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# Incidence of Bullying and Victimisation among Adolescents in New Zealand

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It has been established that bullying and victimisation have negative outcomes for those involved. However, this problem has received little research attention in New Zealand samples, particularly with longitudinal designs. The incidence of four types bullying was assessed in a large adolescent New Zealand sample including; traditional bullying inside the school, bullying outside the school, bullying via text message and bullying via the internet. The same categorisation of victimisation was also assessed. The overall rates of bullying and victimisation appeared elevated relative to international samples but traditional school-based bullying was more frequent than text or internet bullying. No gender differences were found. Differences for ethnic group differences were found only for specific types of bullying, with Māori students reporting more traditional school and text bullying, and more text-based victimisation than other ethnic groups.

**Keywords:** bullying, victimization, New Zealand, adolescents

Bullying and victimisation are highly prevalent among young people, and both bullies and victims exhibit negative outcomes (Stassen Berger, 2007). Adolescents are greatly involved in bullying and experience particularly adverse outcomes in comparison with children (Kim & Leventhal, 2008; Simon-Davies, 2011). Furthermore bullying phenomena are under-researched in New Zealand samples. This paper aims to describe the nature of bullying and victimisation in a large sample of New Zealand adolescents and compare the findings to results from international samples. Four types of bullying will be assessed: traditional bullying inside the school, traditional bullying outside the school, cyber bullying via text message and cyber bullying via the internet. The same four types of victimisation will also be assessed.

An indication of the world-wide prevalence of bullying and victimisation can be drawn from a number of large community-based studies. For example, Craig et al. (2009) used the Health Behaviour in School-aged Children (HBSC) survey to measure self-reported bullying and victimisation in children

aged 11, 13 and 15 years in 40 countries worldwide ( $N = 202,056$ ). New Zealand did not take part in this survey. Respondents were asked how often they had bullied others or had been bullied by others in the past two months. Response options included 'never', 'once or twice', '2 or 3 times a month', 'about once a week', or 'several times a week'. Those who reported being bullied at least '2 or 3 times a month' and did not report bullying others at least '2 or 3 times a month' were considered victims. Those who reported bullying others at least '2 or 3 times a month' and did not report being victimized by others at least '2 or 3 times a month' were considered bullied. If individuals reported being both bullied and victimised '2 or 3 times a month' or more they were classified as bully/victims. Collectively, 10.7 % of the sample reported bullying others, 12.6 % were victims and 3.6 % were bully/victims. The prevalence of being involved in bullying (as a bully, victim or bully/victim) varied greatly between the countries surveyed with estimates ranging from 8.6% to 45.2% in boys, and 4.8% to 35.8% in girls (Craig et al., 2009). The lowest rates of involvement in bullying for both boys and girls were reported from Sweden, and the highest

rates of involvement for both boys and girls were reported from Lithuania (Craig et al., 2009).

Prevalence data based on large samples of school students have reported consistent rates of bullying and victimisation, despite the use of different response options. Nansel, Overpeck, Pilla, Ruan, Simons-Morton & Scheidt (2001) surveyed 11-16 year old students in the US ( $N=15,686$ ) and found that in the past school term 8.8% of students reporting bullying others at least 'once a week', 10.6% reported bullying others 'sometimes' and 25% reported bullying others 'once or twice'. In terms of victimisation, 8.4% of students reported being victimised at least 'once a week', 8.5% reported being bullied by others 'sometimes' and 24.2% reported being bullied by others 'once or twice'. Fleming and Jacobsen (2009) used the Global School-based Student Health Survey (GSHS) to explore the prevalence of victimization of 13-15 year olds from 19 low-middle income countries ( $N=104,614$ ). They found that 34.2% of respondents reported being victimised on at least one day in the past month. Of that group, 55.6% had been victimized 1 or 2 days and 19.7% had been victimised 3-5 days in the past month. Similar results were found in Venezuela with 37.0% of males and 27.0% of female adolescents reported having been the victims of bullying at least once within the past 30 days (Muula, Herring, Siziya & Rudatsikira, 2009).

When broader definitions are used, prevalence rates are higher. For example, in a sample of 25 schools from around the UK that included 4700 children, 75% reported being victims of bullying at some stage during the school year (Glover, Gough, Johnson, & Cartwright, 2000). Collectively, these studies illustrate that the period over which bullying is measured affects

the number of students who report being bullied. However, it is also clear from these studies that bullying is a distressingly common phenomenon amongst adolescent samples.

