no deliberate intent

needed, publicity, and impact on victim), and the addition of multiple subthemes to each impact area for the 'impact of cyberbullying' theme. Two more behaviours were also added to the list of behaviours experienced in SNS as they were referenced in the interviews (see Fig. 2). The final template is provided in a supplementary table. To test inter-rater reliability, five randomly selected transcribed interviews were coded by two independent raters and assessed using two-way random intra-class correlations. The average intra-class correlation was .99 indicating high inter-rater reliability.

3. Results

After qualitative analysis of the data from the interviews was completed, some descriptive quantitative analyses were conducted to estimate the percentages of participants who referenced each theme or subtheme for each research question. The results pertaining to each research question are outlined below.

3.1. Research question 1: definition of cyberbullying

One of the main aims of the interviews was to elicit participants' conceptualisations of cyberbullying. A wide range of themes and subthemes were found through the interviews and used in subsequent analysis. Of the three a priori themes (power imbalance, intent and repetition), only intent and repetition were spontaneously referenced by participants. For these themes, participant responses lead to the identification of subthemes at the time of coding. In particular, references to intent were divided into two subthemes: references to the need for the act to deliberately aim to harm the victim and explicit reference to the fact that the act does not need to be deliberate to constitute cyberbullying. Repetition was also separated into two subthemes: reference to the need for acts to be repeated and reference to the fact that acts do not need to be repeated to be considered cyberbullying. There were no references to the a priori theme of power imbalance. Themes that were referenced by participants as cyberbullying definitional criteria but were not part of the a priori themes included: whether the act has an impact on victim, the medium used and the extent to which the act is publicised. Examples of participant responses for each definitional criterion are presented in Table 1. The percentage of participants who referenced each of the above definitional criteria is presented in Fig. 1.

3.2. Research question 2: behaviours experienced in SNS

Determining the specific types of behaviours experienced by adolescent SNS users was also a key objective of the current study. All the reported behaviours are displayed in Fig. 2, along with the percentage of participants who made reference to having experienced each of the behaviours. The prevalence of behaviours experienced across the sample ranged from 4% to 68% of participants. Being defriended on a SNS and having abusive or cruel emails/inbox messages about them sent to others were the two behaviours spontaneously referenced by participants that were not part of the original list presented in the interview. Behaviours that were experienced by more than 50% of participants included having someone post cruel messages or threats about them on their SNS, someone sending them abusive or cruel emails/inbox messages on their SNS, and someone posting cruel messages or threats on someone else's SNS about them.

3.3. Research question 3: impact of cyberbullying

Impact data was analysed in three ways. Firstly, participants were asked about the impact of each of their reported SNS experiences. Responses were coded within one of six general impact areas, namely: emotional, behavioural, cognitive, social, physical and no impact. Overall, 100% of participants reported experiencing an emotional impact due to an experience on SNS. Furthermore, 84% reported a behavioural impact, 80% a social impact, 56% a cognitive impact, 12% a physical impact and 24% reported experiencing no impact at all. These percentages provide a pattern of impact across all participants.

Secondly, the pattern of impact within each participant was analysed to identify whether the pattern observed above (where the three most frequent areas of impact were emotional, behavioural and social) was also present at an individual level. The rate at which participants referenced specific areas of impact was estimated for each case. For example, if a participant had eight experiences and reported that, of those experiences four had an emotional impact, the percentage of emotional impact for that participant was 50%. Fig. 3 shows the average percentage of impact for each area across participants. Note that the overall pattern of results described above was replicated within individual participants, with the highest impact area being emotional followed by social and behavioural.

Finally, the impact areas for each separate experience for each participant were collated and analysed to produce a profile of the most referenced combined impact areas cited for each experience in SNS. The most common impact profile for adolescent SNS users was Emotional–Social–Behavioural (ESB). Seventeen (68%) participants reported this combined profile.

4. Discussion

The main objectives of this study were to: (1) examine the definition of cyberbullying according to adolescent SNS users who report having experienced a negative event in a SNS; (2) identify the specific behaviours experienced by adolescents on SNS; and (3) explore the impact areas associated with experiences on SNS.

Table 1
Examples of participant responses for definitional criteria.

Criterion	Example of participant response
Impact on victim	"It's more about the other person. Because to bully someone the person has to feel bullied and even if you don't mean to, *sometimes you can because it's all about impacting the person*"
Intent (deliberate)	"It's targeting someone and being *intentionally cruel to them*"
Intent (not deliberate)	"If it's a joke where someone else might get offended and you don't realize, I think that's bullying without you knowing"
Repetition (multiple incidents)	"And like constantly getting at someone like not just the one time. . .constantly"
Repetition (once only)	"One experience still makes you a victim"
Medium	"Anything that's classified as bullying but using technology"
Publicity	"Shaming them publicly"

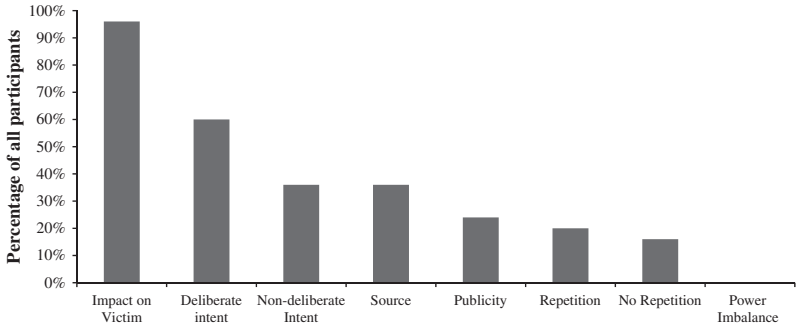

Fig. 1. Percentage of participants who referenced specific definitional criteria.

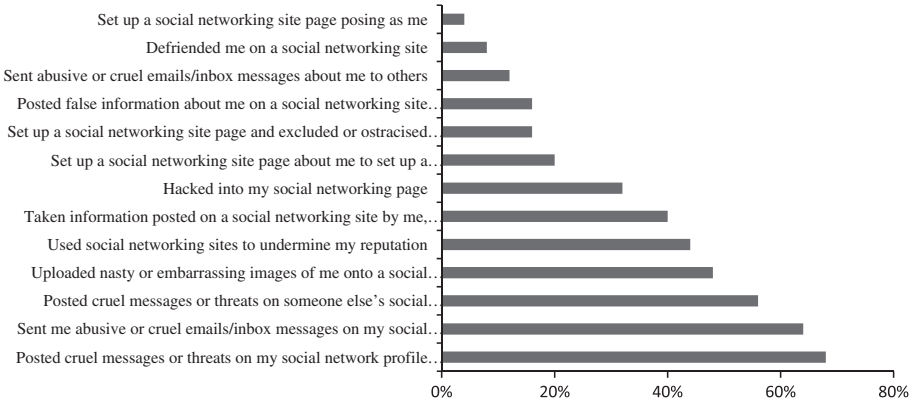

Fig. 2. Percentage of participants who reported experiences of each behaviour on SNS.

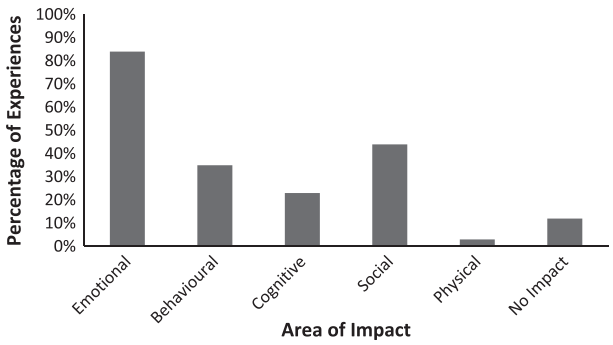

Fig. 3. Percentage of experiences on SNS for each impact area.

4.1. Definition of cyberbullying

The most frequently referenced definitional criterion used by adolescent SNS users to define cyberbullying was whether the cyberbullying experience had a negative impact on the victim. This is consistent with previous research that has shown that impact on the victim is an important criterion used by young people to classify an experience as cyberbullying (Menesini et al., 2012; Nocentini et al., 2010). However, impact on the victim has not previously been a key definitional criterion in the cyberbullying research literature. Instead, research has repeatedly focused its attention on intent, repetition and power imbalance. Therefore, according to established definitions of cyberbullying, the issue of whether an individual had been the victim of cyberbullying or not was defined in terms of the specific features of the actions of the perpetrator (e.g., whether the perpetrator victimised the victim repeatedly or whether their actions had intent). Our data suggest the need to attend not only to the characteristics of the act by the perpetrator, but to the victim's experience of the event.

Furthermore, results showed that previously used traditional bullying definitional criteria are either not used by adolescents to define cyberbullying or they are modified for the cyberbullying context. Results revealed that while intent was the most referenced criterion, only a portion of references involved the belief that intent was a requirement for an act to be considered cyberbullying. However, over a third of participants reported that even when an act does not have the intention to harm, it may be considered a form of cyberbullying. In such instances, classification as cyberbullying was contingent on whether the experience had a negative impact on the victim. Thus, these results indicate that the issue of deliberate intent might not be an essential component of the definition of cyberbullying.

Like with intent, participants' responses regarding the importance of repetition could also be split into two groups. Once again a portion of participants were consistent with previous definitions and indicated that for an experience to be considered as cyberbullying, the experience needed to occur more than once. However, participants also reported that behaviours could be considered cyberbullying based on a single occurrence. One off victimisation experiences could be considered cyberbullying because the single action was particularly severe or because publicity of the act within the SNS performed a similar function to repetition (Nocentini et al., 2010). Indeed a number of participants mentioned the issue of publicity. Interestingly, the criterion of power imbalance was

not mentioned at all by participants. This shows that power imbalance is not considered a defining feature of cyberbullying for adolescent SNS users who have had a negative experience in SNS.

4.2. Behaviours experienced in SNS

With regards to the specific types of victimisation behaviours experienced by adolescents on SNS, results indicated that although there was great variation in the frequency of experienced behaviours, each behaviour in the list constructed based on previous research was reported at least once. Note that the two most frequently reported behaviours differed in the extent to which they were public. The two most reported behaviours included a public event (posting on the victim's SNS page) and an inherently private event (sending cruel private messages to the victim). Thus, public and private forms of aggression were almost equally frequent in our sample.

4.3. Impact of cyberbullying

In terms of the analysis of the impact areas related to each experience on SNS, results indicated that an emotional impact was the most likely consequence of experiencing cyberbullying. Such results are consistent with previous research which has indicated that there is a significant correlation between emotional impact(s) and cyberbullying victimisation (e.g., Dempsey et al., 2009; Finkelhor et al., 2000). Our results are also consistent with research that has indicated that victimisation is associated with behavioural problems (Beran & Li, 2005; Price & Dalgleish, 2010). Interview data also provided support for previous findings that for some cyberbullying victimisation experiences, no negative impact is experienced (Burgess-Proctor et al., 2009; Patchin & Hinduja, 2006; Ybarra et al., 2006). This may be due to other individual level factors such as resilience or self-esteem, however further research is required in this area to clarify why some experiences are not linked with poor outcomes while others are.

Furthermore, results showed that each of these three areas of impact is not experienced in isolation. Analysis of the impact profiles showed that victims tended to report that the experiences of cyberbullying had impacted many areas of functioning. The most common profile of impact across all cyberbullying behaviours studied, was the emotional–social–behavioural impact profile. Importantly, the pattern of impact was the same whether it was estimated by aggregating all participants' data or by looking at the individual experience of impact.

5. Conclusion

This study provides a detailed qualitative analysis of the views and experiences regarding the definition and impact of cyberbullying of adolescent SNS users who have had a negative experience in SNS. The perspective of this population is important to inform the design of acceptable and effective interventions for cyberbullying. This study also has implications for the measurement of cyberbullying in adolescent populations because the key definitional criteria for cyberbullying were found to be either different to, or more complex than, the criteria currently used in the research literature. The current results highlight the discrepancy between the definition of cyberbullying for adolescent cyberbullying victims compared to current research. Such a discrepancy can have an impact on the measurement of victimisation prevalence rates because many studies apply cut offs based on the definitional criteria, thereby potentially missing individuals who may actually be victims (e.g., those who experience a singular victimisation experience).

Results concerning the definition of cyberbullying can be used to inform a more accurate bottom-up definition if needed. However, more importantly, such results may shift the focus away from whether an experience perfectly fits within specific definitional criteria to an understanding of the experiences that have a negative impact on the individual. Results found regarding the fluidity of the definitional criteria, the breadth of experiences in SNS, and the most common impact pattern across and within adolescent SNS users provide key information about areas to target for education, intervention and measurement.

It is important to note that participants in this study were self-selected because they self-identified as having had negative experiences in SNS. It is therefore possible that they may have been more highly motivated to discuss their significant experience(s) or that some of the observed impact patterns may be exclusive to self-identified victims. Therefore their perspectives on what constitutes cyberbullying could be biased and should subsequently be considered as a complementary perspective alongside that of cyberbullying experts. However, the study aimed to focus on the understanding and experience of victims of cyberbullying and, as such, this is not a limitation but a requirement of the present research question.

The current study opens several potential avenues for future research. Firstly, the authors are proposing a revised understanding of the definitional criteria for cyberbullying. In particular, it is suggested that focus is given to the SNS behaviours that have a negative impact on victims rather than focusing on the issues of repetition and power imbalance. This will affect the estimation of the prevalence of cyberbullying victimisation and, in turn, it will affect intervention approaches. Further research should also investigate the way in which the areas and extent of impact of a cyberbullying experience relate to the definitional criteria. While this study's results show that an act may be considered cyberbullying even if it is not repeated, it is reasonable to expect a correlation between the extent of repetition and the degree of impact. Furthermore, it would be interesting to determine whether this is in turn differentially related to the area of impact (e.g. does increased repetition or publicity lead to emotional rather than behavioural impacts?). Future research into the impact of experiences in online environments is encouraged to focus on the factors associated with those who have not had a negative reaction to their experiences. Finally, future research should consider the views and experiences of users of the technology of interest to further expand knowledge of an ever expanding and complex area of research.

Acknowledgements

The authors acknowledge the Department of Education and Early Childhood Development, and subsequently Rosehill Secondary College, for their support in the recruitment of participants and data collection.

Appendix A. Interview questions

Interview Questions

Demographics:

1. How old are you? Years: _____ Months: _____

2. Gender Male Female

3. How often do you access your social networking sites each week?

Twice a week 3-5 times per week 6-10 times per week 11-14 times per week (twice a day) More than 14 times per week (more than twice a day)

1. Please tick which of the following behaviours you have experienced on social networking sites (given list of behaviours).
2. What do you consider cyberbullying to be?
   a. Are there any other factors that are important in the definition of cyberbullying?
   b. Is there anything else?
3. According to the list of cyberbullying behaviours provided to you at the beginning of the interview, you indicated that you have experienced the following behaviours: LIST BEHAVIOURS. Going through each behaviour you have experienced separately, what was the impact of…….for you?

Appendix B. Supplementary material

Supplementary data associated with this article can be found, in the online version, at http://dx.doi.org/10.1016/j.chb.2014.03.026.

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Chapter 5. Introduction to Article 2

5.1 Title

Risk factors associated with impact severity of cyberbullying victimisation: A qualitative study of adolescent online social networking.

5.2 Objectives

Extensive research on the impact of cyberbullying victimisation has identified various associated negative impacts (e.g., Gradinger et al., 2009; Price & Dalgleish, 2010). Yet research has also shown that not every cyberbullying victim is affected negatively by their victimisation experience (e.g., Burgess-Proctor et al., 2009). There has been limited research conducted on this discrepancy in impact. One study found that lower peer related self-esteem predicted being negatively impacted by cyberbullying victimisation experiences (Ortega et al., 2012). Another investigated the role of anonymous perpetrators and publicity of the victimisation on impact experienced. The results showed that experiences that are public and anonymous are associated with a more severe impact (Perren et al. 2012). Despite these studies, the factors that influence impact severity related to victimisation experiences remain unclear. Therefore, the main objective of the current study was to explore what factors influence the risk of negative impact in adolescent cyberbullying victims who use SNS.

5.3 Method

Participants included 25 adolescent SNS users who were aged 15-24 years. Together with age, inclusion criteria for participants were possession of a SNS account, at least twice weekly use of the SNS account, and unspecified ‘negative experience(s)’ in a SNS. Participants took part

in a one-on-one semi-structured interview in which they were asked about how they defined cyberbullying, the victimisation experiences on SNS that they had experienced, and the impact of these experiences on them.

After transcription, qualitative data was analysed using a data-driven inductive approach from a phenomenological theoretical perspective. Raw data was thoroughly read and interpreted multiple times so that themes could be identified. These themes were revised and refined until consensus was achieved between the researchers.

5.4 Results

Themes regarding factors that increase and decrease the risk of impact severity for adolescent cyberbullying victims in SNS emerged from the data. Factors that were found to increase impact severity were if the incident was public in SNS, if the perpetrator was anonymous or if they were a close friend, if the perpetrator did not remove the material from the SNS, and if bystanders (other SNS users) engaged in the incident. Factors that were found to decrease impact severity were if the incident was not public, if the victim was successful in removing offending material from the SNS, and two individual level factors. The first individual level factor was an ability to make the experience into a joke, and the second was a belief about the universality of cyberbullying. In the opinion of participants, these attitudes protected victims against a negative impact related to their experiences.

5.5 Conclusions

The results confirmed the findings of previous research in that there is a range of impact severity related to cyberbullying victimisation. Results regarding the role of publicity and

anonymity were also consistent with previous research. However, results also provided new insight into factors that influence the severity of impact such as individual level attitudes about the universality of cyberbullying victimisation and the ability to make victimisation experiences into a joke. Furthermore, results highlighted the important role that perpetrators and bystanders play in increasing or decreasing the associated impact for victims. These results are useful for generating hypotheses which can be tested quantitatively through further research. By understanding what increases and decreases the impact of cyberbullying victimisation according to adolescent victims, parents, school personnel and other organisations working with individuals involved in cyberbullying will be able to determine strategies to reduce and/or prevent the impact of cyberbullying victimisation. Targeted cyberbullying education and prevention programs will also be able to use these results, particularly for the purpose of garnering the support of perpetrators and bystanders in reducing the incidence of cyberbullying and negative impacts.

Chapter 6. Article 2

Risk factors associated with impact severity of cyberbullying victimisation: A qualitative study of adolescent online social networking.

Current status: Accepted for publication in *Cyberpsychology, Behavior, and Social Networking*.

CYBERPSYCHOLOGY, BEHAVIOR, AND SOCIAL NETWORKING
Volume 17, Number 5, 2014
© Mary Ann Liebert, Inc.
DOI: 10.1089/cyber.2013.0541

Risk Factors Associated with Impact Severity of Cyberbullying Victimization: A Qualitative Study of Adolescent Online Social Networking

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Abstract

Cyberbullying victimization is associated with a range of emotional and behavioral outcomes for adolescents. However, previous research has shown that this type of victimization does not affect all individuals negatively. The factors that account for individual differences in reactions to the same online experiences are not well understood. Using a qualitative inductive approach, a set of strong themes relating to factors that either increased the severity of impact of cyberbullying victimization or buffered victims against the impact emerged from interviews with 25 adolescents aged 15–24 years. Themes related to publicity, anonymity of perpetrators, features of the medium, presence of bystanders, and individual level factors were identified as potential influences upon impact severity. The implications of these results for further research and for school/university cyberbullying prevention programs for victims, perpetrators, and bystanders are discussed.

Introduction

CYBERBULLYING IN ADOLESCENCE is gaining increased research attention because adolescents' use of the Internet, in particular social networking sites (SNS), continues to increase rapidly.[1] Cyberbullying victimization has been found to be associated with symptoms of social anxiety,[2] depression,[3] suicidal ideation,[4] somatic symptoms,[5] low self-confidence, and low self-esteem.[4] Behavioral problems such as a decline in school grades and school attendance, and negative impacts on family relationships[4,6] are additional consequences. However, there is also evidence that not all cyberbullying victims are negatively affected by their victimization.[7,8] These discrepant findings suggest that not enough is known about the specific factors that influence individual differences in reactions to the same online experiences. This knowledge is critical to the design of effective interventions for the prevention of negative outcomes associated with cyberbullying victimization.

There has been little research conducted on the predictors of negative impact associated with cyberbullying victimization. One study that focused on 12–17 year old cyberbullying victims showed that gender (being female), lower peer related self-esteem, and less support from parents and friends were significant predictors of being negatively affected by cyberbullying via mobile phones.[9] However, only lower peer related self-esteem predicted being negatively affected by victimization via the Internet. The authors concluded that victims who are more affected by victimization may be less resourceful and resilient because they have lower self-esteem and higher levels of loneliness, which transfers into online environments. However, it has been noted that studies should no longer distinguish between mobiles and the Internet due to both now being offered in combination (i.e., smartphones).[10]

Numerous studies have shown that the impact of cyberbullying is more severe than traditional bullying.[11,12] So researchers have speculated that the increased impact of cyberbullying may be due to cyberbullying specific features. These features may account for some of the difference in severity of impact experienced by cyberbullying victims. Candidate features have included the larger breadth of the potential audience, the potential for perpetrator anonymity, the permanency of the written word/image, and the ability for perpetrators to access victims 24 hours per day. To date, research has focused only on the contribution of anonymity and publicity to individual differences in the impact of cyberbullying experiences. For example, one study investigated the role of two ''cyber-specific'' criteria for bullying, namely, anonymity and publicity (in addition to repetition, intent and power imbalance), on the perceptions of cyberbullying in 11–18 year olds in Italy, Germany, and Spain.[13(p131)]

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The authors found that the impact of cyberbullying was more severe when the perpetrator targeted the victim from an anonymous phone number or was personally unknown to the victim. Further, public exchanges between the perpetrator and the victim (i.e., sending the message so other people can see) led to a more severe impact than private exchanges (i.e., sending only to the victim). Together, these two results led Nocentini et al.[13] to conclude that both the anonymity and publicity of exchanges are crucial factors in moderating the nature and severity of the experience of cyberbullying on the victim. Furthermore, another study investigated the influence of publicity and perpetrator anonymity on the perceived impact of hypothetical bullying scenarios using an online questionnaire format.[14] Results indicated that regardless of form (online or offline), experiences that occurred publically and anonymously were perceived as worse, and, in general, experiences that occurred online were perceived as worse than offline experiences.

Given that not all cyberbullying victims are negatively affected by their experiences, it is important to consider what factors reduce impact for victims. The use of more adaptive coping strategies is believed to safeguard cyberbullying victims from negative impacts.[15] One study that investigated whether specific coping strategies buffered the impact of cyberbullying found that seeking support from significant others was associated with fewer depressive symptoms, whereas engaging in avoidant coping strategies (e.g., withdrawal, self-blame) resulted in more depressive symptoms.[16] Furthermore, the study found that victim assertion (retaliation) toward the perpetrator was associated with more depressive symptoms. Another study that used a mixed-methods online approach to investigate strategies used by 10–25 year old victims to cope with face to face and cyberbullying victimization found that the most frequently used online strategies were blocking the bully and removing the bully from their list of online friends.[4] The authors also investigated the self-reported effectiveness of the strategies used in terms of how ''helpful'' they were for the victim. Results indicated that blocking the bully was helpful (''sort of'' or ''very'' helpful) for 76% of victims, and removing the bully from their list of friends was helpful for 66% of victims. Despite clarifying the perceived helpfulness of strategies, it is unclear from these results exactly how or how much victim strategies influenced the impact of cyberbullying. Burgess-Proctor et al.[7(p17)] found that respondents (12–18 year old females) who reported not being affected by cyberbullying victimization in any part of their life indicated ''attitudes of dismissal'' toward cyberbullying victimization, which included beliefs such as cyberbullies are ''stupid, pathetic and bored,'' and that they ''don't have anything better to do.'' Such attitudes may explain the often large percentages of respondents who report little to no impact associated with cyberbullying victimization. Despite this, the reasons behind the different moderating factors influencing impact of cyberbullying victimization remain unclear.

The aim of the current study was to identify the factors that affect the impact of cyberbullying upon adolescent victims who use SNS. More specifically, the study sought to clarify which factors increased or decreased the severity of impact for cyberbullying victims. As this is a relatively underresearched area, a qualitative and exploratory design was utilized.

Method

Participants

Participants were recruited from a secondary school in the Melbourne metropolitan area and from Australian Catholic University, Melbourne Campus. Invitations to participate in the study were disseminated via e-mail or by addressing students in school assemblies. The final sample of participants was 25 adolescents aged between 15 and 24 years ($M = 18.72$, $SD = 3.03$). Eight participants were male and 17 were female. Participants were required to have a SNS account, use it at least twice a week, and to have had an unspecified ''negative experience(s)'' in a SNS. Of the participants, 64% accessed SNS more than twice a day, 16% twice a day, 12% 6–10 times per week, and 8% three to five times per week.

Procedure

Semi-structured interviews were conducted with each participant separately. Participants were asked open ended questions about their definition of cyberbullying, their experience(s) in SNS, and the impact of these experiences on them at the time (e.g., What do you consider cyberbullying to be? What was the impact for each experience you have had?). Interviews were conducted by the researcher at the participant's university or school and lasted between 30 and 45 minutes.

Data analysis

Prior to analysis, all participant interviews were transcribed in full and imported into QSR International's NVivo10 software. Data from the qualitative interviews were analyzed using a data driven inductive approach[17] from a phenomenological theoretical perspective.[18] A phenomenological approach was deemed appropriate because we aimed to investigate each individual's account of their experience(s) in SNS and their interpretation of that experience. An inductive approach was chosen because it allows ''research findings to emerge from the frequent, dominant, or significant themes inherent in raw data, without the restraints imposed by structured methodologies.''[17(p239)] The analysis was conducted by rigorously and systematically reading and interpreting the raw data multiple times. Themes were organized in a hierarchy so that upper level themes represented all of the lower level themes. Key quotations from the data were placed under their relevant theme(s), thereby capturing core details and information reported by participants. The research team revised and refined the themes until consensus was achieved between the researchers.

Findings

The thematic analysis highlighted factors that potentially placed cyberbullying victims at greater risk of being negatively impacted by their victimization experiences and factors that reduced the severity of impact. Themes referenced throughout the interviews are presented below.

The role of publicity

A significant theme that emerged from the interviews was the role of publicity in moderating the impact of

cyberbullying victimization. Participants reported that the impact of their experience(s) was amplified if the information or photos shared in SNS were available for other users to see. One participant reflected:

> Because it was online for everyone to see, it's more embarrassing.

Others suggested that although their experience(s) had some degree of adverse impact, the impact was more manageable if the experience occurred out of the public eye. For example:

> It was easier to deal with than something that's public. I find that really annoying if it's public.

These comments support conclusions from previous research[12] that public forms of cyberbullying are considered worse than private forms and that publicity is central in predicting the severity of the experience for the victim.

The role of anonymity

Another theme that emerged from the interviews, which reportedly contributed to impact severity, was whether or not the perpetrator's identity was known to the victim. Also a factor was if the identity was known—whether the victim was friends with or familiar to the perpetrator. Participants reflected on how the anonymity of the perpetrator can increase feelings of loneliness, fear, and persistent worry about the identity of the perpetrator. One participant reflected:

> So the anonymous side of it when people don't actually show who they are … that can hurt a lot because it could be close friends and you don't actually know who sent it.

Another participant reflected on the difficulty associated with not knowing the perpetrator:

> I felt victimized and scared because I didn't know who'd done it.

The role of anonymity as a contributor to impact severity is supported by the results of previous research.[12] However, participants also reported that being close to the perpetrator, and therefore knowing who was responsible for the bullying, intensified the impact for them. For example:

> That had a huge effect on me because that person used to mean so much to me.

It appears that the effect of anonymity is complex, as respondents expressed beliefs that not knowing the perpetrator increases impact severity *and* that severity of impact is high if they were close to the perpetrator.

Unique features of the medium

Participants consistently reported that the manner in which posted information was handled by the perpetrator was another factor that contributed to the impact of SNS experiences. Many participants voiced feelings of hopelessness and helplessness because they were unable to remove material posted onto other SNS users' profile pages. One participant noted:

> When people post stuff on other people's walls, you can't delete it so it's there and you tell them to delete it but they don't care how you feel.

Conversely, when victims were successful in persuading someone to remove the information or pictures, participants reported that the incident was subsequently resolved and feelings of distress were reduced. When reflecting on someone posting cruel messages or threats on her SNS page, one participant commented that:

> It didn't have too much impact because it got taken down. But I don't appreciate the personal information up there. I was panicky until I saw the comments were taken down.

These results indicate that the impact of experiences in SNS is dependent on how much control victims have over the features of the medium and how promptly perpetrators remove distressing material.

The role of bystanders

In SNS, bystanders are other users of the site and can be either the profile owner's friends or a friend of these friends. Consequently, the number of individuals who have access to posted information or pictures is potentially substantial. A central theme that arose from the interviews was how experiences on SNS are worse when others become involved in the harassment or bullying. For example:

> Coz everybody's friends with everybody on Facebook, they can all jump on the bandwagon and it's all just you getting lashed at on your own profile so everyone sees it. And especially once something gets over 20 or so comments and 20 or so likes, then it comes up in people's popular top news. So as soon as they open it up, it's the first thing they see.

Another participant reflected on the impact of bystanders engaging in the incident:

> Everyone would see it and everyone was getting involved and having their input when it wasn't needed. It made the situation 10 times worse.

Facebook is a social platform, so it is not surprising that participants reported that when they were subject to cyberbullying, they sought support from other Facebook users. However, when that support was not forthcoming, the impact of their experience was amplified. Participants reported that the impact was more severe when online bystanders did not stand up to perpetrators on their behalf. The importance of being unable to trust or count on the support of other users in determining impact is supported by previous research[9] that found that those who felt more affected by their experiences in SNS had lower peer related self-esteem.

Individual level factors

A number of individual level factors were referenced by participants as buffering against an increase in severity of impact from cyberbullying victimization. The first common factor referenced by participants was that they had an ability to joke about their experience(s), which protected them from negative impact. For example, when discussing the impact of someone posting a naked photo of him on a SNS, one participant stated:

> I took it as a joke … I still take it as a joke … I thought it was going to be a short term thing so I was fine with it—trying to see the lighter side of it.

This response may indicate a personal strategy used for coping with a wide range of adverse experiences. This was the case for the following participant:

> I'm one of those people … if I find a situation uncomfortable or if I feel someone's not doing the right thing, I'll kind of laugh it off. And so I kind of make it into a joke.

Other participants referenced additional characteristics that protected them from experiencing negative impact related to victimization. Such characteristics included positivity, a thick skin, high self-esteem, confidence, and being easy going. Participants seemed to be describing a general resilience factor that they relied upon to protect against adverse events, not just on SNS.

The final individual level factor that emerged from the interviews as a protective factor against negative impact was a belief about the universality of cyberbullying. When asked about the impact of someone uploading embarrassing images of her on a SNS without consent, one participant noted:

> Who cares? Everyone's got embarrassing photos of themselves.

Others expressed a normative perspective that reduced the impact of cyberbullying because this is what is expected during adolescence. One stated:

> That is something that would happen to anybody at our age; they're always trying to find out who the top dog is and always trying to undermine each other to get the better reputation. Everybody in this age group will be doing that to each other.

Such an attitude may act as a rationalization by victims for processing the perpetration of cyberbullying. However, despite reducing the impact of victimization, cyberbullying should not be considered something that happens to all.

Discussion

The current results confirmed the range in severity of impact associated with cyberbullying victimization. The results supported prior findings such as the role of anonymity and publicity in moderating the impact severity of cyberbullying.[13,14] Experiences on SNS that occurred in public were considered worse than private exchanges. However, anonymity proved to be more complex than previous conceptualizations in research. Not only does not knowing the perpetrator increase impact severity, but so too does knowing and being close to the perpetrator.

The results also provided insight into new factors that potentially contribute to the severity of impact associated with cyberbullying victimization. First, this study identified several individual level factors that predict a lower severity of impact related to cyberbullying victimization. For example, interpreting an experience as a joke and believing that everyone experiences some sort of cyberbullying victimization were found to be factors that safeguard victims from being severely affected by their experiences. Although such attitudes may represent a general resilience from the offline world transferring to the online world, further exploration of their impact is required. Such attitudes may prevent victims from seeking support from friends, parents, or teachers, and may restrict victims from providing feedback to perpetrators regarding the impact of their actions.

