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A cross-cultural examination of personality factors associated with text bullying in  
13 - 14-year-old girls

A thesis presented in partial fulfilment of the requirements for the degree of Master  
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## ABSTRACT

This research set out to determine factors associated with text bullying. It examined the relationship between personality traits and the level of hostility expressed by students in reaction to sample text messages. One hundred and ninety eight girls aged 13 and 14 in Canada and New Zealand volunteered to complete a questionnaire consisting of four personality measures - the impulsivity subscale of the PRF-E, cynical distrust scale (revised), needs for power scale (revised), and the rejection sensitivity scale (adult, short). The survey also rated their proposed likely response to eight sample text messages that covered four themes and to two levels of intensity. Results using Pearson's  $r$  correlation of .01 demonstrated a significant relationship between hostility and impulsivity. There was no significant difference in either the results of the personality measures or their level of hostility between the results of the Canadian and New Zealand participants. How these findings contribute to the current theoretical knowledge of adolescent bullying and the practical application of these findings for schools are also discussed.

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This thesis is dedicated to all children who are victims of bullying, and the children who need our help to manage their aggression and stop bullying.

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## FOREWORD

The idea for this research grew out of my experience as a high school teacher in Canada. I noticed in my work with teenagers that there was a significant difference between the ways physical aggression was displayed in female high school students compared to male high school students. This led to questions about how aggression in general was displayed amongst males and females. I also realised that there was a lack of academic research on aggression in females, and this meant that there were few resources to support girls to deal with their aggression. When individuals who are training to work with adolescents are taught how to handle aggression in teenagers, if they received any training at all they are frequently taught how to handle physical and verbal aggression only. No mention is ever made in the training of how to handle indirect aggression. My goal was to understand better the factors related to indirect aggression, in the hopes that methods could be found to support young women to reduce the incidence of indirect aggression.

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## INTRODUCTION

In recent years bullying via electronic means has become an increasingly widespread problem (Kowalski & Limber, 2007; Raskauskas, 2007; Raskauskas & Stoltz, 2007; Shariff, 2008; Smith, et al., 2008). Headlines such as: “‘We're not murderers,' say text bullies” and “Online bullying should be criminal offense, teachers say” are frequently seen in the media (Bellew, 2009; Fitzpatrick, 2008; Nichols, 2008). Stories of suicides provoked by bullying texts and Web sites, adolescents increasing use of texting, and society's concern with these trends have become commonplace themes in the media and governments reports (Carroll-Lind, 2009; Kuehn, 2008).

### *Early Research on Aggression and Bullying*

Psychologists have researched bullying for more than 50 years. By the late 1970s research on aggression and bullying began to develop more sophisticated instruments of measurement. However, most of the research on bullying at that time tended to focus almost exclusively on physical aggression, with some research also covering verbal aggression (Mounts, 1997; Simmons, 2002; Underwood, 2003). This meant that physical aggression was studied in greater depth than less overt forms of aggression. There were only isolated examples of research done on women and covert forms of aggression, but this research was not consistently built upon until the late 1990's. Some of the early research, such as that of Feshbach in 1966, identified social aggression as a phenomenon when she observed that adult women obtained higher scores on measures of covert hostility than their male counterparts (Chesler, 2001). But it was not until the late 1980's that researchers began to consistently study this type of aggressing, which was initially called indirect

aggression (Lagerspetz, Bjorkqvist, & Peltonen, 1988).

A result of this lack of research is that the etiology of social or indirect aggression was poorly understood (Archer & Coyne, 2005). Indirect aggression also seeks to intentionally inflict harm, but uses indirect means such as; manipulating relationships, gossiping, spreading rumours and isolating members of the social group. As this form of aggression began to be studied in greater detail a plethora of terms were used in the literature to describe aspects of manipulative forms of aggression (indirect aggression, covert aggression, social aggression, and relational aggression), however the term indirect aggression encompasses the attributes of this type of aggression most effectively (Archer & Coyne, 2005). Throughout the rest of this study the term indirect aggression will be used to denote all types of non-overt, non-physical aggression.

### *Gender and Aggression*

As more researchers examined the different types of aggression it was found that there is a gender component to the type of aggression bullies chose to use. Evidence indicates that in a wide variety of situations girls prefer to use indirect aggression rather than overt aggression and this alters very little over the duration of an individual's lifespan (Garbarino, 2006; Moretti, Odgers, & Jackson, 2004). Researchers determined that if all three forms of bullying - physical, verbal and indirect aggression - were taken into account, the rate of aggression between both girls and boys was approximately equal (Crick & Grotpeter, 1995). There is recent evidence that suggests that when all forms of aggression are recorded, girls are the initiators of aggression more frequently than boys (Agatstona, Kowalski, & Limber, 2007). There are a number of reasons why girls prefer to use indirect rather than

physical aggression. From a developmental perspective girls have, on average, less muscle mass than boys but have better language skills. It follows that girls would rely upon their superior verbal skills when they confront someone while boys would use their muscles.

Girls are socialised to be 'nice girls' and the use of indirect aggression allows them to deal with confrontation with only a small chance of being caught and they can continue to be seen as conforming to role that they are being socialized into (Bjorkqvist, 1994; Conway, 2005). Girls perceive indirect aggression as being more hurtful and harmful than boys do (Coyne, Archer, & Eslea, 2006; Cummings & Leschied, 2001; Paquette & Underwood, 1999) and this may also lead them to seeing it as a more successful strategy than overt forms of aggression. In comparison to overt aggression, indirect aggression causes more psychological damage to its victims than other forms of aggression (Paquette & Underwood, 1999). Often the perpetrators of indirect aggression feel that they are justified in using this form of aggression (Artz & Nicholson, 2005). This may lead them to convince themselves that they have not really done any serious harm to their victims. In a study by Guadagno and Cialdini (2002) girls had less agreement on the interpretation of sample text messages than boys did. The perceived ambiguity of the sample messages meant girls tended to read different interpretations into the messages and may have interpreted the messages more negatively than boys.

It is also noteworthy that almost all of the risk factors for aggressive behaviour (e.g., violence in the home, inconsistent parenting, lack of positive role models, emotional difficulties) are the same for boys and girls (Herrenkohl et al., 2007; Leschied, Cummings, Van Brunschot, Cunningham, & Saunders, 2000; Pepler & Sedighdeilami, 1998). Graves's (2007) research into risk factors of aggressing

indicates that while risk factors may be similar for males and females, some risk factors may play a greater role in determining aggressive behaviour in females. Raskauskas, Carroll-Lind, and Kearney (2006) also found that the number of risk factors present is more important than the type of risk factors. Students with more than one risk factor, and those that have been bullied are more likely to become bullies.

Research on aggression in girls has engendered passionate debate between researchers, particularly because some feminist researchers question whether research on aggression in girls should even be pursued (Capaldi, Kim, & Shortz, 2004). There is concern that highlighting aggression in girls will undermine feminist theory, which maintains that only men maintain hierarchical and aggressive relationships (Chesler, 2001). Another factor that has limited research into indirect aggression in females is that almost all of the assessment tools are normed on male populations (Odgers, Moretti, & Reppucci, 2005). Therefore, the debate among researchers, coupled with the newness of most of the research, and the difficulties inherent in studying this topic is that both the theoretical framework and application of our knowledge of indirect aggression remains fragmented and not well integrated with other areas of research (Archer & Coyne, 2005).

The age of the child is also a significant factor. For instance, girls aged 11 to 15 exhibit more indirect aggression than younger or older girls (Bjorkqvist, Lagerspetz, & Kaukiainen, 1992; Green, Richardson, & Lago, 1996). Williams and Guerra (2007) also found that verbal bullying is the most common form of bullying in girls aged between 12 and 16 years old. Both girls and boys are impressionable and volatile at this age. They are broadening their social network, often without the skills that older adolescents have for handling social difficulties. In this age range

girls whole-heartedly embrace technology with up to 74% of their free time using technology to connect with others (Berson, Berson, & Ferron, 2002) and a cell phone ownership rate of 94% (UNICEF: Design and publications section, 2007). Because of these factors the present study focused on girls aged between 13 and 14 years old to understand the factors associated with text bullying among this population.

### *Personality Traits*

There are several personality traits that are linked to indirect aggression in girls and it is important to understand the characteristics of girls who use indirect aggression to bully. There is a high level of intimacy and secret sharing among hierarchical groups of girls (Eder, 1985; Goodwin, 2006). Yoon, Barton, and Taiariol (2004) noted that:

As their social network extends to include both same-sex and opposite-sex peer groups, social status and acceptance in peer groups become more critical than ever. An important developmental task at this age is to effectively navigate through peer relationships and successfully resolve interpersonal conflicts through which they increase levels of social competence (p.305).

Girls' social groups tend to be stable over time, but factions within the broader group form and re-form frequently as the members try to change their status within the group. Best friends fight, and rifts frequently appear between factions of the groups as the hierarchical relationships shift and re-form (Besag, 2006; Hamilton, 2008). Often it is girls that use indirect aggression that maintain the exclusivity and social status of these groups. Girls that use indirect aggression to control exclusive social groups in adolescence maintain this trait throughout their lifetimes into adulthood

(Crick, 2005). Society's view of female aggression is that it is less serious than male aggression, and that females are more justified than men in retaliating for aggression against them (Harris, 1991). Girls that use indirect aggression are less lonely and are more likely to have a high social ranking than girls that overtly aggressive girls (Bjorkqvist et al., 2001).

Interestingly, a number of negative traits typically associated with physical aggression, such as, low academic performance, unpopularity, and other traits associated with later maladjustment are absent among girls with high indirect aggression (Xie, Cairns, & Cairns, 2002). However, a number of positive traits such as being good at sports and being considered good-looking were associated with indirect aggression. Sutton and Smith (1999) also noted that adolescent girls with a high level of indirect aggression also have highly developed social and cognitive skills.

Traditionally there is a link between aggression and low language skills. While this relationship correlates most strongly with overt aggression a different picture emerges when only indirect aggression is examined (Sanger, Moore-Brown, & Alt, 2000). Frequently, it is the girls who have the greatest language skills that engage in indirect aggression. These girls balance the use of their language skills and acts of indirect aggression to maintain their position of dominance within their group of friends (Brown, 2003; Hamilton, 2008). Many of these bullies become more popular over time (Raskauskas & Stoltz, 2007). Indirect aggression is used on members of their group to “keep them in line”, while their strong language skills are used to smooth over any problems that might develop that could threaten the cohesion of the group. Aggressive girls were often quite popular (Garrett, 2003; Pepler, Jiang, Craig, & Connolly, 2008). Aggressive girls often have high verbal abilities, which

give them the ability to barter, negotiate, and make up after quarrel. They are sociable, gregarious, amusing and can be tolerant and empathic (Besag, 2006; Hamilton, 2008).

### *Personality Traits and Bullying*

Sensitivity to rejection is a trait that is related to indirect aggression. The Rejection Sensitivity Scale is based on attachment theory (Downey, Irwin, Ramsay, & Ayduk, 2004). Attachment theory predicts that if a child has not formed a proper attachment with their parents or other role models, as they grow older they will seek out that attachment. Once they feel they have found a person whom they can bond with, they will work very hard to defend that relationship. This may include overreacting or reacting violently when they feel that their relationships are being undermined or attacked. Frequently this includes reacting aggressively to ambiguous stimulus as well as non-ambiguous stimulus (Brookings, Zembor, & Hochstetler, 2002; Downey et al., 2004).

Research has often linked impulsivity to conduct disorders and violent behaviour. Higher levels of impulsivity are correlated with aggression and other antisocial activities (Green, 2001; Hollander & Stein, 1995; Wittmann, Arce, & Santisteban, 2008). While the impulsivity measure used in this study was based on Henry Murray's theories of personality (Jackson, 2007), impulsivity is best understood from a developmental perspective. Developmental psychology also draws a link between individuals' level of impulsivity and their stage of development (Guerin & Hennessy, 2002; Pepler, Madsen, Webster, & Levene, 2005; Strauch, 2004). Recent findings from the field of developmental psychology indicate that girls' level of aggression increases into their early teens but tapers off as they mature



and develop more complex strategies to cope with conflict (Hamilton, 2008; Moretti et al., 2004; Pepler et al., 2005). Between the ages of 10 to 14 the time adolescent girls spend talking with their friends nearly triples. This coincides with an increase in teasing and relational cruelty (Brown, 2003).

The Cynical-Distrust Scale (Revised) is a measure of hostility. Artz and Nicholson's (2005) research indicates that aggression in girls may result from an overall cynical and distrustful worldview. The need for power scale is also useful when studying aggression. Bullying is a form of exerting power over others; therefore this measure has high face value when studying aggression. To date the need for power scale has been underutilised in research on indirect aggression. The cynical distrust scale and the need for power scale are both used in this study because of the correlation of these traits to aggression.