### ***Different Types of Bullying and Victimisation***

Another factor that affects the reported rates of bullying is the different types of bullying behaviours that are measured. For example, Seals and Young (2003) looked at the prevalence of physical bullying, threats of harm, name calling, mean teasing and exclusion as different measures of bullying. Respondents were asked to report whether these occurred 'never', 'sometimes' or 'often' in the past school year. Name calling was the most common form of bullying with 36.7% of respondents reporting that this happened to them 'sometimes' and 13.5% reporting that it happened 'often'.

Another way that the incidence of bullying can vary is the means through which it occurs. For example, cyber bullying (i.e., bullying via the internet, phone or other electronic media) appears to differ in certain ways from traditional forms of face-to-face bullying. Data from the 2005/2006 Health Behaviour in School aged Children (HBSC) survey showed that 20.8% of the adolescents surveyed reported that they had bullied others at least once in the last 2 months physically, 53.6% using verbal bullying, 51.4% using relational, and 13.6% using cyber methods (Wang, Iannotti & Nansel, 2009).

### ***Bullying Incidence by Age***

Despite these difficulties with the measurement, age trends show a clear pattern with bullying and victimisation most common in late childhood, peaking at approximately 12 years of age with the transition to high school, and then declining thereafter. For example, Pelligrini and Long (2002) examined the transition period from primary school to high school using a sample of 11 to 14 year olds, and they confirmed that rates of bullying increased with the transition between schools and then decreased thereafter. They reasoned that this peak occurred at this time due to a desire to establish social dominance in high school among a new cohort of peers.

They also showed that victimisation consistently declined over time after this peak, an effect that appears to be consistent worldwide. Again using data from the Health Behaviour in School-aged Children (HBSC) study, victimisation was found to decrease across the 11 to 15 year span across 28 countries (Due et al., 2005).

Not only does bullying decrease with age, it also appears to be decreasing over time. Molcho et al. (2009) looked at prevalence trends for rates of bullying in over 20 countries. They found that in general, bullying has decreased over time from 1993 to 2006.

### ***Incidence by Gender***

Rates of bullying and victimisation also appear to differ by gender. Generally, traditional bullying appears to be more common in male samples than female samples (Barboza, Schiamberg, Oehmke, Korzeniewski, Post & Heraux, 2009; Li, 2006). It is also often found that although bullies are most often boys, both males and females tend to be victims (Rodkin & Berger, 2008). However, some argue that this difference may be due to the fact that males engage in more obvious, physical aggression whereas females engage in relational aggression, which is less observable (Craig, 1998; Olweus, 1991).

Research pertaining to the gender differences in rates of cyber bullying is still in its infancy; however, it appears to yield a different pattern to that observed in traditional bullying and victimisation. Some evidence indicates cyber bullying is more prevalent amongst males (Li, 2006; Wang et al., 2009); whereas, some evidence suggests it is equally likely in both genders (Beckman, Hagquist & Hellström, 2013). Cyber victimisation on the other hand, generally appears to be more prevalent amongst females (Beckman et al., 2013; Kowalksi & Limber, 2007; Wang et al., 2009).

Gender differences in cyber bullying and victimisation may become more evident when different media (e.g., text message, email, chat room, etc.) are explored. Slonje and Smith (2008) explored the nature of different types of cyber bullying in a sample of adolescents (mean age 15.3 years) in Sweden. Overall, it appeared that there were few gender differences between

rates of cyber victimisation. However, boys tended to cyber bully more than girls, girls were more often victims of email bullying than boys, and boys were more likely to bully via text message than girls.

### ***Incidence by Ethnicity***

Bullying research often indicates that there are differences between the rates of bullying and victimisation by different ethnic groups within the same country. For example, within North American communities, Hispanic adolescents appear to bully others more frequently than African American or Caucasian individuals (Nansel et al., 2001). African American adolescents are significantly less victimised than Hispanic or Caucasian adolescents (Nansel et al., 2001; Spriggs, Iannotti, Nansel & Haynie, 2007). Additionally, Spriggs et al. (2007) found that for Caucasian and Hispanic students, school satisfaction and school performance were negatively associated with bullying and victimisation; whereas, school factors were unrelated to bullying or victimisation for African American students. Conversely, Seals and Young (2003) have found no differences between rates of bullying and victimisation of African American and Caucasian students. However, there were significant differences between the samples of Seals and Young's (2003) and Nansel et al. (2001) which may account for the observed differences. Seals and Young's (2003) sample was much smaller ( $N = 454$ ) than that of Nansel et al. (2001;  $N = 15,686$ ), Nansel et al. (2001) achieved an 83% participation result as opposed to 40% (Seals & Young, 2003). Seals and Young's (2003) sample was primarily comprised of African American individuals (79%) and although Nansel et al. (2001) oversampled both African American and Hispanic individuals in their sample, it is unclear from their study exactly how the sample was distributed. Despite these observations, it is unclear whether it is minority status, socio-economic status or some other factor relating to ethnicity that is causing these differences.