Results also showed that a perpetrator's decision whether or not to remove distressing material (e.g., photo or post) from their SNS profile influenced the subsequent impact experienced by victims. Sensitizing potential SNS bullying perpetrators to the potential impact of specific online behaviors on levels of distress experienced by cyberbullying victims may lead to behavior change. Therefore, these results will inform interventions for cyberbullying perpetrators. More specifically, because some users may post material unintentionally, it is important that they understand the impact of leaving the material online.

Multiple studies have highlighted the importance of bystanders in the prevention and management of cyberbullying.[19,20] Regarding the role of bystanders, our results highlighted that although SNS users may not believe that liking or commenting on a status or photo that somebody else has posted causes them to become another perpetrator, such actions do contribute to the severity of impact for victims. This finding can also inform the development of prevention programs that encourage bystanders to take a stand against cyberbullying rather than becoming involved, albeit passively.

These results provide an important first step in the development and validation of an empirical framework for understanding the factors that moderate the impact for adolescent cyberbullying victims. This may help inform future models of coping with cyberbullying victimization and targeted intervention programs for victims to develop coping strategies to best counter negative impact.

The present study focused specifically on participant perceptions of SNS. However, from the interviews, it was apparent that most participants were responding to questions in the context of experiences on Facebook. As different SNS continue to gain popularity, further research is needed to assess whether similar or different factors contribute to the impact of cyberbullying victimization in each SNS. Furthermore, the current study has identified factors that affect impact severity using a qualitative design. In order to improve external validity, quantitative approaches to this topic are required. This will provide an opportunity for a valid and reliable assessment tool to be developed that systematically investigates contributing factors to impact and the extent to which they contribute.

In summary, this study has several important implications for various groups of individuals. By understanding what increases and decreases the impact of cyberbullying victimization according to adolescent victims, parents, school personnel, and other organizations working with individuals involved in cyberbullying will be able to determine strategies to reduce and/or prevent the impact of cyberbullying victimization, and also harness the support of bystanders and perpetrators in this pursuit.

Acknowledgments

The authors acknowledge the assistance of the Victorian Department of Education and Early Childhood Development with participant recruitment and also participants' valuable contribution to the study.

Author Disclosure Statement

No competing financial interests exist.

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Chapter 7. Literature Review Two

7.1 Introduction to Chapter

The problem with inconsistent definitions of cyberbullying is further confounded by an inconsistent approach to the measurement of cyberbullying. Without a uniform approach to its measurement, comparisons between cyberbullying studies have been extremely difficult. The main goal of cyberbullying measurement thus far has been to estimate prevalence rates of both cyberbullying victimisation and perpetration. This has been assessed mostly by self-report questionnaires and surveys (e.g., Tynes, Rose, & Williams, 2010). Other research has included focus groups (Agatston et al., 2007) or interviews (Tynes, 2007) to measure the prevalence of cyberbullying. Some researchers have used traditional bullying questionnaires as a basis for the construction of a measure of cyberbullying (e.g. the Revised Peer Experiences Questionnaire or the Olweus Bullying Questionnaire) and added cyberbullying related questions onto the already validated measure (Dempsey et al., 2009; Wang, Iannotti, Luk, & Nansel, 2010, respectively). Other researchers have developed their own instrument to measure cyberbullying without providing a rationale for its necessity or superiority over others, and often without reporting any reliability or validity data (Tokunaga, 2010).

The following chapter reviews the progress and limitations in the measurement of cyberbullying. An analysis of how limitations have developed and affected the measurement of both cyberbullying perpetration and victimisation, and an overview of alternative approaches to the measurement of cyberbullying will be presented. Such measurement inadequacies include (a) inconsistencies in the measurement of prevalence rates which arise from how questions and response options provided in cyberbullying measures are constructed; (b) the variability in the length of reference time periods over which participants are asked to recall incidents of

cyberbullying (which affects comparability between studies); (c) the lack of reported psychometric properties of measures and related constructs; and (d) differences in the specific cyberbullying behaviours or environments that are measured and the overall purpose of the cyberbullying measurement tool. Despite the fact that many of these concerns have been outlined in the traditional bullying measurement research, similar problems remain evident in the cyberbullying measurement research. These measurement problems have contributed to reports of cyberbullying victimisation prevalence rates that range from 6% (Finkelhor et al., 2000) to 72% (Juvonen & Gross, 2008) across multiple age groups.

7.2 Inadequacies in the Measurement of Cyberbullying

7.2.1 Purpose of the Measurement Tool

As previously mentioned, cyberbullying questionnaires and surveys have overwhelmingly been constructed to measure the prevalence rates of both victimisation and perpetration. Given that research into cyberbullying and its associated constructs is in its early stages, questionnaires typically include a vast number of questions that tackle multiple areas regarding the cyberbullying phenomenon. For example, Li (2010) constructed the 'Cyberbullying Student Survey' and included questions on the respondents' experience of cyberbullying (including reaction, actions after the cyberbullying incident, who the respondent told, and who helped the respondent). The questionnaire also assessed the reasons why individuals become cyberbullies, attitudes towards cyberbullying, witnessing cyberbullying (including frequency of being a witness, response to witnessing cyberbullying, whether or not the respondent would report the cyberbullying and to whom), and opinions about cyberbullying

(including how to stop cyberbullying and how the respondent interacts within the online world). Similarly, Smith et al.'s (2008) 'Cyberbullying Questionnaire' included 88 multiple choice questions and two open-ended questions regarding frequency of cyberbullying perpetration and victimisation, whether the respondent had heard about cyberbullying occurring in school, the perceived impact of cyberbullying compared to traditional bullying, the number and gender of the cyberbullies, the duration of victimisation, who the victim had told, and what the respondent thought may stop cyberbullying from occurring.

Including such broad data collection should be considered a logical first step in the measurement of a new phenomenon. However, authors continue to develop measurement tools solely for use in their own studies which limits progression towards consistent measurement of key variables related to cyberbullying (e.g., impact). This is a disadvantage for measurement because there is a strong need to systematically investigate variables such as the causes or impact of cyberbullying in greater depth, rather than continuing to follow a purely exploratory approach. Furthermore, measurement tools should be developed with the ultimate aim of comparability of data from each study (e.g., through a meta-analysis). This will enable greater understanding of any differences and what causes these differences.

7.2.2 Differences in Measured Technological Environments and Behaviours

There are numerous forms that cyberbullying can take and environments in which it can occur due to the proliferation and increased sophistication of CMC and mobile technology. Incidents of cyberbullying traverse several media such as e-mail, instant messaging, chat rooms, discussion boards, SNS, blogs, text messages, or pictures and videos sent to mobile phones or uploaded onto the Internet (Kowalski et al., 2008). Hinduja and Patchin (2008) also referred to

online environments such as voting/rating websites where visitors to the website can rate a person's physical attractiveness, virtual worlds (i.e., simulated environments where individuals communicate through avatars), and online gaming. Arguably these environments should all be included in the measurement of cyberbullying. However, this is not necessarily straightforward because within each environment, a variety of behaviours can occur. With a focus on the bullying environment, Smith, Mahdavi, Carvelho, and Tippett (2006) subdivided the term cyberbullying into seven categories: (a) text message bullying, (b) picture/video clip bullying (via mobile phone cameras), (c) phone call bullying (via mobile phone), (d) e-mail bullying, (e) chat room bullying, (f) bullying through instant messaging, and (g) bullying via websites. A potential limitation of this categorisation however, is that Facebook and other popular SNS did not exist in 2004 and therefore were not included in this taxonomy. This highlights the fact that the pace at which technology progresses can make research outdated fairly rapidly.

Furthermore, as technology develops and different types of environments for communicating become more popular, the list of ways in which individuals can bully and harass others extends. Because of this, some research has instead focused on the specific behaviours used rather than the environment in which cyberbullying occurs. Kowalski et al. (2008) focused on related behaviours such as flaming which refers to a "brief, heated exchange between two or more individuals" (p. 47) and happy slapping where individuals are filmed whilst being slapped or assaulted in other ways.

The fact that there are multiple technological environments and associated behaviours involved in cyberbullying, many questionnaires only ask about certain modalities of CMC such as instant messaging or sending/receiving pictures. For example, Ybarra and Mitchell (2004) asked participants two questions about their experience of online harassment that referred to

"rude or nasty comments on the Internet" or "using the Internet to harass or embarrass someone with whom the youth was mad" (p. 323). Dempsey et al. (2009) made reference to four different cyberbullying behaviours: (a) text message/instant message, (b) comments on web space walls, (c) threatening emails, and (d) the creation of a mean or embarrassing web page about the individual. Such research subsequently reports prevalence rates that are only based on a small number of behaviours that fall under the cyberbullying umbrella. Others have sampled a much broader range of behaviours (Akbulut, Sahin, & Eristi, 2010; Calvete, Orue, Estévez, Villardón, & Padilla, 2010; Topcu et al., 2008) or environments where cyberbullying can occur (Kowalski & Limber, 2007). The difference between these two approaches can affect not only the observed prevalence rates, but also the conceptualisation of cyberbullying in research, educational settings and the media.

The rapid evolution of CMC environments poses another challenge to the measurement of cyberbullying. Measurement tools need to keep up to date with these changes and remain relevant. To limit the scope of this task, surveys/questionnaires could focus solely on one technological environment (e.g., chatrooms, SNS) or one area of enquiry (e.g., impact of cyberbullying victimisation or coping strategies used to deal with cyberbullying victimisation). This means that measurement tools will measure each variable rigorously and in sufficient detail so that each feature of the phenomenon of cyberbullying can be understood accurately.

7.2.3 Inconsistencies in the Measurement of Prevalence Rates

Regarding the measurement of traditional bullying, Solberg and Olweus (2003) noted that there has been significant variability in reported prevalence rates of victimisation and perpetration across studies for multiple reasons. These reasons include a reliance on different

data sources (e.g., self-report questionnaires or peer nominations), the presence or absence of a definition of bullying in a questionnaire, varying time frames or reference periods, variability in response or rating categories, and the use of single items to measure prevalence versus composite scores or scales. Despite the fact that these concerns have been outlined in the traditional bullying measurement research, similar problems are evident in the cyberbullying field. The factors that have contributed to the reporting of inconsistent, variable prevalence rates will be discussed below.

7.2.3.1 Problems with the construction of questions.

7.2.3.1.1 Definition.

In their report for the Internet Safety Technical Task Force, propositioned by the Multi-State Working Group on Social Networking of State Attorneys General of the United States, Schrock and boyd (2008) noted that differences in the operationalisation of prevalence based questions across studies may explain the wide disparity in reported cyberbullying rates. The researchers pointed out that the reported differences in cyberbullying rates may be accounted for by varying levels of detail in the definition of cyberbullying contained within questionnaires. For example, at the beginning of his survey, Li (2010) provided a paragraph long definition of cyberbullying and then proceeded to ask participants (Grade 7-12 students), based on the definition provided, "how often have you been cyberbullied?" or "how often have you cyberbullied others?" (p. 388). Other studies also provided participants with definitions of cyberbullying referencing specific mobile phone and online behaviours (Beran & Li, 2005; Menesini, Nocentini, & Calussi, 2011; Ortega et al., 2012; Patchin & Hinduja, 2006), while

others provided no specific information or definition of the construct (Akbulut et al., 2010; Calvete et al., 2010; Topcu & Erdur-Baker, 2010; Tynes et al., 2010).

A number of concerns arise when analysing questionnaires which do or do not provide participants with a definition of cyberbullying as a reference point to structure their answers. First, as discussed previously, there is not a universal definition of cyberbullying. Therefore, most questionnaires that provide a definition before any ensuing questionnaire items provide different definitions. For example, the cyberbullying definition Menesini et al. (2010) used in their cyberbullying measurement tool clearly referred to the three pillars of the traditional bullying definition: repetition, power imbalance and intent. However, Patchin and Hinduja (2006) provided a definition of cyberbullying that highlighted the importance of repetition and intent, but did not refer to a power imbalance. Not only is the lack of consistency in presented definitional criteria a concern for future meaningful cross-study comparisons, but it also creates a challenge for the respondent to respond to the questionnaire items accurately (Tokunaga, 2010). Furthermore, Li (2010) did not provide her participants with a definition of cyberbullying, but she did provide a list of behaviour-based experiences that were examples of cyberbullying. Ybarra (2009) conducted a systematic literature review of research papers on cyberbullying published between 2000 and 2008. Half of the 14 studies reviewed provided a definition of cyberbullying. Ybarra compared the prevalence rates of the studies that provided a definition with the studies that only provided questions that referenced behaviour-based lists of experiences (e.g., sharing embarrassing pictures, being called names by others, rumours spread by others) and found that behaviour-based lists of experiences yielded a higher prevalence rate than a definition-based measure. Furthermore, Solberg and Olweus (2003) noted that questionnaire respondents are more likely to infer what is meant by bullying when there is not a clear

definition consequently affecting the reliability of the prevalence rates. These concerns outlined above create significant problems with comparing the prevalence rates estimated from each study and raise a number of questions about whether a definition should be provided at all.

Berne et al. (2013) conducted a systematic review of cyberbullying (and related concepts such as Internet harassment and electronic bullying) measurement tools published prior to October 2010. The review collected information on how each tool measured cyberbullying victimisation and/or perpetration (e.g., scales and subscales, device or media measured) and the presence or absence of psychometric properties. In terms of the definition of cyberbullying (or related construct) provided to respondents, 40 out of 44 referenced intent to harm, 25 out of 44 included the repetition criterion and only 12 out of 44 referenced the imbalance of power.

In order to further examine the effect of the presence of a definition of cyberbullying and the use of the word 'bully' contained in questionnaires on prevalence rates, Ybarra, Boyd, Korchmaros and Oppenheim (2012) compared the responses of 1200 participants (6-17 year-old) randomly allocated to one of four different forms of a survey question on cyberbullying victimisation: the definition-only form, the 'bully'-only form, the definition plus word 'bully' form or neither the definition nor the word form. The bullying definition referred to behaviours that are repeated, involve a power imbalance between perpetrator and victim and occur over time (more than once a day). Despite noting that the definition used followed on from the Olweus' (1997) definition, no reference was made to intent to harm. Instead, a criterion of over time was included. This new criterion extended the repetition criterion to include experiences that occurred over more than just one day. Results indicated that including the word 'bully' (i.e., 'we say a young person has been bullied') in the introduction text of a cyberbullying measurement

tool resulted in prevalence rates that were similar whether or not the cyberbullying definition was provided. The same results were found when the word ‘bully’ was not included irrespective of whether a definition was provided. Furthermore, when comparing those forms that included the word ‘bully’ to those that did not, the form that did not include ‘bully’ had higher prevalence rates. Results also indicated that when provided with a list of specific examples of bullying experiences, not including either a definition or the word ‘bully’, resulted in the highest prevalence rates of bullying. The authors concluded that when completing a measurement tool, participants may not be reading the definition carefully, or that the definition is not meaningful to them. This supports the notion that differences between researchers’ conceptualisations of cyberbullying and differences between researchers’ and young people’s conceptualisations have an impact on its reliable measurement.

7.2.3.1.2 Single item versus global questions.

Inconsistency in the construction of questionnaire items also creates a problem for the estimation of prevalence rates because, as previously mentioned, specific behavioural item measurements can yield higher prevalence rates, especially when compared to global item assessments (Gradinger et al., 2010). For example, Burgess-Proctor et al. (2009) found that 38% of 8-17-year-old females responded affirmatively to the statement “I have been bullied online”. However, when asked later in the survey about their experiences with specific cyberbullying behaviours (such as being ignored by others or disrespected by others), a greater number of participants responded affirmatively (45.8% and 42.9% respectively). Such results showed that despite potentially meeting the criteria for being a victim of cyberbullying, many do not consider themselves to be a victim. Or, participants may have had an “unclear comprehension” (Gradinger

et al., 2010, p. 210) of the global construct of cyberbullying because participants may not have thought to include the specific cyberbullying behaviours under the global construct of cyberbullying. This could therefore suggest that for questionnaires to accurately assess prevalence rates, global items should not be used. However, Ybarra (2009) suggested that it may be that prevalence rates increase with specific lists of cyberbullying behaviours because more opportunities are created for a respondent to respond in the affirmative. Or there may be a problem of recall versus recognition of the outlined cyberbullying behaviours.

A limitation of using global items only to represent the construct of cyberbullying is that no information regarding the specific cyberbullying behaviours can be collected as the prevalence questions are worded too broadly. Using broad questions to define multidimensional constructs is a problem for various reasons including unreliability of items and the inability to elicit detail (Griezel, Craven, Yeung, & Finger, 2008). For example, Hinduja and Patchin's (2010) cyberbullying offending and victimisation measures explicitly outlined the behaviours that comprised cyberbullying in the questions, e.g., "took a picture of someone and posted it online without their permission" or "received an upsetting email from someone you didn't know (not spam)" (p. 212). This approach provided the researchers with a greater opportunity to understand the phenomenon of cyberbullying from a behavioural perspective which is vital to inform subsequent interventions or education. Questionnaires or surveys must therefore consider whether or not the specific behaviours that constitute cyberbullying are of importance or whether global prevalence rates will suffice.

7.2.3.2 Problems with the response options.

Valid estimates of prevalence rates of cyberbullying have also been difficult to achieve due to differences in response options offered to participants across cyberbullying measurement tools. In a review and synthesis of cyberbullying research, Tokunaga (2010) noted that cyberbullying was often measured with one or two response items with dichotomous choices (yes/no responses). For example, Li (2007) developed a questionnaire that measured both traditional and cyber bullying and provided participants with yes/no responses to the statements "I have been cyber-bullied (e.g., via email, chat room, cell phone)" and "I have cyber-bullied others" (p. 1789). Prevalence rates were simply reported as percentages based on whether the respondent answered yes or no. Other cyberbullying prevalence rates have been collected in a similar way (Burgess-Proctor et al., 2009; Finkelhor et al., 2000; Lenhart & Madden, 2007; Wolak et al., 2007). Such response options do not allow for the measurement of the extent of repetition because yes/no responses cannot differentiate single from repeated online incidents. Furthermore, such response items also have the potential to create confusion in participants as they are forced to separate all the components of a multidimensional construct and answer yes or no when their experience may only meet a proportion of the required criteria (Tokunaga, 2010).

Unfortunately, questionnaires that have provided more response options for participants have done so at the cost of the repetition criterion. For example, questionnaires either use frequency estimate response options such as 'never, sometimes or often' (Calvete et al., 2010) or 'never, once/twice, a few times, many times or almost every day' (Beran & Li, 2005), or reference periods such as 'once or twice a year, a few times this year, about once every week, about a few times every week or never' (Ang & Goh, 2010). Such response options do not

include the option of including a once off experience. Topcu and Erdur-Baker (2010)'s Revised Cyberbullying Inventory appears to be the only measurement tool which enables the distinction between single aggressive acts and cyberbullying by providing the following response options: 'never, once, twice or three times, more than three times'. Using response items that do not clearly reflect the continuum that exists between a single aggressive act and a repetitive act, especially when repetition is referenced in the definition of cyberbullying provided, creates a problem for the accurate conceptualisation of cyberbullying and the comparison of prevalence rates. Furthermore, actual prevalence rates may be difficult to determine when response options reference a specific number of times victimisation has occurred (Tynes et al., 2010). For example, Li (2007) provided the response options "less than 4 times, 4-10 times and over 10 times" to the statements "I have been cyber-bullied" and "I have cyber-bullied others". Moreover, cyberbullying questionnaires have yet to distinguish between those incidents perpetrated repetitively by the same individual and incidents that may have multiple perpetrators such as different individuals disseminating photos or defamatory comments.

Gradinger et al. (2010) noted that the repetition criterion for a cyberbullying definition should be captured accurately in the response items provided in questionnaires. The authors focused on traditional and cyber bullies and classified them as either occasional or frequent bullies based on two cut-off scores representing the frequency of behaviours experienced in the preceding two months (lenient vs. strict). The 'lenient' cut-off was 'one or two times' and the 'strict' cut-off was 'two or three times in the last two months'; placing the response option firmly in the repetition criterion threshold. As previously mentioned, this study also investigated the effect of global versus specific item measurement methods; investigating the interaction of these methods with 'lenient' and 'strict' cut-off scores. The study found that the 'lenient' cut-off

produced a higher rate of traditional and cyber bullies compared to the ‘strict’ cut-off. More specifically, when using a global item and a lenient cut-off score, 18% of respondents reported they were cyberbullies compared to 51% using specific items. When using a strict cut-off score, global items produced a 3% prevalence rate of cyberbullies compared to 13% using the specific item assessments. The authors concluded that the differences in frequencies of cyberbullies highlight the importance of the specific approach to measurement used to gather prevalence rates for either victimisation or perpetration. Furthermore, when using strict cut-off scores for response options, the difference between the estimated frequencies from global versus specific items is more evident.

Cyberbullying measurement tools therefore need to provide response options that are sensitive to the repetition criterion. Furthermore, comparisons between prevalence rates produced by cyberbullying measurement tools need to take into account both the cut-off score and whether or not specific or global items were used.

7.2.4 Variation in the Duration of Time Periods.

Another feature of the measurement of cyberbullying that has varied across published studies is the duration of reference time periods over which participants are asked to recall incidents of cyberbullying (David-Ferdon & Hertz, 2007). Some research has used the preceding 2 months (Kowalski & Limber, 2007; Ortega et al., 2012), the preceding 6 months (Topcu & Erdur-Baker, 2010; Ybarra, Espelage, & Mitchell, 2007; Ybarra et al., 2007), the preceding year (Tynes et al., 2010; Wolak et al., 2007) or no specified time period (Akbulut et al., 2010; Calvete et al., 2010; Li, 2010). Age comparisons become almost impossible as different time periods mean participants can draw on their reported experiences of cyberbullying from varying age

points. For example, studies measuring the cyberbullying experiences of youth that do not specify a time period may in fact be gathering data on experiences that occurred earlier during childhood. Considering the rapidly changing technology, the year of publication also needs to be taken into account in the interpretation of findings.

Ybarra (2009) investigated the time periods provided in 14 cyberbullying research papers (study dates ranged from 1999-2008) and found that five papers did not specify a time period, five used 'ever in the past year', two used 'ever in the past couple of months', one used in the 'current school year' and one used 'this semester'. Ybarra found that in the sample of research papers selected for comparison, time period did not appear to have a significant effect on prevalence rates. However, Ybarra concluded that this may be the case due to the considerable variability in reported prevalence rates across the studies included in this chapter (6-72%). Either way, time periods for response options on cyberbullying measurement tools need to be taken into consideration when comparing prevalence rates and other outcome measures across studies.

7.2.5 Inconsistent Reporting of Validity and Reliability.

Throughout the research on cyberbullying, reporting psychometric data on measures of cyberbullying and its related constructs remains inconsistent. This may have occurred due to the exploratory nature of many surveys and questionnaires developed specifically for each research article. For example, Li (2007) did not provide any psychometric data for her cyberbullying survey. Tokunaga (2010) speculated on the future of cyberbullying research and surmised that the development of valid and reliable measurement tools to "improve the overall quality of research by allowing scholars from divergent perspectives the opportunity to measure constructs equitably" (p. 283) is a priority.

Some researchers have reported some psychometric properties of their cyberbullying measurement tools. For example, Topcu and Erdur-Baker (2008) developed the Cyber Bullying Inventory after a series of face-to-face interviews and focus groups with teachers and students in Turkey. A revised version was then published in 2010 after a review of the recent literature and a further focus group of students aged 16-18 years who were recruited from Turkish schools. In the revision, both cyberbullying perpetration and cyberbullying victimisation loaded onto a single factor each. Internal consistency of the victimisation and perpetration scales were $\alpha = .82$ and .75, respectively. Convergent validity of the inventory was conducted using the Traditional Bullying Questionnaire developed by Topcu (2008). The relationship between the questionnaires was positive and statistically significant indicating that there was a considerable overlap between those who engaged in traditional bullying and cyberbullying perpetration and those who were victims of traditional bullying and cyberbullying. The validity of this inventory across cultures has yet to be determined.

Furthermore, Tynes et al. (2010) developed the Online Victimization Scale (OVS) consisting of four subscales representing the construct of online victimisation. The scales were general victimisation, sexual victimisation, individual racial discrimination and vicarious racial discrimination. Two confirmatory analyses were conducted on data from 14-19 year old participants and both sets of analyses supported the hypothesised four-factor model for online victimisation. To validate the OVS, several measures that have been found to be associated with traditional victimisation were used including the Profile of Mood States-Adolescents (Terry, Lane, Lane, & Keohane, 1999), the Rosenberg Self-Esteem Scale (Rosenberg, 1965), the Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983) and the Satisfaction with Life Scale (Diner, Emmons, Larsen & Griffin, 1985). The OVS was associated with all inventories.

Berne et al. (2013) also reviewed reported psychometric properties of published cyberbullying measurement tools as part of their systematic review. They found that 18 out of 44 instruments reported internal reliability (internal consistency) and 24 out of 44 studies included a report of convergent validity data. Furthermore, the authors noted that no other form of reliability data apart from internal consistency was reported, and convergent validity was the only form of validity reported. Furthermore, only 27% of published tools used exploratory or confirmatory factor analysis to categorise subscales. Based on their findings, the authors concluded that focus should now be on reaching agreement of what cyberbullying is and on examining the psychometric properties of existing measures (if relevant to the data being collected) instead of consistently developing new measures.

Although there have been some researchers who have reported measurement psychometrics appropriately, there needs to be more consistent reporting. This will encourage the repeated use of available measurement tools which will support cross-study comparisons and reduce the proliferation of measurement tools developed solely for the collection of data in a singular study.

7.3 The Impact of Culture on the Measurement of Cyberbullying

A few studies have outlined the various terms used across countries to describe traditional bullying (e.g., Smith, Cowie, Olafsson, & Liefooghe, 2002) and cyberbullying (e.g., Nocentini et al., 2010). Nocentini et al. (2010) investigated the terms used by adolescents to describe cyberbullying behaviours, and whether these terms were the same across countries. Results indicated that there is not always a direct translation of the term ‘bullying’, and therefore ‘cyberbullying’, in languages other than English. For example, the term ‘cybermobbing’ was

used in Germany, harassment or harassment via the Internet or mobile phone in Spain, and virtual- or cyberbullying in Italy. Menesini et al. (2012) went on to explore whether culture had an impact on the conceptualisation, or definitional criteria of cyberbullying. Italian, Spanish, Swedish, German, Estonian and French 11-17 year-old participants were randomly allocated a series of scenarios combining the presence or absence of cyberbullying definitional criteria. Results indicated that French participants were more likely to indicate that a scenario was an example of cyberbullying. Support for the criterion of imbalance of power was generally accepted across cultures, whereas intentionality was slightly less accepted in Italy and Germany compared to the other countries' respondents. The researchers attempted to contextualise the high frequencies of cyberbullying responses by the French participants by explaining that in the same year that the data had been collected, a large campaign on school and cyber-violence took place in schools, potentially increasing their awareness of what constitutes cyberbullying. This research indicated that culture can have an impact on the conceptualisation and experience of cyberbullying. However, there remains a strong need for further research in this area. Therefore, cultural and language differences need to be considered when developing a cyberbullying measurement tool and when interpreting the results from such a measurement tool. This is especially important when the impact of an event, such as the cyber-violence campaign in France, can influence the reporting of cyberbullying experiences.

7.4 Summary

Despite notable progression, there are numerous limitations to the measurement of cyberbullying victimisation and perpetration. There are some simple recommendations that if adopted, could aid future research progress in this area of growing significance. Researchers need to have prior measurement goals and report these goals when developing a cyberbullying

measurement tool. Below are a series of specific points to take into account during such a process.

1. Consider the definition of cyberbullying to be used in the respective research and explicitly state the definition used and how or if each definitional criterion will be measured.
2. Choose a clear purpose for the measurement tool. Consider what variables are to be measured. Consider the length of the questionnaire/survey and the subsequent effect on the respondents' responses.
3. Choose what environments to measure. Considerations need to be made regarding whether the measure will focus on one CMC or mobile technology environment or behaviours across all environments.
4. Choose what behaviours to measure. Considerations need to be made regarding whether the measure will include all cyberbullying behaviours or a selection of behaviours (e.g., uploading pictures or exclusion).
5. Definition – add in introduction text or not? Consider the purpose of the presence or absence of a cyberbullying definition in the measure. More specifically, consider what definition will be used (see point 1) and which definitional criteria are included in that definition and how this may affect the responses from respondents.
6. Consider whether or not to use single or global item questions. When collecting data, the format of the questions asked needs to be carefully considered based on the required outcome(s). Single item questions produce different data and results compared to global item questions.

7. Consider the type of response options provided for respondents. For the measure to be sensitive to the repetition criterion and enable cross-study comparisons, careful consideration needs to be taken when constructing measurement response options.
8. Time frame provided – will the time frame provided over which respondents are asked to recall incidents of cyberbullying affect the overall prevalence rates? The time frame provided needs to be explicitly stated so that cross-study comparisons can take place.
9. Reliability and validity psychometrics need to be reported. The following are examples of psychometrics that should be considered, depending on the measurement tool, when piloting and validating cyberbullying measurement tools: internal consistency reliability, test-retest reliability, content validity, criterion-related validity, convergent validity, and/or discriminant validity.
10. Consider the culture of the population being measured and whether the culture will affect the interpretation of results or the construction of the measurement tool.

Chapter 8. Introduction to Article 3

8.1 Title

The development and validation of the Social Networking Experiences Questionnaire (SNEQ): A measure of adolescent cyberbullying and its impact.

8.2 Objectives

To date, the measurement of cyberbullying has been problematic within the published empirical research literature. Problems include (1) inconsistencies in the measurement of prevalence rates which arise from problems with the construction of questions and problems with the response options in cyberbullying measures, (2) differences in the duration of reference time periods over which participants are asked to recall incidents of cyberbullying, (3) a lack of reported psychometric data on measures of cyberbullying and its related constructs, and (4) differences in the specific cyberbullying behaviours or environments that are measured and the overall purpose of the cyberbullying measurement tool. Despite the fact that many of these concerns have been outlined in the traditional bullying measurement research, similar problems remain evident in the cyberbullying measurement research. Therefore, the present study aimed to develop a measure of experience (prevalence) and impact of cyberbullying victimisation that improved on the above mentioned limitations. The second objective was to examine the psychometrics properties of this measurement tool.

8.3 Method

The development of the draft questionnaire items involved two sources of data. First, an extensive review of the current cyberbullying and traditional bullying research literature was conducted; with particular focus on previous cyberbullying measurement tools. Secondly, the qualitative data regarding the experiences and associated impact of adolescent SNS users from the first study of this project was reviewed. Next, the research team generated draft items for the cyberbullying victimisation and impact of experience components of the questionnaire. A pre-testing phase was then conducted using a sample of 18 adolescent SNS users with the purpose of refinement and checking misinterpretations for each item. After the interviews, the feedback from participants was incorporated into a revised questionnaire for piloting. As part of the piloting process, participants were asked to complete the draft cyberbullying questionnaire and a series of other questionnaires used for construct validity analyses. Exploratory factor analysis (EFA) was conducted on the impact items and internal consistency reliability and convergent validity was calculated for all impact subscales and the experience of cyberbullying scale. To assess construct validity, correlations between the SNEQ experience and impact subscales and other theoretically associated constructs were conducted. These constructs included traditional bullying victimisation and perpetration, and two subscales of the Neuroticism scale of the International Personality Item Pool (IPIP) NEO-PI-R (depression and anxiety).

8.4 Results

The EFA process was conducted using polychoric correlations because variables were ordinal. The final factor structure included five impact factors: health impact, positive growth, emotional impact, social impact, and SNS behavioural impact. Cronbach's α values for the

cyberbullying victimisation scale and all five impact subscales ranged from .76-.95. Regarding construct validity, consistent with previous research, the SNEQ cyberbullying victimisation experience scale showed significant positive relationships with traditional bullying victimisation and perpetration, depression and anxiety. Regarding the associations between the impact subscales and the other measures, some relationships between variables were consistent with expectations, whilst some were not.

8.5 Conclusions

The results of the third study provided preliminary evidence that the SNEQ is a reliable and valid instrument for measuring the experience and impact of victimisation in SNS. The SNEQ provides an opportunity to measure the experience of 14 different behaviours experienced in SNS, as well as five different impact areas. Further research into the psychometrics properties of the SNEQ, including confirmatory factors analysis is needed. The development and validation of the SNEQ makes a strong contribution to the standardised measurement of cyberbullying victimisation in SNS for adolescent SNS users. Such a measurement tool is essential in the identification of prevalence rates of victimisation and in informing education and prevention programs that target the impact of victimisation. Knowledge of the impact of cyberbullying on victims will also inform education and support personnel who may work with victims to effectively process their experiences.