### *Technology and Bullying*

There is a great deal of research on the influence on children and adolescents of aggression in other media such as television. Research indicates that girls who had viewed television programmes that contained direct and/or indirect forms of aggression exhibited higher levels of indirect aggression than girls who have not viewed those types of television programmes (Coyne, Archer, & Eslea, 2004). The increasing frequency of reality television shows are a good example of how television media has evolved to embody a particular type of schadenfreude (Watts, 2008). Reality television shows, videos of people posted on websites like "You Tube," and particular movies and television shows like "Jackass" are a forum for adolescents to delight in the suffering of others (Hamilton, 2008).

Since the rise of the 'dot-com' era in 2001 technology has become a ubiquitous

influence in people's lives. Technology such as personal computers, cellular phones (cellphones), and new media such as the Internet are now widely available at lower costs than when these were first introduced. It is estimated that globally over 4 trillion emails were sent in 2004 (Phillips-Newton, 2004). By 2005, New Zealanders were sending more than 10 million text messages per day and the rate of increase is exponential (Thompson & Cupplesa, 2008). Technology has had a significant influence on the way people interact and the rise of social networking sites such as "Facebook", "MySpace" and "Bebo" show that people are using technology to interact with each other in new ways. Adolescents in particular have rapidly adopted ways of interacting that are mediated by technology; "Bebo" for instance is almost entirely targeted at adolescents between 12 - 17 years old (Gavin, 2007).

Campbell (2005) noted that for 11 to 14 year olds the cell phone is such a valued possession that it is preferred to television or the Internet. One of the reasons that cell phones have become so valued to young adolescents is that they not only allow immediate communication, they are also a method of displaying their social desirability and status. Cellphones are also a vehicle for personal expression as many adolescents customise their cellphones with stickers, coloured face plates, writing, or other decoration. This customisation allows users to display both their individuality and their inclusion within a particular peer group. Adolescent behaviour has also changed through the use of cellphones. There is a particular new set of etiquette related to the usage of their cellphones. An example of this new etiquette is the very short time frames that are expected when replying to communication. A reply to a text message is expected within 15 to 30 minutes and if this time limit is exceeded it is expected that the text message will contain an apology for the delay (Kasesniemi & Rautiainen, 2002).

### *Distinctions Between Cyber-bullying and Text Bullying*

The rapid spread of technology means that there is little academic research on new avenues for indirect aggression that technology has created. The use of electronic media to bully is often called cyber-bullying and data indicate that it is widespread with estimates ranging up to 80% of students having being cyber-bullied by age 15 (Carroll-Lind, 2009; Jaishankar & Shariff, 2008; Li, 2007; Raskauskas & Prochnow, 2007). Cyber-bullying can take many forms but most often refers to the use of websites on the Internet or emails to bully an individual. Cyber-bullying can include using websites, chat rooms and/or emails to defame someone, spread false information against someone, or to organise an aggressive or hostile activity against an individual. Up to seventy-five percent of adolescents have been bullied online, but only ten percent have reported the problem to their parents or other adults (Juvonen & Gross, 2008). Phillips-Newton (2004) found that cyber-bullying might be more common because parents do not attend to their children on the Internet. Twenty-five percent of teenagers say their parents would be worried if they knew what they were doing with their new technology (David-Ferdon & Hertz, 2007).

Text bullying is one form of cyber-bullying. It refers to using Short Message Service (SMS) text messages and/or photos and videos on cellphones to express aggression towards someone. The messages can be directed to an individual or to spread information to others about the individual and/or organise others to act against the individual. There are a number of significant differences between cyber-bullying and text bullying.

- Text bullying can happen 24 hours a day and be perpetrated on the victim at home or in their personal space to an even greater extent than cyber-bullying

because most teenagers depend on their phone for communicating with their friends and are very reluctant to give up or even turn off their phones (Campbell, 2005).

- Text bullying can be done with very little technical skill. Cyber-bullying may require the bully to know how to set up a web page or post messages or send emails anonymously. While these skills are only moderately difficult to learn, it is a barrier to many students that are not interested in technology.
- Text bullying can be done almost anywhere, regardless of what the person is doing at the time. Most teenagers are so adept at texting that they do not need to look at the keyboard when they text. Consequently a teacher, or a parent, or even the victim may never know that while they are talking to the person she may be creating and send bullying text messages. On the other hand cyber-bullying requires access to a computer, which may require the student to wait a number of hours before they can attack their victim. This level of impulsivity is one of the defining factors in distinguishing text bullying from other forms of cyber-bullying.
- The contents of a web page and messages on a cell phone may persist for an indefinite length of time, assuming they are not deleted. Text messages may be viewed in a wide variety of locations or situations making the victim more vulnerable to the attack, where as cyber-bullying is usually experienced while sitting at a computer terminal and this may happen in public or private. Often girls with low self-esteem will ruminate on negative events (in this case reviewing text messages multiple times), which can result in depression (Nolen-Hoeksema, 2000).
- Text bullying is harder to detect than cyber-bullying because anyone can access

a web page to determine if it contains offensive content. However a cellphone is treated as private property and requests to read an adolescent's text messages are often refused because of their preoccupation with privacy. Furthermore, victims will sometimes delete the offending messages and unless the victim reports the bullying there is no way for anyone to detect the bullying activity (Phillips-Newton, 2004).

- Cyber-bullying is frequently done via the web and can consequently reach a much wider audience than a cell phone message. However, text messages can target multiple audiences and even focus on the friends of the victim in an attempt to isolate the victim. This directly attacks the victims support network while it is possible that messages posted on the web may not be seen by the victim or the victim's friends.

### *Effects of Text Bullying*

Text bullying may be more damaging than traditional forms of bullying (Raskauskas & Prochnow, 2007; Ybarra & Mitchell, 2004). Attacks are tailored to the individual, but there are some common themes (body shape, sexuality, demeanour, and dress style). Trading of insults with an ex-best friend is very common in text bullying. Rumours, gossip, insults and slander are the most likely things to make a girl cry (Alder & Worrall, 2004). Given that adolescents tend to keep their cellphones with them all the time, this also increases the bully's level of access to the victim (Raskauskas & Prochnow, 2007).

Both cyber-bullying and text bullying also afford the bully a level of anonymity. This emboldens the bully because they do not see the immediate results of their actions and they can express more extreme forms of indirect aggression

without immediate consequences (Kowalski, Limber, & Agatston, 2008). In both cyber-bullying and text bullying the victim frequently has no idea who initiated the bullying (Li, 2007). However, research indicates that bullies usually come from the same group of friends as the victim; even though the identity of the bully is often not known (Smith, Mahdavi, Carvalho, & Tippet, 2006). The early teenage years also coincide with increasing use of technology and an increase in bullying behaviour (Kowalski & Limber, 2007).

#### *Developmental Traits of Early Teen Girls*

Bullying is viewed less negatively among 13 to 16 year olds and verbal and text bullying increases in early adolescence (Raskauskas & Stoltz, 2007). As a result it is not surprising to find that girls are responsible for most online bullying, and bullying with new technology, partially because it is particularly suited to their preference for using forms of aggression that relies upon linguistic skills (Wolak, Mitchell, & Finkelhor, 2007). Females are also more approving of bad-mouthing and verbally harassing those they see as rivals than males (Paul & Galloway, 1994). This may increase the likelihood of girls' using media such as text messages to "bad-mouth" from a safe distance

#### *Bullying in New Zealand and Canada*

It is difficult to compare rates of bullying from country to country because different definitions are used in each country (Raskauskas & Prochnow, 2007). However, according to a study in 2007 completed by the International Association for the Evaluation of Education Achievement (IEA), New Zealand has a particularly high rate of bullying and is ranked second in the world for bullying behaviour

(Mullis et al., 2008). In an alternate study, sponsored by the World Health Organisation, Canada was ranked eighth in the world for bullying (Hediger, 2008). New Zealand also has higher rates of cellphone ownership than Canada. In 2007 approximately 90% of people in New Zealand owned a cellphone. In a 2006 Canadian study, 60% of people were estimated to own cellphones (Office of Consumer Affairs, 2006; UNICEF: Design and publications section, 2007).

There are a number of cultural, social and political similarities between New Zealand and Canada that make for useful comparisons between the populations. Both Canada and New Zealand are located near a neighbour with a much larger population and economy that tends to dominate their smaller trade partners. Both countries maintain a very modest military that focuses on peacekeeping. Both nations are founded on a resource-based economy and both have made efforts to diversify their economies in recent decades. Culturally New Zealand and Canada share a similar history of colonisation by the British, and the resulting conflict with the earlier inhabitants (Māori, and the French Canadians and First Nations respectively). Both countries have uneasy relationships with their minority populations but view themselves as bicultural. Both countries have diverse immigrant communities, and have a dominant national sport for which they are internationally renowned.

### *Significance of the Study*

Research on text bullying is still in its infancy. There is very little research on text bullying that goes beyond identifying the extent and the damage to the victims. There is also very little research on cyber-bullying or text bullying that incorporates a cross-cultural component. To date, studies have almost exclusively focused on

homogeneous populations. Another reason for the lack of research in this area is the difficulty of detecting indirect aggression and the low rates of reporting for text bullying in particular. One possible reason for this is that it is such a new phenomenon people frequently do not recognize indirect aggression as a form of aggression (Raskauskas, Carroll-Lind, & Kearney, 2005). Of greater concern is how few scales have been designed to measure indirect aggression in general. This has seriously hampered research in this area. For a variety of historical reasons there is also a lack of research specifically focused on aggression in girls. This study attempted to address this gap in the research. Focusing on a cross-cultural population of adolescent girls, this study used personality trait measures to determine the factors associated with text bullying which is a form of indirect aggression. This research also examines possible differences between the two populations sampled.

## METHOD

### *Design*

The purpose of this study was to investigate the relationship between text bullying and personality traits in 13-14 year old girls. The hypothesis underpinning this research was that one or more of the four personality traits measured (impulsivity, cynical-distrust, need for power, sensitivity to rejection) will correlate with high levels of hostility, which would serve as an indicator of likelihood of text bullying. This research was a descriptive, comparative quasi-experimental study that used surveys to compare the responses of New Zealand and Canadian girls from schools in low, medium and high socio-economic areas to sample text messages. These responses were then compared with the scores obtained on four measures of personality. In this study decile ratings have been used as a proxy for the socio-



economic level of the students. Although Canada does not publish decile ratings of their school districts, I obtained data from school officials and websites in Canada to match the socio-economic status of schools to the equivalent decile ranking used in New Zealand. The second hypothesis was that there will be no significant difference between the results obtained from Canada and New Zealand, regardless of decile rating.

Impulsivity was chosen as a measure based on Pontzer (2006) finding that impulsivity was strongly correlated with bullying behaviour and that impulsivity was a predictor of aggression in children (Wittmann, et al., 2008). The cynical-distrust measure was selected based on the finding that cynicism was the main cognitive component of hostility (Mittag & Maurischat, 2004) and that cynicism was a predictor of anger and aggressive behaviour (Zwaal, Prkachin, Husted, & Stones, 2003). A scale measuring the need for power was used based on Vaillancourt, Hymel, and McDougall's (2007) and Pepler, Jiang, Graig, and Connolly's (2008) findings that a desire for power over others was a predictor of aggressive and bullying behaviour. Sensitivity to rejection was selected for use because the participants in the research are adolescent girls and sensitivity to rejection has been found to be one of the strongest predictors of aggressive and violent behaviours in females (Downey & Feldman, 1996).

### *Participants and Setting*

This study included 209 participants. The participants were drawn from three secondary schools in New Zealand ( $n = 95$ ), and six secondary schools in the Greater Vancouver District of British Columbia, Canada ( $n = 114$ ). All participants were female adolescents between 13 and 14 years old. The majority of New Zealand

students who participated were Caucasian with roughly 25% participation from Māori and Pacific Island students. The Canadian participants were more evenly spread between a heterogeneous population of Chinese-Canadians (approaching 50%), Caucasians, Indian-Canadians and a small number of First Nations students. The percentage of the participants who reported having access to a cellular phone was 93% in New Zealand, and 74% in Canada.

One of the secondary schools in New Zealand was a rural school north of Wellington; the other two schools were located in the greater Wellington region. Three of the Canadian schools were located in Vancouver, British Columbia; the other three were located in Burnaby, British Columbia, which is part of the Greater Vancouver District. Based upon the decile ranking provided by the New Zealand Government for the New Zealand schools and the proxy decile rating estimated for the British Columbian schools the participating schools ranged from a decile rating of 3 to 10. There was an equal balance between high decile schools and low decile schools with the majority of the schools having a decile rating between 5 and 6. These ratings are based on a decile rating of 1 = low socio-economic area, and 10 = high socioeconomic area. This was a convenience sample with all of the schools that participated in the research agreeing to inform the parents and students about the study and to call for volunteers to participate in the study.