Chapter 9. Article 3

The development and validation of the Social Networking Experiences Questionnaire (SNEQ): A measure of adolescent cyberbullying and its impact.

Current status: Accepted for publication in *Violence and Victims* pending minor revisions.

Appendices

Appendix E: Social Networking Experiences Questionnaire

Appendix F: Adolescent Peer Relations Instrument

Appendix G: International Personality Item Pool (IPIP) NEO-PI-R Anxiety and Depression Subscales

Tables

Table 1 *Factor Loadings Based on a Principal Axis Factoring with Oblimin Rotation for 37 Items from the Social Networking Experiences Questionnaire (SNEQ) (N=250)*

Table 2 *Inter-factor Correlation Coefficients of the SNEQ Dimensions*

Table 3 *Correlation Coefficients of the Social Networking Experiences Questionnaire Dimensions with Convergent and Divergent Measures*

Full title

The development and validation of the Social Networking Experiences Questionnaire (SNEQ): A measure of adolescent cyberbullying and its impact.

Running title

A measure of cyberbullying and its impact

Cyberbullying continues to gain international research attention. This is not surprising given the range of adverse consequences attributed to cyberbullying, including social anxiety (Dempsey, Sulkowski, Nichols, & Storch, 2009), suicidal thoughts and behaviors (Hinduja & Patchin, 2010), low school attendance, and school grades (Price & Dalgleish, 2010). Despite the considerable effort in the past and current research literature to measure cyberbullying (see Dredge, Gleeson, & de la Piedad Garcia, 2013), a problem of inconsistency in its measurement has limited the comparability of individual studies, thus making it difficult for researchers to draw conclusions regarding its frequency of occurrence and impact (Lam & Li, 2013).

Measuring the Experience of Cyberbullying Victimization

Variability in previously reported cyberbullying prevalence rates (with estimates ranging from 4–72%; Sabella, Patchin, & Hinduja, 2013) is likely to be due to a number of reasons. First, because of the large number of online environments in which cyberbullying can occur, and the frequent development of new environments, it has been challenging for researchers to include all relevant victimization or perpetration behaviors associated with these environments in a single measurement tool. A solution to this problem is to construct surveys or questionnaires that focus on a singular technological environment (e.g. social networking sites (SNS)) or on a specific construct such as the impact of cyberbullying victimization (Dredge et al., 2013). This would allow more systematic and specific measurement of exposure to cyberbullying behaviors.

Concerns also arise when comparing the data stemming from questionnaires that do versus those that do not provide participants with a definition of cyberbullying as a reference point for subsequent responses to questionnaire items. Because there is not a universally accepted definition of cyberbullying (Dredge, Gleeson, & de la Piedad Garcia, 2014), those

questionnaires that have provided a definition have not provided the same definition. For example, one cyberbullying measurement tool included a definition that referred to the three pillars of the traditional bullying definition: repetition, power imbalance and intent (Menesini et al., 2012). Repetition implies the repetition of the bullying behavior and power imbalance implies that the victim has difficulty defending him or herself (Guerin & Hennessy, 2002). Intent has been defined as a "desire to hurt another" (Tattum, 1997, p.10). Another measurement tool provided a definition of cyberbullying that highlighted the importance of repetition and intent, but did not refer to a power imbalance (Patchin & Hinduja, 2006). In a systematic review of studies of tools that measured cyberbullying (and related concepts such as internet harassment and electronic bullying), published prior to October 2010 (Berne et al., 2013), it was found that 40 out of 44 definitions provided to respondents referenced intent to harm, 25 out of 44 included the repetition criterion and only 12 out of 44 referenced the importance of an imbalance of power. This lack of consistency across studies creates a challenge for the respondent to answer the questionnaire items accurately (Tokunaga, 2010) as they are more open to interpretation.

Other cyberbullying measurement tools have not provided participants with a definition of cyberbullying at all. Instead, they have required participants to indicate which examples of specific cyberbullying behaviors they have experienced (Li, 2010). A systematic literature review of 14 research papers on cyberbullying that had been published between 2000 and 2008 found that half of the studies did not provide a definition of cyberbullying in their measure (Ybarra, 2009). Ybarra compared the prevalence rates of the studies that provided a definition with those that provided behavior-based lists of experiences (e.g., sharing embarrassing pictures, being called names, rumours spread by others) and found that questionnaires that included lists of behaviors yielded higher prevalence rates than definition-based measures. This disparity may

be due to questionnaire respondents being given "more room for subjective interpretation of what is meant by bullying" (Solberg & Olweus, 2003, p. 240) when there is not a clear definition. Furthermore, given that there is no consistency in definition, it will be easier to compare results from studies that list specific behaviors.

Finally, the period of time over which respondents are asked to report their experiences of cyberbullying has varied across measurement tools. Duration periods have varied from the preceding two months (Kowalski & Limber, 2007) to the preceding year (Tynes, Rose, & Williams, 2010). Furthermore, some questionnaires have provided no specified duration period (e.g., Akbulut, Sahin, & Eristi, 2010). Such variation poses a threat to external validity and therefore does not allow meaningful comparisons between studies.

Measuring the Impact of Cyberbullying Victimization

As well as prevalence rates, measuring the impact of cyberbullying victimization is important in order to ascertain the degree and range of impact of cyberbullying upon victims. Research investigating the impact of cyberbullying has been approached in one of two ways. First, some studies have compared perceived impact of cyberbullying relative to other forms of bullying (Bauman & Newman, 2013; Sticca & Perren, 2013). One limitation to this approach is that there appears to be an overreliance on asking participants to judge the impact of hypothetical victimization scenarios (e.g., Sticca & Perren, 2013) rather than real life experiences. This approach poses a threat to the external validity of research findings on impact because no information about the actual impact of lived experiences is found.

The second approach to measuring impact has been to report emotional or behavioral correlates of cyberbullying victimization. For example, one study found that amongst 11-16-

year-old American students, cyberbullying victimization was associated with symptoms of social anxiety (Dempsey et al., 2009). Finkelhor, Mitchell, and Wolak (2000) found that 18% of 10-17-year-old victims of online/internet harassment reported five or more depressive symptoms after their victimization which was more than twice the rate for the overall sample of study participants (victims and non-victims). Furthermore, cyberbullying victims (10-16 year olds) were found to experience more suicidal thoughts and behaviors compared to cyberbullying perpetrators and were 1.9 times more likely to attempt suicide than those who were not cyberbullying victims (Hinduja & Patchin, 2010). Other studies have found that cyberbullying victimization is associated with low self-confidence (78% of respondents), low self-esteem (70% of respondents; Price & Dalgleish, 2010), and loneliness in friendships (Ortega, Eilpe, & Monks, 2012).

Research has shown that emotional responses reported by victims after cyberbullying include anger, sadness, embarrassment, frustration, annoyance, fear and feeling terrified (Beran & Li, 2005; Dehue, Bolman, & Vollink, 2008; Price & Dalgleish, 2010). Various behavioral and cognitive outcomes have also been associated with cyberbullying victimization. For example, 56% of self-reported victims reported experiencing poor concentration, 21% low school achievement and 13% absenteeism following cyberbullying victimization (Beran & Li, 2005). Another study found that of cyberbullying victims, 35% experienced a negative effect on school grades, 28% on school attendance and 19% on family relationships (Price & Dalgleish, 2010). Many studies have also found commonality between being a cyberbullying victim and being a traditional bullying victim and/or perpetrator (e.g., Hinduja & Patchin, 2008; Walrave & Heirman, 2011). Furthermore, some research has suggested that cyberbullying victimization is associated with no impact at all. For example, a study on cyberbullying in 9-18-year-olds found

that 43% of victims were unaffected (Patchin & Hinduja, 2006). Similar results had have been found in other studies (e.g., Burgess-Proctor, Patchin, & Hinduja, 2009; Ybarra, Mitchell, Wolak, & Finkelhor, 2006).

However, one limitation to the measurement of cyberbullying victimization impact using emotional, behavioral and cognitive correlates is that the response scales have been typically scored dichotomously (present/absent). In other words, investigators (e.g., Patchin & Hinduja, 2006; Topcu, Erdur-Baker, & Capa-Aydin, 2008) have asked participants if they were or were not anxious or angry as a result of their victimization experience(s). This approach has not adequately captured the range of experience of victims; nor has allowed for a continuum of severity of impact.

The Current Study

Despite significant progress, the measurement of cyberbullying prevalence rates and associated impact has been marked by several inconsistencies. Consequently, there remains a need for a cyberbullying measurement tool that addresses the above mentioned limitations. Such a tool could be used to collect data for use in the development of focused and effective cyberbullying education and intervention programs. Furthermore, a reliable and valid measure of cyberbullying and its impact would also contribute to research on cyberbullying as it would facilitate cross-study comparisons (Kiriakidis & Kavoura, 2010). The aim of the present study was therefore to develop a measure of experience and impact of cyberbullying victimization in SNS. A second aim of the current study was to examine the psychometric properties of the measure, including factor structure, reliability and construct validity in an adolescent SNS user population. Regarding construct validity, it was expected that measures of traditional bullying

victimization and perpetration, anxiety, and depression would be positively correlated with cyberbullying victimization.

Method

Both qualitative and quantitative data were collected in the development and validation of the Social Networking Experiences Questionnaire (SNEQ). The steps followed in this process were (1) development of questionnaire items, (2) pre-testing of the questionnaire on SNS users, and (3) piloting of the initial questionnaire.

Initial Development of Tool

As part of a previous study (Dredge et al., 2014), 25 cyberbullying victims aged 15-24 years participated in semi-structured interviews. Participants were asked about their victimization experiences in SNS and the associated impact of each experience. Based on these data, draft questionnaire items were generated for the measurement of the extent of cyberbullying victimization and its impact. Fourteen experience and 83 impact items were originally created in the preliminary version of the questionnaire. Experience items included specific behaviors experienced in SNS such as ‘someone has posted cruel messages or threats on my social network profile page about me’. Example impact items included ‘I cried a lot’, ‘I felt distant from those around me’, and ‘I appreciated my real friends much more’.

Pre-testing of Initial Questionnaire

Participants.

Participants were 18 students between the ages of 15-24 years (M = 20.3, SD = 2.4). Of the participants, 44% were females and 66% were males. Participants were recruited from

Australian Catholic University (ACU), Melbourne Campus (18-24 year-olds) or by using snowball sampling (15-17-year olds). Apart from meeting the age requirement, it was a requirement that participants used SNS at least twice a week.

Procedure.

Cognitive interviewing (Collins, 2003) was chosen as the most suitable method for the pre-testing process as it focuses on attending to the mental processes of participants as they respond to questionnaire questions. The specific cognitive technique chosen was probing which involves asking the participants specific questions, or probes, so that how they respond can be understood (Collins, 2003). Concurrent probing was chosen so that participants could provide their process of responding verbally as they answered each question (Drennan, 2002).

After ethics approval from the Human Research Ethics Committee at Australian Catholic University and the Department of Education and Early Childhood Development (Victoria) was gained, participants were given the draft SNEQ and asked to verbalise the process they used to answer each question. The interviewer asked participants questions identified as key examples of cognitive probes (Collins, 2003). Such questions included: "How did you go about answering that question?" and "How easy or difficult did you find this question to answer? Why do you say that?" Other questions included: "What did you understand by the term X?" and "Were you able to find your first answer to the question from the response options provided?" (Collins, 2003, p. 235). Participants were also asked a number of general cognitive probes about the length and flow of the questionnaire. Responses were recorded verbatim in writing by the researcher. After the interviews, the feedback from participants was incorporated into a revised questionnaire for piloting.

Piloting of Questionnaire

Participants.

Participants were 318 students between the ages of 15 and 24 years, inclusive (M = 19.23, SD = 2.01; 255 females). Participants were recruited from ACU, Melbourne Campus (18-24 year-olds) through an online research participation system. Students were provided with course credit for their participation. The remaining participants (15-17 year olds) were recruited from two secondary schools in Melbourne.

Measures.

Demographic questions. Participants were asked to report their age, gender, occupation, SNS used, frequency of use, location of use, and durations of active SNS accounts.

Social Networking Experiences Questionnaire (SNEQ). The SNEQ was specifically developed for the present study (refer to online supplementary material for the final SNEQ questionnaire). The first scale included 14 items measuring the prevalence (or experience) of specific behaviors that occurred in SNS over the preceding 6 months. One example was ‘someone has posted cruel messages or threats on my social network profile page about me’. Respondents were asked to rate the frequency of each of the experiences on a 7-point response scale. Item responses were *never, less than once a month, once a month, 2-3 times a month, once a week, 2-3 times a week, and daily*. The second scale included the original 83 impact items (e.g., ‘I felt angry’ or ‘I found others avoided me’). Respondents were asked to indicate how much each statement described the impact during or after their experience. A five-point scale (0 = *This did not describe my experience at all*, 1 = *This described my experience a little bit*, 2 = *This described my experience*

moderately, 3 = *This described my experience quite a bit*, and 4 = *This described my experience extremely*) was provided.

Adolescent Peer Relations Instrument (APRI; Parada, 2000) is a self-report questionnaire that consists of two 18-item scales measuring traditional bullying victimization (Cronbach's $\alpha = 0.95$) and perpetration (Cronbach's $\alpha = 0.93$) *this year*. Each item is rated on a 6-point scale ranging from 1 (never) to 6 (everyday). Within each scale, there are three subscales representing the frequency of verbal, physical and social bullying as both the perpetrator and victim (Cronbach's α = ranging from 0.83-0.92). Both the bully and victim scales have been shown to be positively associated with depression, external locus of control, and avoidance coping strategies, indicating strong construct validity (Marsh et al., 2011).

International Personality Item Pool (IPIP) NEO-PI-R (Goldberg et al., 2006) is a self-report questionnaire that consists of five scales. The anxiety (Cronbach's $\alpha = 0.83$) and depression (Cronbach's $\alpha = 0.88$) subscales of the Neuroticism scale were used in the current study. Each subscale includes 10 items and each item is rated on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). The anxiety scale measures general anxiety and the depression scale measures feelings of guilt and sadness (Costa & McCrae, 1992). Each subscale is scored such that higher scores indicate greater quantities of the attribute being measured. Participants were asked to respond to the questions in relation to the preceding 6 months. Preliminary evidence of convergent and discriminant validity of the IPIP NEO-PI-R scales with the NEO-FFI has also been found (Beng-Chong & Ployhart, 2006).

Procedure.

Participants over 18 years of age were provided with an information letter and the link to the online questionnaire through an online research participation system. Informed consent was obtained after reading the information letter. Participants then completed the battery of questionnaires online. Participants under 18 years of age were provided with information packs and consent forms for both parents and themselves. Once these were returned, the students were given access to the online questionnaires.

Results

Exploratory Factor Analysis (EFA)

Sixty five participants had not experienced any of the SNS victimization behaviors so were unable to provide impact data. Therefore, 253 cases were used to conduct EFA with all 83 impact items as variables. Missing values analysis was conducted on all impact items which indicated that no item had more than 2.8% of data missing. Missing values were excluded pairwise. Because responses to impact items employed a Likert-type scale, these responses were an ordinal manifestation of a continuous construct (Flora, Finkel, & Foshee, 2003). Therefore, polychoric correlations were deemed appropriate because they are designed to measure the "linear relationship between two observed, discrete variables that are manifestations of latent, normal continuous variables" (Flora et al., 2003, p. 118). Therefore polychoric correlations were used as the basis for the EFA (Holgado-Tello, Chacón-Moscoso, Barbero-García, & Vila-Abad, 2008).

The EFA process commenced with the calculation of a matrix of polychoric correlations among all possible pairs of items. This was conducted using an R-Menu v2.2 plugin for SPSS Version 21 (Basto & Pereira, 2012). To determine the number of factors to retain, Velicer's Minimum Average Partial (MAP) test was used (Velicer, 1976). The MAP technique has been shown to perform well in determining the number of factors to retain in numerous simulation studies (e.g., correct determinations in 59.6% of cases; Ruscio & Roche, 2012). Based on the use of the MAP technique, six factors were found. The extraction was conducted using principal axis factoring from the polychoric correlation matrix estimated by a two-step method. Because factors were expected to be highly correlated, an oblique rotation (oblimin-quartimin-Q method) was applied to the 6-factor solution to aid interpretation. Thirty six items that loaded on more than one factor with loadings larger than .3 were removed. The final factor structure included 47 items loading onto six impact factors with eigenvalues ranging from 25.60 to 1.31, and accounting for 78.85% of the total variance. The factors were (1) health impact, (2) positive growth, (3) emotional impact, (4) peer impact, (5) SNS behavioral impact, and (6) positive coping strategies.

Internal consistency reliability

Cronbach's α for the 14-item victimization scale was .82. All of the impact subscales except for positive coping strategies subscale, exceeded the minimum reliability standard of .70 (all were larger than .76). Therefore the positive coping strategies factor was deleted (3 items, Cronbach's α = .57). Cronbach's α values are presented in Table 1 for the experience and all remaining impact subscales. After the deletion of the positive coping strategies factor, the remaining 44 items were reanalyzed using the same process outlined above. A further seven

items were removed due to cross-loading onto more than one factor. The final factor solution included five factors (37 items) and is included in Table 1. Eigenvalues ranged from 20.99 to 1.09 and accounted for 80.77% of the total variance. The correlations between the factors are presented in Table 2.

(INSERT TABLE 1 AND 2 ABOUT HERE)

Convergent and divergent validity

The correlations between the SNEQ experience and impact subscales, traditional bullying victimization, perpetration, anxiety, and depression, are presented in Table 3. Missing values analysis showed that only traditional bullying perpetration and victimization had more than 5% missing values (6.3% and 5.9% respectively). Further investigation indicated that four participants had not answered any of the required variable items. These participants were removed from subsequent analysis with 249 participants remaining. After removal of these participants, it was apparent that the remaining missing values were due to participants missing responses for only one item in a scale. Their missing responses were replaced by the mode response for that question.

The experience scale was significantly and positively correlated with all convergent measures except anxiety, with the highest correlation with traditional bullying victimization. The health, emotional, social, and SNS behavioral impact subscales were significantly and positively correlated with depression and traditional bullying victimization and perpetration. Only SNS behavioral impact was significantly and positively correlated with anxiety. The positive growth subscale was not significantly associated with anxiety or depression yet was significantly and

positively correlated with traditional bullying victimization and perpetration. Table 3 shows the inter-factor correlations of the SNEQ.

(INSERT TABLE 3 ABOUT HERE)

Discussion

The main objective of the current study was to develop a valid and reliable measure of experience with and impact of cyberbullying victimization in SNS in a sample of adolescents. EFA produced a six-factor model of impact of cyberbullying victimization. These impact areas were health impact, positive growth, emotional impact, peer impact, SNS behavioral impact, and positive coping strategies. However, the items that loaded on 'positive coping strategies' were removed due to low internal consistency of this factor. Therefore, the final factor structure included five factors. The results of the reliability analyses demonstrated that each of those five impact subscales and the experience scale had satisfactory or excellent internal consistency, with each scale obtaining a Cronbach's α of .76 and above. Furthermore, each of the resulting impact factors represented meaningful subcategories of impact which are supported by previous research (e.g., Dredge et al., 2014; Ortega et al., 2012; Price & Dalgleish, 2010).

The SNEQ cyberbullying victimization experience scale showed significant positive relationships with depression, traditional bullying victimization and traditional bullying perpetration as predicted. These relationships are consistent with previous research that has indicated that cyberbullying victims are more likely to also be traditional bullying victims and perpetrators (Hinduja & Patchin, 2008; Walgave & Heriman, 2011), and also score higher on

measures of depression (Finkelhor et al., 2000). It is unclear why anxiety was not associated with cyberbullying victimization as previous research has supported its relationship with social anxiety (Dempsey et al., 2009). Regarding the associations between the impact subscales and the other construct measures, mixed results were found. Importantly, the negative impact subscales that related to health, emotional, peer, and SNS behavioral impact were positively and significantly related to depression and traditional bullying perpetration and victimization. Furthermore, the positive growth subscale was not associated with depression or anxiety. However, positive growth was significantly and positively associated with traditional bullying perpetration and victimization indicating that learning and growing from online victimization experiences does not necessarily influence offline victimization and perpetration experiences. The observed relationships between SNS behavioral impact and depression and anxiety indicate that those who remove themselves from SNS or change how they communicate, experience less anxiety and depression. Finally, it is unclear why anxiety was only significantly associated with SNS behavioral impact and not with the other negative impact subscales. Despite these mixed results, these associations provide preliminary evidence of the construct validity of the SNEQ.

Regarding the health impact subscale, it should be noted that the EFA included one item not overtly related to health. This item, *I found the relationship with my parents suffered*, may have correlated highly with the other health related items due to one of two reasons. It may be that when cyberbullying victims begin to experience health related impacts, tension is created within the parent-child relationship due to worry. Alternatively, the tension may already exist due to the victimization experience(s) and as a result health related impacts are experienced. Furthermore, this item may not have related to the other peer impact items because the other items were all related to the peer social network rather than family. Further research is required

to investigate the relationship between cyberbullying victimization and impact on both peer and family relationships in order to understand this result more clearly.

The current study has a number of strengths. To the authors' knowledge, this study is the first to develop and provide preliminary reliability and validity data for a questionnaire measuring victimization experiences within SNS only. This is valuable not only because of the popularity of SNS, but also because such a questionnaire provides detail about the specific contribution of SNS to cyberbullying victimization. Focusing exclusively on SNS in the measurement tool is an advantage because all relevant victimization behaviors can be included in one short measure (Dredge et al., 2013). Further, the SNEQ did not include a definition of bullying, but a list of relevant behaviors. In doing so, it reduced the risk that responses were affected by the differing cyberbullying definitions that have been previously provided to participants (see Berne et al., 2013).

This is the first study to measure the impact of cyberbullying victimization using specific impact area subscales. This approach to the measurement of cyberbullying victimization impact is important because previous methodologies have not allowed for a detailed account of the diverse consequences associated with victims' experiences (e.g., Patchin & Hinduja, 2006; Topcu et al., 2008). The SNEQ does this by enabling respondents to endorse a broad range of impacts that were formulated based on interviews with a different sample from the same population (Dredge et al., 2014). The SNEQ also enables flexibility regarding the time frame within which respondents are asked to report their victimization experiences. Although the current study measured cyberbullying victimization in the preceding 6 months, other timeframes can be applied to the questionnaire depending on need. This allows for flexibility contingent on

use in research or clinical settings and also allows for cross-study comparisons with alternate time frames.

There were also several limitations to this study. First, the sample recruited for the piloting process was drawn from the general population rather than from a population of individuals identified as having experienced cyberbullying victimization. Consequently, the range of the severity of impact in our sample was restricted. Most participants had experienced some of the impacts sometimes, but not many endorsed the more severe impacts frequently. Further validation of the measure with adolescent SNS users who have experienced more varied victimization experiences would be advantageous. Second, the samples also had a gender imbalance with many more females participating. This limits the sample's representativeness of the general adolescent population. A gender imbalance may have affected the results as previous research has found a gender difference in the likelihood of being a cyberbullying victim (e.g., Li, 2007; Wang, Iannotti, Luk, & Nansel, 2010).

Third, it is important to note that there was a gap in the cyberbullying victimization experience scale. The response scale did not allow for a respondent who had faced 4-6 victimization experiences per week to respond accordingly as the two closest options were 2-3 times a week and daily. This should be considered in further research on the psychometric properties of the SNEQ. Finally, although Comrey and Lee (1992) reported that a sample size of 200 is *fair* and 300 is *good* for conducting factor analysis, the low ratio of participant to item may impact on the generalizability of and the ability to replicate the factor structure found in the current study.

The results of the present study provide preliminary evidence of the validity and reliability of the SNEQ for measuring the experience and impact of victimization in SNS. The

SNEQ provides an opportunity to measure the experience of 14 different behaviors experienced in SNS, as well as five different impact areas. The development and validation of the SNEQ makes a strong contribution to the standardised measurement of cyberbullying victimization in SNS for adolescent SNS users. Such a measurement tool is essential in the identification of prevalence rates of victimization and in informing education and prevention programs that target the impact of victimization. Knowledge of the impact of cyberbullying on victims will also inform education and support personnel who may work with victims to effectively process their experiences. Finally, the SNEQ could be used to evaluate the effectiveness of cyberbullying interventions in the reduction of associated impact.

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Table 1

Factor Loadings Based on a Principal Axis Factoring with Oblimin Rotation for 37 Items from the Social Networking Experiences Questionnaire (SNEQ) (N=250)

Item	Health	Positive Growth	Emotional	Peer	SNS behavior
1. I had headaches/migraines	.81				
2. I vomited	.76				
3. My heart rate was often fast	.75				
4.I had stomach aches	.70				
5. My eating habits changed (ate more or less)	.70				
6. I found the relationship with my parents suffered	.70				
7. My sleep was disturbed	.69				
8. I went to see a psychologist/counsellor	.64				
9. I drank alcohol more than usual	.63				

10. I stopped exercising as much as usual	.60		
11. I feel like I have become a better person		.95	
12. I learned more about myself		.91	
13. It made me realise what was really important to me		.90	
14. I learned to stand up for myself		.90	
15. I learned not to care as much about what people think about me		.88	
16. I appreciated my real friends much more		.86	
17. I felt like a stronger person after the experience		.81	
18. My experience made me more sensitive to others who have similar experiences		.66	
19. I spent more time with friends who were not involved		.59	
20. I felt angry			-.91
21. I felt frustrated			-.90

22. I felt upset	-.88	
23. I was in shock	-.80	
24. I felt like I had no control	-.77	
25. I felt embarrassed	-.72	
26. I felt anxious	-.71	
27. I felt worthless	-.66	
28. I felt lost	-.52	
29. My friends no longer trusted me		-.94
30. Others no longer respected me		-.76
31. I felt others viewed me differently		-.74
32. I found others avoided me		-.70
33. I no longer attended the same social events that I used to attend		-.60
34. I did not feel as close to my friends anymore		-.52

35. I deleted my social networking site(s)					.85
36. I stopped using social networking site(s)					.76
37. I changed the way I communicated with others in social networking sites					.39
Cronbach's alpha	.92	.95	.95	.90	.76
Eigenvalues	20.99	3.71	2.79	1.30	1.09
Percentage of total variance	56.73	10.02	7.55	3.52	2.96

Note. SNS = social networking site

Table 2

Inter-factor Correlation Coefficients of the SNEQ Dimensions

SNEQ dimension	Health Impact	Positive Growth	Emotional Impact	Peer Impact
Health Impact				
Positive Growth	.45			
Emotional Impact	-.56	-.48		
Peer Impact	-.67	-.43	.47	
SNS Behavioral Impact	.50	.32	-.24	-.43

*$p < .05$, **$p < .01$

Note. SNS = social networking sites.

Table 3

Correlation Coefficients of the Social Networking Experiences Questionnaire Dimensions with Convergent and Divergent Measures

SNEQ dimension	Depression	Anxiety	TradPerp	TradVic
Health Impact	.27**	-.03	.27**	.44**
Positive Growth	.07	.01	.13*	.29**
Emotional Impact	.30**	.02	.28**	.42**
Peer Impact	..27**	-.03	.41**	.56**
SNS Behavioral Impact	.25**	.16*	.31**	.51**
Experience	.13*	-.01	.34**	.49**

*$p < .05$, **$p < .01$, $N = 249$

Note. TradPerp = traditional bullying perpetrations scale from the APRI; TradVic = traditional bullying victimisation scale from the APRI; Depression = depression subscale from the IPIP NEO-PI-R; Anxiety = anxiety subscale from the IPIP NEO-PI-R; SNS = social networking site

Chapter 10. Literature Review Three

10.1 Introduction to Chapter

The use of SNS such as Facebook, Twitter and Instagram, have proliferated during the last decade. A SNS is defined as:

> A networked communication platform in which participants (1) have uniquely identifiable profiles that consist of user-supplied content, content provided by other users, and/or system-provided data; (2) can publicly articulate connections that can be viewed and traversed by others; and (3) can consume, produce, and/or interact with streams of user-generated content provided by their connections on the site (Ellison & boyd, 2013, p. 158)

SNS enable users to communicate with their extended social network in new ways, and provide opportunities to meet new people who share similar interests, demographics or location. In order to achieve this, each SNS has specific features that provide a variety of different avenues to communicate with others, publically or privately. Historically, the use of social networking has significantly changed as more SNS continue to develop. For example, Lenhart, Purcell, Smith, and Zichuhr (2010) found that in 2009 73% of American teens (12-17-years-old) were using social networking sites; an increase from 55% in 2006 and 65% in 2008. Furthermore, with the social networking expansion, more and more tools for communication become available to users which changes the way we interact with others online. boyd and Ellison (2008) mapped the trajectory of SNS from SixDegrees.com in 1997 that only enabled

users to list their friends, to the launch of Friendster in 2002 that allowed users to access other user profiles that were up to four degrees away from them. boyd and Ellison (2008) reported that SNS really "hit the mainstream" (p. 216) from 2003 onward as a series of popular sites were developed (e.g., MySpace and Facebook).

One of the most popular SNS is Facebook. As of September 30, 2013, Facebook reported 874 million monthly active users who used Facebook mobile products and on average, 727 million daily active users (Facebook, 2013). Facebook provides users with many interactive features including a wall to place status updates, a 'news feed' to access other friends' updates, groups to join, pages to like (e.g., favourite TV programs, music), and the ability to upload and share pictures, videos, and links. Due to its popularity, Facebook was used as the online environment for the fourth study of this research project.

This chapter provides an overview of the key research literature that relates to how internet and SNS users present themselves online, and why users share personal information online despite potential risks, such as cyberbullying. Next, a theory used to understand the role of victim behaviour in risk of victimisation is presented and linked to cyberbullying risk. The chapter finishes with a discussion of the predictors of cyberbullying victimisation, how SNS behaviours have previously been measured, and a clear rationale for the fourth study of this research project.

10.2 Self-Presentation on Facebook.

SNS such as Facebook provide users with new opportunities to create and present who they are to the digital world. Self-presentation is defined as "the process of controlling how one is perceived by other people" (Leary, 1995, p.2). Self-presentation is pertinent to SNS as the

main technical feature of SNS is the creation of visible profiles which display a social graph (i.e., a set of online "friends"), personal information and photos. Due to technological advancements, young people are now engaging in "a careful negotiation between the opportunities (for identity, intimacy, sociability) and risks (regarding privacy, misunderstanding, abuse) afforded by internet-mediated communication" (Livingstone, 2008, p. 407). Gonzales and Hancock (2008) noted that how individuals present in online environments can act as a "medium for facilitating identity construction" (p. 179).

Self-presentation and identity construction on the internet has been investigated for more than a decade. Typically the research literature has focused on the construction of identity in anonymous environments such as chat rooms and bulletin boards (e.g., Zhao et al., 2008). More recently, research has shifted to include self-presentation in non-anonymous online environments such as internet dating sites. For example, Ellison et al. (2006) investigated how online dating members managed their self-presentation whilst trying to find a romantic partner. Members were interviewed about how they constructed their profile, honesty and self-disclosure online and what criteria they used to evaluate others' online profiles. Results showed that members attended to a number of 'small cues' such as timing and length of message as well as grammar when evaluating others. They also endeavoured to present an accurate version of themselves on their profile but would often include descriptions of an ideal or future self. The authors concluded that their results supported the social information processing (SIP) theory (Walther, 1992) that when nonverbal cues are removed or limited (as in CMC), the cues that are remaining become more noticeable. Furthermore, it was inferred that due to the likelihood that members would meet face-to-face, online self-presentation was closer to their actual self rather than their ideal self.

Other research has examined how personality is expressed by SNS users and interpreted by others, and whether there is consensus between the users' self-presentation and their profile visitors' perception. For example, Back et al. (2010) investigated the accuracy of personality presentation on SNS in a study of 17-22-year-old SNS users. Profile owners and four close friends completed a personality inventory to assess the owner's personality. Profile owners also completed an inventory measuring ideal-self ratings. Observers rated the profile using observer-reports of each of the owner-completed measures. Results supported the 'extended real-life hypothesis' that observers were able to accurately judge a profile owner's personality and that there was no evidence of self-idealisation. Consequently the authors concluded that SNS are used to express and communicate a "real personality" (p. 374). Similar results have been found in other studies (e.g., Li & Chignell, 2010; Vazire & Gosling, 2004).

Hagger-Johnson, Egan and Stillwell (2011) investigated whether Facebook profile pages, in particular, are reliable indicators of sensational interests (e.g., Militarism and Violent Occultism) and personality. Raters coded the 'interests' and 'activities' sections of Facebook profile pages and found that higher scores on the Sensational Interests Questionnaire's (SIQ) Violent Occultism subscale predicted a higher number of sensational interests and activities in males. Furthermore, higher scores in the SIQ subscale of Militarism predicted a higher number of sensational interests in males and females. Such results provide evidence for the validity of the self-reported information provided on an individual's Facebook profile page; at least in this domain.

Despite previous research showing that online personalities are accurate presentations of offline personalities, Qiu, Lin, Leung and Tov (2012) conducted a series of studies and found in their first study that college students were more likely to disclose positive rather than negative

emotional experiences on their Facebook profile pages. In their second study, Qui et al. then asked participants to rate a close friend's life in terms of happiness and expression of positive and negative emotions. Participants then browsed their friend's Facebook profile page and completed the same rating scales. Results indicated that again, users disclosed more positive than negative emotional experiences online and presented a happier self-image on Facebook compared to real life. These results indicate that although SNS users may present a real self rather than an ideal self, the ability to self-select desirable content may lead to users presenting a more positive self.

Based on the reviewed research literature, it appears that offline personality traits can be construed relatively accurately from SNS profiles. So, if other SNS users can accurately judge the offline personality of another user based on their online behavior, research should investigate whether or not online perpetrators target individuals based on what they infer about them given their online self-presentation behaviours.

10.3 What are the Potential Risks on Facebook for Adolescents?

Despite the numerous benefits of the internet and SNS, there are a number of different potential risks that can occur on the internet in general, and on SNS like Facebook. Wilson, Gosling, and Graham (2012) stated that these risks can include the "unintentional disclosure of personal information, damaged reputation due to rumours and gossip, unwanted contact and harassment, vulnerability to stalkers or pedophiles, use of private data by a third party, hacking, and identity theft" (p. 212). Cyberbullying is another one of the potential risks on Facebook and other SNS for adolescents.

Cyberbullying is now a global problem, with incidents of varying severity reported across the world. Since 2005, research on cyberbullying in child and adolescent populations has shown varying prevalence rates. For example, The National Children's Home and Tesco Mobile (2005) jointly commissioned a survey of mobile and online bullying. Twenty percent of 12-16-year-olds from the UK had experienced some form of digital bullying, 14% by mobile text message, 5% in chatrooms, and 4% via email. In their preliminary study of cyberbullying, Patchin and Hinduja (2006) reported that almost 29% of their 9-18-year-old respondents reported being a victim and more than 47% witnessed online bullying. Ybarra et al. (2007) examined cyberbullying amongst 10-15-year-olds and found that 35% reported being targeted by at least one of the three forms of internet harassment categorised as rude or nasty comments, the spreading of rumours, or threatening and aggressive comments.

Burgess-Proctor et al. (2009) conducted a study focusing solely on females to try and isolate the nature of cyberbullying incidents specific to adolescent girls (8-17-year-olds). Over one third (38.3%) of respondents reported being bullied online in their lifetime. However, when their memories were prompted by a request to describe specific cyberbullying experiences, a greater (but unspecified) number described experiences of cyberbullying. Other studies have found comparable but slightly lower prevalence rates. Slonje and Smith (2008) found 17.6% of 12-20-year-olds in Sweden reported being a cybervictim. Wolak et al. (2007) reported 9% of 10-17-year-olds had been harassed online, and Kowalski and Limber (2007) found that 11% of grades 6-8 students reported being cyberbullied at least once in the last couple of months. Variability in reported prevalence rates may be explained by the differences in samples used (i.e., age, gender and culture), what year the study was conducted, or by the format of the prevalence questions (see chapter 7 for a review of the impact of the construction of questions on

prevalence rates). However, all studies have indicated that cyberbullying can be common, and therefore a risk wherever ICT technology is being used.

It is important to note that the majority of the cyberbullying prevalence studies reviewed above measured cyberbullying victimisation across all ICT environments. Only a limited number of studies have investigated cyberbullying and other risks that occur specifically in SNS. In one of the earliest studies focusing on online risks specific to SNS, Ybarra and Mitchell (2008) investigated whether SNS were environments in which young people were vulnerable to 'sexual solicitation' or 'internet victimisation'. Sexual solicitation was defined as being provided with sexual information or being requested to talk about sex or engage in a sexual activity. Internet harassment was defined as someone spreading rumours or saying rude or nasty comments online. Overall, 14.7% of participants (10-15-years-old) reported being the victim of unwanted sexual solicitation and 34% reported experienced internet harassment in the last year. Of those who reported being targeted, 33.6% reported being targeted for sexual solicitation in SNS and 27.3% reported internet harassment in SNS in the last year.

Lenhart et al. (2011) also investigated cyberbullying in SNS. Although 69% of 12-17-year-olds (teens) reported that other users were mostly kind to other users on SNS, 88% reported being a witness to other users being mean or cruel on SNS. Furthermore, 15% of teens and 13% of adults (18 years and older) reported being the target of 'online meanness' in SNS. Such results highlight that there is a significant portion of SNS users that are faced with victimisation. These experiences in SNS are also leading to various negative outcomes such as the termination of a friendship, face-to-face arguments with someone, problems with parents, nerves related to school attendance, and physical altercations with others (Lenhart et al., 2011). Consequently, the victimisation experiences of SNS users cannot be ignored.

10.4 Why do SNS users Disclose Personal Information on SNS despite Potential Risks?

Disclosing information in general is seen as an important component of building healthy relationships (Christofides, Muise, & Desmarais, 2009). However, it appears that in SNS there is a substantial difference between the amounts of personal information each user shares with their online, compared to their offline, networks. Furthermore, as previously reviewed, research has consistently showed that risks such as cyberbullying are common on SNS. Consequently, it is essential to understand whether there is a relationship between disclosing personal information on SNS and risk of cyberbullying victimisation.

Regarding the difference between SNS users' level of information disclosure online and offline, Acquisti and Gross (2006) compared participant (undergraduate students) attitudes about privacy in general to the likelihood of sharing private information on their Facebook profile pages. Participants completed a series of questionnaires measuring privacy attitudes, Facebook use, attitudes towards Facebook, and demographics. Results showed that nearly 16% of those who were the most concerned about strangers knowing their university schedule and where they lived provided the relevant information on their profiles. Furthermore, 48% of those who reported the highest level of concern regarding others knowing their sexual orientation reported this on their profile page. The authors surmised that the reasons for this discordance between attitudes and behaviour may be due to peer pressure, not understanding the visibility of their profiles, or placing too much trust in Facebook and its members.

Suler (2004) defined the online disinhibition effect as when individuals "say and do things in cyberspace that they wouldn't ordinarily say and do in the face-to-face world" (p. 321). Individuals feel less restrained and more likely to express themselves freely when they are online (Suler, 2004). In an effort to further understand young people's perceptions of their risk in an

online environment (in particular SNS), Kite, Gable and Filippelli (2010) administered an internet risk and behaviour survey to 588 Grade 7-8 students. Results indicated that 71% of students did not think that an internet predator would contact them based on their postings online and 63% reported not fully understanding the potential risk of internet predators. The findings also indicated some high frequency risk taking related to posting personal information online. For example, 69% reported that placing personal contact information on a SNS is 'no big deal' and 85% reported that if they were contacted by someone they did not know on a SNS, it would be 'OK' to share personal information with them.

A limited number of studies have collected frequency data on the personal information that SNS users do provide on their profile pages. Acquisti and Gross (2006) surveyed a sample of Facebook users 17 years and older on the personal information they provide on their profile pages. Frequencies of use of each feature are provided in Table 10.1. As part of the Pew Internet Project, Madden et al. (2013) also collected frequencies of use related to specific features of various SNS in 12-17 year olds. Furthermore, Staksrud, Olafsson, and Livingstone (2013) collected frequencies of those (9-16-year-olds) who posted their phone number or address on their SNS profile page. These frequencies are also provided in Table 10.1. One limitation of the Acquisti and Gross (2006) and Madden et al. (2013) studies was that they did not collect data on all SNS profile features. However, the data collected does show that there are various personal details that SNS users are more comfortable to provide on their profile pages.

Table 10.1

Frequencies of Disclosed Personal Information in SNS.

Disclosed information	Acquisti and Gross (2006)	Madden et al. (2013)	Staksrud et al. (2013)
Birthday	12	82	-
Mobile number	59	20	-
Home phone number	89	-	-
Address	73	-	-
Schedule of classes	54	-	-
Political views	42	-	-
Sexual orientation	38	-	-
Partner's name	71	-	-
Photo of self	-	91	-
School name	-	71	-
City/town of residence	-	71	-
Email address	-	53	-
Real name	-	92	-
Interests	-	84	-
Relationship status	-	62	-
Video of themselves	-	24	-
Phone number OR address	-	-	14

Note. All frequencies provided are percentages. - = data was not obtained

Based on the previously reviewed literature, it is evident that young people report concerns about potential online risks, but this concern does not always translate to decisions not to provide personal information online and in SNS. Given young people continue to provide personal information online despite the potential risks that can occur, it will be of interest to investigate whether there is a relationship between the provision of personal information on SNS and subsequent risk.

10.5 The Effect of Disclosing Personal Information Online

Considering the risks associated with online environments such as Facebook, it is important to consider the effect of disclosing information online. Facebook in particular, has changed how individuals conceptualise public and private space because so much more personal information about ICT technology users is available (Muise, Christofides, & Desmarais, 2009). Sleigh, Smith and Laboe (2013) examined whether type of self-disclosure on Facebook can influence how the profile owner is perceived by other users. Undergraduate university students were provided with fictitious Facebook profiles of a male professor. Each profile differed on political views, amount of profile self-disclosures, and social versus family oriented traits. Participants rated the professor's skill level as a teacher, friendliness towards students, and difficulty level when teaching. They also indicated whether or not they would respect or take a class with the professor and whether he should have revealed more or less on his profile. The study found that the social professor was considered less skilled and more inappropriate, but more popular and entertaining (no effect sizes were reported). Students reacted in a more favourable manner towards the profiles of religious, family and professional profiles compared

to the politically focused ones. It was concluded that despite only being provided with limited information, participants still made a number of specific judgments about the fictitious professor.

Other studies have found that ICT technology users can infer emotional state, gender and personal health behavioural intentions based on viewing other technology users' online communication. McAndrew and Rae De Jonge (2011) randomly allocated participants (18-23-year-old undergraduate students) to one of four groups. Each group was given four emails manipulated based on the presence or absence of expressive language and typographical errors, and which person (first or third) the email was written in. Participants judged the writers of emails written in the third person as more angry and those who used more question marks and exclamation points as more happy. Emails that were written using more expressive punctuation were perceived as having been written by a female. Such results show that even without specific author information, there seems to be evidence of "explicit stylistic strategies that readers resort to when ambiguities are present" (p. 406). Furthermore, Young and Jordan (2013) randomly allocated participants (18-25-year-old college students) to a group that saw sexually suggestive Facebook photos (e.g., kissing, wearing revealing clothing) or a group that saw non-sexually suggestive photos (no examples were provided). Participants were then asked to estimate their peers' sexual risk behaviours and their own. Results showed that those who saw the sexually suggestive Facebook photos estimated that a higher number of their peers engage in unprotected sexual intercourse (36.7% and 25.2% respectively) and have sex with strangers (36.6% and 26.0% respectively). The authors suggested that social and peer norms can be conveyed through even brief exposure to Facebook photos of others. Such research provides more evidence of how even minimal written or pictorial communication online can lead other users to deduce certain characteristics about the user who posted the information. This may be important when

considering cyberbullying because certain ICT technology users may make decisions about whether or not to target another user based on inferences made about that user and their SNS profile.

Marcum (2008) investigated the role of specific information posted on SNS on the likelihood of freshmen (18-19-years-old) receiving sexually explicit material, unwanted emails/instant messages or sexual solicitation. After collapsing 12 different types of personal information (e.g., age, extracurricular activities, and sexual information) into one variable, the authors found that posting personal information on a SNS increased the likelihood of all three risky experiences. Disclosing personal information increased the participants' vulnerability more than any other predictor variable measured (e.g., activities performed on the internet, location of computer and online restrictions). By collapsing the types of personal information into one variable, the researchers were able to show that the extent to which young people disclose information is related to risk of being targeted. However, conclusions were unable to be made about whether or not there were singular types of information, that when disclosed, increased the discloser's risk.

Sengupta and Chaudhuri (2011) also examined whether disclosing certain personal information on a SNS influenced the risk of being harassed online. The authors split 'teen internet abuse' into cyberbullying (occurred when the perpetrator was known) and online harassment (occurred when the perpetrator was a stranger). A sample of 12-17 year olds were required to complete questionnaires on SNS use, parent awareness of online activity, parent monitoring of internet activities, and whether or not the participant had been contacted by strangers online or cyberbullied. Results showed that participants who had their school and instant messaging ID online were more likely to be cyberbullied. Those who used SNS to flirt

with other users were also found to be at more risk of cyberbullying victimisation. The authors concluded that amount of personal information disclosed on SNS profiles and how individuals interact online with other users, plays an integral role in determining risk of cyberbullying victimisation. A limitation of this study was that data was collected in 2006, before the significant increase in SNS use. Furthermore, cyberbullying victimisation was measured dichotomously (yes/no), therefore no conclusions could be made about the role of information disclosure on frequency of victimisation. Similarly, Staksrud et al. (2013) found that SNS users (9-16 years) with a public profile, who provided their personal information (e.g., last name, address, phone number), and had more friends were more at risk of meeting new online contacts offline, receiving sexual messages or visiting websites promoting negative behaviours such as self-harm. However, no relationship between these risky behaviours and being bullied on the internet was found. This may have occurred due to poor measurement of cyberbullying victimisation and reliance on self-report for the online behaviours engaged in by participants.

In summary, previous research has found that disclosing certain types of personal information online and on SNS can lead judgments about the gender, likability, emotional state, and sexual behaviours of the discloser. A series of cross-sectional questionnaire studies have also showed that disclosing certain personal information is associated with an increased risk of being harassed online and/or receiving sexually explicit material. Researchers have called for further examination of how the features of online communication can influence the likelihood of cyberbullying victimisation (e.g., Runions et al., 2012; Twyman, Saylor, Taylor & Comeaux, 2010)

10.6 The Victim Precipitation Model

Research usually investigates perpetrator characteristics when trying to understand bullying (Aquino & Bradfield, 2000). Typically used among criminologists, the victim precipitation model aims to understand the role of victim behavior on the decisions made by perpetrators to target certain individuals (Timmer & Norman, 1984). More specifically, the model is premised on the idea that victim behaviour may, whether intentionally or unintentionally, elicit a response in perpetrators that leads to victimisation (Kim & Glomb, 2010). Many victimisation prevention strategies have been born out of this model such as not letting newspapers or mail collect whilst away, installing an alarm or security system, and locking windows and doors to houses and cars when unoccupied (Timmer & Norman, 1984). In the past, the victim precipitation model has led to victim blaming (Miethe, 1985). The theory will not be used in this way in the current research project. Instead the theory will provide a framework for understanding the relationship between the online behaviour of cyberbullying victims and the likelihood of their victimisation.

10.6.1 Linking the Victim Precipitation Model to Bullying Victimisation.

Traditional bullying research provides some background understanding of how bullying victims can play a key role in the prevention of their own victimisation. As well as perpetrators, Olweus (1993) showed that victims portray characteristics that may contribute to their involvement in traditional bullying. In particular, he identified two subsets of victims on the basis of their behaviour. Most traditional bullying victims were described as cautious, sensitive, quiet, and anxious, and subsequently indicate to others that they are insecure and will not retaliate if attacked. Olweus labelled this subset of victims ‘submissive victims’. Olweus’ other

subset of victims was labelled ‘provocative victims’. Provocative victims were characterised as both anxious and aggressive and their behaviour had the potential to provoke others resulting in negative reactions. Olweus’ victim categories provide a link between bullying and the victim precipitation model in that victim characteristics have the potential to evoke certain actions from others.

Although sampling from an adult rather than an adolescent population, Aqunio and Bradfield (2000) examined the contribution of specific individual level factors to victimisation vulnerability in a work environment. The authors suggested that both of Olweus’ victim types are found in organisations and therefore “underlying personality characteristics that influence how people typically behave at work may predict perceived victimisation” (p. 527). Aggressiveness and negative affectivity were the two individual level factors used to predict perceived workplace victimisation. Results showed that those high in aggressiveness and negative affectivity perceived themselves as being victimised more often than those less aggressive and with less negative affectivity. The authors concluded that the results supported the victim precipitation model in that certain individual level characteristics may function as vulnerabilities for becoming the target of victimisation. Although there is some research on the risk factors that predict cyberbullying victimisation, to the author’s knowledge, no research has directly referenced the victim precipitation model in such an investigation.

10.7 Predicting Cyberbullying Victimisation

In light of the negative outcomes of cyberbullying, it is important for researchers to identity risk factors that influence the risk of victimisation. Research that has been conducted on predictors of cyberbullying victimisation has so far focused on intrinsic factors of ICT

technology users and results have been mixed. For example, a variety of results regarding gender as a contributing factor have been found in numerous cross-sectional questionnaire studies. Patchin and Hinduja (2006) and Slonje and Smith (2007) found no significant difference between males and females. Other studies have found that females are at more risk than males (e.g., Li, 2007; Wang et al., 2010). Similar discrepancies have also been found regarding the relationship between age and victimisation with some studies finding no relationship (e.g., Patchin & Hinduja, 2006; Smith et al., 2008), and others a positive (Kowalski & Limber, 2007) or negative relationship (Slonje & Smith, 2008).

Research has also investigated the predictive role of computer and internet related characteristics in cyberbullying victimisation. For example, Hinduja and Patchin (2008) collected online data from participants under 18 years of age on cyberbullying victimisation and perpetration, personal demographics, time spent online per week, and how many online activities they participate in. Results showed that significant predictors of victimisation in participants were more time spent online and greater computer proficiency. Walrave and Heirman (2011) also provided participants (12-18-years-old) with a questionnaire measuring their personal experiences with cyberbullying victimisation and perpetration. Those who were cyberbullying victims (12-18-year-olds) were more likely to chat with older online acquaintances, publish passwords to others and share personal information on a blog. Law, Shapka and Olson (2010) investigated environmental predictors of online aggression in 14-18-year-olds and found that having a computer in the bedroom increased the likelihood of engaging in online aggression. However, a limitation of this study was that the measure of cyberbullying included victimisation, but they did not distinguish between victimisation and perpetration when reporting predictors.

Finally, Vandebosch and Cleemput (2009) found that those more dependent on the internet (12-18-year-olds) were more likely to be a cyberbullying victim.

Other studies have found commonality between being a cyberbullying victim and being a traditional bullying victim and/or perpetrator. Walrave and Heirman (2011) found that those who are cyberbullying victims are more than six and a half times more likely to have been a cyberbullying perpetrator. Hinduja and Patchin (2008) found that a significant predictor of cyberbullying victimisation was being a traditional bullying victim in the previous 6 months. Results from other studies have confirmed the strong relationship between both cyber and traditional bullying victimisation in children and adolescent samples (e.g., Juvonen & Gross, 2008; Li, 2007; Twyman et al., 2010; Vandebosch & Cleemput, 2009).

Wang et al. (2010) investigated predictors of physical, verbal, relational and cyber bullying in students in Grades 6-10. Participants completed a self-report questionnaire distributed in class measuring experience with all types of bullying, parental support, and number of friends (not stated whether online only or in general). Results indicated that less parental support was associated with an increased likelihood of being a cyberbullying victim ($OR = 0.55$). Having more friends was not associated with less cyberbullying victimisation but was for the other bullying types. Modecki, Barber and Vernon (2013) explored developmental antecedents to 'cyber-aggression' using longitudinal data collected from participants recruited in Grade 8 who participated in data collection for the following four years. Higher levels of depressed mood in Grade 8, regardless of changes in subsequent years, and lower levels of self-esteem predicted higher cyber perpetration and victimisation in Grade 11.

Another approach to the prediction of cyberbullying victimisation risk is to examine the role of online self-presentation behaviours. Staksrud et al. (2013) investigated the role of 'risky SNS practices' in online risk in 9-16-year-olds. They asked participants to report the time they spent online daily, how much they knew about the internet (digital competence), whether their profile was set to public/private, if they had more than 100 contacts on SNS, and whether they included specific personal information on their profiles (e.g., last name, address, phone number, school, and correct age). Cyberbullying was measured dichotomously (yes/no) in the last 12 months. Results showed that those who had more than 100 friends on SNS were more likely to be cyberbullied than other SNS users (10% and 8% respectively). Those whose SNS were public and who displayed their mobile phone number or address on SNS were also more likely to be cyberbullied. However, these differences were not statistically significant. This study supports the notion that some self-presentation behaviours are associated with cyberbullying victimisation.

10.8 Measuring Predictor Variables Related to Cyberspace

One limitation in the measurement of predictors of cyberbullying victimisation in SNS has been a reliance on self-report data from the ICT technology users being studied (e.g., Sengupta & Chaudhuri, 2011; Staksrud et al., 2013). Without direct access to their SNS page, it is unreasonable to expect users to remember exactly how many friends they have or what specific SNS features they do or do not use. One method that has been used to remedy this limitation is to allow SNS users to view their own profile page during data collection to aid memory recall. Ong et al. (2011) asked participants to reference their own Facebook profile pages when estimating the frequency of status updates, number of friends and number of photos

they were present in. Participants were also asked to rate their own physical attractiveness in their profile picture. However, despite being a memory aid, this method still relied on self-report. In order to avoid self-report bias, researchers must view the users' profile pages and code the features as other users would see them. Table 10.2 contains previous studies presented in chronological order that have used this methodology. The features of online communication or SNS that were coded for are also included.

Table 10.2
Summary of SNS, Sample, Design and Features of SNS Measured by Researchers (Section 1 of 5)

Study	SNS	Sample	*N*	Design	Behaviours coded
Govani & Pashley (2005)	Facebook	18-22 year old college students	50	Saved a copy of the participant's Facebook profile before questionnaire on privacy attitudes	Birthday, mobile phone number, home phone number, personal address, schedule of classes, political views, sexual orientation, partner's name and picture of yourself
Pierce (2007)	MySpace	All ages (no age range reported)	700	Used 'browser' function in MySpace - Coding manual used to numerically record contents of profile page	Sex, age, personal information, sexual visual content, pornography, language (profanity), privacy setting
Zhao et al. (2008)	Facebook	University students (no age range reported)	63	Coding manual used to numerically record contents of profile page	Detailed aspects of the user's profile (all Facebook features), contact information, social networks and self-description

Table 10.2
Summary of SNS, Sample, Design and Features of SNS Measured by Researchers (Section 2 of 5)

Study	SNS	Sample	*N*	Design	Behaviours coded
Marcum (2008)	Online in general	Freshman High School students	483	Self-report questionnaire	Age, gender, descriptive characteristics, pictures of yourself, telephone number, school location, extracurricular activities, goals/aspirations, sexual information, emotional/mental distresses/problems, family conflicts, other
Young & Quan-Haase (2009)	Facebook	17-25 year old university students	77	Self-report questionnaire on information reported on Facebook profile. Individual interviews – discussed information shared and privacy attitudes	Relationship status, email address, mobile phone number, frequency of Facebook use, number of Facebook friends, profile visibility

Table 10.2
Summary of SNS, Sample, Design and Features of SNS Measured by Researchers (Section 3 of 5)

Study	SNS	Sample	*N*	Design	Behaviours coded
Amichai-Hamburger & Vinitzky (2010)	Facebook	Undergraduate university students (*M* = 22)	237	Coding manual used to numerically record contents of profile page	Basic, personal, contact and education/work information
Mehdizadeh (2010)	Facebook	18-25 year old undergraduate university students	100	Self-report questionnaire on Facebook activity, self-esteem and narcissism. Coding manual used to numerically record contents of profile page	About me section, main photo, the first 20 pictures on the view photos of me section, the notes section and the status updates section
Boyle & Johnson (2010)	MySpace	All ages (no age range reported)	502	Used 'browser' function in MySpace - Coding manual used to numerically record contents of profile page	Title of page, photo content, specific features (video, blog, slideshow etc), interests, hometown, relationship status etc

Table 10.2
Summary of SNS, Sample, Design and Features of SNS Measured by Researchers (Section 4 of 5)

Study	SNS	Sample	*N*	Design	Behaviours coded
Patchin & Hinduja (2010)	MySpace	All ages (no age range reported)	2423	Used 'browser' function in MySpace - Coding manual used to numerically record contents of profile page	Profile picture (in swimsuit/underwear), swear words, evidence of alcohol, tobacco or marijuana use, first name, full name, current city, school, instant messaging name, email address, phone number
Taraszow, Aristodemou, Shitta, Laouris, & Arsoy (2010)	Facebook	14-29 years old	131	Coding manual used to numerically record contents of profile page	Publicity of profile, profile name, profile picture, birthdate, email address, IM screen name, mobile phone number, other phone number, address, hometown, website

Table 10.2

Summary of SNS, Sample, Design and Features of SNS Measured by Researchers (Section 5 of 5)

Study	SNS	Sample	*N*	Design	Behaviours coded
Kim & Lee (2011)	Facebook	Undergraduate university students (*M* = 19.57)	391	Self-report questionnaire	Number of Facebook friends, positive self-presentation, honest self-presentation
Moore & McElroy (2012)	Facebook	Undergraduate university students (no age range reported)	143	Coding manual used to numerically record contents of profile page	Number of friends and photos, detail of wall postings

In one of the studies presented in Table 10.2, researchers were present when participants logged onto their SNS (Young & Quen-Haase, 2009). In four others, researchers accessed SNS profile pages that did not have active privacy settings and were therefore accessible to the public (Boyle & Johnson, 2010; Patchin & Hinduja, 2010; Pierce, 2007; Zhao et al., 2008). Furthermore, Marcum (2008) and Kim and Lee (2011) relied on self-report data from participants about their online and SNS activities. In the remainder, researchers added participants as friends to a research only SNS account (e.g., Mehdizadeh, 2010) so that they could objectively code the pages using a specific coding manual.

A limitation of the measurement of predictor variables in cyberspace is that only a small selection of online self-presentation behaviours have been measured as potential predictors. As can be seen from Table 10.2, each study varies substantially on what behaviours they include in their coding manuals. This limits the ability to make solid conclusions about the predictive role of online self-presentation behaviours in various outcome variables.

10.9 Summary

Previous research that has explored how technology users present themselves online and on SNS have found that an accurate self is presented. However, this presentation may include the 'better' components of the self. Previous research has also found that the online disinhibition effect and attitudes of dismissal related to online risk (e.g., 'no big deal') can lead to an increase in online self-disclosure. Despite being a key feature of relationship development, unfortunately online self-disclosures can be associated with an increase in exposure to online risks such as cyberbullying.

The findings that show young people are concerned about online privacy but still provide certain personal information online indicate that young people may not be

considering online risks as older individuals are. The broad concern about how much information young people are sharing online suggests that investigating predictors of online risk is significant. As can be seen from the reviewed research literature on predictors of cyberbullying victimisation, most studies have focused on intrinsic factors of a person (e.g., gender and age).

To aid the development of successful interventions for the prevention of cyberbullying victimisation and to inform the safe construction of SNS environments, a greater understanding of the factors that increase the risk of cyberbullying victimisation is needed. Future research on the online self-presentation behaviours of SNS users is required to predict risk with greater precision. Furthermore, studies need to be designed to measure online predictors (e.g., self-presentation behaviours) using the most objective methodology available, which at this stage is coding the behaviours directly from the source of the behaviour.

Chapter 11. Introduction to Article 4

11.1 Title

Presentation on Facebook and risk of cyberbullying victimisation.

11.2 Objectives

SNS are an environment in which adolescents can explore their identity and experiment with different ways to present who they are to other users. However, SNS are also an environment in which adolescents can bully and harass other users. This phenomenon is called cyberbullying. As cyberbullying is associated with numerous negative outcomes, it is important to identify factors that influence the risk of being targeted. Previous research has focused on the role of factors such as age, gender, and frequency of computer use, however little is known about the predictive validity of SNS users' presentation on their profile pages. Consequently, the main objective of this study was to investigate whether specific online self-presentation behaviours in SNS were associated with the likelihood of cyberbullying victimisation for adolescents. Facebook was the SNS used in the current study. The victim precipitation model informed the research questions and study design.

11.3 Method

Participants were 147 Facebook users aged 15-24-years-old. Participants answered a series of questions online including demographics, a measure of cyberbullying victimisation in the preceding 6 months, and measures of traditional bullying victimisation and perpetration in the preceding year. Participants were then invited to add the purpose-made Facebook researcher account as a friend to their own Facebook account. Using a comprehensive coding manual, researchers were then able to code the presence or absence of certain features (e.g., current city, phone number, religion), the number of certain features

(e.g., friends, liked pages), and the content of certain features (e.g., type of wall posts, content of profile picture). High inter-rater reliability was found between the two coders.

11.4 Results

Results showed that in the preceding 6 months, 51% reported having experienced more than one of the 14 behaviours, 25.9% reported having experienced one of the 14 behaviours, and 23.1% of participants reported that they had not experienced any of the SNS victimisation behaviours. Spearman correlations between continuous Facebook features and total cyberbullying victimisation in the preceding 6 months were then calculated. Point-biserial correlations were conducted for the dichotomous (yes/no) Facebook features. The Facebook features associated with cyberbullying victimisation in the preceding 6 months were providing a current city of residence, following other users, making more wall posts containing negative affect (out of the 10 most recent posts), and a higher frequency of posting activity by the profile owner (as measured by the number of days from day of coding until first wall post). A backward stepwise logistic regression was conducted (using a yes/no cyberbullying victimisation variable) and results showed that there were two statistically significant predictors of cyberbullying victimisation. Number of Facebook friends was the strongest predictor from the logistic regression model and was associated with nearly a two-fold increase in risk of cyberbullying victimisation. The other statistically significant predictor was traditional bullying victimisation which was associated with an 11% increase in cyberbullying victimisation risk.

11.5 Conclusions

This study was the first to provide prevalence rates for cyberbullying victimisation in SNS only in adolescent SNS users aged 15 to 24 years. This is important as SNS continue to

gain popularity amongst young people and are central to research on adolescent identity experiments. Results also provided information about the relationship between risk of cyberbullying victimisation and use of specific Facebook features. This is consistent with the victim precipitation model that draws attention to the influence of victim behavior on cyberbullying perpetrators' decisions to target certain SNS users. These results have implications for cyberbullying education and prevention programs because SNS users need to be informed about the impact of their online behaviours. Furthermore, the results indicate that as well as online behaviours, experience as a traditional bullying victim and/or perpetrator are risk factors for cyberbullying victimisation and need to be considered in future prevention efforts. This supports prevention and education programs that target offline behaviours as well.

Chapter 12. Article 4

Presentation on Facebook and risk of cyberbullying victimisation.

Current status: Accepted for publication in *Computers in Human Behavior*.

Appendices

Appendix H: Information Letters and Consent Forms for Adult and Minor Participants

Appendix I: Facebook Coding Manual

Tables

Table 1 *Frequency of Daily SNS Use, Facebook Features Used, and Context of SNS Use*

Table 2 *Frequency of Specific Cyberbullying Behaviours Experienced in Preceding 6 Months*

Table 3 *Correlations between Facebook Features and Cyberbullying Victimisation*

Table 4 *Correlations between Content of Facebook Features, Related Concepts, and Cyberbullying Victimisation*

Table 5 *Stepwise Logistic Regression Model of an Adolescent Experiencing a Negative Behaviour on Facebook*

Computers in Human Behavior 40 (2014) 16–22

Contents lists available at ScienceDirect

Computers in Human Behavior

journal homepage: www.elsevier.com/locate/comphumbeh

Presentation on Facebook and risk of cyberbullying victimisation

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ARTICLE INFO

Article history:

Keywords:
Cyberbullying
Victimisation
Adolescents
Risk
Prevention
Facebook

ABSTRACT

Facebook is an environment in which adolescents can experiment with self-presentation. Unfortunately, Facebook can also be an environment in which cyberbullying occurs. The aim of the current study was to investigate whether specific self-presentation behaviours in Facebook were associated with cyberbullying victimisation for adolescents. The contents of 147 adolescent (15–24 years) Facebook profile pages were recorded and used to predict cyberbullying victimisation. Coded contents included the presence or absence of Facebook profile features (e.g., relationship status) and the specific content of certain features (e.g., type and valence of wall posts). Participants completed measures of cyberbullying victimisation and traditional bullying victimisation and perpetration. More than three out of four participants reported experiencing at least one victimisation experience on Facebook in the preceding 6 months. A series of Facebook features and experiences of traditional bullying victimisation/perpetration were found to be associated with an increased risk of cyberbullying victimisation. Number of Facebook friends and traditional bullying victimisation were also significant predictors of cyberbullying victimisation. These results support the hypothesis that self-presentation on Facebook can increase the likelihood of eliciting negative attention from potential perpetrators. This has important implications for the development of cyberbullying prevention and education programs that teach adolescents about measures they may take to decrease their risk for cyberbullying victimisation within social networking sites like Facebook.