### *Materials*

Students completed a six-page self-report survey form that asked for information about cell phone ownership, the student's reaction to eight sample text messages, and answer question for four personality measures. The survey included a total of 80 questions. Seventy-one of these questions were measured with a Likert

scale and one question was yes/no (forced choice). For each of the sample scenarios and accompanying text messages, the participants were asked three questions, and recording their answers on a 7-point Likert scale. These questions assessed how the participant would feel if they had received the sample text message, how likely they would be to send a similar text message in this scenario, and how justified they would feel in sending such a message if their friend had made them angry. All of the eight sample scenarios and text messages ended with an open-ended exploratory item for the students to write down their likely reaction to each one. The surveys were not named or numbered in order to protect the anonymity of the participants. A sample survey is included in Appendix A.

Sets of sample text messages were created to assess whether the level of aggressiveness depicted in the messages would differentially influence the participants. The sample text messages were based upon current research that notes that indirect aggression attempts to undermine the character of the victim (Besag, 2006; Putallaz, Kupersmidt, Cole, McKnight, & Grimes, 2004; Williams & Guerra, 2007). There are many ways to do this, but there are four recurring themes mentioned in the literature: (a) telling lies about someone; (b) disclosing personal information; (c) withdrawal of friendship; and (d) exclusion of the victim from the social group (Cairns, Cairns, Neckerman, Ferguson, & Gariépy, 1989; Goodwin, 2002).

A focus group composed of 15-year-old girls was assembled and asked to write out examples of typical text messages of each of the four themes. All members of the focus group were from Christchurch, New Zealand. The girls were asked to write some of the text messages in a hostile tone and some of the text messages in a less hostile or a neutral tone. All of the members of the focus group reported having

at least one of their friends victimised by text bullying. Eight sample text messages were selected from the pool of 40 generated text messages. During the creation of the test messages it was noted that the focus group expressed a high level of hostility in the text messages. The members of the focus group were questioned about the level of hostility in the text messages and they reported that they had actually seen similar text messages in their daily lives.

Two sample text messages were used for each of the four common bullying themes. For each of the bullying themes one sample message was written in a hostile tone (the high hostility condition) and the other sample message was written in a less hostile/neutral tone (the low hostility condition). The eight sample text messages were presented to a focus group in Mission School District in British Columbia, Canada to determine if any changes were needed to accommodate the culture of the Canadian participants. The inter-rater reliability for the text messages in each theme was .95 and was calculate using Fleiss' Kappa. The two conditions (high and low hostility) of the text messages were counterbalanced to minimise any order effects.

Each text message was preceded by a short story giving a context to the message. For each of the eight text messages the students were asked to rate, on a seven point Likert scale, how they would feel if they received that text message, how likely would it be for them to send a message like this to their friend if their friend had made them angry, and how reasonable/justified would they be to send this text message to their friend if their friend had been "acting mean". Many of the students found this enjoyable and engaging. A number of students in both Canada and New Zealand created additional "back stories" that extended the story presented in the survey and also served to justify their answers. This indicates that the participants

were invested in answering the questions in the survey. One example of the use of a “back story” was in a response to one of the high hostility sample scenarios in the survey. The survey gave the following background scenario and sample text message:

*Scenario:* You are friends with Tina. You told your group of friends a secret about Tina. Now, Tina has sent you this text message because she found out you told her secret and doesn't want you to hang out with the group anymore.

*Sample text message:* I can't believe u said that shit bout me bitch! don't even think ur hanging out with us on saturday you're just a backstabbing bitch.”

To which the participant responded with the following statement: “ I'm sorry but don't you remember the time I told you something real important and by the end of the day the whole school knew?” In this case the participant had gone beyond the format of the given scenario to create an expanded history of the relationship and used this in their response to the sample text message. However, the range of the students’ responses to the text messages was highly varied. When confronted with the most strongly worded text messages some students’ response was remarkably mild. In the same scenario as above, another student responded very differently. This participant responded: “jeez. sorry I spilled ur secret. really sorry. I didn't know was that bad sorry”. In this example the student appears to be doing a number of things. She is apologetic, using the word “sorry” three times to emphasise this. She also emphasises the accidental nature of the transgression by the use of the phrase “spilled your secret”. Finally, she plays down her culpability by using the phrase “I didn’t know it was that bad.”

In another scenario, some participant's responses indicated a great deal of hostility.

*Scenario:* Your friends Sarah and Maria have been distant lately and are not being nice to you. Sarah sends you this text.

*Sample text message:* I don't want you hanging out with Maria anymore we need some time apart sorry.

In this case the participant responded with a very hostile message: "you mother-fucking, whore slut bitch fucker, ass clown I can see who I want when I want to and trust me you'll fucking die from what I do to you! You bitch! & Whore!" Most of the students that responded highly aggressively to the text messages in the less hostile condition also responded aggressively to the text messages in the high hostility condition.

The student responses to the eight sample text messages were assessed by five postgraduate student assistants using a rubric that had a scale of one (indifference or agreement with the text message) to five (hostile response with threats to violence). The inter-rater reliability for the resulting scores, calculated using Fleiss' Kappa, was .83. The eight sample text messages with indications of the associated themes, and the scoring rubric are presented in Appendix B.

### *Measures*

In this study four personality measures were compared to levels of hostility derived from the reaction of participants to eight sample text messages. The four personality measures used in the survey were:

- The Cynical-Distrust scale (revised)
- Rejection sensitivity scale (short form, Adult scale, modified)

- Need for power scale (modified)
- Impulsivity scale (a subscale of the PRF-E)

The Cynical-Distrust scale ( $\alpha = .75$ ) was developed by Barefoot, Dodge, Peterson, Dahlstrom, and Williams (1989) and revised by Evans and Fitzgerald (2004). The revision consists of some changes to the language of the original scale, including the changing of American spelling to the spelling commonly used in Commonwealth countries, and the replacement of one item. The version of the Cynical-Distrust scale I used was composed of eight questions normed on an adolescent population. Participants responded on a 5-point Likert scale ranging from strongly agree (1) to strongly disagree (5) and were reverse scored.

Downey and Feldman (1996) developed the Rejection Sensitivity Questionnaire (RSQ). This scale is intended to identify participants who will interpret ambiguous cues as rejection, expect others to reject them, and overreact to real or imagined rejection. The sensitivity to the rejection scale contained seven items. The sensitivity to rejection scale had a range of 1 to 36 unlike all the other personality measures, which had a range of 1 to 5.

Using attachment theory, Downey and Feldman (1996) found that a high rejection sensitivity score was a good predictor of difficulties in relationships and high levels of aggression in females. There are a number of versions of the RSQ, long form (18 questions), short form (8 questions), adult, college, and adolescent/child, of which the present study utilized a slightly modified version of the short form of the college RSQ ( $\alpha = .81$ , test-retest reliability = .83, skewness = .65). Spelling was changed to the spelling commonly used in Commonwealth countries and one question “You ask your boyfriend/girlfriend if he/she really loves you.” was modified to “You ask a guy you really like if he likes you”. This was

done to more accurately reflect the age group of the participants and with Downey's approval (personal communication, June 13, 2008).

The Impulsivity scale is a subscale of the Personality Research Form (E) or PRF-E. The PRF was first developed by Jackson in 1967 using Murray's theory of personality and has been cited in over 1,500 research studies (Jackson, 2007). The PRF Extended report (PFR-E) includes 20 personality scales that can be administered individually or in any combination. The PRF-E has a test-retest reliability ranging between .80 and .96 (*Mdn* = .91), an internal consistency ranging between .50 and .91 (*Mdn* = .70), and a correlation ranging from .27 to .74 (*Mdn* = .53) for self and peer ratings of the PRF constructs. The Impulsivity scale is composed of 16 questions and is widely used as a preliminary measure to assess ADHD in adolescents. Participants responded on a 5-point Likert scale ranging from strongly agree (1) to strongly disagree (5).

The Need for Power scale was based upon French and Raven's power taxonomy (Nesler, Aguinis, Quigley, Lee, & Tedeschi, 1999). The original scale utilized a five-factor taxonomy of power (positional, reward, coercive, expert, and referent power) and was designed for the workplace. The present study reworded these test items to reflect the setting and age of the participants. This resulted in reward, coercive, and referent power being the main focus of the scale. Positional power and expert power were not used, as these categories were not relevant to the age and setting of the participants. Reward power is the ability to give other people what they want or to withhold those things that they want. Coercive power is the ability to force someone to do something against their will through the use of physical aggression or verbal threats. Reference power is the ability to get your way through charisma or status. The Need for Power scale consisted of nine questions



with participants responding on a 5 point Likert scale ranging from strongly agree (1) to strongly disagree (5).

### *Procedure*

All of the participating schools in New Zealand were approached individually and the consent to conduct the research in the school was obtained from the principal. Consent from the school districts in Canada had to be obtained via the research committees of the Vancouver and Burnaby School Districts before individual schools could be contacted. Once the present study was granted approval by the relevant research committees the individual schools were invited to participate. After the school principals granted consent, principals invited teachers of classes containing 13 to 14 year old girls to participate in the study. Once the teachers had consented to participate in this study, parental information and consent forms were disseminated to all of the 13 to 14 year old girls (Appendix C). Girls that volunteered to participate in the study returned the signed consent forms to the school office or to the researcher prior to participation in the survey. The completed consent forms were collected, transported to Massey University and stored in a secure location. In New Zealand schools, these surveys were handed out and completed during either form time or during health class. In Canada, these surveys were handed out and completed during physical education, family studies, life skills or health class. All of the participating schools were co-educational institutions.

Throughout the administration of the surveys, a female school counsellor, administrator, or research assistant accompanied the researcher. Prior to the surveys being handed out, I read out an information sheet (Appendix D) was to explain the context and procedure of the survey and put the participants at ease. This also

ensured that the participants understood their rights. The surveys took between 35 and 45 minutes to complete. After the surveys were completed and collected, I read a debriefing letter (Appendix E) to the participants and answered any of their questions. At that time, qualitative data were collected by asking the participants about their experiences and feelings about cyber-bullying, texting, and bullying in their school. The female counsellors, school administrators or research assistants asked the questions in order to facilitate a more open discussion, as the girls were less reluctant to speak to a woman. The data collected from these semi-structured group interviews are presented in Appendix F. The completed surveys were collected and labelled as to which school they were obtained from, the decile rating of that school, and demographics information of the participants. The surveys were transported to Massey University where they were stored securely and separate from the consent forms to ensure that participants' anonymity was maintained.

This procedure was followed in all participating schools except for one school. This school requested that a registered school psychologist administer the surveys and collect the qualitative data. In this case, prior to the surveys being administered at this school, I consulted at length with the school psychologist to ensure that not only were the same procedures followed as in the other participating schools, but also that she understood the methodological and theoretical background of this study. When I collected the results from the school psychologist it was confirmed that the outlined procedure had been followed.

The personality measures used in this study were scored according to the appropriate rubric. For each of the eight sample scenarios and text messages, the data from the question regarding participants' feelings of justification in sending message were reverse scored to allow low numbers to represent the belief that sending these

kinds of text messages was justified. The data from the first two questions about how the sample text message would make participants' feel and their likelihood of sending a similar message were scored by summing the results to obtain a mean score. The data collected from the semi-structured interviews were explored by narrative analysis. The reoccurring themes that emerged from these interviews are presented in Appendix G.

## RESULTS

The data from this study were analysed in order to explore the relationship between hostile/aggressive texting and impulsivity, cynical - distrust, the need for power, and sensitivity to rejection. The samples from each country were also compared to determine cell phone usage, attitudes towards hostile text messages, feelings of justification about the use of hostile text messages, and participants' feelings about bullying. An alpha level of .05 was used for all statistical tests unless otherwise noted.

### *Cell Phone Ownership*

The participants were asked in a forced choice, yes or no question as to whether they owned a cell phone. The data gathered revealed that cell phone usage in this sample was higher in New Zealand compared to Canada. In the New Zealand schools sampled 94% of the participants indicated that they owned a cell phone. In the Canadian schools sampled, 75% of the participants indicated that they owned a cell phone.

### *Reaction to Sample Text Messages*

The survey then examined how the participants felt about the sample text messages (Feeling), the likelihood that they would send a text message like the sample text message to their friend (Likelihood), and how justified they thought they would be to send a similar text message (Justification). These were measured by a 7 point Likert scale (1 = bad/not likely/reasonable to 7 = good/likely/not reasonable). The third scale (justification) was reverse scored. Ninety-five New Zealand participants and 114 Canadian participants responded to these questions. Overall New Zealand and Canadian participants had similar mean scores (See Table 1).