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1. Introduction

The use of social networking sites (SNS) such as Facebook, Twitter and Instagram is prolific amongst young people (Duggan & Smith, 2014; Madden et al., 2013). Self-presentation is a central feature of SNS because their interface is based around the creation of visible personal profiles that display a friends list, personal information, and photos. Unfortunately, SNS have also become environments in which users can target and harass other users. This phenomenon is typically called cyberbullying (Smith et al., 2008). Consequently, the associations between the ways in which young SNS users manage their online self-presentation and risk of cyberbullying, has recently begun to attract the interest of researchers.

Cyberbullying has been defined in the research literature as "an aggressive, intentional act carried out by a group or individual, using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend him or herself" (Smith et al., 2008, p. 376). Published reports of cyberbullying prevalence rates in teens (generally below 18 years of age) have ranged from 6% to 30% (Sabella, Patchin, & Hinduja, 2013) and victimisation experiences have been associated with multiple emotional, cognitive and behavioural impacts such as social anxiety (Dempsey, Sulkowski, Nichols, & Storch, 2009), poor concentration (Beran & Li, 2005), suicidal thoughts and behaviours (Hinduja & Patchin, 2010), and lower school grades and poor school attendance (Price & Dalgleish, 2010).

Considering the associated negative outcomes, it is important to identify factors that influence the risk of cyberbullying victimisation. Victimisation has been defined as an individual's "self-perception of having been exposed, either momentarily or repeatedly, to aggressive actions emanating from one or more other persons" (Aquino & Bradfield, 2000, p. 172). There are multiple factors that may influence the risk of victimisation. Victimologists have suggested that these may include perpetrator characteristics, environmental factors, or victim behaviour (Elias, 1986). Identifying the role that victim behaviour may play in the likelihood of being targeted by others, as suggested by the victim precipitation model (Timmer & Norman, 1984), is as important as focusing on perpetrator and environmental factors. According to the victim precipitation model, victim behaviour may, whether intentionally or unintentionally, elicit a response in perpetrators that leads to victimisation (Kim & Glomb, 2010). It is important

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http://dx.doi.org/10.1016/j.chb.2014.07.035
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to note that this perspective does not blame the victim for the victimisation; rather the model identifies behavioural factors that are related to an increased risk of being targeted. The victim precipitation model has been used extensively within the criminal victimology literature (Aquino & Byron, 2002) and has been applied empirically in studies investigating the role of personality characteristics (Coyne, Seigne, & Randall, 2000), conflict management style (Aquino & Bradfield, 2000), and other organisational variables (Aquino & Thau, 2009) on risk of workplace victimisation. Therefore the victim precipitation model may also provide a framework for the study of victim-specific risk factors that increase the likelihood of being cyberbullied.

To date, research investigating factors that influence the risk of cyberbullying victimisation has focused on individual differences of young information and communications technology (ICT) users. Conflicting results regarding the role of gender as a predictor of victimisation have been reported. While some studies have found no significant difference between males and females (e.g., Patchin & Hinduja, 2006; Slonje & Smith, 2008), other studies have found that females are more at risk than males (e.g., Li, 2007; Wang, Iannotti, & Nansel, 2009). Conflicting results have also been found regarding the relationship between age and victimisation with some studies finding no relationship (e.g., Patchin & Hinduja, 2006; Smith et al., 2008), and others a positive (Kowalski & Limber, 2007) or negative relationship (Slonje & Smith, 2008). Research has also focused on the relationship between the risk of cyberbullying victimisation in young people and the extent and nature of internet and computer use. For example, time spent online and computer proficiency were significant positive predictors of victimisation among participants under 18 years of age (Hinduja & Patchin, 2008). It has also been shown that likelihood of being a cyberbullying victim was higher for those who (1) were more dependent on the internet (e.g., would surf on the internet at the expense of other activities; Vandebosch & Cleemput, 2008), (2) were more likely to chat with older online acquaintances (Walrave & Heirman, 2011), or (3) who gave passwords to others and shared personal information on a blog (Walrave & Heirman, 2011).

Other studies have found a relationship between being a cyberbullying victim and being a traditional bullying victim or perpetrator in samples of young people. Cyberbullying victims (12–18 years old) have been found to be more than six and a half times more likely to have been a cyberbullying perpetrator (Walrave & Heirman, 2011) and more than two and a half times more likely to be a traditional bullying victim (under 18 years; Hinduja & Patchin, 2008). Results from other studies have confirmed the strong relationship between both cyber and traditional bullying victimisation in children and adolescent samples (e.g., Juvonen & Gross, 2008; Li, 2007; Twyman, Saylor, Taylor, & Comeaux, 2010; Vandebosch & Cleemput, 2009). One issue regarding previous research on cyberbullying victimisation risk factors is that samples have been recruited from different populations (e.g., under 18 years old, 12–15 years, middle school students only) which makes cross study comparisons of risk factors and prevalence rates difficult.

More recently, the role of 'risky SNS practices' in online risk was investigated in 9–16 year olds (Staksrud, Olafsson, & Livingstone, 2013). Participants were asked to report the time they spent online daily, how much they knew about the internet (digital competence), whether their SNS profile was set to public/private, whether they had more than 100 SNS contacts, and whether they included specific personal information on their profiles (e.g., last name, address, phone number, school, and correct age). Cyberbullying was measured dichotomously (yes/no) in the last 12 months. Results showed that overall, 8% of participants who use SNS had experienced cyberbullying, while 10% of participants who use SNS *and* have more than 100 friends had experienced cyberbullying. Those with public SNS profiles and those who displayed their mobile phone number or address on SNS were also more likely to be cyberbullied. However, these differences were not statistically significant. These results support the victim precipitation model in that self-presentation behaviours account for some degree of the risk in cyberbullying victimisation. While the results are interesting, this study relied on participants' self-report of SNS behaviours, which is subject to potential memory and self-presentation biases. In an effort to avoid these problems, researchers who investigate self-presentation behaviour in SNS directly view and code users' profile pages. Numerous studies have implemented this approach (e.g., Boyle & Johnson, 2010; Mehdizadeh, 2010; Zhao, Grasmuck, & Marton, 2008).

The current study extended the Staksrud et al. (2013) study that investigated the role of only a small selection of self-presentation behaviours in SNS as predictors of cyberbullying victimisation, by coding each profile page feature and the content of specific features. This study also focused on risk in adolescence as this period is considered to be critical in the development of a personal, individuated identity (Erikson, 1968). Furthermore, how adolescents choose to present in SNS may be a key part of identity development (Gonzales & Hancock, 2011). The current study was exploratory due to a lack of previous related research. The main objective was to understand the victim related factors that increase the risk of cyberbullying victimisation so that successful interventions for the prevention of cyberbullying victimisation can be developed and safer SNS environments can be constructed. More specifically, this study aimed to determine the frequency that cyberbullying victimisation occurred in Facebook in the preceding 6 months and what specific features of a Facebook profile page, that when used or used in a certain way, were associated with an increased risk of cyberbullying victimisation in adolescents.

2. Methods

2.1. Participants

As part of a larger study, 316 15–24 year old participants completed a battery of online questionnaires. Of these, 147 agreed to provide the researchers with access to their Facebook profile pages for coding purposes. Of these 147 participants, 124 (18–24 year olds) were recruited from the Melbourne campus of Australian Catholic University (ACU), a public university in Australia, and 23 (15–17 year olds) were recruited from two secondary schools in Melbourne. Overall, 28 (19%) participants were male and 119 were female (81%). The age range was 15–24 years ($M = 19.12$, $SD = 1.98$). Frequency of SNS use on a typical day, context of SNS use, and the frequency of use of each Facebook profile feature are presented in Table 1.

2.2. Measures

2.2.1. Demographic questions

These included age, gender and occupation. Participants also reported their active SNS accounts (e.g. Twitter, Facebook, and Instagram), frequency of daily SNS use, and the environments in which SNS were used.

2.2.2. Cyberbullying victimisation

Cyberbullying victimisation was measured using a 14-item self-report questionnaire measuring the frequency of specific behaviours that may have been experienced by the participant on Facebook across the preceding 6 months. An example of an item is *Someone has posted cruel messages or threats on my social network*

Table 1
Frequency of daily SNS use, Facebook features used, and context of SNS use.

Characteristic	%	Characteristic	%
Daily SNS use		Use of Facebook profile feature[a]	
Once	2.1	Cover photo	93.9
2–3 times	21.4	Profile picture	100
4–6 times	33.1	School	83.7
7–10 times	22.1	University	79.8
11–15 times	6.9	Employment	59.9
More than 15 times	14.5	Current city	83.7
Where SNS accessed[a]		Relationship	73.5
At school/university	85.0	Family	85.0
At work	37.4	About me	36.7
Whilst socialising	68.7	Gender	82.3
During mealtimes	23.1	Interested in	47.6
When commuting	78.9	Languages	19.0
Whilst studying	56.5	Religion	31.3
Whilst watching TV	80.3	Political views	12.2
Before I go to bed	86.4	Email	0
When I wake up	70.1	Mobile phone	9.5
Sport/at the gym	5.4	Other phone number	0.7
		IM screen	7.5
		Address	6.1
		Website	3.4
		Networks	11.6
		Favourite quotation	27.2
		Following others	40.4

[a] Adds up to more than 100% because each participant could select more than one answer.

profile page about me. Respondents were asked to indicate the frequency with which they had experienced each behaviour on a 7-point response scale. Item responses were *never, less than once a month, once a month, 2–3 times a month, once a week, 2–3 times a week and daily*. Cronbach's alpha for the 14-item victimisation scale was .82. A complete list of items, along with prevalence rates, appears in Table 2.

2.2.3. Adolescents peer relations instrument

(APRI; Parada, 2000) is a questionnaire that entails two 18-item self-report scales measuring bullying victimisation (Cronbach's $\alpha = .94$) and bullying perpetration (Cronbach's $\alpha = .93$) over the past year (Finger, Yeung, Craven, Parada, & Newey, 2008). Each item (e.g., *In the last year, I was pushed or shoved*) is rated on a 6-point scale ranging from 1 (never) to 6 (everyday). Within each scale, there are three subscales representing the frequency of verbal, physical and social bullying as both the perpetrator and victim (Cronbach's α ranging from 0.84 to 0.94; Finger et al., 2008).

2.3. Procedure

Participants from ACU were provided with an information letter and the link to the online questionnaire through an online research participation system. Informed consent was obtained before questionnaire completion. Participants from secondary schools were given access to the online questionnaires after parental consent and participant assent was obtained. Upon completion of the questionnaires, participants were invited to add the purpose-made Facebook researcher account as a friend to their own Facebook account. The participants were "defriended" (i.e., Facebook friendship disconnected) from the researcher account once the coding of the participant's profile page was completed. The coding scheme developed in this study was similar to that used in previous studies (Amichai-Hamburger & Vinitzky, 2010; Moore & McElroy, 2012). However, the current coding scheme included additional features available on Facebook profiles (refer to online supplementary material for full Facebook Coding Manual).

First, the presence or absence of Facebook profile features (e.g. whether participants listed their relationship status or their gender) were coded. Second, the specific content of specific features was coded (e.g. the characteristics of the cover and profile pictures). Finally, the type (e.g., status update, check in) and valence (positive, negative or neutral) of the 10 most recent wall posts (i.e., the posting of messages, photos, or links to websites) for each participant was also coded. For the cover photo and profile picture, the following details were coded: (a) content of picture (e.g., people, animals, scenery or other); (b) when it presented a person/people, whether the picture was a close up or full body picture; (c) when it presented a person/people, the gender of those pictured, their attire, presence/absence of alcohol, and affect (e.g., smiling, neutral). Two independent coders examined each profile page between April and November, 2013. To test inter-rater agreement, 20% of the profiles were randomly selected and coded independently by both coders. Ten items were randomly sampled from the items in the Facebook Coding Manual and assessed using two-way mixed intra-class correlations. Intra-class correlations ranged between .90 and 1 indicating high inter-rater reliability.

3. Results

3.1. Frequency of cyberbullying victimisation

In the preceding 6 months, 51% reported having experienced more than one of the 14 behaviours ($M = 2.54$, $SD = 2.89$), 25.9% reported having experienced one of the 14 behaviours, and 23.1% of participants reported that they had not experienced any of the SNS victimisation behaviours. Table 2 shows the observed frequencies of each target behaviour. The most prevalent reported behaviour was deliberate blocking of participants ("defriending") from a social networking site.

Participants also indicated the frequency with which they had experienced each behaviour in the preceding 6 months. A *total cyberbullying victimisation* score was computed by summing the total number of behaviours experienced weighted by their frequency. Therefore, *total cyberbullying victimisation* could range from 0 to 84. The observed range in the sample was 0–20 ($M = 3.09$, $SD = 3.90$) indicating that few participants had experienced multiple behaviours at high frequencies. No significant relationships between *total cyberbullying victimisation* and age, gender, or daily SNS use were found.

3.2. Relationships between Facebook features and cyberbullying victimisation

Due to positive skewness in most of the variables of interest, Spearman correlations between continuous Facebook features and *total cyberbullying victimisation* in the preceding 6 months were calculated. Point-biserial correlations were conducted between dichotomous (yes/no) Facebook features and *total cyberbullying victimisation*. Results are provided in Tables 3 and 4. Following other Facebook users, the number of days until first wall post, the number of negative wall posts, and traditional bullying victimisation and perpetration were significantly associated with cyberbullying victimisation.

The relationship between coded features with more than two possible values (e.g. type of relationship status and the content of profile/cover photos) and cyberbullying victimisation were examined through a series of one-way between groups analyses of variance (ANOVA). Cyberbullying victimisation in the preceding 6 months was significantly related to type of relationship status, $F(3, 143) = 3.78$, $p = .012$, $\eta^2 = .073$. Post hoc analyses with Tukey's HSD (with $\alpha = .05$) revealed that those who stated that their relationship status was 'married' reported significantly more cyberbullying victimisation ($M = 20.80$, $SD = 5.96$) than those who did not

Table 2
Frequency of specific cyberbullying behaviours experienced in preceding 6 months.

Behaviour	%
Someone has deliberately defriended/blocked me from their social networking site	48.3
Someone has hacked into my social networking page after I did not log out	37.4
Someone has sent me abusive or cruel emails/inbox messages on my social networking page	25.9
Someone has uploaded nasty or embarrassing images of me onto a social networking site without my consent	24.5
Someone has sent others abusive or cruel emails/inbox messages about me on their social networking page	17.7
Someone has posted false information about me on a social networking site page	15.0
Someone has used social networking sites to hurt or damage my reputation	15.0
Someone has posted cruel messages or threats on someone else's social network profile page about me	13.6
Someone has set up a social networking site page and excluded or ostracised me	12.2
Someone has posted cruel messages or threats on my social network profile page about me	12.9
Someone has hacked into my social networking page after attaining my login details	11.6
Someone has taken information I posted on a social networking site and used it against me	10.9
Someone has set up a social networking site page posing as me	6.8

report their relationship status ($M = 16.31$, $SD = 2.95$), those who reported they were 'single' ($M = 16.88$, $SD = 4.24$), and those who reported they were 'in a relationship' ($M = 17.12$, $SD = 3.51$), with no significant differences between the latter three groups.

3.3. Logistic regression analyses for cyberbullying victimisation

Because the *total cyberbullying victimisation* variable was positively skewed, it was dichotomised. Those who reported no experience with any of the 14 victimisation behaviours were given a score of zero and those who reported experiencing one or more of the victimisation behaviours were given a score of one. Point-biserial correlations were calculated to test the relationship between continuous Facebook features, APRI scores and the dichotomous cyberbullying victimisation variable. Phi-coefficients were calculated for dichotomous (yes/no) Facebook variables. Number of friends was standardised because there was a large disparity across participants (Range = 87–1064; $M = 511$, $SD = 237.37$). Variables with significant associations were included in a backward stepwise logistic regression to examine the risk factors for cyberbullying victimisation. These variables included number of friends, traditional bullying victimisation, and whether or not the profile owner reported their city of residence. Table 5 shows the results of this analysis. The final model included two significant predictor variables. Each increase in one standard deviation of number of friends was associated with nearly a twofold increase in risk of cyberbullying victimisation. Traditional bullying victimisation was associated with an 11% increase in cyberbullying victimisation risk.

Table 3
Correlations between Facebook Features and Cyberbullying Victimisation.

Variable	*N* (%)	*r*
Cover photo	138 (93.9)	−.01
Profile picture	147 (100)	
School	123 (83.7)	−.06
University[a]	99 (79.8)	.13
Employment	88 (59.9)	.12
Current city	123 (83.7)	.20
Relationship status	108 (73.5)	.12
Family	125 (85)	.04
About me	54 (36.7)	−.01
Gender	121 (82.3)	−.04
Interested in	70 (47.6)	.01
Languages	28 (19)	.10
Religion	46 (31.3)	.05
Political views	18 (12.2)	.15
Email	0 (0)	
Mobile number	14 (9.5)	−.01
Other phone number	1(0.7)	−.07
Instant messenger	11 (7.5)	.10
Address	9 6.1)	−.06
Website	5 (3.4)	.15
Networks	17 (11.6)	−.10
Quotes	40 (27.2)	−.02
Following others	40 (27.2)	.20**

** $p < .05$.
[a] Those under 18 years old were not included as they could not be at university.
* $p < .01$.

Table 4
Correlations between content of Facebook features, related concepts, and cyberbullying victimisation.

Variable	M (SD)	*r*
Number of friends	511.00 (237.37	.16
Number of photos	305.00 (297.80)	.01
Number of check-ins	103.00 (107.08)	.1
Number of liked pages	517.00 (700.87)	.15
Number of notes	.78 (4.69)	.09
Number of days to post 10 WPs	170.00 (210)	−.14
Number of days to first WP	19.86 (40.12)	−.17*
Number of status updates (WP)	3.67 (2.58)	.09
Number of check-ins (WP)	.67 (1.06)	.04
Number of check-ins with photo (WP)	.31 (.95)	−.02
Number of links (WP)	.87 (1.56)	.09
Number of videos (WP)	.27 (.72)	.01
Number of shared photos (WP)	4.09 (2.55)	−.12
Number of negative WP	1.05 (1.49)	.30**
Number of positive WP	5.24 (2.25)	−.12
Number of neutral WP	3.60 (2.16)	−.08
Traditional bullying perpetration	24.43 (9.25)	.27**
Traditional bullying victimisation	29.99 (13.05)	.38**

WP = wall post.
* $p < .01$.
** $p < .05$.

4. Discussion

The current study utilised the victim precipitation model to investigate the relationship between victims' behaviour and the risk of victimisation. More specifically, we aimed to determine the frequency of cyberbullying victimisation in Facebook in the preceding 6 months and to explore whether specific online self-presentation behaviours in SNS and associated constructs were related to the likelihood of cyberbullying victimisation.

4.1. Frequency of victimisation behaviours in SNS

To the authors' knowledge, this is the first study to provide the frequencies of victimisation behaviours specifically in Facebook. Fifty-one percent of participants aged 15–24 years reported experiencing more than one victimisation behaviour in the preceding

Table 5
Stepwise logistic regression model of an adolescent experiencing a negative behaviour on Facebook.

		B	SE	Wald	Sig.	Odds ratio	95% Confidence intervals for EXP(B)	
							Lower	Upper
Step 1	Number of friends	.60	.28	4.61	.03*	1.82	1.05	3.16
	Traditional victimisation	.10	.04	6.66	.01**	1.10	1.02	1.19
	Current city	−.85	.52	2.65	.10	.43	.16	1.19
	Constant	−1.12	.97	1.35	.25	.33		
Step 4	Number of friends	.67	.28	5.94	.02*	1.96	1.14	3.34
	Traditional victimisation	.10	.04	6.65	.01**	1.11	1.02	1.19
	Constant	−1.35	.98	1.91	.17	.26		

Note. R^2 = .19 (Hosmer & Lemeshow), .11 (Cox & Snell), .17 (Nagelkerke). Model $\chi^2(8) = 11.21$, $p = .19$. df = 1 for each predictor.
* $p < .05$.
** $p < .01$.

6 months, which is substantially higher than has been previously reported (Sabella et al., 2013). The difference in frequencies may be due to using a behaviour based list compared to using a global victimisation item, as was used in the Staksrud et al. (2013) study, which is likely to lead to lower rates of recall. Indeed, previous research has found that frequency responses to a global item are lower than behaviour-based lists (Gradinger, Strohmeier, & Spiel, 2010). The difference may also be because other reported frequencies of victimisation have included victimisation experiences across all technological media. Either way, our reported frequencies of victimisation show that more than three out of four adolescent Facebook users (aged 15–25 years) have experienced at least one victimisation experience on Facebook in the preceding 6 months.

4.2. Risk factors associated with cyberbullying victimisation in the preceding 6 months

Number of Facebook friends was the strongest predictor in the logistic regression model. This is consistent with previous research (Staksrud et al., 2013). Having a higher number of friends may increase risk because there are more potential perpetrators with access to the victim's SNS profile page. The other significant predictor was traditional bullying victimisation which was associated with an 11% increase in cyberbullying victimisation risk. This is not as high as previous findings (Hinduja & Patchin, 2008). Furthermore, *total cyberbullying victimisation* was significantly positively associated with traditional bullying perpetration and victimisation. This is consistent with previous research (Hinduja & Patchin, 2008; Walrave & Heirman, 2011). However, traditional bullying perpetration was not a significant predictor of cyberbullying victimisation in the final logistic regression model perhaps because the sample recruited reported low scores on this measure (Actual range = 18–108, $M = 24.43$). Consistent with some previous research that has not found a significant difference in risk for gender and age (Patchin & Hinduja, 2006; Slonje & Smith, 2008), the present study did not find a significant relationship between gender or age of Facebook users and *total cyberbullying victimisation*. However, the lack of a gender effect could be due to the disproportionately high number of females in this sample.

The Facebook features associated with total cyberbullying victimisation in the preceding 6 months were following other users, a higher overall frequency of posting activity by the profile owner (as measured by the number of days from day of coding until first wall post) and a higher frequency of wall posts containing negative affect (out of the 10 most recent posts). Regarding the positive association found between the number of negative affect wall posts made by the individual on their profile page and total cyberbullying victimisation, such wall posts may influence the mood of others and lead to reactions or comments that the user considers a form of victimisation. This would be consistent with the victim precipitation model. Interestingly, the type of relationship status of participants was also related to total cyberbullying victimisation. Those who stated that their relationship status was 'married' reported higher levels of victimisation compared to all other relationship status options. Qualitative feedback from the two independent raters indicated that in all these cases, the participants listed being married to one of their close friends. Therefore, it is plausible that the real risk factor for cyberbullying victimisation is falsely reporting a 'married' status.

Self-reported frequency of daily SNS use, as measured by how often participants reported logging into their SNS account(s) daily, was not associated with *total cyberbullying victimisation*. This is inconsistent with previous research that has found that more time spent online (Hinduja & Patchin, 2008), and higher dependency on the internet (Vandebosch & Cleemput, 2009) are significant predictors of cyberbullying victimisation. Such research suggests that internet use that involves simply browsing is related to an increased risk of cyberbullying victimisation. However in the current study, using SNS, and more specifically, following other users and posting at a higher frequency, was associated with *total cyberbullying victimisation*. This suggests that the risk of cyberbullying victimisation can vary depending on specific aspects of active use or direct visible activity (such as uploading negative posts) rather than more general browsing behaviour, and perhaps the use of SNS. This may be because SNS are environments in which more cyberbullying victimisation occurs of because active use is visible to others. This is consistent with the victim precipitation model that highlights the importance of victim behaviour that when seen by perpetrators, may subsequently influence potential perpetrators' actions. Our results suggest that the more actively engaged the profile owner is with their profile page, the more likely they are to be cyberbullied.

4.3. Strengths and limitations

A major strength of the current study was that a much broader range of self-presentation features within Facebook were coded compared to previous research (Staksrud et al., 2013). Self-report of the use of these features was also not relied upon. Furthermore, a comprehensive coding manual that took into account content of key features (cover photo, profile picture, and wall posts from the profile owner) was used. The association between feature content and risk of cyberbullying victimisation has not been investigated in previous research to the authors' knowledge. Therefore, this study constitutes a foundation for future research to continue to investigate adolescent self-presentation in SNS and other online environments. More specifically, the impact of self-presentation on the likelihood of being targeted and victimised needs to be examined further.

It is important to note that the sample used in the current study was obtained from the general population rather than from a population of self-identified cyberbullying victims (e.g., those who identified as having experienced cyberbullying victimisation). As a result, our sample showed a restricted range in frequency of experienced behaviours on Facebook (range was only 0–20 out of a possible 84). Although this may be the nature of the cyberbullying phenomenon, the data (including the use of Facebook features) was positively skewed. This limited the statistical approaches available and may have contributed to the non-significant correlations due to a lack of variability and restricted range in the variables. Obtaining a broader representation of experiences, including sampling from more vulnerable populations (e.g., chronic cyberbullying victims, minority populations) would enable a more in-depth understanding of the risk factors for cyberbullying victimisation so that all SNS can be informed how to minimise their risk online.

In addition, although we eliminated self-report bias regarding Facebook variables by having researchers code the Facebook profile pages of users, self-report biases may have been present when participants were asked to recall their experiences on SNS in the preceding 6 months. One approach to improve upon the ecological validity of this study would be to use experience sampling which requires participants to repeatedly respond to measurements at specific moments over a period of time whilst going about their daily life (Scollon, Kim-Prieto, & Diener, 2003). This method may eliminate recall bias and provide more detail about adolescents' experience in SNS as they occur in real or recent time.

It is also important to note that there was a gender imbalance in the sample recruited for this study with many more females participating. It is unclear whether this was due to a self-section bias and limits the sample's representativeness of the general adolescent population.

Furthermore, it must also be noted that the Staksrud et al. (2013) study used a random stratified sample of nearly 1000 participants across 25 European countries. Such a sampling approach is superior to the recruitment approach in the current study and should be considered when interpreting the victimisation frequency data.

Given the ever changing popularity of each SNS, it is important that the impact of self-presentation behaviours on victimisation in other SNS, such as Twitter and Instagram, is explored. A recent American poll showed that Twitter is now the most popular SNS amongst American teens (Piper Jaffrey., 2013). Importantly, our approach of coding the user's behaviour directly, rather than using self-report can be applied to other SNS like Twitter. For example, details about a user's relationship status can be provided in other SNS and frequency of use still applies. Other SNS also involve following other users, having numerous friends/followers and provide an opportunity to post negative affect posts. The question of whether the present results generalise to other SNS is an empirical question that will be answered when this approach is applied to the analysis of cyberbullying victimisation in other SNS. Finally, our measures of Facebook activity did not include other ways users can engage in SNS such as 'liking' others users' wall posts or posting on others' profile pages. Future research could investigate whether victimisation risk varies depending on other forms of SNS use.

4.4. Conclusions

The results of the current study are consistent with the victim precipitation model. It is not the aim of the current study to remove responsibility from the perpetrators; however the results show that cyberbullying victims have the potential to contribute to their risk of victimisation. Consequently, all SNS users need to be informed about the impact of their online behaviours in order for the prevention of cyberbullying to be successful. Within SNS, it is important that users understand that disclosing their city of residence, following others, having more Facebook friends, posting wall posts more frequently, and posting negative wall posts on their profile wall, increases the likelihood that they are targeted. It is important that this information is integrated into online safety programs. The current results also indicate that as well as online behaviours, experience as a traditional bullying victim and/or perpetrator is a risk factor for cyberbullying victimisation and needs continued consideration in future prevention efforts. This supports prevention and education programs that target offline behaviours as well. Finally, the current study has contributed to the cyberbullying research literature by developing an innovative methodology for the coding of online self-presentation behaviours in SNS and by focusing on victim specific behaviours that contribute to risk of cyberbullying victimisation.

Acknowledgements

The authors acknowledge the assistance of the Victorian Department of Education and Early Childhood Development with participant recruitment and also participants' valuable contribution to the study.

Appendix A. Supplementary material

Supplementary data associated with this article can be found, in the online version, at http://dx.doi.org/10.1016/j.chb.2014.07.035.

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Chapter 13: Review and Discussion

13.1 Introduction and Chapter Overview

The studies that comprise this research project were designed to investigate cyberbullying victimisation in SNS amongst adolescents. The overall objectives (from all four studies) were:

1. To develop a definition of cyberbullying based on the experiences of adolescent cyberbullying victims;
2. To determine the specific types of victimisation behaviours experienced by adolescent SNS users in SNS;
3. To identify areas in which adolescent cyberbullying victims report having been impacted as a result of cyberbullying victimisation in SNS;
4. To identify the factors that influence impact severity associated with cyberbullying victimisation in SNS;
5. To develop a reliable and valid measure of the frequency and impact of cyberbullying victimisation in SNS;
6. To identify specific online self-presentation behaviours on Facebook that are associated with an increased risk of cyberbullying victimisation.
7. To establish the frequency with which cyberbullying victimisation occurs in SNS in the preceding 6 months for adolescent SNS users.

Together the findings from these four studies contribute to a more detailed understanding of the definition, impact, and measurement of cyberbullying victimisation, as well as the online self-presentation behaviours that place adolescent SNS users at increased risk of victimisation. This chapter begins with a discussion of the specific findings of each study as they relate to the extant research literature. Next, limitations of each study are

discussed as well as implications for, and contributions of the findings to the cyberbullying research literature. This chapter concludes with a discussion of general future directions and implications of these results for further research, cyberbullying prevention programs, and clinical practice.

13.2 Study 1

13.2.1 Summary of results and integration with previous research literature.

The lack of consensus regarding the definition of cyberbullying in the cyberbullying research literature was the basis for the first study. As reviewed in Chapter 2 and the first article, many researchers have applied the traditional definition of bullying to the cyberspace context (e.g., Patchin & Hinduja, 2006; Smith et al., 2008). As a consequence, the three components of the definition of traditional bullying: repetition, power imbalance, and intent (Olweus, 1993), have been incorporated into cyberbullying definitions. Although this is a pragmatic approach to defining a new phenomenon, there have been numerous studies that have found that the conceptualisation of cyberbullying is more complex than applying the three traditional bullying criteria (e.g., Nocentini et al., 2010; Vandebosch & Van Cleemput, 2008). For instance, repetition can be confounded with the extent of dissemination of the offending online material, power imbalance extends from age, size and status to computer proficiency and publicity of the victimisation act, and perpetrator intent can be difficult to assess. Furthermore, additional definitional criteria, specific to the cyber context, have been proposed, including anonymity and publicity (Nocentini et al., 2010). Despite these findings, the most common approach to defining cyberbullying continues to be to apply the traditional bullying criteria to cyberspace.

The first objective of the first study was to identify the definitional criteria adolescent SNS users who identify as cyberbullying victims use to classify experiences as

cyberbullying. The study found that the most frequently referenced definitional criterion was whether the experience had a negative impact on the victim. Impact on the victim had not been referenced as a definitional criterion in previous studies within the cyberbullying research literature. However, several authors had noted its potential importance (e.g., Arora, 2006; Nocentini et al., 2010).

Regarding the utility of the three traditional bullying criteria, the first study showed that there are other important criteria adolescent SNS users employ when defining cyberbullying; beyond the traditional bullying criteria. For example, participants made reference to both the importance of the repetitive nature of experiences and the inclusion of one off experiences in a definition of cyberbullying. This is consistent with Nocentini et al. (2010) who reported that participants considered a single act to comprise cyberbullying if it was damaging to the victim. The participants justified this because the act comprised a singular behaviour accessible to a large number of other internet users. Smith et al. (2008) also found that singular acts constitute cyberbullying if disseminated to an unspecified audience. It appears that publicity of the act is functionally equivalent to the criterion of repetition which is particularly relevant in SNS because the majority of victimisation experiences occur in view of other SNS users (e.g., on users' 'walls'). Results in the first study of the current research project regarding the repetition criterion are also consistent with the traditional bullying literature. For example, Guerin and Hennessy's (2002) study on the definition of traditional bullying amongst 10-13 year olds, found that over half of respondents reported believing that behaviours were not required to be repetitive in nature to constitute bullying.

Similarly, study 1 showed that participants referenced both the need for a victimisation experience to occur with intent on behalf of the perpetrator, but also that an experience could be considered cyberbullying if the perpetrator did not intend the action. In

other words, emphasis was placed by participants on the impact of the act upon the victim regardless of perpetrator intent. These results are consistent with findings reported by Guerin and Hennessy (2002) who investigated the role of intent when 10-13 year old participants determined if an act was considered traditional bullying. The authors found that nearly two thirds of respondents did not believe intent was a necessary feature of bullying. Instead, intent was found to be related to impact on the victim in that many respondents reported that the impact on the victim was the reason they considered actions that were unintentional as bullying. Regarding the role of intent in cyberbullying, Nocentini et al. (2010) found that focus group participants referred to intent as a critical feature of cyberbullying, but a feature that was less critical than the impact on the victim. This is consistent with our results in that both repetition and intent may influence the impact of victimisation experiences, but what really matters is whether or not there is an impact on the victim.

Finally, the criterion of power imbalance was not mentioned at all by participants. This was an interesting finding because researchers had previously argued that an imbalance of power between victim and perpetrator distinguished between acts of aggression and bullying (Dooley et al., 2009). Instead, participants from our study reported that they could maintain enough control over the incident by potentially leaving the website or blocking the perpetrator. This finding was consistent with some previous research (e.g., Wolak et al., 2007). Another explanation as to why power imbalance was not referenced in study 1 may be because a power imbalance may exist the moment a clear victim and perpetrator are defined, and so it is therefore an inherent feature of the bullying act. In addition, results may have been influenced by the chosen methodology used in this study. Menesini et al.'s (2012) study on the defining features of cyberbullying gave participants bullying scenarios which relied on recognition compared to the current study that relied on spontaneous recall.

The second objective of the first study was to determine the specific types of behaviours experienced by adolescent SNS users in SNS. Despite pervasive use of SNS amongst adolescents (Lenhart & Madden, 2007), there remains little understanding of the types of specific victimisation experiences cyberbullying victims are having in SNS. One study investigated the frequency of cyberbullying victimisation in relation to SNS specifically (Staksrud et al., 2013). However, this study first determined the frequency of cyberbullying victimization experienced by the overall sample over the preceding 12 months (6%), and then calculated the frequency of victimisation of those who had a SNS (8%). Consequently, conclusions could not be drawn regarding whether these victims who had SNS had actually been victimised on SNS. Furthermore, no detail was provided about the types of victimisation experiences that occurred in SNS.

Participants in the first study reported experiencing 13 different victimisation behaviours with varied frequencies depending on the behaviour. The frequency of behaviours experienced across the sample ranged from 4% to 68% of participants. Of note was that the two most referenced behaviours included both a public experience and a private experience between victim and perpetrator.

The third objective of the first study was to identify areas in which adolescent cyberbullying victims report having been impacted as a result of cyberbullying victimisation in SNS. Previous research on the impact of cyberbullying victimisation has either compared the perceived impact of cyberbullying relative to that of other forms of bullying (e.g., Smith et al., 2008), or has investigated whether cyberbullying victimisation is correlated with specific emotional and psychological problems (e.g., Dempsey et al., 2009; Finkelhoret al., 2000) or behavioural outcomes (Price & Dalgleish, 2010). However, these approaches have often included the use of hypothetical victimisation scenarios or limited their focus to certain

impact correlates (e.g., only focusing on depression and anxiety), potentially at the expense of other relevant associated impacts.

Study 1 showed that the most referenced impact areas as a result of victimisation were: emotional, social, behavioural, cognitive, and physical (from most to least referenced). Previous research had also found that cyberbullying victimisation is correlated with significant emotional and behavioural impacts (e.g., Dempsey et al., 2009; Ortega et al., 2012; Price & Dalgleish, 2010). However, little research had focused on the specific social, cognitive and physical impacts associated with victimisation. Therefore our results highlight a gap in the research literature.

Results also indicated that some participants did not experience any negative impact as a result of their experience(s). This was consistent with previous research (e.g., Burgess-Proctor et al., 2009; Patchin & Hinduja, 2006; Ybarra et al., 2006). However, our reported frequency of no impact associated with a victimisation experience in SNS was lower than reported frequencies in previous studies. This may have occurred because we recruited self-selected victims who reported experiencing a negative experience in SNS. Although recruiting a sample with this inclusion criterion should mean that all participants would report experiencing some negative impact, all participants had experienced multiple acts of victimisation on SNS, and while some reported that several of these experiences had not caused a negative impact, other experiences had a negative impact. This supports the notion that there are factors that moderate the impact of cyberbullying victimisation that are experience specific.

Finally, results showed that the same pattern of impact (i.e., emotional, social, behavioural, cognitive, and physical) that was found for the aggregate data of all participants, was also found within each participant's set of experiences. This result indicated that each participant experienced a similar rate of each impact area, rather than some participants only

experiencing emotional impact or some only experiencing a behavioural impact. When identifying the most common profile of impact for victims it became apparent that the most common impact profile was emotional-social-behavioural. This is the first time impact profiles have been generated in relation to cyberbullying victimisation. Ortega et al. (2012) measured impact profiles for cyberbullying via the internet and mobile telephone; however they included only emotional impacts.

13.2.2 Limitations of Study 1.

There were three methodological issues specifically related to the investigation of the definition of cyberbullying and impact of victimisation experiences of adolescent SNS users. First, the sample in the first study consisted of participants who self-identified as having had a negative experience on SNS rather than being sampled from the general adolescent population. Self-selection may have meant that those who participated were more motivated to present their more significant experience(s) of victimisation or that they were a group whose experiences lead to a greater impact. However, the aim of the first study was to understand the experiences of victims of cyberbullying, therefore it was a requirement that participants were recruited using this selection criterion.

Second, participants may have experienced difficulty recalling the specific victimisation behaviours they had experienced in SNS. As a consequence, participants may have relied on the availability heuristic. According to Tversky and Kahneman (1973), the availability heuristic describes when an individual's ability to estimate or recall frequency details is affected by how easily such details and related associations "come to mind" (p. 208). Considering participants were asked to report on experiences that may have occurred some years ago, they may have forgotten experiences and subsequently not reported them. Participants may have also experienced recall difficulties when asked to express defining

features of cyberbullying. As a consequence, important defining features may not have been reported, despite their importance in deciding whether or not an experience constituted cyberbullying. Recall difficulties may also have occurred regarding specific impacts related to each experience. However, the objectives of this study were to thoroughly investigate the definition, frequency, and impact of cyberbullying according to adolescent SNS users who identified as cyberbullying victims. Therefore, a pragmatic decision was made to collect self-report data and to collect data relating to all of their victimisation experiences, regardless of how long ago they occurred.

A third methodological issue was the size and the representativeness of the sample. Twenty five adolescent SNS users who were also self-identified cyberbullying victims were recruited for this study. These participants were also recruited from schools and an urban university. As a consequence, the sample may not have included adolescents who were being educated in a trade or those who were unemployed. This may have influenced the external validity of the results. However, 25 participants were chosen because the guiding principle in determining sample size in qualitative studies is construct saturation (Mason, 2010). Construct saturation became evident during the data collection of this study, therefore participant recruitment was ceased. Further research is needed to replicate the results of the first study in other sub-groups of adolescents such as the unemployed, to more comprehensively assess the generalizability of the results to the general adolescent population.

13.2.3 Contributions and Implications of Study 1.

The findings concerning the cyberbullying definition contribute to the cyberbullying research literature in a number of ways. The results highlight that previous cyberbullying measurement tools have not been designed to capture specific experiences that were considered by adolescent cyberbullying victims to comprise cyberbullying. For example,

regarding the criterion of repetition, some previous studies have reported prevalence rates from ‘one or two times’ or from ‘two to three times a month’ (e.g., Gradinger et al., 2010). Another study reported prevalence rates that included a one-off event (Topcu & Erdur-Baker, 2010). Applying cut offs when measuring prevalence can lead to missing individuals who may actually consider themselves to be victims and who may experience a set of effects that are associated with cyberbullying. Furthermore, the results regarding the cyberbullying definition have implications for cyberbullying measurement because studies have previously differed in the provision of definitions to participants on questionnaires. The disparity between adolescent SNS users and cyberbullying researchers’ conceptualisations of cyberbullying is problematic because effective cyberbullying interventions are contingent on an accurate understanding of the views of those who use ICT. In previous approaches to defining cyberbullying, this perspective has not always been sought. The current research does include the views of adolescent SNS users so the results can be used in the development of valid and reliable cyberbullying measurement tools (see Study 3 of the current research).

Providing SNS users who also identified as cyberbullying victims with an opportunity to articulate what *they* considered were the key definitional criteria of cyberbullying, and the most salient impacts, will also be important for the education of potential support personnel for victims. Previous research has reported that certain groups of adults (e.g., teachers and parents) do not understand what constitutes cyberbullying and its associated impacts (Campbell, 2005). By not understanding, adults may not be able to adequately support or respond to victims of cyberbullying. The results of the first study can be used to inform the development of education programs to improve the overall awareness of cyberbullying and its impact. It is also important that this study focused on the experiences of SNS users only, because there is little research investigating their specific experiences. Given that the

popularity of various SNS continues to rise, it is essential that the experiences of users inform the education of teachers, other staff, and parents about what happens in SNS.

The findings concerning the specific types and frequencies of victimisation behaviours experienced in SNS contribute to the cyberbullying research field in two ways. First, the results provide frequencies of cyberbullying victimisation in SNS specifically, as opposed to across all ICT. This is especially important as the use of SNS continues to increase in adolescents. It is possible that different experiences and impacts arise from the SNS context specifically. Second, the details of each type of victimisation experience within SNS was assessed, which has not been reported in previous research. Such detail provides important information about how specific SNS features are being used by cyberbullies to target other users which can be used in cyberbullying prevention and intervention programs for bullies and victims.

Findings regarding the most common impact areas for adolescent SNS users who are cyberbullying victims also provide key information about areas to target for education, intervention and measurement. According to Campbell (2005), one of the four areas that have been found to reduce traditional bullying in schools is ‘awareness raising’. A central component of ‘awareness raising’ is to inform educational personnel about the real consequences of cyberbullying. The impact results from the current study can be used in similar programs developed for cyberbullying. Furthermore, by identifying the most common impact profile, those who support cyberbullying victims can provide targeted support. Finally, the detailed record of specific impacts associated with cyberbullying victimisation can be used in guiding the development of valid and reliable cyberbullying measurement tools (see Study 3 of the current research).

13.3 Study 2

13.3.1 Summary of results and integration with previous research literature.

The second study of this project further investigated the impact of cyberbullying victimisation on adolescent SNS users with the aim of identifying factors that participants believed were associated with an increase or decrease in impact of victimisation experiences. Differences in victim reaction to the same victimisation experiences have been found in previous studies (e.g., Burgess-Proctor et al., 2009; Patchin & Hinduja, 2006; Ybarra et al., 2006). Such a difference was also found in the first study of the current research. However, further clarification is required to ascertain the reasons for these research findings regarding impact severity for cyberbullying victims.

Results showed that a series of factors were associated with an increase or decrease in the reported impact of cyberbullying victimisation. These factors included whether or not (1) the incident was public, (2) the perpetrator was anonymous, (3) the online material was removed, and (4) bystanders intervened. Experiences in SNS that occurred in public were reported as worse than private exchanges. This was consistent with previous research (Nocentini et al., 2010; Sticca & Perren, 2013). However, the role of anonymity proved to be more complex than previous research (Nocentini et al., 2010) had shown. For example, participants in the second study reported that not only does not knowing the perpetrator increase impact severity, but so too does knowing and being close to the perpetrator. Such results have not been found in previous cyberbullying research literature so are a significant contribution of the current research.

Results also showed that those who were able to interpret the experience as a joke or believed that all SNS users will eventually be targeted reported the impact associated with victimisation experiences as less severe. The results of this study confirmed the range in severity of impact associated with cyberbullying victimisation and that there are specific

factors that influence where a victim is placed on this continuum. As well as supporting some of the relevant research literature (e.g., Nocentini et al., 2010; Sticca & Perren, 2013), this study also highlighted factors that had not previously been found to influence impact severity related to cyberbullying victimisation.

13.3.2 Limitations of Study 2.

There were several potential limitations relating to the investigation of factors that influence impact severity associated with cyberbullying victimisation in SNS. In the second study of this research project, the experiences of victims across all SNS were explored. However, it was apparent from the interviews that participants were predominantly referencing the SNS, Facebook. This limits the generalisability of the impact results to other SNS. Furthermore, the interviews conducted as part of this study were not initially designed to measure the factors that influence impact of cyberbullying victimisation in SNS. Instead the interviews were constructed to elicit participants' definitions of cyberbullying and the impact of their own experiences (as part of the first study of this project). Themes relating to the factors that influenced impact emerged within the answers to those questions. This may be a limitation of the current study as questions were not directly framed to elicit information about the factors that participants believed increased and/or decreased associated impact. If more focused questions related to differences in impact associated with experiences of victimisation were asked, more detail about these factors could have emerged.

Another potential limitation that may have influenced the results of the second study is related to the data collection method. Data was collected using semi-structured interviews with participants who were instructed to reflect on the impact of their victimisation experiences, potentially after some time had elapsed between the experience and the interview. This may have affected participants' ability to accurately recall the impact of their

experiences and the factors that influenced that impact. Therefore, findings related to the impact of experiences may have been based on what participants *thought* influenced the impact of their experiences, rather than what actually did. However, again, the main objective of this study was to gain a detailed insight into all experiences of cyberbullying victimisation faced by victims. Realistically, individuals working with cyberbullying victims would rely on the victim's ability to accurately recollect their experiences. Therefore, relying on participant recall as part of the current study's design was a pragmatic decision. Furthermore, exploring what adolescent SNS users think about experiences of cyberbullying is a solid starting point for generating and later testing hypotheses.

13.3.3 Contributions and Implications of Study 2.

The results of the second added to the understanding of the factors that increase and/or decrease the impact for adolescent cyberbullying victims in SNS. These results may also inform targeted intervention and prevention programs for victims to support them to develop plans and coping strategies to deal with experiences of victimisation online. By understanding the factors that buffer victims against severe impact associated with such experiences, the most severe outcomes (i.e., suicidal ideation or suicide attempts) may be prevented.

Results showed that participants believed that a perpetrator's decision to remove or maintain distressing material on their SNS profile affected the associated impact experienced by victims. Such a result has implications for the education of and intervention with actual and potential cyberbullying perpetrators. By sensitising potential perpetrators to the possible impact their actions may have on others, behaviour change may occur. This is particularly important because the results of the first study showed that many adolescent SNS users who are also cyberbullying victims considered victimisation experiences as cyberbullying

regardless of intent. Thus, other ICT users should be informed about the extent to which their actions may affect others and how much they can help by listening and heeding requests to remove online material.

Results also have some implications for bystanders of cyberbullying victimisation. The important role of cyberbullying bystanders in the management of cyberbullying has consistently been highlighted in previous literature (Li, 2006; Machácková, Dedkova, Sevcikova, & Cerna, 2013). Our results show that although SNS users may not believe that liking or commenting on a status or photo that somebody else has posted causes them to become another perpetrator, such actions were reported to contribute to the severity of impact for victims. This finding can also inform the development of prevention programs that encourage bystanders to take a stand against cyberbullying rather than becoming involved, albeit passively.

13.4 Study 3

13.4.1 Summary of results and integration with previous research literature.

Another area within the cyberbullying research literature that required further attention was the measurement of cyberbullying victimisation and associated constructs. Historically, a standardised approach to the measurement of these constructs was lacking and consequently, comparisons of prevalence rates and other related constructs (e.g., impact) across studies has been difficult. Numerous problems in the previous approaches to the measurement of cyberbullying victimisation and its impact were reviewed in Chapter 7. Based on these problems, a need for a cyberbullying measurement tool that addressed specific limitations in previous measurement was identified. Therefore, the aim of the third study in this project was to develop a measure of experience (frequency of occurrence) and impact of cyberbullying victimisation. A second aim of this study was to investigate the

psychometric properties of the measure, including factor structure, reliability and validity in an adolescent SNS user population.

The outcome of this study was the development of the Social Networking Experiences Questionnaire (SNEQ). The SNEQ included a 14-item scale measuring the frequency of victimisation behaviours experienced within SNS. In addition, the impact of victimisation scale was made up of five subscales (health impact, positive growth, emotional impact, social impact, and SNS behaviour impact). The experience and each of the impact subscales had sufficient internal consistency. The experience scale was statistically associated with relevant constructs (anxiety, depression, traditional bullying perpetration and victimisation) providing adequate construct validity. Regarding the statistical associations between the impact subscales and the other construct measures, mixed results were found. Of note was that the positive growth subscale was associated with higher levels of depression and anxiety. One interpretation of this result is that victims who experienced positive growth as a consequence of their victimisation may have also experienced numerous negative impacts (associated with higher levels of depression and anxiety). In other words, negative and positive impacts are not necessarily mutually exclusive.

13.4.2 Limitations of Study 3.

There was one central methodological issue specifically relating to the valid and reliable measurement of the frequency and impact of cyberbullying victimisation in SNS. When data was collected as part of the piloting phase, the sample was recruited from the general adolescent population rather than a self-selected, victim specific population (which was the sample in the questionnaire development phase). The general adolescent population had experienced relatively low levels of cyberbullying victimisation. This would have restricted the reported range of impact severity as those who were self-selected victims had

all experienced multiple victimisation experiences, and consequently endorsed more of the impact areas compared to the general population sample. Most of the general adolescent population sample had experienced some of the impacts sometimes but not many endorsed particular impacts more frequently; subsequently having an impact on the results of the EFA process. One way to improve the variability in reported cyberbullying victimisation experiences is to sample from vulnerable groups (e.g., severe cyberbullying victims or individuals with depression and/or anxiety) when establishing preliminary psychometric properties of the SNEQ. This would provide the potential to improve the external validity of the SNEQ.

13.4.3 Contributions and Implications of Study 3.

The SNEQ is an important measurement tool for the cyberbullying field because it addresses many of the previously reviewed limitations of other measurement tools and approaches to the measurement of cyberbullying victimisation. First, the SNEQ accommodates varying time frames within which respondents are asked to report their victimisation experiences. Although the psychometric analyses were conducted using impact data taken from the preceding 6 months, other time frames can be used depending on the need (although reliability for different time frames would need to be tested). This allows for flexibility depending on the specific use of the SNEQ, whether it be for research or clinical purposes.

Second, the SNEQ does not provide a definition of cyberbullying for respondents; rather it provides them with a list of 14 different types of SNS behaviours. Therefore, respondents are not prompted or biased by an a priori definition of cyberbullying provided by the researcher. Third, preliminary psychometric data for the SNEQ from study 3 supports the

validity of the tool (Tokunaga, 2010), and studies of cyberbullying measurement tools have consistently not included reports of such data (Berne et al., 2013).

Fourth, the SNEQ is a valuable contribution to the cyberbullying field because it is the first measurement tool designed specifically to measure experiences in SNS only. This is valuable due to the popularity of SNS amongst young people. Measuring SNS victimisation experiences is also important because previous studies (e.g., Staksrud et al., 2013), and the current research, have found that SNS are an online environment where users can be at risk of being targeted. Fifth, this is the first study to measure the impact of cyberbullying victimisation using specific impact subscales. This approach to the measurement of impact is important because previous research has measured the impact of cyberbullying victimisation by comparing its severity with other forms of bullying (e.g., Bauman & Newman, 2013), or by choosing specific impacts, such as school grades, depression, or suicidal thoughts (e.g., Price & Dalgleish, 2010). These approaches have not allowed for a detailed investigation of the varied consequences of victims' experiences. The SNEQ allows respondents to endorse a broad range of impacts that were selected from interviews with the same population (i.e., adolescent SNS users).

Finally, the SNEQ can be adapted to changes in the features of SNS (i.e., if a new form of communication within SNS was developed) because cyberbullying victimisation is measured using a list of behaviours based on the features of SNS. Therefore, any newly developed features could be converted into its equivalent behaviour and added to the experience scale.

13.5 Study 4

13.5.1 Summary of results and integration with previous research literature.

It has been consistently reported in the cyberbullying research literature that cyberbullying victimisation can lead to various negative impacts (e.g., Hinduja & Patchin,

2010; Price & Dalgleish, 2010). This finding is also supported by data from the current research. Considering the negative outcomes associated with cyberbullying victimisation, it is important for researchers to identify factors that influence the risk of being targeted. One approach, adopted in study 4, is to investigate the role of victim behaviour in the risk of victimization using the victim precipitation model (Timmer & Norman, 1984). Although there is previous research on risk factors of cyberbullying victimisation, very little is known about whether self-presentation behaviours on SNS are associated with cyberbullying victimisation risk.

One recent study (Staksrud et al., 2013) that did investigate the role of 'risky SNS practices' in online risk in 9-16 year olds, had some notable methodological shortcomings. First, it relied upon self-reporting of participants' SNS behaviours which is subject to memory biases and forgetting. Second, the study focused upon a small selection of online self-presentation behaviours as potential predictors. This limited the capacity of the researchers to draw definitive conclusions about the role of online self-presentation behaviours in cyberbullying victimisation.

The aim of the fourth study of the current research was to investigate whether specific online self-presentation behaviours on Facebook were associated with an increased risk of cyberbullying victimisation for adolescents. This study also obtained the frequency of victimisation in SNS over the preceding 6 months. Fifty one percent of participants reported having experienced more than one of the 14 behaviours, 25.9% reported having experienced one of the 14 behaviours, and 23.1% of participants reported that they had not experienced any of the SNS victimisation behaviours.

Facebook self-presentation behaviours that were correlated with victimisation were following other users (r = .20), a higher frequency of wall posts with negative affect (out of the 10 most recent posts; r = .30), and higher posting activity by the profile owner (as

measured by the number of days from day of coding until first wall post; r = -.17). Type of relationship status was also found to be related to cyberbullying victimisation. If a Facebook profile owner posted that they were 'married' on their profile, they were significantly more likely to be targeted compared to other relationship statuses or not providing a status. Cyberbullying victimisation was also associated with traditional bullying victimisation (r = .38) and perpetration (r = .27). This is consistent with previous research (e.g., Hinduja & Patchin, 2008; Walrave & Heirman, 2011).

Traditional bullying victimisation and number of Facebook friends were found to be significant predictors of cyberbullying victimisation over the preceding 6 months. Each increase in one standard deviation of number of friends was associated with nearly a two-fold increase in risk of cyberbullying victimisation. Traditional bullying victimisation was associated with an 11% increase in cyberbullying victimisation risk.

13.5.2 Limitations of Study 4.

Although self-report bias was eliminated from the assessment of Facebook variables by having researchers code the Facebook profile pages of users, there may have been some recall bias and forgetting when participants were asked to recall their victimisation experiences on SNS in the preceding 6 months. Similar to the third study, a potential limitation and threat to external validity is that the sample recruited did not report a broad variation in frequency of victimisation experiences on SNS (range of frequency of victimisation was only 0-20 out of a possible 84). The restricted range in victimisation frequency may have been because the sample was not recruited from a vulnerable population such as self-identified victims. Another explanation may be that those who had experienced higher frequencies of victimisation had already deleted their Facebook account as a consequence and therefore could not participate in the data collection, or did not want to

complete a questionnaire reminding them of their victimisation. However, the aim of this study was to determine what factors influenced risk of cyberbullying victimisation, therefore both victims and non-victims (i.e., with no reported experience of cyberbullying) were needed. The limited range of frequency of cyberbullying victimisation observed in the sample in study 4 limited the extent to which statistical relationships could be found between Facebook features and cyberbullying victimisation. As a consequence, the results of the fourth study may only be generalisable to those who have experienced low levels of cyberbullying victimisation. Another consideration is that these lower reported levels of victimisation may be examples of cyber-arguments or fighting. Nevertheless, every effort was made to recruit a varied and representative sample and to design a robust methodology. Furthermore, the research question regarding the relationship between online self-presentation behaviours and cyberbullying victimisation risk is still of interest in the pursuit of cyberbullying prevention.

Another limitation of this study is that the researchers only coded Facebook profiles and no other SNS. As other SNS continue to become popular, there remains a need to investigate the role of features of other SNS, or newly developed social networking features, to see whether they contribute to the risk of cyberbullying victimisation in that respective SNS. Finally, this study was only designed to investigate the role of one level of risk factors (victim behaviour) on cyberbullying victimisation risk. In doing so, the relative contribution of confounding variables that may also account for the relationships observed remain unknown. Furthermore, victim behaviour may only make a moderate contribution to predicting variance in the likelihood of cyberbullying victimisation, compared with other factors. In order to fully comprehend the contributions to cyberbullying victimisation risk, the role of other factors including those related to perpetrators and ICT environments need to be assessed.

13.5.3 Contributions and Implications of Study 4.

A major strength of this study was that it improved on the limitations of the Staksrud et al. (2013) study. The impact of a much broader range of self-presentation features within Facebook was investigated and a comprehensive coding manual that included content of key features (cover photo, profile picture, and wall posts from the profile owner) was also applied. To the author's knowledge, no other study has investigated the role of the content of SNS profile features on the risk of cyberbullying victimisation. This study also eliminated the problems of self-report bias and forgetting regarding the use of Facebook features because the researcher coded the Facebook profile pages of users.

The results of this study add to knowledge about the contribution of SNS behaviours to the risk of cyberbullying victimisation. Results may be applicable to other SNS. For example, details about a user's relationship status can be provided in many SNS and frequency of use still applies across all SNS platforms. Other SNS also involve following other users, having numerous friends/followers and provide an opportunity to post negative affect posts. Therefore, these results can be disseminated and used in education programs on safe use of numerous SNS.

Results can also provide the foundations of a cyberbullying victimisation prevention model where SNS users are informed about the influence of their online behaviours on their risk of being targeted. The contribution of other risk factors, such as those related to perpetrators and ICT environments, may also be included in such a model. The current results also indicate that as well as online behaviours, experience as a traditional bullying victim and/or perpetrator is a risk factor for cyberbullying victimisation and need to be considered in future prevention efforts. For example, prevention and education programs that

target offline *and* online behaviours may be developed rather than just isolating one form of bullying.

Finally, this study contributes to the victim precipitation literature. Our results indicate that cyberbullying victims may choose to use specific Facebook features or provide particular information on their Facebook profile page that are associated with a risk of being targeted. This study complements other studies that have used this model to predict workplace victimisation by focusing on the role of factors such as personality characteristics (e.g., Aquino & Thau, 2009), conflict management style (Aquino, 2000), and other organisational variables (Aquino & Thau, 2009). Although the intention of this study is not to blame the victim for their victimisation, it is important to consider the role of victims for the purposes of education and prevention programs about the safe use of SNS.

13.6 General Implications of the Findings

This project has several broad implications for research, prevention programs, and clinical practice. Regarding research implications, a revised approach to the definition and measurement of cyberbullying victimisation is being proposed. More specifically, it is suggested that a polythetic definition of cyberbullying is developed where inclusion in a 'victim' group is associated with a number of criteria, only some of which are necessary for assignment to a victim group. For example, a victimisation experience may be repeated and negatively impact the victim, but the perpetrator may not have intended for their behaviour to have an impact. Despite not necessarily meeting all explicit definitional criteria, this experience would still be considered an experience of cyberbullying. A polythetic definition may have several advantages. There may be greater simplicity when classifying individuals to a victim or non-victim group. As the cyberbullying research literature currently stands, there remains disparity between researchers' conceptualisations of cyberbullying. By having

a set of criteria, not all of which need to be met, this disparity would be reduced. Consequently the reliability of cyberbullying victimisation measurement may improve as there is no need for consensus on every criterion to arrive at the same classification. Furthermore, when measuring the frequency of cyberbullying victimisation, experiences that are one off or not intended to harm the victim will be captured in subsequent reported prevalence rates. This measurement approach is consistent with the results of the first study of this project that found that adolescent SNS users consider experiences to be cyberbullying even if they are not repeated or have not been intended to cause them harm. Recognising these experiences is important because adolescent SNS users have clearly stipulated their importance and have indicated that regardless of whether or not they meet each definitional criterion, they can still lead to negative consequences.

It is also suggested that focus is placed on the SNS behaviours that have a negative impact on victims. However, it is important that impact on the victim is not the only definitional criterion of cyberbullying. This would be a problem because if all determinations regarding the classification of a cyberbullying incident were contingent on a negative impact on the victim, the risk of a SNS user misinterpreting behaviour may occur.

This research project also has several important implications for cyberbullying education and prevention programs. As previously mentioned, Campbell (2005) suggested that ‘awareness raising’ was an important step in reducing the incidence of all bullying in schools. Besag (1989) also noted that schools can find it difficult to recognise bullying incidents. The current research project provides the information required to raise the awareness of the definition of according to adolescent SNS users, and its consequences. Campbell (2005) also suggested that parents need to be educated on the different methods of cyberbullying. The current research also provides this detail.

This research has provided adolescent cyberbullying victims with an opportunity to express their views and opinions regarding the definition and impact of their victimisation experiences in SNS. The views of this particular group can be used to inform programs that educate potential cyberbullying victims on the impact of being targeted. Furthermore, by understanding what increases and decreases the impact of cyberbullying victimisation according to adolescent victims, parents, school personnel and other organisations working with individuals involved in cyberbullying (e.g., mental health organisations, drug and alcohol organisations, and private psychological organisations), will be able to determine strategies to reduce and/or prevent the impact of cyberbullying victimisation. The support of bystanders and perpetrators in this harm minimisation pursuit can also be attained. In particular, the results from the fourth study will be able to guide the development of digital literacy programs that focus on the safe use of SNS.

Finally, this research project has implications for clinical practice. Knowledge of common impact profiles of cyberbullying victims can allow support personnel to be more prepared for the specific presentations of victims. Victims will need emotional support, support around their social connections/relationships, and behavioural support (e.g., managing their online identities etc). According to the results of the third study in this project, symptoms of depression and anxiety will also be common in cyberbullying victims. Furthermore, the SNEQ can be used within clinical contexts when measuring the experience and impact of cyberbullying victimisation.

13.7 Suggestions for Future Directions

Taking the project as a whole, there are some clear and important directions for future research. The first and second studies open several potential avenues for future research regarding the impact of cyberbullying. Further research should investigate whether the

severity of impact of a cyberbullying experience is differentially related to each definitional criterion. Our cross-sectional investigations showed that some adolescent SNS users consider both repeated experiences and one off experiences as cyberbullying. Further research is needed to determine whether or not there is a correlation between the extent of repetition and the degree of impact. A longitudinal study that recruited SNS users at the beginning of their use, then tested at regular intervals for cyberbullying victimisation experiences (including whether or not they were repeated or one off) and various associated impacts would enable a greater understanding of the short and long term impact of cyberbullying. This design would also allow for the detection of potential confounding variables that may influence impact (e.g., pre-existing anxiety/depression or traditional bullying victimisation experiences), and may also provide further explanation about the difference in impact experienced by victims.

It would also be interesting to determine whether specific definitional features of cyberbullying are related to particular areas of impact. For example, the influence of repetition or publicity on emotional versus behavioural impacts can be investigated. Regarding the 14 different SNS victimisation behaviours that were measured throughout the current research, further research should investigate whether there is a difference in impact severity or type (e.g., social or cognitive) depending on the type of victimisation experienced. This would provide valuable information because some behaviours were experienced more commonly amongst adolescent SNS users and therefore the associated impact will be evident more frequently.

The SNEQ also requires further development. The factor structure needs to be replicated in other samples that include a broader range of adolescent SNS users who have experienced more varied victimisation experiences. Confirmatory factor analysis is also required to confirm the current factor structure.

The novel findings related to the self-presentation behaviours on SNS that have an impact on risk of cyberbullying victimisation require further investigation. First, the findings need to be replicated in other samples of adolescent SNS users. Furthermore, other populations such as those with depression or anxiety, or traditional bullying victim groups could be targeted and their online self-presentation behaviours examined. Such examinations would provide information for targeted prevention and education programs for these vulnerable individuals. Second, further research is needed to explore how and why certain self-presentation behaviours on SNS are associated with cyberbullying victimisation risk. For example, it was found that having more Facebook friends is associated with an increase in victimisation risk. Is this because SNS users are less discerning about whom they add to their friends list and as a consequence, increase the likelihood of more antisocial users being added? Do SNS users sense an illusion of safety when adding other users who are potentially not known to them? Or, do individuals with more Facebook friends represent those who are more vulnerable and therefore easier targets for perpetrators? These hypotheses need to be empirically tested in order to adequately assess the relative contribution of each of the relevant online self-presentation behaviours to online risk or how/why they are related.