Table 1

*Mean Scores of Reaction to Sample Text Messages for Canada and New Zealand.*

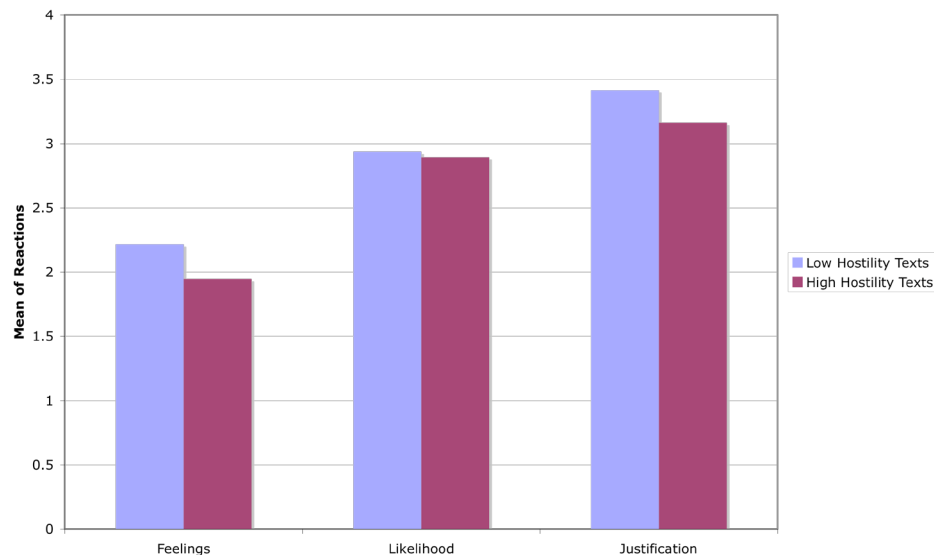
	Feeling	Likelihood	Justification
New Zealand	2.04	3.14	3.29
Canada	2.12	2.73	3.29

No significant difference was found using a two tailed, independent sample t-tests comparing New Zealand and Canadian scores on how they would feel if they had received one of the sample text message,  $t(198) = .964, p > .05$  and how justified they felt they would be sending a text message similar to the sample text message,  $t(198) = .679, p > .05$ . However, the New Zealand participants were significantly more likely than Canadian participants to declare that they would send a text message similar to the sample text message,  $t(198) = .039, p < .05$ .

When the means were converted into percentages based upon the Likert scale 45% of New Zealanders and 39% of Canadians indicated that it would be likely for them to send a text message similar to the sample text message. This percentage rose to almost 50% (New Zealand = 47%, Canadian = 47%) when the participants

were asked if they would feel justified in sending a text message similar to the sample text messages. This was despite the fact that in both cases about 70% of the participants indicated that if they received a message similar to the sample text message it would make them feel very bad (New Zealand = 71%, Canadian = 70%).

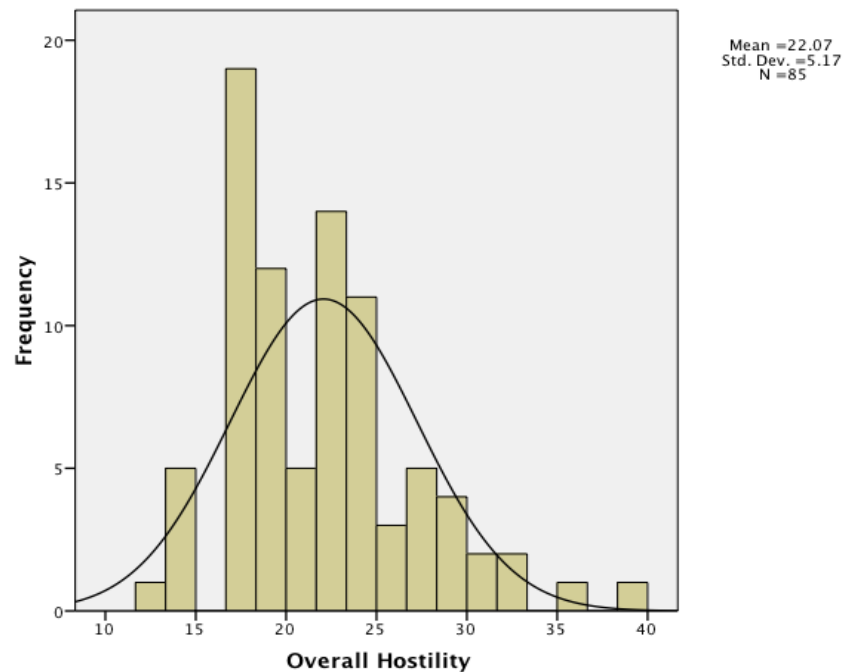
If the hostile condition and less hostile condition for these three question are compared (See Figure 1) participants reacted in a predictable pattern. Participants felt worse (i.e., scored lower) when they read the messages in the high hostile conditions ( $M = 1.95$ ) and did not feel as bad when they read the less hostile text messages ( $M = 2.22$ ). Participants indicated that they felt more justified in sending less hostile text messages ( $M = 3.41$ ) and less justified in sending a more hostile text message ( $M = 3.16$ ). However, the mean score for whether a participant felt it was likely that they would respond with a similar text message to the sample message were almost the same regardless of the level of hostility in the sample text message (high hostility  $M = 2.89$  and low hostility  $M = 2.94$ ).



*Figure 1.* Mean of Reactions to Sample Text Message Conditions for All Participants

### *Responses to Text Messages*

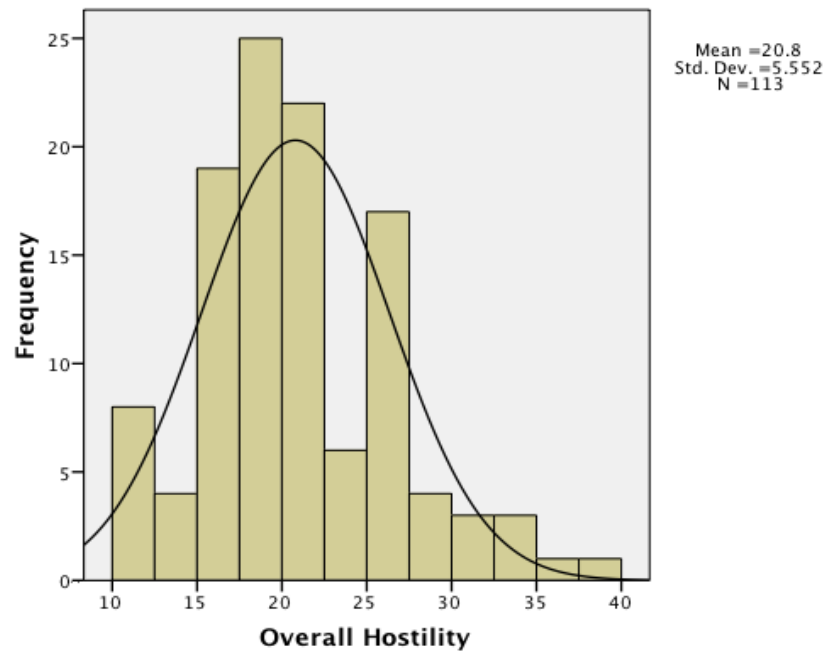
Participants' hostility displayed in texting was measured by their proposed response to the eight sample text messages. Each of their responses was rated on a scale of 1 to 5 with the largest possible score being 40. The sum of this score was used to represent overall hostility levels for the participants. 86 New Zealand participants and 112 Canadian participants responded to the eight sample text messages. The frequency distribution chart in figures two and three indicate that the mean hostility level of the New Zealand participants ( $M = 22.2$ ) was slightly higher than the mean of the Canadian participants ( $M = 20.8$ ).



*Figure 2.* Histogram of Overall Hostility Scores for New Zealand Participants

The frequency distribution chart for the hostility levels of the Canadian participants is similar to the New Zealand frequency distribution. The Canadian participants mean was close to that of a normal distribution ( $M = 20.9$ ,  $SD = 5.48$ ).

however the Canadian sample displayed 25% less skewness (.62 and .44), and 44% less kurtosis compared to the New Zealand sample (.85 and .78 respectively).



*Figure 3.* Histogram of Overall Hostility Scores for Canadian Participants

While the mean scores for the level of hostility for New Zealand participants was higher than the mean scores of the Canadian participants, the difference failed to reach significance  $t(196) = 1.64, p > .05$  (two tailed). This result supports the hypothesis that there is no significant difference in the results of New Zealand and Canadian participants with regard to overall hostility. Despite the presence of moderate skewness and kurtosis in both samples it was not large enough to warrant utilizing a Box-Cox transformation.

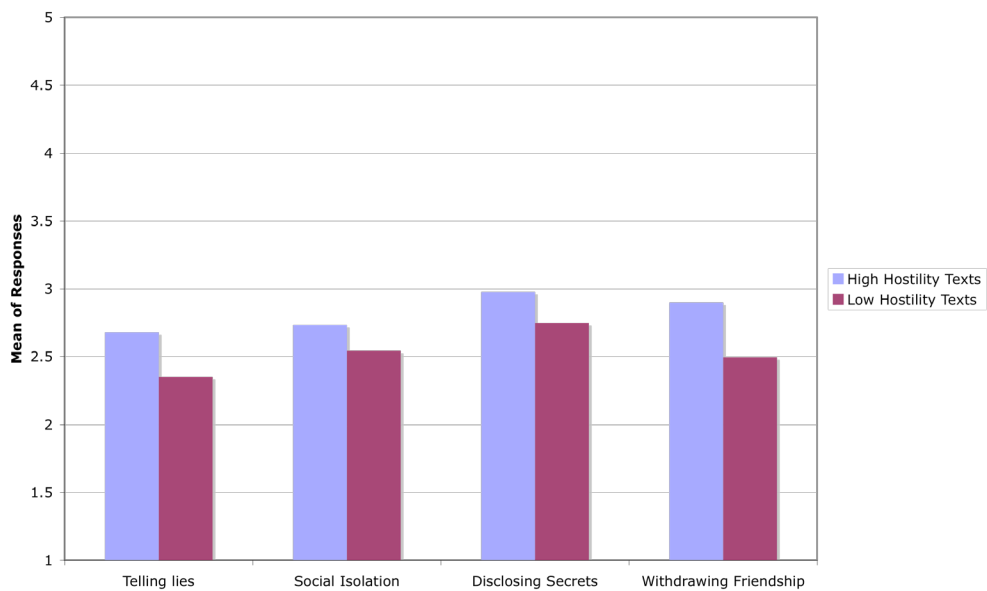
The distribution of the four themes within the text messages conformed to a normal distribution as outlined in Table 2.

Table 2.

*Mean and Standard Deviation of the Four Themes in the Text Messages*

	Telling Lies	Exclusion	Disclosing Secrets	Withdrawing Friendship
New Zealand M	2.56	2.76	2.96	2.75
New Zealand SD	.771	.878	.942	.797
Canadian M	2.48	2.48	2.76	2.62
Canadian SD	.765	.765	.921	.879
Overall M	2.52	2.60	2.84	2.67
Overall SD	.766	.825	.933	.845

Figure 4 below demonstrates that the results as expected. In each theme the high hostility text messages elicited higher hostility in participants' responses. The greatest difference in the mean of responses to the high and low hostility text message conditions was in the case of withdrawing friendship (high hostility  $M = 2.90$ , low hostility  $M = 2.49$ ).



*Figure 4.* Mean of Responses to High and Low Hostility Text Message Conditions for All Participants



A paired sample t-test was used to compare the high hostility conditions for all four themes present in the text messages to the low hostility conditions for all four themes for all participants (Table 3). The theme of social isolation  $t = -1.9(197)$ ,  $p < .05$  was not significantly different when the high and low hostility conditions were compared. This indicates that the participants did not strongly distinguish between the two levels of hostility and reacted with a similar level of hostility when presented with text messages that expressed themes of social isolation.

Table 3.

*Mean Differences Between High Hostility and Low Hostility Responses for the Four Themes for All Participants*

	Mean	Std. Deviation	t	df	Sig. (2- tailed)
Telling Lies	-.328	1.20	-3.84	197	.000
Social Isolation	-.190	1.29	-2.08	197	.039
Disclosing Secrets	-.229	1.20	-2.69	197	.008
Withdraw Friendship	-.406	1.18	-4.84	197	.000

A paired sample t-test was also used to examine the mean scores of the New Zealand participants' responses for high hostility and low hostility conditions of each of the themes. It was found that New Zealand participants responded with equal levels of hostility when presented with high and low hostility text messages for the themes of social isolation  $t = -.533(84)$ ,  $p < .05$  and telling lies  $t = -1.63(84)$ ,  $p < .05$  (see Table 4).

Table 4.

*Mean Differences Between High Hostility and Low Hostility Responses for the Four Themes for New Zealand Participants*

	Mean	Std. Deviation	t	df	Sig. (2- tailed)
Telling Lies	-.236	1.33	-1.63	84	.107
Social Isolation	-.079	1.37	-.533	84	.595
Disclosing Secrets	-.334	1.27	-2.44	84	.017
Withdraw Friendship	-.346	1.24	-2.58	84	.012

A different picture emerges when examining the results from the Canadian participants (see Table 5). There was a significant difference in the mean scores of the Canadian participants for the high and low hostility conditions in the disclosing secrets theme  $t = -1.39(112)$ ,  $p < .05$ . This indicates that the Canadian students reacted to text messages that disclosed secrets similarly regardless of whether they were presented with a high hostility or low hostility text message. The results for Canadian and New Zealand participants suggest that Canadian students are particularly sensitive to the disclosure of secrets, and the New Zealand students are particularly sensitive to telling lies and social isolation.

Table 5.

*Mean Differences Between High Hostility and Low Hostility Responses for the Four Themes for Canadian Participants*

	Mean	Std. Deviation	t	df	Sig. (2- tailed)
Telling Lies	-.397	1.09	-3.87	112	.000
Social Isolation	-.273	1.22	-2.38	112	.019
Disclosing Secrets	-.149	1.14	-1.39	112	.168
Withdraw Friendship	-.451	1.14	-4.20	112	.000

The hostility score of the four themes were analysed in a one way repeated measure analysis of variance to determine if there was any interaction between the themes. The results as indicated on Table 6 revealed that there is a significant difference between the theme of disclosing secrets and the other three themes  $F(1,196) = .000$   $p < .05$ . When results from both Canadian and New Zealand participants were examined it was clear that participant from both countries reacted with significantly greater hostility to those text messages that contain themes of disclosing secrets ( $M = 2.96$ ) than they did to themes about telling lies ( $M = 2.57$ ), of social exclusion ( $M = 2.78$ ), and withdrawal of friendship ( $M = 2.75$ ).

Table 6.

*Comparison of the Hostility Levels of the Four Themes for All Participants.*

(I) Themes	(J) Themes	Difference between Means (I-J)	Std. Error	Sig. <sup>a</sup>
Telling Lies	Social exclusion	-.097*	0.039	0.014
	Disclosing Secrets	-.334*	0.066	.000
	Withdrawing Friendship	-.160*	0.059	0.007
	Disclosing Secrets	-.237*	0.063	.000
Social Exclusion	Withdrawing Friendship	-0.06	0.059	0.286
	Withdrawing Friendship	.174*	0.061	0.005

\* The mean difference is significant at the .05 level.

Current research has produced a wide variety of results regarding the percentage of students that use indirect aggression to bully other students. Estimates can be found indicating that as few as 4% (Raskauskas & Prochnow, 2007), that between 11% and 15% (Kowalski & Limber, 2007; Ybarra & Mitchell, 2004), and as high as 27% (Zheng, 2000) of students have bullied other students. However, most studies indicate a figure between 7% and 12% of students bully other students

(Campbell, 2005; Jaishankar & Shariff, 2008).

By applying this 9% figure to this study we can get a deeper understanding of the characteristics of the participants that may use indirect aggression to bully. This study uses the figure of 9% for two reasons. It is within the range of the figure used by the majority of the studies. The hostility scores obtained in this study ranged from 18-39. Participants that scored 29 or higher on the hostility measure make up 9% of the sample. Participants that scored 28 or higher make up 14% of the sample and participants that scored 30 or higher make up 6% of the sample. If either of these scores were used then the percentage of participants in the high hostility category would not fall within the range of figures reported by the majority of the studies.

Therefore this study used 9% as a guideline for determining the most hostile participants. When the most hostile girls are examined in terms of this sample, 10 girls from New Zealand and nine girls from Canada fell within this range. None of the students displaying high hostility in the New Zealand sample came from the rural school in the sample population. The remaining two schools from the greater Wellington region each had five girls displaying a high level of hostility. Of the nine girls from the Canadian schools four of the six schools had at least one student display a high level of hostility.

### *Personality Measures*

Ninety three New Zealand participants and 114 Canadian participants completed the four personality measures. The frequency distributions of the four personality measures used showed similar patterns for both the New Zealand and Canadian participants. Assumptions about the normalcy of the distribution of the Canadian and New Zealand scores were met for all four of the personality measures

as displayed in Table 7.

Table 7.

*Mean and Standard Deviation of Personality Measure Scores by Country*

	Impulsivity	Cynical/Distrust	Need for Power	Rejection Sensitivity
New Zealand M	3.00	2.92	3.01	14.06
New Zealand SD	.497	.735	.796	5.73
Canadian M	2.88	2.87	3.21	13.25
Canadian SD	.556	.733	.677	5.42
Overall M	2.93	2.89	3.13	13.59
Overall SD	.534	.732	.735	5.55

When the levels of hostility displayed in participants' responses to the sample text messages were compared with the scores obtained from the four personality measures there was found to be a moderate correlation between hostility and impulsivity,  $r = .301(198)$ ,  $p < .01$ . There were negative correlations between hostility and the need for power,  $r = -.309 (197)$ ,  $p < .01$ , and a weak negative correlation between hostility and sensitivity to rejection,  $r = -.151(198)$ ,  $p < .01$ . This supports the hypothesis that one or more of the personality measures would correlate with the hostility score.

Table 8

*Correlation Between Hostility and Personality Measures*

	Overall Hostility	Impulsivity	Cynical Distrust	Need for Power	Rejection Sensitivity
Overall Hostility	--	.301**	.127	-.309**	-.151*
Impulsivity	--	--	.019	-.332**	-.090
Cynical Distrust	--	--	--	.011	.009
Need for Power	--	--	--	--	.085
Rejection Sensitivity	--	--	--	--	--

\*\* . Correlation is significant at the 0.01 level. \* . Correlation is significant at the 0.05 level.

In summary these findings indicate that there was no significant difference between the Canadian and New Zealand participants' level of hostility and scores on the measures of personality. The results also indicate that there was a significant relationship between overall hostility and one of the personality measures (i.e. impulsivity).

### *Qualitative Findings*

A thematic analysis of the qualitative data revealed four common themes: duration of bullying, use of varied media, differences in style of bullying, and who bullies whom. The first dealt with the duration of the bullying and found that bullying often occurred over an extended period of time. This could range from a weekend, to weeks, to months or even years but was most commonly reported to last weeks. The second theme was that of the method that bully used to express their behaviour. The participants indicated that girls usually exhibited bullying behaviour through a variety of media. Bullying may start in one form and shift from one medium to another over time. For example; bullying may start out as a verbal disagreement, then the bully may spreading rumours via the internet, then switch to attempting to socially exclude the victim via text messaging their friends, bully the victim by sending text messages directly to the victim and end with a physical confrontation. The perpetrator will often use more than one type of media at a time to bully the victim. An example of this would be when a bully sets up a web page to ridicule someone then send text messages to all of their friends inviting them to post hateful comments on the web site or to manipulate the images of the victim to make them appear grotesque.

A gender difference in the preferred style of bullying was also raised during the

group interviews. The girls expressed a belief that girls in general hold grudge much longer than boys and that girls don't like direct confrontation. The prevalence of technologies like cameras in cell phones, SMS, twitter and chat rooms allow girls to attack their victims in a variety of ways without the being forced to confront there victims directly. The participants also noted that the bullies were just as likely to bully their friends, as they were to bully people that they did not know well. They suggested that this may conflict is more likely to occur between people that have close daily contact because there is more chance for disagreements to arise. It was also noted that the strong bonds that girls form might cause conflict when they are threatened by friends entering or leaving their circle of friends. These relationships are also threatened when girls challenge for the leadership of the group.

## DISCUSSION

The purpose of this research was to determine if there was any relationship between personality traits and levels of hostility. In this study high levels of hostility were used as an indicator of the likelihood of sending bullying text messages, which is a form of indirect aggression. The second hypothesis was that there would be no difference between the results obtained from New Zealand and Canadian participants. The scores obtained on all of the personality measures and from the responses to the sample text messages conformed to a normal distribution.

The survey examined rates of cellphone ownership and found that ownership rates in New Zealand are considerably higher than in Canada. There are several possible explanations for this. Firstly, Wellington has the second highest mean income rate in New Zealand (Statistics New Zealand/Tatauranga Aotearoa, 2007; Welch, 2008), this may make it possible for a higher percentage of the students to

have the extra disposable income to pay for owning a cell phone. Given that the majority of the New Zealand participants were drawn from the Wellington region this may account for the high rates of cellphone ownership reported by New Zealand participants. A second possible explanation is that the cellphone companies in New Zealand offers inexpensive calling plans and this increases cellphone usage. One plan allows users to send up to 2000 text messages in a month for NZD\$10 (Vodafone NZ, 2009). Alternatively, Canada may have lower cellphone ownership rates because of their much higher monthly charges. For instance both incoming and outgoing calls are charged to the cellphone owner in Canada whereas, in New Zealand, only outgoing calls attract a charge to the owner.

Despite these differences in the rate of ownership of cell phones the results of this study indicate that there was no difference in how Canadian and New Zealand participants felt about the sample text messages. On average, participants indicated that if they had received these sample text messages they would feel very unhappy. They also indicated that, despite their recognition of the hurtful nature of some of these text messages, almost 50% would send an equally hurtful message to their friend(s). An even higher percentage, 70%, felt completely justified in sending a hurtful text message to their friend if their friend had made them angry or had been acting meanly towards them. This pattern emerged in responses to both the hostile and less hostile conditions of the sample text messages. This is a surprising result as commonsense would dictate that people would be less likely to send hurtful text messages to someone they considered a friend, especially if they realised how hurtful it could be.

When the scores of both New Zealand and Canadian students were combined, the results indicated that overall participants responded with the greatest hostility to



the theme of disclosing secrets. The combined hostility scores also indicated that the most hostile students, those students that the literature suggests that would be most likely to text bully, were divided evenly between the two countries. The hostility scores that were obtained by rating Canadian and New Zealand participants' responses to the sample text messages further supported the hypothesis of the study. The only difference that could be found between New Zealand and Canadian girls' attitudes towards the text messages was when the four themes of indirect aggression were examined. New Zealand girls were found to respond with more hostility to the sample text messages that expressed social isolation or the telling of lies/gossiping. In contrast, the Canadian girls expressed more hostility when they responded to text messages that focused on disclosing secrets. It is unclear why New Zealand participants would be more concerned about telling lies and social isolation, when Canadians were more concerned with disclosing secrets. This may be a fruitful area for further research to investigate.

No rural schools were represented in the top 10% of the most hostile students. This might have resulted from the small sample size of rural schools participating in this study, or it could reflect an actual difference that may have resulted from growing up in a rural area. This finding is supported by research that community support, and/or a strong support network can reduce the rate of bullying and its consequences (Espelage & Swearer, 2004; Holt & Espelage, 2007). It is possible that a rural setting provides stronger community support and support networks to adolescents thereby reducing the rate of bullying.

Both countries that participated in this study had very similar social, historical, and cultural contexts. As there were few significant differences between New Zealand and Canadian results, it is likely that the results of this research could be

generalised across similar westernised Commonwealth countries. However, countries with significantly different social and cultural milieu such as Asia or Africa would likely have results that differ from the present study and may require different scales and specific research to consider the relevant variables for their sample populations.

The results of this study support the hypothesis that there is an association between indirect aggression and one or more of the personality traits measured. High levels of impulsivity were correlated with high levels of hostility. This is not surprising because there is a considerable amount of research that suggests high levels of impulsivity are related to conduct disorder, aggression and other antisocial activities (Green, 2001; Hollander & Stein, 1995; Wittmann, et al., 2008). Recent research in the field of developmental psychology also supports this finding (Guerin & Hennessy, 2002; Pepler, et al., 2005; Strauch, 2004).

One of the surprising results of the survey was the negative correlation found between hostility and the sensitivity to rejection scale. It is possible that the scale measures more overt aggression resulting in it being a very poor predictor of indirect aggression. The sensitivity to rejection scale is based on attachment theory (Downey, et al., 2004) which would indicate that girls who had not formed an appropriate attachment in childhood would be more likely to react with hostility if their friendships and relationships in adolescence were threatened. It is unlikely that this scale would be more sensitive to overt aggression than indirect aggression. However, Brookings, Zembar and Hochstetler (2002) found that people, who had scored highly on the Rejection Sensitivity Questionnaire, were just as likely to avoid rejection by distancing themselves from others, as they were to avoid rejection by seeking to cling tightly to the relationship. This research found that other measures

might need to be administered along with the Rejection Sensitivity Questionnaire to obtain results that are more predictive of aggressive behaviour in a relationship.

### *Limitations and Improvements*

This study could be improved upon by using other personality traits in the analysis. For example it is possible that the Callous-Unemotional Scale would generate results that more accurately predict indirect aggression than the Cynical-Distrust Scale. An intriguing study by Calvete (2008), suggests that the presence of cognitive schemas of grandiosity and justification for violence are a good predictor of both aggressive and delinquent behaviour. This suggests that it is likely that the use of measures based upon theories of cognitive schema, such as the Callous-Unemotional Scale, would result in a strong correlation with text bullying behaviour.