Finally, given the changing popularity of specific SNS, it is important that the impact of self-presentation behaviours on victimisation in other SNS, such as Twitter and Instagram, is explored. A recent American poll showed that Twitter is now the most popular SNS amongst American teenagers (Piper Jaffrey, 2013). Future researchers should continue to consider the views and opinions of the users of the technology of interest in order to keep abreast of any discrepancies in the users' conceptualisation of cyberbullying or other online phenomena, compared to the conceptualisations presented in the research literature.

13.8 Conclusion

Prior to this series of four studies, gaps regarding the definition, impact, measurement, and predictors of cyberbullying victimisation existed within the cyberbullying research literature. Although overall, this project had some sampling issues that require more consideration, the findings of each study contribute uniquely to the research literature and provide a rich source of hypotheses for testing in future research with the goal of continuing to understand and solve the problem of cyberbullying victimisation in SNS.

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Appendix A

Australian Catholic University Human Research and Ethics Committee Approval Letters

ACU
AUSTRALIAN CATHOLIC UNIVERSITY

Human Research Ethics Committee
Committee Approval Form

Principal Investigator/Supervisor: John Gleeson Melbourne Campus
Co-Investigators: Melbourne Campus
Student Researcher: Rebecca Dredge Melbourne Campus

Ethics approval has been granted for the following project:
Cyberbullying in social networking sites: A victim's perspective

for the period: 07/10/2011-07/04/2012

Human Research Ethics Committee (HREC) Register Number: V2011 114

Special Condition/s of Approval
Prior to commencement of your research, the following permissions are required to be submitted to the ACU HREC:
N/A

The following standard conditions as stipulated in the *National Statement on Ethical Conduct in Research Involving Humans* (2007) apply:

(i) that Principal Investigators / Supervisors provide, on the form supplied by the Human Research Ethics Committee, annual reports on matters such as:
- security of records
- compliance with approved consent procedures and documentation
- compliance with special conditions, and

(ii) that researchers report to the HREC immediately any matter that might affect the ethical acceptability of the protocol, such as:
- proposed changes to the protocol
- unforeseen circumstances or events
- adverse effects on participants

The HREC will conduct an audit each year of all projects deemed to be of more than low risk. There will also be random audits of a sample of projects considered to be of negligible risk and low risk on all campuses each year.

Within one month of the conclusion of the project, researchers are required to complete a *Final Report Form* and submit it to the local Research Services Officer.

If the project continues for more than one year, researchers are required to complete an *Annual Progress Report Form* and submit it to the local Research Services Officer within one month of the anniversary date of the ethics approval.

Signed: ..... Date: .....07/10/2011.....
(Research Services Officer, Melbourne Campus)

C:\Users\redredge\AppData\Local\Temp\V2011 114 Approval Form-1.doc

ACU
AUSTRALIAN CATHOLIC UNIVERSITY

Human Research Ethics Committee
Committee Approval Form

Principal Investigator/Supervisor: John Gleeson Melbourne Campus

Co-Investigators: Xochitl de la Piedad Garcia Melbourne Campus

Student Researcher: Rebecca Dredge Melbourne Campus

Ethics approval has been granted for the following project:
Cyberbullying in social networking sites: a victim's perspective

for the period: 18/09/2012 - 31/12/2012

Human Research Ethics Committee (HREC) Register Number: 2012 241V

Special Condition/s of Approval
Prior to commencement of your research, the following permissions are required to be submitted to the ACU HREC:
N/A

The following standard conditions as stipulated in the *National Statement on Ethical Conduct in Research Involving Humans* (2007) apply:

(i) that Principal Investigators / Supervisors provide, on the form supplied by the Human Research Ethics Committee, annual reports on matters such as:
- security of records
- compliance with approved consent procedures and documentation
- compliance with special conditions, and

(ii) that researchers report to the HREC immediately any matter that might affect the ethical acceptability of the protocol, such as:
- proposed changes to the protocol
- unforeseen circumstances or events
- adverse effects on participants

The HREC will conduct an audit each year of all projects deemed to be of more than low risk. There will also be random audits of a sample of projects considered to be of negligible risk and low risk on all campuses each year.

Within one month of the conclusion of the project, researchers are required to complete a *Final Report Form* and submit it to the local Research Services Officer.

If the project continues for more than one year, researchers are required to complete an *Annual Progress Report Form* and submit it to the local Research Services Officer within one month of the anniversary date of the ethics approval.

Signed: ..... Date: .....20/09/2012.....
(Research Services Officer, Melbourne Campus)

Appendix B

Department of Education and Early Childhood Development Ethics Approval

Department of Education and Early Childhood Development

Office for Policy, Research and Innovation

2 Treasury Place
East Melbourne, Victoria 3002
Telephone: +61 3 9637 2000
DX 210083
GPO Box 4367
Melbourne, Victoria 3001

2011_001356

Miss Rebecca Dredge
School of Psychology
Locked Bag 4115
Fitzroy MDC
FITZROY 3065

Dear Miss Dredge

Thank you for your application of 3 November 2011 in which you request permission to conduct research in Victorian government schools and/or early childhood settings titled *Cyberbullying in social networking sites: A victim's perspective.*

I am pleased to advise that on the basis of the information you have provided your research proposal is approved in principle subject to the conditions detailed below.

1. The research is conducted in accordance with the final documentation you provided to the Department of Education and Early Childhood Development.

2. Separate approval for the research needs to be sought from school principals and/or centre directors and this is to be supported by the DEECD approved documentation and the letter of approval from a relevant and formally constituted Human Research Ethics Committee.

3. The project is commenced within 12 months of this approval letter and any extensions or variations to your study, including those requested by an ethics committee must be submitted to the Department of Education and Early Childhood Development for its consideration before you proceed.

4. As a matter of courtesy, you advise the relevant Regional Director of the schools or early childhood settings that you intend to approach. An outline of your research and a copy of this letter should be provided to the Regional Director.

5. You acknowledge the support of the Department of Education and Early Childhood Development in any publications arising from the research.

6. The Research Agreement conditions, which include the reporting requirements at the conclusion of your study, are upheld. A reminder will be sent for reports not submitted by the study's indicative completion date.

7. If DEECD has commissioned you to undertake this research, the responsible Branch/Division will need to approve any material you provide for publication on the Department's Research Register.

I wish you well with your research study. Should you have further enquiries on this matter, please contact Kathleen Nolan, Research Officer, Education Policy and Research, by telephone on (03) 9637 3244 or by email at nolan.kathleen.j@edumail.vic.gov.au.

Yours sincerely

Dr Elizabeth Hartnell-Young
Group Manager
Education Policy and Research

21/11/2011

enc

Department of Education and Early Childhood Development

Strategy and Review Group

2 Treasury Place
East Melbourne, Victoria 3002
Telephone: +61 3 9637 2000
DX 210083
GPO Box 4367
Melbourne, Victoria 3001

2013_002021

Miss Rebecca Dredge
Faculty of Arts and Science
School of Psychology
Australian Catholic University
Locked Bag 4115
Fitzroy MDC
FITZROY 3065

Dear Miss Dredge

Thank you for your application of 29 May 2013 in which you request permission to conduct research in Victorian government schools and/or early childhood settings titled *The relationship between self-presentation on Facebook and the likelihood cyberbullying victimisation.*

I am pleased to advise that on the basis of the information you have provided your research proposal is approved in principle subject to the conditions detailed below.

1. The research is conducted in accordance with the final documentation you provided to the Department of Education and Early Childhood Development.

2. Separate approval for the research needs to be sought from school principals and/or centre directors. This is to be supported by the DEECD approved documentation and, if applicable, the letter of approval from a relevant and formally constituted Human Research Ethics Committee.

3. The project is commenced within 12 months of this approval letter and any extensions or variations to your study, including those requested by an ethics committee must be submitted to the Department of Education and Early Childhood Development for its consideration before you proceed.

4. As a matter of courtesy, you advise the relevant Regional Director of the schools or governing body of the early childhood settings that you intend to approach. An outline of your research and a copy of this letter should be provided to the Regional Director or governing body.

5. You acknowledge the support of the Department of Education and Early Childhood Development in any publications arising from the research.

6. The Research Agreement conditions, which include the reporting requirements at the conclusion of your study, are upheld. A reminder will be sent for reports not submitted by the study's indicative completion date.

State Government Victoria

7. If DEECD has commissioned you to undertake this research, the responsible Branch/Division will need to approve any material you provide for publication on the Department's Research Register.

I wish you well with your research study. Should you have further enquiries on this matter, please contact Youla Michaels, Project Support Officer, Research, Evaluation and Analytics Branch, by telephone on (03) 9637 2707 or by email at michaels.youla.y@edumail.vic.gov.au.

Yours sincerely

Joyce Cleary
Director
Research, Evaluation and Analytics Branch

22/07/2013

enc

Appendix C

Information Letters and Consent Forms for Adult and Minor Participants (Study 1 and 2)

INFORMATION LETTER TO PARTICIPANTS

TITLE OF PROJECT: Cyberbullying in Social Networking Sites

SUPERVISOR: Dr John Gleeson

STUDENT RESEARCHER : Rebecca Dredge

PROGRAMME IN WHICH ENROLLED: PhD

Dear Participant,

You are invited to participate in a study investigating cyberbullying in social networking sites. The study is being undertaken as part of a PhD in the School of Psychology. In order to meet the requirements of this study, you must have an active social networking site account and log on to it at least twice each week. You must also have had a negative experience on a social networking site.

If you meet these requirements and decide to participate in the study, you will be required to attend an individual interview in which you will be asked questions about your experience of cyberbullying in social networking sites. The aim of the individual interview is not to provide counselling, rather to provide an opportunity for you to share your thoughts about your experiences on social networking sites. It is anticipated that the individual interview will take approximately 45-60 minutes.

This study has been approved by the Human Research Ethics Committee at Australian Catholic University. Your participation in this study is voluntary. You are free to refuse consent altogether without having to justify that decision, or you may withdraw consent and discontinue participation in the study at any time without giving a reason.

There are no foreseen risks associated with participation in the individual interviews, however, if you experience any discomfort at any stage you may contact the counselling services at the St Patrick's Campus at Australian Catholic University. Appointments can be made by following the links on the Australian Catholic University website (http://sarsgrid.acu.edu.au/esars/couns/eSARS.asp). Youn may also contact Dr Barbara Jones who is a clinical psychologist at the Melbourne Psychology and Counselling Clinic at Australian Catholic University. Her contact number is 03 9953 3464, or you may contact her via her email

on barbara.m.jones@acu.edu.au. Both counselling services are free of charge to research participants and no referrals are required.

By participating in this research you will have an opportunity to contribute to a research area which requires more insight in order to best understand cyberbullying and its associated impact. You will also be reimbursed with a voucher for your participation in this study. You may also choose to receive a summary of the study's results by indicating so on the consent form below.

Any questions regarding this project should be directed to the supervisor Professor John Gleeson or the student researcher, Rebecca Dredge.

Professor John Gleeson
03 9953 3108
School of Psychology
St Patrick's Campus Melbourne

Rebecca Dredge
ta0097551@myacu.edu.au
School Of Psychology
St Patrick's Campus Melbourne

Your confidentiality will be protected at all times during your participation in this study and in any report or publication arising from it. Results from the study may be summarised and appear in publications or may be provided to other researchers in a form that does not identify the participants in any way.

In the event that you have any complaint or concern, or if you have any query that the researcher has not been able to satisfy, you may write to the Chair of the Human Research Ethics Committee. Any complaint or concern will be treated in confidence and fully investigated. The participant will be informed of the outcome.

Tel: 03 9953 3158

VIC: Chair, HREC
C/- Research Services
Australian Catholic
University
Melbourne Campus
Locked Bag 4115
FITZROY VIC 3065
Fax: 03 9953 3315

If you agree to participate in this project, you should sign both copies of the Consent Form below, retain one copy for your records and return the other copy to the Supervisor or Student Researcher.

…….. ……..

Supervisor Student Researcher

ACU
AUSTRALIAN CATHOLIC UNIVERSITY

CONSENT FORM
Copy for Researcher / Copy for Participant to Keep

TITLE OF PROJECT: Cyberbullying in social networking sites

SUPERVISOR: Dr John Gleeson

STUDENT RESEARCHER: Rebecca Dredge

I ..... *(the participant)* have read (*or, where appropriate, have had read to me)* and understood the information provided in the Letter to Participants. Any questions I have asked have been answered to my satisfaction. I agree to participate in a recorded semi-structured individual interview of approximately 45-60 minutes duration and realise that I can withdraw my consent at any time without adverse consequences. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify me in any way.

NAME OF PARTICIPANT: .....

SIGNATURE ..... DATE

.....

SIGNATURE OF PRINCIPAL INVESTIGATOR (or SUPERVISOR):.....

DATE:……..

SIGNATURE OF STUDENT RESEARCHER: .....

DATE:……..

Please indicate below if you would like a summary of the results of this study provided to you. Your email address will be required so that a summary of results can be sent to you upon completion of this study.

Yes I would like the results emailed to me. ☐

My email address is:……..

No I would not like the results emailed to me. ☐

ACU
AUSTRALIAN CATHOLIC UNIVERSITY

CONSENT FORM
Copy for Researcher / Copy for Participant to Keep

TITLE OF PROJECT: Cyberbullying in social networking sites

SUPERVISOR: Dr John Gleeson

STUDENT RESEARCHER: Rebecca Dredge

I ..... *(the participant)* have read (*or, where appropriate, have had read to me)* and understood the information provided in the Letter to Participants. Any questions I have asked have been answered to my satisfaction. I agree to participate in a recorded semi-structured individual interview of approximately 45-60 minutes duration and realise that I can withdraw my consent at any time without adverse consequences. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify me in any way.

NAME OF PARTICIPANT: .....

SIGNATURE ..... DATE

.....

SIGNATURE OF PRINCIPAL INVESTIGATOR (or SUPERVISOR):.....

DATE:……..

SIGNATURE OF STUDENT RESEARCHER: .....

AUSTRALIAN CATHOLIC UNIVERSITY

INFORMATION LETTER TO PARTICIPANTS

TITLE OF PROJECT: Cyberbullying in Social Networking Sites

SUPERVISOR: Dr John Gleeson

STUDENT RESEARCHER : Rebecca Dredge

PROGRAMME IN WHICH ENROLLED: PhD

Dear Participant,

You/your child are invited to participate in a study investigating cyberbullying in social networking sites. The study is being undertaken as part of a PhD in the School of Psychology. In order to meet the requirements of this study, you/your child must have an active social networking site account and log on to it at least twice each week. You/your child must also have had a negative experience on a social networking site.

If you/your child meet these requirements and decide to participate in the study, you/your child will be to attend a recorded individual interview in which you/your child will be provided with a cyberbullying questionnaire and asked questions about aspects of the questionnaire as you/they complete it. The aim of the individual interview is to provide an opportunity for you/your child to share your/their thoughts about the cyberbullying questionnaire. It is anticipated that the individual interview will take approximately 30 minutes.

This study has been approved by the Human Research Ethics Committee at Australian Catholic University. Your/your child's participation in this study is voluntary. You/your child is free to refuse consent altogether without having to justify that decision, or may withdraw consent and discontinue participation in the study at any time without giving a reason.

There are no foreseen risks associated with participation in the individual interviews, however, if you/your child experiences any discomfort at any stage you may contact the counselling services at the St Patrick's Campus of Australian Catholic University. Appointments can be made by following the links on the Australian Catholic University website (http://sarsgrid.acu.edu.au/esars/couns/eSARS.asp). You may also contact Dr Barbara Jones who is a clinical psychologist at the Melbourne Psychology and Counselling Clinic at Australian Catholic University. Her contact number is 03 9953 3464, or you may contact her via email on barbara.m.jones@acu.edu.au. Both counselling services are free of charge to research participants and no referrals are required.

By participating in this research you/your child will have an opportunity to contribute to a research area which requires more insight in order to best understand cyberbullying and its associated impact. You/your child will also be reimbursed with a voucher for your/their participation in this study. You/your child may also choose to receive a summary of the study's results. You can elect to receive the results by indicating so on the consent form below.

Any questions regarding this project should be directed to the supervisor Professor John Gleeson or the student researcher, Rebecca Dredge.

Professor John Gleeson
03 9953 3108
School of Psychology
St Patrick's Campus Melbourne

Rebecca Dredge
ta0097551@myacu.edu.au
School Of Psychology
St Patrick's Campus Melbourne

Your/your child's confidentiality will be protected at all times during participation in this study and in any report or publication arising from it. Results from the study may be summarised and appear in publications or may be provided to other researchers in a form that does not identify the participants in any way.

In the event that you/your child have any complaint or concern, or if any query that the researcher has not been able to satisfy, you/your child may write to the Chair of the Human Research Ethics Committee. Any complaint or concern will be treated in confidence and fully investigated. The participant will be informed of the outcome.

Tel: 03 9953 3158

VIC: Chair, HREC
C/- Research Services
Australian Catholic
University
Melbourne Campus
Locked Bag 4115
FITZROY VIC 3065
Fax: 03 9953 3315

If you agree to participate in this project, you and your child should sign both copies of the Consent Form below and retain one copy for your records and return the other copy to the Supervisor or Student Researcher.

…….. ……

Supervisor Student Researcher

PARENT/GUARDIAN CONSENT FORM
Copy for Researcher

TITLE OF PROJECT: Cyberbullying in social networking sites

SUPERVISOR: Dr John Gleeson

STUDENT RESEARCHER: Rebecca Dredge

I ..... (*the parent/guardian*) have read (*or, where appropriate*, have had read to me) and understood the information provided in the Letter to the Participants. Any questions I have asked have been answered to my satisfaction. I agree that my child, nominated below, may participate in this activity which involves a recorded semi-structured individual interview of approximately 45-60 minutes duration. I realise that I can withdraw my consent at any time without adverse consequences. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify my child in any way.

NAME OF PARENT/GUARDIAN: .....

SIGNATURE ..... DATE: .....

NAME OF CHILD .....

SIGNATURE OF PRINCIPAL INVESTIGATOR (or SUPERVISOR): .....

DATE: .....

SIGNATURE OF STUDENT RESEARCHER: .....

DATE: ....

ASSENT OF PARTICIPANTS AGED UNDER 18 YEARS

I ..... (*the participant aged under 18 years*) understand what this research project is designed to explore. What I will be asked to do has been explained to me. I agree to take part in a recorded semi-structured individual interview of approximately 45-60 minutes duration, realising that I can withdraw at any time without adverse consequences.

NAME OF PARTICIPANT AGED UNDER 18: .....

SIGNATURE: DATE: .....

SIGNATURE OF PRINCIPAL INVESTIGATOR (or SUPERVISOR): .....

DATE: .....

SIGNATURE OF STUDENT RESEARCHER: .....

DATE: .....

Please indicate below if you/your child would like a summary of the results of this study provided to you. Your email address will be required so that a summary of results can be sent to you upon completion of this study.

Yes I would like the results emailed to me. ☐

My email address is:……..

No I would not like the results emailed to me. ☐

AUSTRALIAN CATHOLIC UNIVERSITY

PARENT/GUARDIAN CONSENT FORM
Copy for Participant to Keep

TITLE OF PROJECT: Cyberbullying in social networking sites

SUPERVISOR: Dr John Gleeson

STUDENT RESEARCHER: Rebecca Dredge

I ..... (*the parent/guardian*) have read (*or, where appropriate*, have had read to me) and understood the information provided in the Letter to the Participants. Any questions I have asked have been answered to my satisfaction. I agree that my child, nominated below, may participate in this activity which involves a recorded semi-structured individual interview of approximately 45-60 minutes duration. I realise that I can withdraw my consent at any time without adverse consequences. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify my child in any way.

NAME OF PARENT/GUARDIAN: .....

SIGNATURE ..... DATE: .....

NAME OF CHILD .....

SIGNATURE OF PRINCIPAL INVESTIGATOR (or SUPERVISOR): .....

DATE: .....

SIGNATURE OF STUDENT RESEARCHER: .....

DATE: ....

ASSENT OF PARTICIPANTS AGED UNDER 18 YEARS

I ..... (*the participant aged under 18 years*) understand what this research project is designed to explore. What I will be asked to do has been explained to me. I agree to take part in a recorded semi-structured individual interview of approximately 45-60 minutes duration, realising that I can withdraw at any time without adverse consequences.

NAME OF PARTICIPANT AGED UNDER 18: .....

SIGNATURE: DATE: .....

SIGNATURE OF PRINCIPAL INVESTIGATOR (or SUPERVISOR): .....

DATE: .....

SIGNATURE OF STUDENT RESEARCHER: .....

Appendix D

Interview Schedule Study 1

Demographics:

1. How old are you? Years: _____ Months: _____

2. Gender Male Female

3. How often do you access your social networking sites each week?

Twice a week 3-5 times per week 6-10 times per week 11-14 times per week (twice a day) More than 14 times per week (more than twice a day)

1. Please tick which of the following behaviours you have experienced on social networking sites (given list of behaviours).
2. What do you consider cyberbullying to be?
    a. Are there any other factors that are important in the definition of cyberbullying?
    b. Is there anything else?
3. According to the list of cyberbullying behaviours provided to you at the beginning of the interview, you indicated that you have experienced the following behaviours: LIST BEHAVIOURS. Going through each behaviour you have experienced separately, what was the impact of…….for you?

Appendix E

Screen Shot of the Social Networking Experiences Questionnaire

In the last 6 months, how often have the below behaviours happened to you?

	Never (1)	Less than Once a Month (2)	Once a Month (3)	2-3 Times a Month (4)	Once a Week (5)	2-3 Times a Week (6)	Daily (7)
Someone has posted cruel messages or threats on my social networking site profile page about me (1)	○	○	○	○	○	○	○
Someone has posted cruel messages or threats on someone else's social networking site profile page about me (2)	○	○	○	○	○	○	○
Someone has set up a social networking site page and excluded or ostracised me from it (3)	○	○	○	○	○	○	○
Someone has uploaded nasty or embarrassing images of me onto a social networking site without my consent (4)	○	○	○	○	○	○	○
Someone has taken information I posted on a social networking site, and used it against me (5)	○	○	○	○	○	○	○
Someone has used social networking sites to hurt or damage my reputation (6)	○	○	○	○	○	○	○
Someone has set up a social networking site	○	○	○	○	○	○	○

page posing as me (7)							
Someone has set up a survey or poll which asks others to vote on how ugly, unpopular, fat etc I am (8)	❍	❍	❍	❍	❍	❍	❍
Someone has posted false information about me on a social networking site page (9)	❍	❍	❍	❍	❍	❍	❍
Someone has sent me abusive or cruel emails/inbox messages on my social networking page (10)	❍	❍	❍	❍	❍	❍	❍
Someone has sent others abusive or cruel emails/inbox messages about me on their social networking page (11)	❍	❍	❍	❍	❍	❍	❍
Someone has hacked into my social networking page after I did not log out (12)	❍	❍	❍	❍	❍	❍	❍
Someone has hacked into my social networking page after attaining my login details (13)	❍	❍	❍	❍	❍	❍	❍
Someone has deliberately defriended/blocked me from their social networking site page (14)	❍	❍	❍	❍	❍	❍	❍

Please indicate how much the following statements described your experience during or after your experience(s).

	This did not describe my experience at all (1)	This described my experience a little bit (2)	This described my experience moderately (3)	This described my experience quite a bit (4)	This described my experience extremely (5)
I felt alone and isolated from others (1)	○	○	○	○	○
I was scared for my safety (2)	○	○	○	○	○
I felt upset (3)	○	○	○	○	○
I felt worthless (4)	○	○	○	○	○
I felt embarrassed (5)	○	○	○	○	○
I felt frustrated (6)	○	○	○	○	○
I felt angry (7)	○	○	○	○	○
I felt like I had no control (8)	○	○	○	○	○
I was in shock (9)	○	○	○	○	○
I felt anxious (10)	○	○	○	○	○
I lost confidence in myself (11)	○	○	○	○	○
I felt insecure (12)	○	○	○	○	○
I felt lost (13)	○	○	○	○	○
I cried a lot (14)	○	○	○	○	○
I withdrew from those around me (15)	○	○	○	○	○
I stopped using social networking site(s) (16)	○	○	○	○	○
I deleted my social networking site(s) (17)	○	○	○	○	○
I changed the way I communicated with others in social networking sites (18)	○	○	○	○	○
I no longer added friends to my social networking site(s) (19)	○	○	○	○	○
I found it difficult to study (20)	○	○	○	○	○
My grades at school/university/TAFE dropped (21)	○	○	○	○	○
I found it difficult to go to work (22)	○	○	○	○	○

I did not engage in activities that I normally would (23)	❍	❍	❍	❍	❍
I tired to get even with the person(s) who did this to me (24)	❍	❍	❍	❍	❍
I deliberately cut/picked/scratched myself (25)	❍	❍	❍	❍	❍
I attempted suicide (26)	❍	❍	❍	❍	❍
I did not leave my house (27)	❍	❍	❍	❍	❍
I moved schools/universities/TAFEs (28)	❍	❍	❍	❍	❍
I drank alcohol more than usual (29)	❍	❍	❍	❍	❍
I started to use illicit substances (30)	❍	❍	❍	❍	❍
I stopped exercising as much as usual (31)	❍	❍	❍	❍	❍
I exercised more than usual (32)	❍	❍	❍	❍	❍
I found others avoided me (33)	❍	❍	❍	❍	❍
I felt like I could not trust anyone anymore (34)	❍	❍	❍	❍	❍
I questioned the loyalty of my friends (35)	❍	❍	❍	❍	❍
I found my relationship with my partner suffered (36)	❍	❍	❍	❍	❍
I found the relationship with my parent(s) suffered (37)	❍	❍	❍	❍	❍
I did not feel supported (38)	❍	❍	❍	❍	❍
I felt that no one believed me (39)	❍	❍	❍	❍	❍
I felt I was not being taken seriously (40)	❍	❍	❍	❍	❍
Others no longer respected me (41)	❍	❍	❍	❍	❍
My friends no longer trusted me (42)	❍	❍	❍	❍	❍

I did not talk to my friends as much (43)	❍	❍	❍	❍	❍
I felt others viewed me differently (44)	❍	❍	❍	❍	❍
It affected my work situation at the time (45)	❍	❍	❍	❍	❍
I felt unfairly blamed by my friends (46)	❍	❍	❍	❍	❍
I felt distant from those around me (47)	❍	❍	❍	❍	❍
I did not feel as close to my friends anymore (48)	❍	❍	❍	❍	❍
I no longer attended the same social events that I used to attend (49)	❍	❍	❍	❍	❍
I thought about the experience often (50)	❍	❍	❍	❍	❍
I worried about the same thing happening to me again (51)	❍	❍	❍	❍	❍
I was stressed (52)	❍	❍	❍	❍	❍
I was concerned it would affect my ability to find employment (53)	❍	❍	❍	❍	❍
I wondered who knew about my experience (54)	❍	❍	❍	❍	❍
I thought about what others were thinking about me (55)	❍	❍	❍	❍	❍
I thought about suicide (56)	❍	❍	❍	❍	❍
I felt like everyone knew who I was and what had happened to me (57)	❍	❍	❍	❍	❍
I felt someone might harm me (58)	❍	❍	❍	❍	❍
I found it difficult to concentrate (59)	❍	❍	❍	❍	❍
I had nightmares about m y experience (60)	❍	❍	❍	❍	❍
My eating habits changed (ate more or less) (61)	❍	❍	❍	❍	❍
My sleep was disturbed (62)	❍	❍	❍	❍	❍
My heart rate was often	❍	❍	❍	❍	❍

fast (63)					
I felt tension in my muscles (64)	❍	❍	❍	❍	❍
I felt sick (65)	❍	❍	❍	❍	❍
I had headaches/migraines (66)	❍	❍	❍	❍	❍
I had stomachaches (67)	❍	❍	❍	❍	❍
I vomited (68)	❍	❍	❍	❍	❍
I sought police assistance (69)	❍	❍	❍	❍	❍
I went to see a psychologist/counselor (70)	❍	❍	❍	❍	❍
I made it into a joke (71)	❍	❍	❍	❍	❍
I approached the perpetrator to talk with them about it (72)	❍	❍	❍	❍	❍
I removed the perpetrator(s) from my social networking site straight away (73)	❍	❍	❍	❍	❍
I felt like a stronger person after the experience (74)	❍	❍	❍	❍	❍
I found new friends (75)	❍	❍	❍	❍	❍
I spent more time with friends who were not involved (76)	❍	❍	❍	❍	❍
I feel like I have become a better person (77)	❍	❍	❍	❍	❍
I learned not to care as much about what people think about me (78)	❍	❍	❍	❍	❍
I learned to stand up for myself (79)	❍	❍	❍	❍	❍
I learned more about myself (80)	❍	❍	❍	❍	❍
It made me realise what was really important to me (81)	❍	❍	❍	❍	❍
I appreciated my real friends much more (82)	❍	❍	❍	❍	❍
My experience made me more sensitive to others who have similar	❍	❍	❍	❍	❍

experiences (83)					

Appendix F

Adolescent Peer Relations Instrument

How often HAVE YOU done any of the following things to someone else THIS YEAR. CIRCLE THE NUMBER THAT IS CLOSEST TO YOUR ANSWER.

	In the past year at this school I…	**Never**	**Sometimes**	**Once or twice a month**	**Once a week**	**Several times a week**	**Everyday**
1.	Teased them by saying things to them	1	2	3	4	5	6
2.	Pushed or shoved a student	1	2	3	4	5	6
3.	Made rude remarks at a student	1	2	3	4	5	6
4.	Got my friends to turn against a student	1	2	3	4	5	6
5.	Made jokes about a student	1	2	3	4	5	6
6.	Crashed into a student on purpose as they walked by	1	2	3	4	5	6
7.	Picked on a student by swearing at them	1	2	3	4	5	6
8.	Told my friends things about a student to get them into trouble	1	2	3	4	5	6
9.	Got into a physical fight with a student because I didn't like them	1	2	3	4	5	6
10.	Said things about their looks they didn’t like	1	2	3	4	5	6
11.	Got other students to start a rumor about a student	1	2	3	4	5	6
12.	I slapped or punched a student	1	2	3	4	5	6
13.	Got other students to ignore a student	1	2	3	4	5	6
14.	Made fun of a student by calling them names	1	2	3	4	5	6
15.	Threw something at a student to hit them	1	2	3	4	5	6
16.	Threatened to physically hurt or harm a student	1	2	3	4	5	6
17.	Left them out of activities or games on purpose	1	2	3	4	5	6
18.	Kept a student away from me by giving them mean looks	1	2	3	4	5	6

How often has someone else done the following things TO YOU THIS YEAR.

CIRCLE THE NUMBER THAT IS CLOSEST TO YOUR ANSWER.

In the past year at this school …		**Never Sometimes**	**Once or twice a month**	**Once a week**	**Several times a week**	**Everyday**
1.	I was teased by students saying things to me	1	2	3	4	5	6
2.	I was pushed or shoved	1	2	3	4	5	6
3.	A student wouldn't be friends with me because other people didn't like me	1	2	3	4	5	6
4.	A student made rude remarks at me	1	2	3	4	5	6
5.	I was hit or kicked hard	1	2	3	4	5	6
6.	A student ignored me when they were with their friends	1	2	3	4	5	6
7.	Jokes were made up about me	1	2	3	4	5	6
8.	Students crashed into me on purpose as they walked by	1	2	3	4	5	6
9.	A student got their friends to turn against me	1	2	3	4	5	6
10.	My property was damaged on purpose	1	2	3	4	5	6
11.	Things were said about my looks I didn't like	1	2	3	4	5	6
12.	I wasn't invited to a student's place because other people didn't like me	1	2	3	4	5	6
13.	I was ridiculed by students saying things to me	1	2	3	4	5	6

14.	A student got students to start a rumor about me	1	2	3	4	5	6
15.	Something was thrown at me to hit me	1	2	3	4	5	6
16.	I was threatened to be physically hurt or harmed	1	2	3	4	5	6
17.	I was left out of activities, games on purpose	1	2	3	4	5	6
18.	I was called names I didn’t like	1	2	3	4	5	6

Appendix G

International Personality Item Pool (IPIP) NEO-PI-R Anxiety and Depression Subscales

Anxiety

+ keyed	Worry about things.
	Fear for the worst.
	Am afraid of many things.
	Get stressed out easily.
	Get caught up in my problems.
– keyed	Am not easily bothered by things.
	Am relaxed most of the time.
	Am not easily disturbed by events.
	Don't worry about things that have already happened.
	Adapt easily to new situations.