A second measure of hostility would also be useful as a comparison to the hostility scores generated by the participants' responses to the sample text messages. If this study had been conducted in a country with significantly different customs and historical background dramatically different results might have been obtained. Many countries in Africa do not have extensive landlines for their telephone network, which has resulted in many citizens of those countries, having experienced telephone communications solely through cellular phones. In addition, many of these countries still maintain a system of extended family that may result in adolescents growing up in a stronger social network. The stronger social network may in turn inhibit levels of indirect aggression (Espelage & Swearer, 2004; Holt & Espelage, 2007).

The results of this research indicate that impulsivity is a factor associated with text bullying. Most high school counsellors already have training materials and counselling tools to help them work with students on anger management. A key

component of anger management training involves learning to control impulsivity. By understanding text bullying as a form of indirect aggression, and its linkage to impulsivity, counsellors will be able to use their existing skills and tools to intervene early with potential text bullies. This may help limit the frequency and intensity of text bullying, as counsellors would be able to help students with high hostility and impulsivity understand the impact of their actions on their victims. Counsellors also need to understand that 13 to 14 year olds have poor impulse control compared to older adolescents. While it is not possible to completely eradicate text bullying among young adolescent girls, it may be possible to reduce the incidence of text bullying by helping girls to manage their impulsivity and better understand the impact of indirect aggression on their victims.

#### *Areas for Future Research*

To date most psychological research on bullying has focused on the impact on the victims of bullying, there is insufficient research on the factors associated with bullying behaviours. By focusing on victims of bullying rather than why people bully, the practical applications of the research have been limited to dealing with the results of bullying rather than focusing on development of prevention strategies and/or resources to stop potential bullies. By the same token, most research has focused on expressions of direct (and to a lesser degree) indirect aggression by males. More research is needed to understand how girls use indirect aggression in their relationships to obtain and maintain status and power. Despite the passionate debate between researchers as to whether girls exhibit any forms of aggression, this is without doubt an area where more research is needed. This could lead to a much better understanding of female relationships, and may lead to development of

resources to help girls who exhibit, and/or are impacted by, indirect aggression.

In order to shift the focus of research to the factors associated with bullying, researchers need to develop valid and reliable measures of indirect aggression. Current measurement scales are insufficient to fully study the phenomena of indirect aggression. This means that examples of indirect aggression such as cyber-bullying or text bullying will likely remain understudied in the psychological literature. If additional measures were created to help generate results that explain the factors associated with indirect aggression, theoretical frameworks could be developed that would more fully account for this phenomena. In turn, this would allow theories of indirect aggression to be better integrated with other psychological theories.

Early research shows that the context of bullying behaviour is important however research into cyber-bullying or text bullying has not yet examined the contextual factors in detail (Juvonen, Nishina, & Graham, 2001; Williams & Guerra, 2007). Further research may be able to uncover contextual factors that adolescents use to decide how hostile they perceive a text message to be. For instance, adolescents commonly use profanity within their social group and often this is acceptable between friends. However, if the context of this exchange within the group alters, then the identical words may be perceived to be more hostile. The perception of what is acceptable in any given exchange is fluid and changing due to a variety of factors. These contextual factors may trigger bullying behaviours.

Japan and Korea would be an interesting contrast to countries such as Africa because they also have strong community networks. In Japan cellphone owners also use emoticons (a standardised set of symbols that represent particular feelings or emotions) much more than in Western countries. This may impact the results of research on Japanese adolescents as emoticons may reduce the ambiguity of text

messages. Emoticons could either mitigate or amplify the perceived hostility of text messages, thus leading to different results than from the New Zealand and Canadian participants of the present study. Japan and Korea also have a much higher percentage of cellphones that have “smart phone” capabilities to transmit multimedia (photos, videos, internet).

Smart phones act as mini computers and this may cause convergence of text and other forms of cyber-bullying in adolescents. Because these smart phones have the capacity to send and receive video calls, the anonymity, lack of immediate consequences, and psychological distance from the victim in text bullying may not be present. Smart phones are becoming increasingly common (Haq, 2008; Haque, 2009; IMS Research, 2007). The increasing ubiquity of multimedia capabilities may change the nature of text bullying.

Given the changing demographics of cellphone use globally, more research could also be done on text bullying to draw finer distinctions between text bullying with regular cellphones compared to with smart phones. As texting has created its own etiquette and particular forms of communication, the multimedia capability of smart phones may also revolutionise how this technology is used to maintain relationships.

### *Conclusion*

Prior to this study no research had been done examining the relationship between text bullying and personality traits among adolescent girls. The findings of this research begin to answer some critical questions about the factors that are associated with text bullying behaviour. Specifically, the results of this study have

shown that high levels of hostility and impulsivity are correlated. Although there is little research on indirect forms of aggression, the literature examined in this study suggests that girls are more likely to use indirect aggression to obtain and maintain their social status and power. Results from New Zealand and Canadian participants indicate that there are few cultural and/or social differences that impact levels of hostility. Therefore, the findings of this study can be generalised across similar westernised Commonwealth countries. This research could provide schools with insights into how resources could be allocated to address text bullying. In particular, it may assist schools to identify girls that have high levels of impulsivity that indicates that they are likely to engage in text bullying behaviour.

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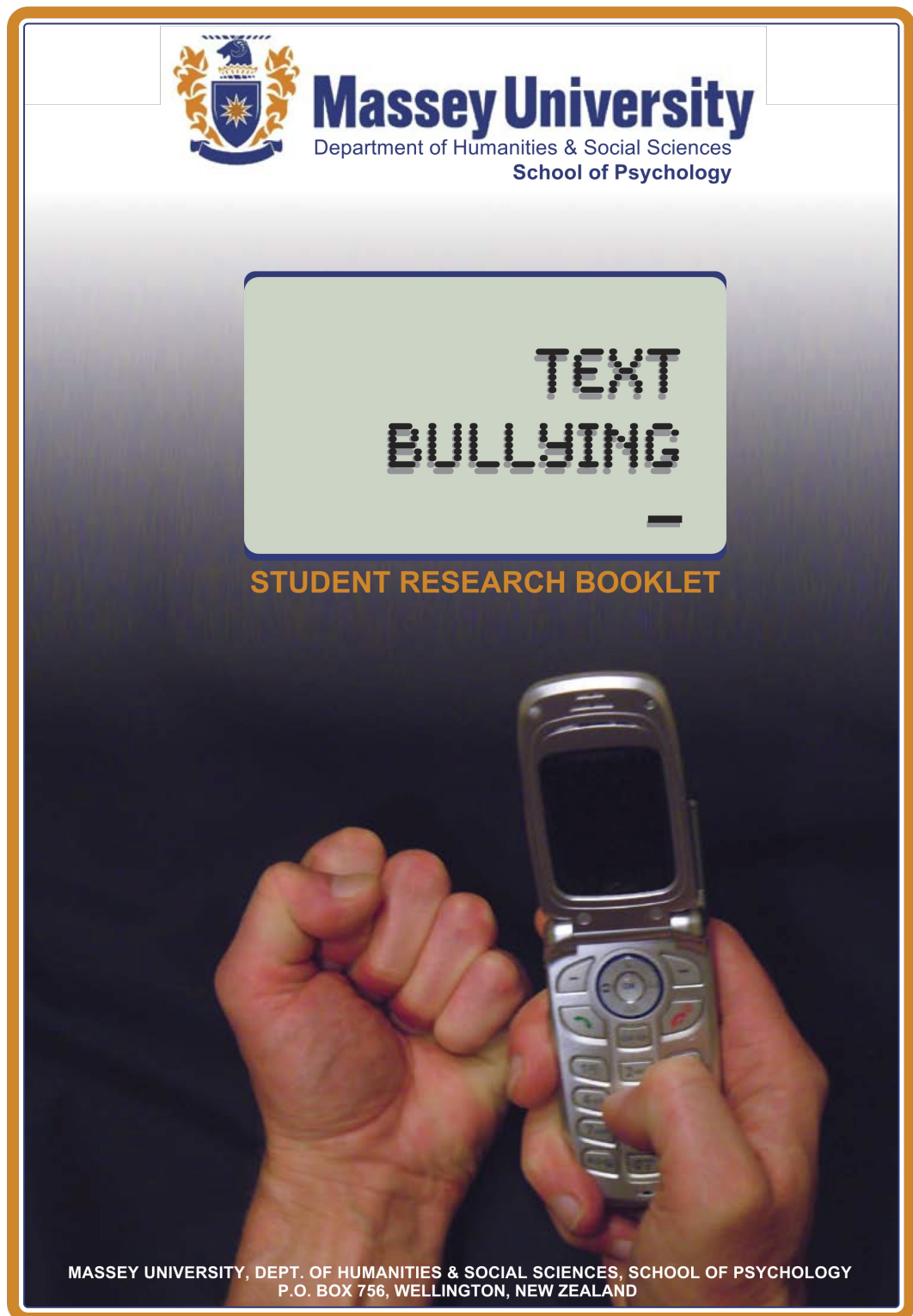
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## APPENDIX A: SAMPLE SURVEY



## RESEARCH BOOKLET

## PART 1

Please read each of these text messages and circle the numbers below that describe how you feel about the message.

*You are friends with Sarah and Maria. Maria and Sarah have had a fight. Maria has sent you this text message about Sarah and you are sure this is a lie.*

**1) omfg did u hear that sarahs pregnant the slut!**

If you received this text message talking about your friend how would you feel?

1	2	3	4	5	6	7
Bad			Ok			Good

How likely would it be for you to send out a text like this if your friend had made you really angry?

1	2	3	4	5	6	7
Not likely			Maybe			Likely

If you knew Sarah had been acting mean how reasonable would it be for her to send a text like this?

1	2	3	4	5	6	7
Reasonable			Not sure			Not reasonable

On the lines below please write out the text message you would most like to send to Maria or someone else.

Please note who you would send it to and also whether you would actually send it or if you would probably just think it but not actually send it

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*You are friends with Tina. You told your group of friends a secret about Tina. Now, Tina has sent you this text message because she found out you told her secret and doesn't want you to hang out with the group anymore.*

**2) i cant believe u said that shit bout me u bitch! dont even think ur hanging out with us on saturday ur just a backstabbing bitch**

If you received this text message how would you feel?

1	2	3	4	5	6	7
Bad			Ok			Good

How likely would it be for you to send out a text like this if you were Tina?

1	2	3	4	5	6	7
Not likely			Maybe			Likely

How reasonable do you think Tina is in sending this text?

1	2	3	4	5	6	7
Reasonable			Not sure			Not reasonable

On the lines below please write out the text message you would most like to send to Tina or someone else.

Please note who you would send it to and also whether you would actually send it or if you would probably just think it but not actually send it

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*You had a fight with Anna and she has sent this text to you warning you not to tell lies about her to get back at her.*

**3) if u spread shit about me bitch expect everyone to know the bullshit youv told me**  
If you received this text message how would you feel?

1	2	3	4	5	6	7
Bad			Ok			Good

How likely would it be for you to send out a text like this if you were in Anna's position?

1	2	3	4	5	6	7
Not likely			Maybe			Likely

How reasonable do you think Anna is in sending a text like this?

1	2	3	4	5	6	7
Reasonable			Not sure			Not reasonable

On the lines below please write out the text message you would most like to send to Anna or someone else.

Please note who you would send it to and also whether you would actually send it or if you would probably just think it but not actually send it

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*Your friend Emma got this text from Kirsty (another girl in your group of friends). Kirsty thinks that Emma dissed her in front of everyone.*

**4) dont come near me again u skank i dont want to hear ur bullshit excuses**

How do you think Emma would feel to get this text?

1	2	3	4	5	6	7
Bad			Ok			Good

How likely would it be for you to send out a text like this if you were Kirsty?

1	2	3	4	5	6	7
Not likely			Maybe			Likely

How reasonable would it be for Kirsty to send this text?

1	2	3	4	5	6	7
Reasonable			Not sure			Not reasonable

On the lines below please write out the text message you would most like to send to Kirsty or someone else.

Please note who you would send it to and also whether you would actually send it or if you would probably just think it but not actually send it

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*You are friends with Sarah and Maria. Maria sent this text about Sarah to your other friend Kirsty and Kirsty showed it to you and you are pretty sure this is a lie.*

**5) did u hear that sarah kissed jared at jimmys**

If you saw this text message talking about your friend how would you feel?

1	2	3	4	5	6	7
Bad			Ok			Good

How likely would it be for you to send out a text like this if you were angry at Sarah?

1	2	3	4	5	6	7
Not likely			Maybe			Likely

If you knew Sarah had been acting mean, how reasonable would it be for you to send a text like this?

1	2	3	4	5	6	7
Reasonable			Not sure			Not reasonable

On the lines below please write out the text message you would most like to send to Maria or someone else.

Please note who you would send it to and also whether you would actually send it or if you would probably just think it but not actually send it

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*Your friends Sarah and Maria have been distant lately and not being as nice to you. Sarah sends you this text.*

**6) I don't want you hanging out with maria anymore we need some time apart sorry**

If you received this text message how would you feel?

1	2	3	4	5	6	7
Bad			Ok			Good

How likely would it be for you to send out a text like this if your friends had made you really angry?

1	2	3	4	5	6	7
Not likely			Maybe			Likely

You are feeling rather sick of Sarah and Maria and have been hanging out with other friends lately. How reasonable do you think your friends are in sending this text?

1	2	3	4	5	6	7
Reasonable			Not sure			Not reasonable

On the lines below please write out the text message you would most like to send to Sarah or someone else.

Please note who you would send it to and also whether you would actually send it or if you would probably just think it but not actually send it

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*You are friends with Kirsty. But you have been annoying Kirsty lately. She sends you this text.*

**7) I think u should stop pissing me off or I'm gonna tell everyone bout what u did at the party**

How do you think you would feel if she got this text?

1	2	3	4	5	6	7
Bad			Ok			Good

How likely would it be for you to send out a text like this if Kirsty had made you really angry?

1	2	3	4	5	6	7
Not likely			Maybe			Likely

If you knew you had been acting mean how reasonable would it be for Kirsty to send a text like this?

1	2	3	4	5	6	7
Reasonable			Not sure			Not reasonable

On the lines below please write out the text message you would most like to send to Kirsty or someone else.

Please note who you would send it to and also whether you would actually send it or if you would probably just think it but not actually send it

---



---

*You are friends with Emma. But Emma has been annoying you lately. You send her this text.*

**8) im sorry but im going to hang out with brittany from now on not u**

How do you think Emma would feel to get this text?

1	2	3	4	5	6	7
Bad			Ok			Good

How likely would it be for you to send out a text like this if your friend had made you really angry?

1	2	3	4	5	6	7
Not likely			Maybe			Likely

If you knew Emma had been acting mean how reasonable would it be for you to send this text?

1	2	3	4	5	6	7
Reasonable			Not sure			Not reasonable

On the lines below please write out the text message you would most like to send to Emma or someone else.

Please note who you would send it to and also whether you would actually send it or if you would probably just think it but not actually send it

---



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## PART 2

Read each statement below and circle the number that is closest to how you feel about each statement.

I concentrate easily	1	2	3	4	5
	Strongly Agree		Undecided		Strongly Disagree

I plan tasks carefully.	1	2	3	4	5
	Strongly Agree		Undecided		Strongly Disagree

I squirm during class	1	2	3	4	5
	Strongly Agree		Undecided		Strongly Disagree

I say things without thinking	1	2	3	4	5
	Strongly Agree		Undecided		Strongly Disagree

I am self-controlled	1	2	3	4	5
	Strongly Agree		Undecided		Strongly Disagree

I get easily bored when solving maths problems	1	2	3	4	5
	Strongly Agree		Undecided		Strongly Disagree

I buy things on impulse	1	2	3	4	5
	Strongly Agree		Undecided		Strongly Disagree

I like puzzles	1	2	3	4	5
	Strongly Agree		Undecided		Strongly Disagree

No one cares much about what happens to me	1	2	3	4	5
	Strongly Agree		Undecided		Strongly Disagree

It is safer to trust nobody	1	2	3	4	5
	Strongly Agree		Undecided		Strongly Disagree

I think most people lie to get ahead	1	2	3	4	5
	Strongly Agree		Undecided		Strongly Disagree

Most people dislike putting themselves out to help other people	1 Strongly Agree	2	3 Undecided	4	5 Strongly Disagree
---	---------------------	---	----------------	---	------------------------

Most people will cheat to get an advantage rather than lose it	1 Strongly Agree	2	3 Undecided	4	5 Strongly Disagree
--	---------------------	---	----------------	---	------------------------

Most people are honest mainly because of their fear of being caught.	1 Strongly Agree	2	3 Undecided	4	5 Strongly Disagree
--	---------------------	---	----------------	---	------------------------

I usually wonder what hidden reasons another person may have for doing something nice to me	1 Strongly Agree	2	3 Undecided	4	5 Strongly Disagree
---	---------------------	---	----------------	---	------------------------

Most people make friends because friends are likely to be useful to them	1 Strongly Agree	2	3 Undecided	4	5 Strongly Disagree
--	---------------------	---	----------------	---	------------------------

I enjoy when people do things my way	1 Strongly Agree	2	3 Undecided	4	5 Strongly Disagree
--------------------------------------	---------------------	---	----------------	---	------------------------

I can usually change the opinion of my friends	1 Strongly Agree	2	3 Undecided	4	5 Strongly Disagree
--	---------------------	---	----------------	---	------------------------

I can make life difficult for someone that has offended me	1 Strongly Agree	2	3 Undecided	4	5 Strongly Disagree
--	---------------------	---	----------------	---	------------------------

My friends usually do what I want	1 Strongly Agree	2	3 Undecided	4	5 Strongly Disagree
-----------------------------------	---------------------	---	----------------	---	------------------------

Among my friends I am the one who usually decides what movies we will rent	1 Strongly Agree	2	3 Undecided	4	5 Strongly Disagree
--	---------------------	---	----------------	---	------------------------

If I don't get my way I usually complain about it	1 Strongly Agree	2	3 Undecided	4	5 Strongly Disagree
---	---------------------	---	----------------	---	------------------------

I feel like I am being attacked when my friends question my opinion	1 Strongly Agree	2	3 Undecided	4	5 Strongly Disagree
---	---------------------	---	----------------	---	------------------------

I would rather tell my friends what to do than have them tell me what to do	1 Strongly Agree	2	3 Undecided	4	5 Strongly Disagree
---	---------------------	---	----------------	---	------------------------

I prefer to get things “just right” rather than slapping things together	1 Strongly Agree	2	3 Undecided	4	5 Strongly Disagree
--	---------------------	---	----------------	---	------------------------

In this part of the booklet imagine that you are in each situation. You will be asked to answer the following questions:

- 1) How worried or nervous would you be about how the other person would respond?
- 2) How do you think the other person would be likely to respond?

**Imagine that you are in a new school and you have to talk to someone about helping you with some school work.**

How worried would you be about whether or not they would help you?	Not worried 1      2      3      4      5      6 Very worried					
--	---	--	--	--	--	--

I would expect that they would want to help me	Not Likely 1      2      3      4      5      6 Very likely					
--	---	--	--	--	--	--

**You approach a close friend to talk after doing or saying something that seriously upset her.**

How worried would you be about whether or not your friend would want to talk with you?	Not worried 1      2      3      4      5      6 Very worried					
--	---	--	--	--	--	--

I would expect that they would want to talk with me to work it out.	Not likely 1      2      3      4      5      6 Very likely					
---	---	--	--	--	--	--

**You ask someone that you don't know very well to hang out with you after school.**

How worried would you be about whether or not they would want to hang out with you?	Not worried 1      2      3      4      5      6 Very worried					
---	---	--	--	--	--	--

I would expect that they would want to hang out with me	Not Likely 1      2      3      4      5      6 Very likely					
---	---	--	--	--	--	--

**You ask a friend to go on a trip with you over the school holidays**

How worried would you be about whether or not your friend would want to go with you?	Not worried					Very worried
	1	2	3	4	5	6

I would expect that they would want to go with me on holiday.	Not Likely					Very likely
	1	2	3	4	5	6

**You ask a friend to do you a big favour.**

How worried would you be about whether or not your friend would do you a favour?	Not worried					Very worried
	1	2	3	4	5	6

I would expect that they would do a favour for me.	Not Likely					Very likely
	1	2	3	4	5	6

**You go to a party and notice someone you like on the other side of the room and then you ask them to dance.**

How worried would you be about whether or not they would want to dance with you?	Not worried					Very worried
	1	2	3	4	5	6

I would expect that they would want to dance with me	Not Likely					Very likely
	1	2	3	4	5	6

**You ask a guy you really like if he likes you.**

How worried would you be about whether or not he would say he likes you?	Not worried					Very worried
	1	2	3	4	5	6

I would expect that they he would say he likes me.	Not Likely					Very likely
	1	2	3	4	5	6

## APPENDIX B: SAMPLE TEXT MESSAGES, ASSOCIATED THEMES AND SCORING RUBRIC

### Hostile Condition

- Tells lies about someone: *"omfg did u hear that sarahs pregnant the slut!"*
- Telling someone they can not participate in a group activity/Social exclusion from the victims friends: *"i cant believe u sed that shit bout me u fucking bitch! dont even think ur hanging out with us on satrday ur just a backstabing bitch"*
- Discloses personal information: *"if u spread shit about me bitch expect everyone to know the bullshit youv told me"*
- Withdrawal of friendship: *"dont ever come near me again u skank i dont wanna hear ur bullshit excuses"*

### Non-Hostile

- Tells lies about someone: *"did u hear that sarah kissed jared at jimmys"*
- Telling someone they can not participate in a group activity/Social exclusion from the victims friends: *"I don't want you hanging out with maria anymore we need some time apart sorry"*
- Discloses personal information: *"I think u should stop pissing me off or I'm gonna tell everyone bout what u did at the party"*
- Withdrawal of friendship: *"im sorry but im going to hang out with brittany from now on not u"*

### Scoring Rubric

Use the following guidelines and examples to generate a score for each response to the text messages (eight scores/text messages for each booklet).

1 = ignore/would not respond/curious/okay with the text message

example: *Oh Gee. I didn't know*

example: *I wouldn't send anything*

2 = acting as a peacemaker/taking the blame/trying to reconcile/mild reply

example: *I'm sorry but can we hang out some other time*

example: *why aren't you hanging out with me*

3 = reprimand/moral reprimand/mild rebuke /you should(n't)

example: *why are you threatening me?*

example: *why can't you asked me first about stuff before assuming*

4 = retaliate/a bit of swearing/you can't.../I will not do is you ask

example: *then you should stop saying shit behind my back to the end. Stay out of my business*

example: *okay! That is it! you have gone too far! Like OMFG! wtf is wrong with you! Get over it okay! I'm tired of both of you*

5 = retaliate with extreme prejudice/threatened with violence/accusations

example: *shit whore*

example: *fuck you slut. I hate you u bitch*

example: *if I hear you saying stuff like that I'm going to make sure you sorry you were ever born*

## APPENDIX C: SAMPLE PARENTAL INFORMATION AND CONSENT FORM

*Both the consent form and information letter were printed on letterhead of Department of Humanities and Social Sciences*

### Text Bullying Research Project

#### PARENT/GUARDIAN AND STUDENT CONSENT FORM

This research is about bullying by text message. The results of this research will help reduce bullying in school. I am only asking girls age 13-14 year to do the research booklet. The research booklet is 5 pages long. Four of the questions in the booklet contain swearing. This research is anonymous. No one will know what you daughter wrote in the booklet and it will not affect her grades. Your daughter has the right to stop filling in the booklet at anytime. She does not have to give a reason why she stopped. I will be asking the school to publish the results of this research in the school newsletter. If you would like more information please read the attached information sheets.

STUDENT NAME \_\_\_\_\_ (full name printed)

SCHOOL: \_\_\_\_\_ CLASS \_\_\_\_\_

I have read the information above and/or the attached Information Sheet and hereby give my consent for my daughter to participate in this project conducted by James Sanderson. Thank you in anticipation of your consent

**Signature:** (Student) \_\_\_\_\_ **Date:** \_\_\_\_\_

**Signature:** (Guardian/Parent) \_\_\_\_\_ **Date:** \_\_\_\_\_

**Full Name**  
**(guardian/parent) -**  
**printed** \_\_\_\_\_

## **Text Bullying**

### **GUARDIAN/PARENTAL INFORMATION LETTER**

Hi, my name is Jim Sanderson. I'm doing a thesis project on bullying with text messages as partial fulfillment of a Master of Arts degree in Psychology at Massey University in Wellington under the supervision of Professor Ian Evans. Your daughter has expressed interest in participating in this research project. The attached consent form is seeking permission from you for your daughter to participate in this project.

The purpose of this research is to increase our knowledge about text bullying in both New Zealand and in Canada. Bullying via text messaging has become increasingly common in the industrialized world. To date, very little research has been done on this topic. I am hoping that my research will aid in the creation of programmes that will reduce bullying in general and text bullying specifically.

#### **Participants**

Girls aged 13 to 14 are the focus of this research. A number of schools in New Zealand, and in British Columbia, Canada have agreed to help with my research and allow 13-14 year old girls in those schools to be asked to participate. I am hoping to get a total of 200 to 250 students from Canada and New Zealand to participate in this research; this will ensure the validity of the research.

#### **Participant Involvement**

Students who agree to participate will be given a booklet. In the booklet they will be asked to read eight sample text messages, answer a couple of questions about each text message and write a possible reply to each messages. The text messages use language that is commonly used by young teens. Because of this, some of the language may be offensive. Four of the text messages in the research booklet contain profanity. The second part of the booklet contains a survey of about 50 questions. All of this will take about 35-40 minutes.