Depression

+ keyed	Often feel blue.
	Dislike myself.
	Am often down in the dumps.
	Have a low opinion of myself.
	Have frequent mood swings.
	Feel desperate.
	Feel that my life lacks direction.
– keyed	Seldom feel blue.
	Feel comfortable with myself.
	Am very pleased with myself.

Response scale: strongly disagree, disagree, neutral, agree, and strongly agree.

Appendix H

Information Letters and Consent Forms for Adult and Minor Participants

AUSTRALIAN CATHOLIC UNIVERSITY

INFORMATION LETTER TO PARTICIPANTS

TITLE OF PROJECT: Cyberbullying in Social Networking Sites

SUPERVISOR: Dr John Gleeson

STUDENT RESEARCHER : Rebecca Dredge

PROGRAMME IN WHICH ENROLLED: PhD

Dear Participant,

You are invited to participate in a study investigating cyberbullying in social networking sites. The study is being undertaken as part of a PhD in the School of Psychology. In order to meet the requirements of this study, you must be **18-24 years old**, have an active **Facebook** account and log on to it at least twice each week.

If you meet these requirements and decide to participate in the study, the following will be required of you. Please note that there are two parts to this study and that you can consent to participate in just part 1 or both part 1 *and* 2.

1. Part 1: You will be invited to complete a series of questionnaires about your experiences in social networking sites, your experience with traditional bullying, how you cope with stressful situations in general and how you feel about others evaluating you in social situations. It is anticipated that completion of the questionnaires will take approximately 20-30 minutes and will take place at a location convenient to you as they will be available online.
2. Part 2: You will then be invited to add the researcher (the account will only be produced for research purposes) as a friend to your Facebook account. By doing this, the researcher will be able to evaluate how young people are presenting themselves online and then investigate whether this has an impact on the likelihood of being victimised on Facebook. After a period of 2 weeks, you will be deleted by the researcher as a friend and nothing further will be required. The privacy and confidentiality of all of your Facebook friends will be maintained. The aim of this part of the study is specifically to evaluate the information you have provided on your profile page as another user would view it, not to access information about anyone else whose names appear on the profile

page. Furthermore, only the researcher and her supervisor will be viewing the Facebook profile pages and the researcher will not communicate with you or your friends.

Please note: In the highly unlikely circumstances that something on your Facebook profile page indicates a risk to yourself or others, this information may need to be passed onto the appropriate authorities in accordance with the law.

Both parts of this study have been approved by the Human Research Ethics Committee at Australian Catholic University. Your participation in this study is voluntary. You are free to refuse consent altogether without having to justify that decision, or may withdraw consent and discontinue participation in the study at any time without giving a reason.

There are no foreseen risks associated with participation in either part of the study, however, if you experience any discomfort at any stage you may contact the counselling services at the St Patrick's Campus at Australian Catholic University. Appointments can be made by following the links on the Australian Catholic University website (http://sarsgrid.acu.edu.au/esars/couns/eSARS.asp).

By participating in this research you will have an opportunity to contribute to a research area which aims to increase the understanding of cyberbullying, its associated impact and how to prevent it occurring from the outset. You may also choose to receive a summary of the overall results of the study. You can elect to receive these results by indicating so on the consent form below.

Any questions regarding this project should be directed to the supervisor Professor John Gleeson or the student researcher, Rebecca Dredge.

Professor John Gleeson
03 9953 3108
School of Psychology
St Patrick's Campus Melbourne

Rebecca Dredge
ta0097551@myacu.edu.au
School Of Psychology
St Patrick's Campus Melbourne

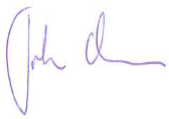
Your confidentiality will be protected at all times during participation in this study and in any report or publication arising from it. Results from the study may be summarised and appear in publications or may be provided to other researchers in a form that does not identify the participants in any way.

In the event that you have any complaint or concern, or if any query that the researcher has not been able to satisfy, you may write to the Chair of the Human Research Ethics Committee. Any complaint or concern will be treated in confidence and fully investigated. The participant will be informed of the outcome.

Tel: 03 9953 3158

VIC: Chair, HREC
C/- Research Services
Australian Catholic
University
Melbourne Campus
Locked Bag 4115
FITZROY VIC 3065
Fax: 03 9953 3315

If you agree to participate in this project, you should sign both copies of the Consent Form below and retain one copy for your records and return the other copy to the Supervisor or Student Researcher.



…….. ……..

Supervisor Student Researcher

AUSTRALIAN CATHOLIC UNIVERSITY

CONSENT FORM
Copy for Researcher

TITLE OF PROJECT: Cyberbullying in social networking sites

SUPERVISOR: Dr John Gleeson

STUDENT RESEARCHER: Rebecca Dredge

I ..... (*the participant*) have read (*or, where appropriate*, have had read to me) and understood the information provided in the Letter to the Participants. Any questions I have asked have been answered to my satisfaction. I agree that I will participate in:

Part 1: Completion of questionnaires. ☐

Part 2: Add researcher as friend on Facebook for a period of 2 weeks. ☐

I realise that I can withdraw my consent at any time without adverse consequences. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify me in any way.

NAME OF PARTICIPANT: .....

SIGNATURE ..... DATE

.....

SIGNATURE OF PRINCIPAL INVESTIGATOR (or SUPERVISOR): .....

DATE:.....

SIGNATURE OF STUDENT RESEARCHER: .....

Please indicate below if you/your child would like a summary of the results of this study provided to you. Your email address will be required so that a summary of results can be sent to you upon completion of this study.

Yes I would like the results emailed to me. ☐

My email address is:……..

No I would not like the results emailed to me. ☐

ACU
AUSTRALIAN CATHOLIC UNIVERSITY

CONSENT FORM
Copy for Participant to Keep

TITLE OF PROJECT: Cyberbullying in social networking sites

SUPERVISOR: Dr John Gleeson

STUDENT RESEARCHER: Rebecca Dredge

I ..... (*the participant*) have read (*or, where appropriate*, have had read to me) and understood the information provided in the Letter to the Participants. Any questions I have asked have been answered to my satisfaction. I agree that I will participate in:

Part 1: Completion of questionnaires. ☐

Part 2: Add researcher as friend on Facebook for a period of 2 weeks. ☐

I realise that I can withdraw my consent at any time without adverse consequences. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify me in any way.

NAME OF PARTICIPANT: .....

SIGNATURE ..... DATE

.....

SIGNATURE OF PRINCIPAL INVESTIGATOR (or SUPERVISOR): .....

DATE:……..

SIGNATURE OF STUDENT RESEARCHER: .....

AUSTRALIAN CATHOLIC UNIVERSITY

INFORMATION LETTER TO PARTICIPANTS

TITLE OF PROJECT: Cyberbullying in Social Networking Sites

SUPERVISOR: Dr John Gleeson

STUDENT RESEARCHER : Rebecca Dredge

PROGRAMME IN WHICH ENROLLED: PhD

Dear Participant,

Your child is invited to participate in a study investigating cyberbullying in social networking sites. The study is being undertaken as part of a PhD in the School of Psychology. In order to meet the requirements of this study, your child must be **15-17 years old**, have an active **Facebook** account and log on to it at least twice each week.

If your child meets these requirements and decides to participate in the study, the following will be required of your child. Please note that there are two parts to this study and that you can consent for your child to participate in just part 1 or both part 1 *and* 2.

1. Part 1: Your child will be invited to complete a series of questionnaires about their experiences in social networking sites, their experience with traditional bullying, how they cope with stressful situations in general and how they feel about others evaluating them in social situations. It is anticipated that completion of the questionnaires will take approximately 20 minutes and will take place at St Margaret's School or Berwick Grammar School.
2. Part 2: Your child will then be invited to add the researcher (the account will only be produced for research purposes) as a friend to their Facebook account. By doing this, the researcher will be able to evaluate how young people are presenting themselves online and then investigate whether this has an impact on the likelihood of being victimised on Facebook. After a period of 2 weeks, your child will be deleted by the researcher as a friend and nothing further will be required. The privacy and confidentiality of all of your child's Facebook friends will be maintained. The aim of this part of the study is specifically to evaluate the information your child has provided on their profile page as another user would view it, not to access information about anyone else whose names appear on the profile page. Furthermore, only the researcher and her supervisor will be viewing the Facebook profile pages and the researcher will not communicate with your child or their friends.

   Please note: In the highly unlikely circumstances that something on your child's Facebook profile page indicates a risk to themselves or others, this information will be

passed onto the Director of Student Wellbeing at St Margaret's School and Berwick Grammar School, Monica Hill, to be dealt with according to the school's policies.

Both parts of this study have been approved by the Human Research Ethics Committee at Australian Catholic University. Your child's participation in this study is voluntary. Your child is free to refuse consent altogether without having to justify that decision, or may withdraw consent and discontinue participation in the study at any time without giving a reason.

There are no foreseen risks associated with participation in either part of the study, however, if your child experiences any discomfort at any stage, they may withdraw from the study or you may contact the Director of Student Wellbeing at St Margaret's School and Berwick Grammar School, Monica Hill, on 9703 8107 or by email at hillm@stmargarets.vic.edu.au.

By participating in this research your child will have an opportunity to contribute to a research area which aims to increase the understanding of cyberbullying, its associated impact and how to prevent it occurring from the outset. You and your child may also choose to receive a summary of the overall results from the study. You can elect to receive these results by indicating so on the consent form below.

Any questions regarding this project should be directed to the supervisor Professor John Gleeson or the student researcher, Rebecca Dredge.

Professor John Gleeson
03 9953 3108
School of Psychology
St Patrick's Campus Melbourne

Rebecca Dredge
ta0097551@myacu.edu.au
School Of Psychology
St Patrick's Campus Melbourne

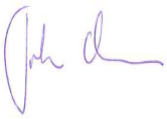
Your child's confidentiality will be protected at all times during participation in this study and in any report or publication arising from it. Results from the study may be summarised and appear in publications or may be provided to other researchers in a form that does not identify the participants in any way.

In the event that you or your child has any complaint or concern, or if any query that the researcher has not been able to satisfy, you may write to the Chair of the Human Research Ethics Committee. Any complaint or concern will be treated in confidence and fully investigated. The participant will be informed of the outcome.

Tel: 03 9953 3158

VIC: Chair, HREC
C/- Research Services
Australian Catholic
University
Melbourne Campus
Locked Bag 4115
FITZROY VIC 3065
Fax: 03 9953 3315

If you agree to participate in this project, you and your child should sign both copies of the Consent Form below and retain one copy for your records and return the other copy to the Supervisor or Student Researcher.



…….. ……

Supervisor Student Researcher

PARENT/GUARDIAN CONSENT FORM
Copy for Researcher

TITLE OF PROJECT: Cyberbullying in social networking sites

SUPERVISOR: Dr John Gleeson

STUDENT RESEARCHER: Rebecca Dredge

I ..... (*the parent/guardian*) have read (*or, where appropriate*, have had read to me) and understood the information provided in the Letter to the Participants. Any questions I have asked have been answered to my satisfaction. I agree that my child, nominated below, may participate in:

Part 1: Completion of questionnaires. ☐

Part 2: Add researcher as friend on Facebook for a period of 2 weeks. ☐

I realise that I can withdraw my consent at any time without adverse consequences. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify my child in any way.

NAME OF PARENT/GUARDIAN: .....

SIGNATURE ..... DATE:.....

NAME OF CHILD .....

SIGNATURE OF PRINCIPAL INVESTIGATOR (or SUPERVISOR): .....

DATE:.....

SIGNATURE OF STUDENT RESEARCHER: .....

DATE: ....

ASSENT OF PARTICIPANTS AGED UNDER 18 YEARS

I …… (*the participant aged under 18 years*) understand what this research project is designed to explore. What I will be asked to do has been explained to me. I agree to take part in:

Part 1: Completion of questionnaires. ☐

Part 2: Add researcher as friend on Facebook for a period of 2 weeks. ☐

I also realise that I can withdraw at any time without adverse consequences.

NAME OF PARTICIPANT AGED UNDER 18: .....

SIGNATURE: …… DATE: .....

SIGNATURE OF PRINCIPAL INVESTIGATOR (or SUPERVISOR): ..... DATE: .....

SIGNATURE OF STUDENT RESEARCHER: ..... DATE: .....

Please indicate below if you/your child would like a summary of the results of this study provided to you. Your email address will be required so that a summary of results can be sent to you upon completion of this study.

Yes I would like the results emailed to me. ☐

My email address is:……..

No I would not like the results emailed to me. ☐

PARENT/GUARDIAN CONSENT FORM
Copy for Participant to Keep

TITLE OF PROJECT: Cyberbullying in social networking sites

SUPERVISOR: Dr John Gleeson

STUDENT RESEARCHER: Rebecca Dredge

I ..... (*the parent/guardian*) have read (*or, where appropriate*, have had read to me) and understood the information provided in the Letter to the Participants. Any questions I have asked have been answered to my satisfaction. I agree that my child, nominated below, may participate in:

Part 1: Completion of questionnaires. ☐

Part 2: Add researcher as friend on Facebook for a period of 2 weeks. ☐

I realise that I can withdraw my consent at any time without adverse consequences. I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify my child in any way.

NAME OF PARENT/GUARDIAN: .....

SIGNATURE ..... DATE:.....

NAME OF CHILD .....

SIGNATURE OF PRINCIPAL INVESTIGATOR (or SUPERVISOR): .....

DATE:.....

SIGNATURE OF STUDENT RESEARCHER: .....

DATE: .....

ASSENT OF PARTICIPANTS AGED UNDER 18 YEARS

I ..... (*the participant aged under 18 years*) understand what this research project is designed to explore. What I will be asked to do has been explained to me. I agree to take part in:

Part 1: Completion of questionnaires. ☐

Part 2: Add researcher as friend on Facebook for a period of 2 weeks. ☐

I also realise that I can withdraw at any time without adverse consequences.

NAME OF PARTICIPANT AGED UNDER 18: .....

SIGNATURE: …… DATE: .....

SIGNATURE OF PRINCIPAL INVESTIGATOR (or SUPERVISOR): .....

DATE: .....

SIGNATURE OF STUDENT RESEARCHER: .....

DATE: .....

Appendix I

Facebook Coding Manual and Key

CODER:_____

Facebook Profile Coding Manual

Full name of participant _____

DATE CODED: _____

Age (in years) _____

Please circle

COVER PHOTO Present Absent

Close up/full body	Alone/couple/group/ animal/scenery	Gender of ppl	Casual/club or formal attire	Alcohol	Mood	Other

PROFILE PICTURE Present Absent

Close up/full body	Alone/couple/group/ animal/scenery	Gender of ppl	Casual/club or formal attire	Alcohol	Mood	Other

'ABOUT' SECTION

WORK & EDUCATION

School	Present	Absent
University	Present	Absent
Place of employment	Present	Absent

CURRENT CITY (HOMEWTOWN) Present Absent

RELATIONSHIP (STATUS) Present Absent

***If present, what is it?* _____

FAMILY Present Absent
**explicitly stating of family members

BIRTHDAY Present (including year) Present (no year) Absent

'ABOUT ME' STATEMENT Present Absent

SEX/GENDER Present Absent

INTERESTED IN (MALE/FEMALE) Present Absent
***Please circle which is specified*
LANGUAGES Present Absent

RELIGION Present Absent

POLITICAL VIEWS Present Absent

EMAIL(S) (other than Facebook email) Present Absent

MOBILE PHONE NUMBER Present Absent

OTHER PHONE NUMBER Present Absent
IM SCREEN NAME(S) Present Absent
E.g. Twitter
ADDRESS Present Absent

WEBSITE(S) Present Absent

NETWORKS Present Absent

FAVOURITE QUOTATION(S) Present Absent

FOLLOWING OTHERS Yes No

CONNECTED TO: Instagram Pintrest Shazam Yelp Other N/A

NUMBER OF FRIENDS _____

NUMBER OF PHOTOS OF INDIVIDUAL _____

NUMBER OF CHECK-INS (ALL PLACES) _____

NUMBER OF LIKED PAGES _____
**Need to add likes together (e.g. music, TV shows, movies, books, sports teams, other likes)

NUMBER OF NOTES _____

MOST RECENT 10 WALLPOSTS → POSTED BY THE INDIVIDUAL

Timeframe → how many days did it take to post 10 items? _____

Number of days from day of coding → first post

Individual: _____ - _____ = _____

Post	Type	Affect
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Facebook Coding Key

Pictures

Close up/full body
0 = close up
1 = full body
2 = N/A

Content: Alone/couple/group/animal/scenery
0 = Animal
1 = alone
2 = couple
3 = group
4 = scenery
5 = Other

Gender
0 = male
1 = female
2 = mixed
3 = N/A

Casual/club or formal attire
0 = casual clothes
1 = club clothes/formal attire
2 = N/A

Alcohol
0 = absent
1 = present
2 = N/A

Mood
0 = neutral
1 = smiling
2 = posing/pouting
3 = pulling faces
4 = N/A
5 = Other

Wall Posts

Type
1 = status update
2 = check in
3 = check in with photo

4 = share link (e.g. stories, articles, facts)
5 = share video
6 = share photo (albums)
7 = tagged in photos

Affect

0 = Negative
1 = Positive
2 = No Affect

Research Portfolio Appendix

List of Publications

Publication 1:

Cyberbullying in social networking sites: An adolescent victim's perspective.

Status: Accepted for publication in *Computers in Human Behavior*.

Statement of Contribution of Others

I acknowledge that my contribution to the above paper is 60%.

……..

Rebecca Dredge

I acknowledge that my contribution to the above paper is 20%.

……..

Professor John Gleeson

I acknowledge that my contribution to the above paper is 20%.

……..

Dr Xochitl de la Piedad Garcia

From: ees.chb.431.27c859.e76bccc4@eesmail.elsevier.com on behalf of Jen-Her Wu
To: Rebecca Dredge
Subject: Your Submission CHB-D-13-00632R2
Date: Monday, 10 March 2014 2:00:37 PM

Ms. Ref. No.: CHB-D-13-00632R2
Title: Cyberbullying in social networking sites: An adolescent victim's perspective.
Computers in Human Behavior

Dear Ms Rebecca Dredge,

I am very pleased to inform you that your paper "Cyberbullying in social networking sites: An adolescent victim's perspective." has now been fully accepted for publication in Computers in Human Behavior. Congratulations!

Below are comments from the editor and reviewers. Once your manuscript has been assigned its volume and issue number, we will let you know. The formal permission release form will be sent to you from Elsevier once the publication date nears.

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Many thanks for submitting your work to this journal.

With kind regards,

Jen-Her Wu, PhD
Associate Editor
Computers in Human Behavior

Comments from the editors and reviewers *Please note that to view any attachments you will have to log in to your EES author account for viewing*:

Publication 2:

Risk factors associated with impact severity of cyberbullying victimisation: A qualitative study of adolescent online social networking.

Status: Accepted for publication in *Cyberpsychology, Behavior, and Social Networking*.

Statement of Contribution of Others

I acknowledge that my contribution to the above paper is 60%.

……..

Rebecca Dredge

I acknowledge that my contribution to the above paper is 20%.

……..

Professor John Gleeson

I acknowledge that my contribution to the above paper is 20%.

……..

Dr Xochitl de la Piedad Garcia

From: onbehalfof+cyberpsych+vrphobia.com@manuscriptcentral.com on behalf of cyberpsych@vrphobia.com
To: Rebecca Dredge
Subject: Cyberpsychology, Behavior, and Social Networking - Decision on Manuscript ID CYBER-2013-0541.R1
Date: Friday, 17 January 2014 3:55:42 PM

16-Jan-2014

Dear Miss Dredge:

It is a pleasure to accept your manuscript entitled "Risk factors associated with impact severity of cyberbullying victimisation: A qualitative study of adolescent online social networking." in its current form for publication in Cyberpsychology, Behavior, and Social Networking.

Please be sure to cite this article to ensure maximum exposure of your work.

All authors will get a follow-up email with instructions on how to complete our online Copyright Agreement form.

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Please allow a few months for scheduling for publication, considering we are handling a large backlog of revised manuscripts at the moment. Thank you.

Thank you for your fine contribution. On behalf of the Editors of Cyberpsychology, Behavior, and Social Networking, we look forward to your continued contributions to the Journal.

Sincerely,
Prof. Brenda Wiederhold
Editor-in-Chief, Cyberpsychology, Behavior, and Social Networking
frontoffice@vrphobia.com, cyberpsych@vrphobia.com

Publication 3:

The development and validation of the Social Networking Experiences Questionnaire (SNEQ): A measure of adolescent cyberbullying and its impact.

Status: Accepted for publication in *Violence and Victims* pending minor amendments.

Statement of Contribution of Others

I acknowledge that my contribution to the above paper is 60%.

……..

Rebecca Dredge

I acknowledge that my contribution to the above paper is 20%.

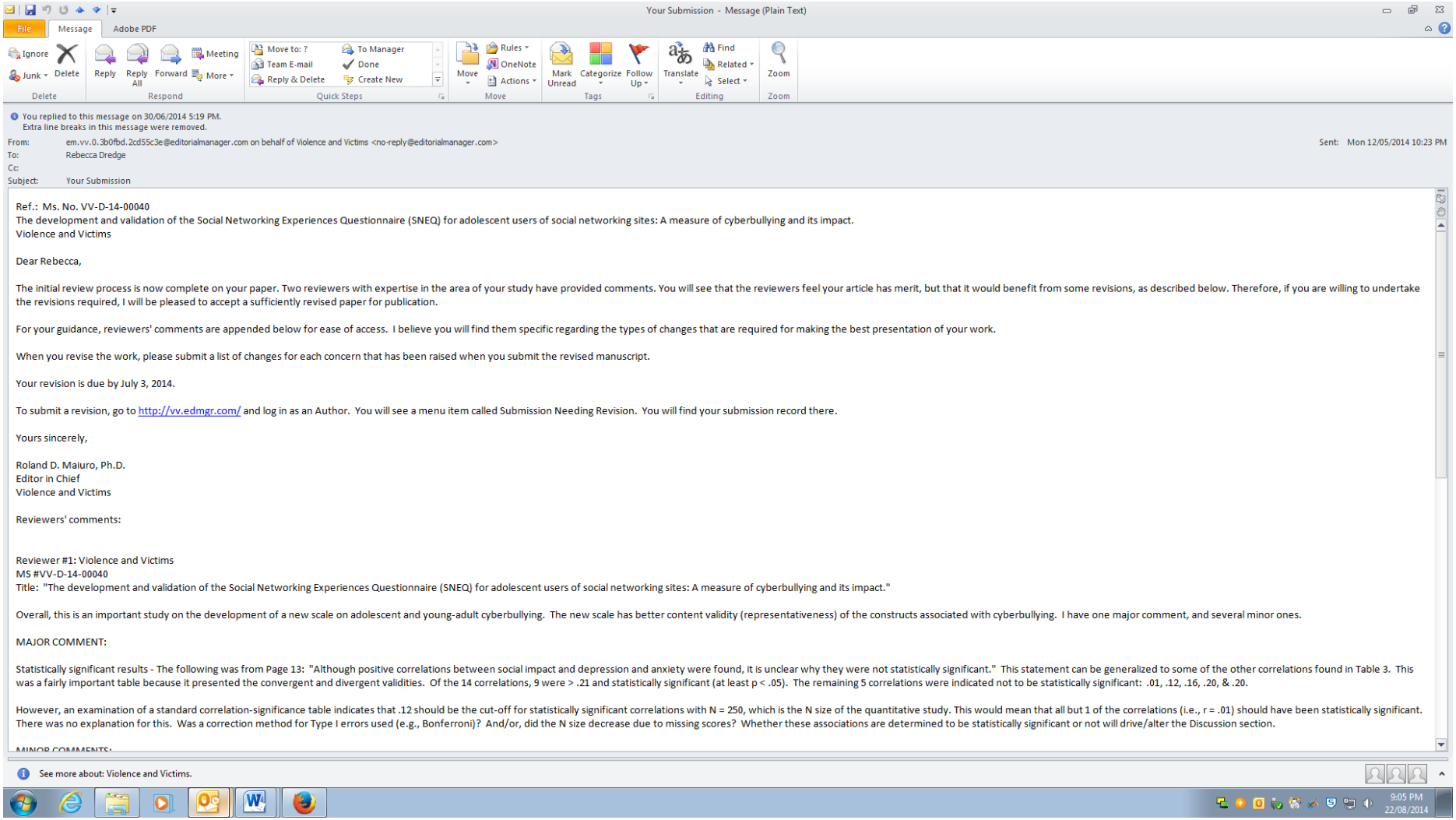
……..

Professor John Gleeson

I acknowledge that my contribution to the above paper is 20%.

……..

Dr Xochitl de la Piedad Garcia



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From: em.vv.0.3b0fbd.2cd55c3e@editorialmanager.com on behalf of Violence and Victims <no-reply@editorialmanager.com>
Sent: Mon 12/05/2014 10:23 PM
To: Rebecca Dredge
Cc:
Subject: Your Submission

Ref.: Ms. No. VV-D-14-00040
The development and validation of the Social Networking Experiences Questionnaire (SNEQ) for adolescent users of social networking sites: A measure of cyberbullying and its impact.
Violence and Victims

Dear Rebecca,

The initial review process is now complete on your paper. Two reviewers with expertise in the area of your study have provided comments. You will see that the reviewers feel your article has merit, but that it would benefit from some revisions, as described below. Therefore, if you are willing to undertake the revisions required, I will be pleased to accept a sufficiently revised paper for publication.

For your guidance, reviewers' comments are appended below for ease of access. I believe you will find them specific regarding the types of changes that are required for making the best presentation of your work.

When you revise the work, please submit a list of changes for each concern that has been raised when you submit the revised manuscript.

Your revision is due by July 3, 2014.

To submit a revision, go to http://vv.edmgr.com/ and log in as an Author. You will see a menu item called Submission Needing Revision. You will find your submission record there.

Yours sincerely,

Roland D. Maiuro, Ph.D.
Editor in Chief
Violence and Victims

Reviewers' comments:

Reviewer #1: Violence and Victims
MS #VV-D-14-00040
Title: "The development and validation of the Social Networking Experiences Questionnaire (SNEQ) for adolescent users of social networking sites: A measure of cyberbullying and its impact."

Overall, this is an important study on the development of a new scale on adolescent and young-adult cyberbullying. The new scale has better content validity (representativeness) of the constructs associated with cyberbullying. I have one major comment, and several minor ones.

MAJOR COMMENT:

Statistically significant results - The following was from Page 13: "Although positive correlations between social impact and depression and anxiety were found, it is unclear why they were not statistically significant." This statement can be generalized to some of the other correlations found in Table 3. This was a fairly important table because it presented the convergent and divergent validities. Of the 14 correlations, 9 were > .21 and statistically significant (at least $p < .05$). The remaining 5 correlations were indicated not to be statistically significant: .01, .12, .16, .20, & .20.

However, an examination of a standard correlation-significance table indicates that .12 should be the cut-off for statistically significant correlations with N = 250, which is the N size of the quantitative study. This would mean that all but 1 of the correlations (i.e., r = .01) should have been statistically significant. There was no explanation for this. Was a correction method for Type I errors used (e.g., Bonferroni)? And/or, did the N size decrease due to missing scores? Whether these associations are determined to be statistically significant or not will drive/alter the Discussion section.

MINOR COMMENTS:

See more about: Violence and Victims.

9:05 PM
22/08/2014

Publication 4:

Presentation on Facebook and risk of cyberbullying victimisation.

Status: Accepted for publication in *Computers in Human Behavior*.

Statement of Contribution of Others

I acknowledge that my contribution to the above paper is 60%.

……..

Rebecca Dredge

I acknowledge that my contribution to the above paper is 20%.

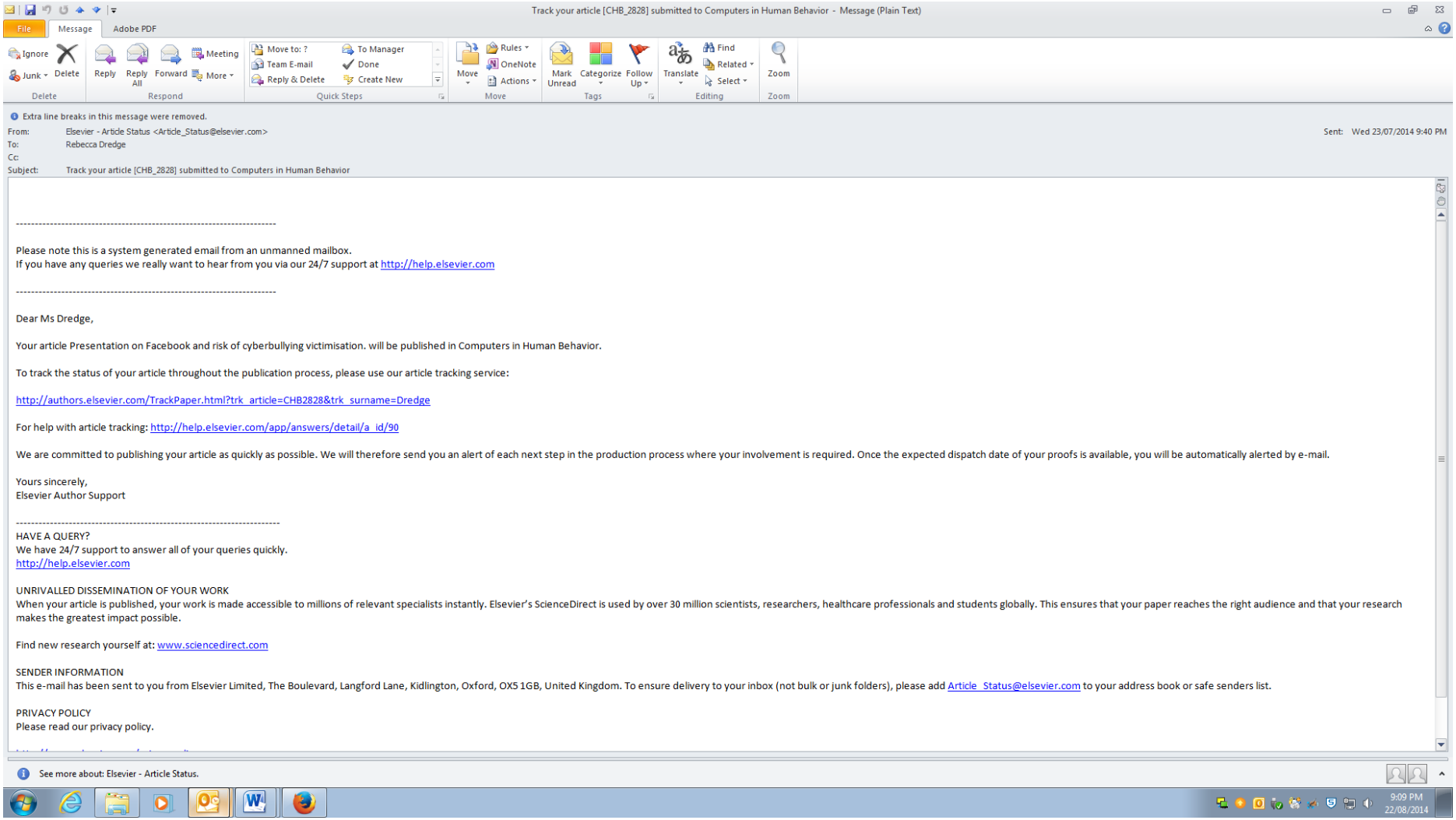
……..

Professor John Gleeson

I acknowledge that my contribution to the above paper is 20%.

……..

Dr Xochitl de la Piedad Garcia



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Your article Presentation on Facebook and risk of cyberbullying victimisation. will be published in Computers in Human Behavior.

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22/08/2014

Additional Publications and Conferences

The Inaugural Australian Catholic University School of Psychology Research Conference (2012) – Presentation entitled *Cyberbullying in social networking sites: A victim's perspective.*

International Conference on Cyberbullying, Paris (2012) – Poster entitled *Cyberbullying in social networking sites: A victim's perspective.*

Dredge, R., Gleeson, J., & de la Piedad Garcia, X. (2013). Progress and limitations in the measurement of cyber bullying. In R. Hanewald (Ed.), *From cyber bullying to cyber safety: Issues and approaches in educational contexts*. Hauppauge: Nova Publishers.

The 2nd Australian Catholic University School of Psychology Research Conference (2013) – Presentation entitled *How do you present on Facebook? Predictors of cyberbullying victimisation*.

No2Bullying Conference (2013) – Presentation entitled *What really happens in social networking sites?*

International Society of Justice Research Conference, New York (2014) – Presentation entitled *How do you present on Facebook? Predictors of cyberbullying victimisation*.