After they have completed the booklet I will be reading out a debriefing letter to the students to explain the questions to the students, and give them some practical examples of what they can do if they receive bullying text messages. In the letter I will make it clear that they should not use the type of language in the sample messages when they are sending text messages. For additional support more information on text bullying can be found at the web site <http://www.stoptextbully.com/>. The administration of the research materials will take place in school time. It will be at the discretion of the school principal and relevant teachers as to when exactly this will start.

#### **Project Procedures**

Participants will be anonymous. No names will be recorded on the booklets. The data from the research will be gathered and analysed, and the results made available to the school. I will request that the results of the research be published in the school newsletter to ensure that all parents, guardians and students have access to the information.

#### **Participant Rights**

While participants will be asked to try to answer all of the questions in the booklet, participation is voluntary and your daughter has the right to decline to answer any particular question and is under no obligation to complete the questions in the booklet. She can choose to stop participating in the project at any time. At all times during this research project your daughter can stop and ask questions or ask for further support if she has concerns related to this research. A school counselors or teacher will be available to answer questions, or your daughter can approach me in person, or by email. Additional support is available if you or



your daughter are concerned about bullying.

The responses to the text messages in the booklet and consent forms will be put in secure storage for a five year period at the School of Psychology, Massey University. At the end of the five years, my supervisor will destroy them.

## **Information for your daughter**

Hi, my name is Jim Sanderson. I'm doing a Masters thesis project on bullying with text messages and I would like your help with my research. I am from Massey University in Wellington, New Zealand. I am usually a high school teacher but I'm taking a little time off to do my Master's degree and then I will come back to teaching and counseling.

### **What to do you have to do?**

If you agree to take part in this project you will be given a booklet. In the booklet you will be asked to read eight sample text messages, answer a couple of questions about each text message and write a possible reply to each message. Warning: four of the text messages contain profanity. In the second part of the booklet you will fill out a 50 question survey. The whole thing will take about 35-40 minutes.

### **Why?**

Using text messages to bully other students is becoming more and more common. By asking you about these text messages and how you feel about some of these text messages I will be able to better understand what causes text bullying. This information will be useful in the future to help reduce the amount of bullying among students.

### **Confidentiality**

No one will know what your answers are because you will not write your name on the booklet. I will also be collecting a lot of these booklets and they will be all mixed together. Your consent form, which includes your name, will be put in a separate folder so there will be no way for your answer to be linked with your name.

### **Your Rights**

You are under no obligation to fill in this booklet. You can stop at any time for any reason. You can ask any question about this project any time you wish. You have the right to decline to answer any particular question. Please remember, whether you chose to fill in the booklet, or if you chose not to, or even if you chose to stop after you start writing it; participating in this project will not affect your school marks. I will write up a report of what I found out from this research project later this year. I will give a copy to your school so you can find out the results of this research.

### **What will happen to the booklets?**

After I have got all of the information out of the questions in this booklet that students fill in I will put the booklet and the consent form in a secure place and they will be stored for five years at the School of Psychology at Massey University in Wellington. At the end of the five years my supervisor will destroy all of the papers.

### **Approval from Ethic Committee**

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application 08/16. If you have any concerns about the conduct of this research, please contact Dr Karl Pajo, Chair, Massey University Human Ethics

Committee: Southern B, telephone 04 801 5799 x 6929, email humanethicsouthb@massey.ac.nz”.

If you have any questions about this project, the questionnaire, or anything else related to this project, my supervisor and I can be contacted at:

Researcher: Jim Sanderson, c/- School of Psychology, Massey University,  
Te Kura Hinengaro Tangata  
P O Box 756, Wellington.  
e-mail: jimsan@xtra.co.nz  
Telephone: 06-350-5799 ext 62324

Supervisor Professor Ian Evans, School of Psychology, Massey University,  
Te Kura Hinengaro Tangata  
P O Box 756, Wellington.  
e-mail: i.m.evans@massey.ac.nz  
Telephone: 06-350-5799 ext 62125

Best wishes

Jim Sanderson  
Researcher

## APPENDIX D: SAMPLE INFORMATION SHEET

### **A cross-cultural examination of the factors influencing text bullying in 13-14 year old girls.**

#### Information Letter for Participating Schools

My name is Jim Sanderson; I'm doing a thesis project on what factors lead to bullying with text messages. This study is partial fulfilment of my Master of Arts degree in Psychology at Massey University in Wellington, New Zealand under the supervision of Professor Ian Evans. I worked as a high school teacher in BC from 1998 to 2005. Once my degree is completed in September I intend to return to BC and start working as a high school counsellor.

The purpose of this research is to increase our knowledge about text bullying. Bullying via text messaging has become increasingly common in the industrialised world. To date very little research has been done on this topic and, unfortunately, most of the anti-bullying programs either ignore text bullying or attempt to deal with it without adequate scientific facts. I am hoping that my research will aid in the creation of programs that are grounded in scientific research and aimed at reducing bullying in general and text bullying specifically.

#### **Participants**

This research will focus on girls aged 13 to 14. A number of schools in New Zealand and BC have agreed to take part in this research and 13-14 year old girls in those schools have been asked to participate. I am hoping to get 200 to 250 students in BC and New Zealand to participate in this research to ensure statistical reliability.

#### **Participant Involvement**

Students who agree to participate will be given a booklet. In the booklet they will be asked to read eight sample text messages, answer a couple of questions about the text messages and write a possible reply to each text message. The text messages use language that is commonly used by young teens. Because of this some of the language may be offensive as four of the text messages contain profanity. In the second part of the booklet they will fill out a short survey. All of this will take about 30 minutes. After they are finished the booklet I will be reading out a debriefing letter to the students to explain the booklet to the students, and give them some practical examples of what they can do if they receive bullying text messages.

In the debriefing letter I will make it clear that they should not use the type of language used in text messages in the booklet. All participants will be anonymous and voluntary. No names will be recorded on the booklets, students can stop participating at anytime, they can decline to answer any question and I will answer any questions that they have at anytime.

#### **School Rights and Involvement**

The school has the right to terminate their involvement at any time, for any reason. The school has a right to a copy of the results of this research. The responses in the booklets and consent forms will be put in secure storage for a five year period at the School of Psychology, Massey University, Wellington New Zealand. At the end of the five years, my supervisor will destroy them.

**Approval from Ethic Committee**

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application 08/16. If you have any concerns about the conduct of this research, please contact Dr Karl Pajo, Chair, Massey University Human Ethics Committee: Southern B, telephone 04 801 5799 x 6929, email [humanethicsouthb@massey.ac.nz](mailto:humanethicsouthb@massey.ac.nz)”.

If you have any questions about this project, the questionnaire, or anything else my supervisor and I can be contacted at:

Researcher: Jim Sanderson, c/o School of Psychology, Massey University,  
Te Kura Hinengaro Tangata  
P O Box 756, Wellington.  
e-mail: [jimsan@xtra.co.nz](mailto:jimsan@xtra.co.nz)  
Telephone: 06-350-5799 ext 62324

Supervisor Professor Ian Evans, School of Psychology, Massey University,  
Te Kura Hinengaro Tangata  
P O Box 756, Wellington.  
e-mail: [i.m.evans@massey.ac.nz](mailto:i.m.evans@massey.ac.nz)  
Telephone: 06-350-5799 ext 62125

Best wishes

Jim Sanderson  
Researcher

## APPENDIX E: SAMPLE DEBRIEFING LETTER

**Text Bullying Research Project****DEBRIEFING INFORMATION SHEET**

*To be read out to the students after they have completed the questionnaire.*

Thank you for participating in this study. Your time and effort are appreciated. This experiment looks at what causes people to text-bully. The first part of the booklet, the one with the text messages on it, measured how people respond to different types of text messages. This will tell us how the average person will respond to each of these messages. The second part of the booklet measures impulsiveness, desire for power, cynicism and sensitivity to rejection. The scores from the second part will be compared to their responses in the first part and the people that scored high on the first part will probably score high on the second part also. Just remember that none of these scores can be connected to you because your name is not on the sheets. One thing that I would like to stress is that the text messages in the first part of the booklet are very harsh and nasty. You should never send text messages like these because they could really hurt someone who reads them. There is never a good reason to hurt someone's feeling with a text message. One final point, if you are getting text messages that are hostile, bullying, or are trying to push you around there are several things you can do

- 1) don't respond to the messages – this just escalates the bullying.
- 2) don't respond to the messages – after five messages that you have not responded to the cell phone company can take action to block the messages and possibly even take away the bully's cell phone.
- 3) save the messages – this is evidence against the bully.
- 4) tell your parents, teachers and counsellors about what is happening – the bully wants to isolate you because it makes them stronger and makes you weaker. Being isolated makes it harder for you to stop the bully.
- 5) Make sure that only good friends and family are in your address book on your phone.

This study received ethics clearance through the Massey University Human Ethic Committee in Wellington, New Zealand.

## APPENDIX F: QUALITATIVE DATA FROM POST-SURVEY INTERVIEWS

### School One (New Zealand)

During the post-debriefing, open discussion students noted that they had heard cases of people killing themselves because of bullying. They identify text bullying as a popular mean to bully and they noted that bullying amongst girls last a long time - in some cases weeks, months and in one case more than a year. The students also noted how easily misunderstanding occur since you cannot see the person face to face. They also felt that changes in friendships may start bullying behaviour as a way to manage

### School Two (New Zealand)

The students also reported that incidents can last for just a weekend but they felt that normally it takes weeks to solve. Girls will bully fiends because they know more about each other. These incidents can be very frightening to the person being bullied because they feel powerless and sometimes the bully will bring in peers, siblings and even relatives to participate in the bullying. Some of the girls felt that this might lead the victim to become suicidal. The students also stated that bullying could lead to the girl to miss school or even change schools if things get particularly bad.

The students noted that boys are very direct in their conflicts while conflict amongst girls can be very complicated and multidimensional. One example of this is that bullying can start out as verbal, then over time, move to texting, then to the internet, and then back to verbal. Not only will the bullying shift from one media/delivery mechanism to another over time but also several may be employed simultaneously. The students also stated that girls were more

prone to creating drama than boys. When they were questioned about what they meant by this they gave the example of "some girls like to have a lot of conflict in their lives. They get bored if there is not something happening. They like being the centre of attention." The girls also indicated that texting is central to their communication network, that they like texting because you can say what you like and it is a secret, and that they prefer to text people rather than confront them face to face.

#### School Three (New Zealand)

These girls felt that girls hold grudges longer than boys and that in general being a boy is much easier than being a girl. Because girls hold grudges longer than boys their conflicts are spread out over long periods of time. They also noted that girls tend to mix their methods of bullying and that bullying can last for months. The students said that boys also text bully but girls are much more likely to text bully than boys. They also noted that girls often bring others in on the bullying, that text bullying happens as much outside of school as in the school and that often a conflict between friends is the origins of most of the bullying

#### School Four (Canada)

The girls felt that text bullying is more common among girls because they like to talk and gossip more than boys. Bullying can be caused by a wide number of things: from a misunderstanding, a bad attitude, boys, friends, wearing the same clothes, concern about image and the way you are perceived by others, etc. Girls tend to fight for a longer period of time than boys. Girls hold a grudge longer than boys do.

#### School Five (Canada)

Bullying often changes from one medium to another, can happen both in

school and out of school, and can happen at any time of the day. Facebook is one of the top bullying sites. A strong support system (friends and older siblings) can help victims through the period of bullying. Girls tend to bully friends and ignore people they don't like.

#### School Six (Canada)

Text bullying is a growing problem. People feel safe behind the keyboard / keypad. This feeling of safety makes them feel invincible and invulnerable and this makes them more likely send messages and to push the limits. Technology is a good way to spread information regardless of whether the information is true or false. Spreading rumors is the most common form of bullying among girls. You are a snitch if you tell. Many friends do not take bullying serious.



## APPENDIX G: THEMES FROM QUALITATIVE INTERVIEWS

### 1) Duration of bullying

Bullying often occurs over an extended period of time. Often it extends over weeks or months and may even last years.

### 2) Media used to express the bullying behaviour

Girls often do not focus on using one medium. Bullying may start out one way and the method of attack will change over time. For example bullying may start out verbally, then change to spreading rumors via the internet, then switch to attempting to socially exclude the victim via text messaging their friends, and end on verbal harassment. The perpetrator will often use more than one type of media at a time to bully others.

### 3) Gender difference in bullying

Girls hold grudges longer than boys do and they often involve others to "gang up" on the victim. Girls prefer to bully via technology rather than confront each other directly.

### 4) Who is bullying whom

Girls are just as likely to bully friends as they are people they don't know well. Alliances shift in friendships and this may trigger bullying behaviour.