A number of studies in the U.S. have found a higher prevalence of victimisation in Asian students compared to ethnic majority students



(Juvonen, Graham & Schuster, 2003; Mouttapa, Valenta, Gallaher, Rohrbach & Unger, 2004; Zhou, Peverly, Xin, Huang & Wang, 2003). However, it is unclear whether Asian students in these cases are victims because of their ethnicity per se or because of ethnic minority status, or again because of some other factor.

Further research alludes that in some cases it may be minority status that plays a role in different rates of bullying and victimisation observed between different ethnic groups. For example, in a sample of adolescents from the Netherlands, Vervoort, Scholte and Overbeek (2010) found that, after controlling for the ethnic composition of school class, non-Western ethnic minorities were victimised less and they did not differ from the ethnic majority in their rates of peer reported bullying. Ethnic composition of the school classes appeared to moderate the relationship between ethnicity and bullying in that ethnic minorities appeared to bully more in ethnically diverse classes. Australian and British research indicates that children are most likely to be the victims of bullying from those in their own ethnic group as opposed to those outside of it (Nguy & Hunt, 2004; Eslea & Mukhtar, 2000).

Other factors, such as measurement tools and level of assimilation may also play a role in the relationship between bullying and victimisation within ethnic minority groups. For example, Sawyer, Bradshaw and O'Brennan (2008) found that higher rates of victimisation were reported by ethnic minorities when a behaviour-based measure was used as opposed to a definition-based measure. Yu, Huang, Schwalberg, Overpeck and Kogan (2003) showed that children who spoke languages other than English at home were at a greater risk of being victims of bullying than their solely English speaking peers. They attributed this difference to levels of assimilation of immigrants based on the degree to which English was spoken at home. They also considered the role of psychosocial, school, or parental risk factors and found that those who speak languages other than English are at increased risk of feeling vulnerable, excluded and lacking confidence (Yu et al., 2003).

### *The New Zealand Context*

The international literature shows that bullying and victimisation are universally experienced, although the rates may differ according to factors such as country, gender, domain of bullying and ethnicity. It is important to understand these factors more fully in New Zealand, and thereby help to ascertain the risk and protective factors specific to bullying in this country.

Some (e.g., Petrie, 2012) have claimed that New Zealand has some of the highest rates of bullying in the developed world. However, as outlined above, varying measurement of bullying may account for differences in reported rates of bullying. For example, New Zealand studies tend to measure any experience of having been bullied during the past year, whereas many other studies require a more frequent experience of bullying to meet criteria, which will inevitably result in a lower percentage reported. Within New Zealand, Carroll-Lind and Kearney (2004) found that 63% of their sample (N = 1480) reported being bullied at some stage in the past school year and of those bullied, 8% were bullied 'about once a week'. However, this study included both children and adolescents.

Using a sample of 2066 New Zealand adolescents, Adair, Dixon, Moore and Sutherland (2000) used two measures to ascertain the incidence of bullying behaviours. They found that 58% of the sample reported being bullied in the past year according to the participants' own definitions of the phenomena; whereas, 75% reported having been a victim of at least one of the listed bullying behaviours. Additionally, 44% reported being perpetrators of bullying in the past year according to their own definition.

In a more recent online survey, similar prevalence statistics were found (Marsh, McGee, Nada-Raja & Williams, 2010). Of 1169 15-year-old students, 47% reported having been bullied sometimes or often. Eleven percent of this sample also reported being victims of text bullying, and those involved in text bullying (either as a bully or a victim) were significantly more likely to be involved in other, non-text forms of bullying (Marsh, et al., 2010).

In a sample (N = 821) encompassing 15-16 year olds from 107 New Zealand schools (approximately a quarter of the schools in New Zealand at the time), Nairn and Smith (2002) found that 45% of the sample reported having ever been bullied at their current school. Of those bullied, 31% reported being bullied sometimes and 12% reported being bullied often (Nairn & Smith, 2002).

Using a more selective cut off, Deny et al. (2014) examined the prevalence of bullying and victimisation, once a week or more over the past year, in the 2007 cohort of the Youth2000 survey series. This comprised 9107 adolescents from 96 high-schools across New Zealand. Of the sample, 6.1% of students reported being victims of bullying once a week or more, and 5% reported bullying others once a week or more.

In regard to bullying via text message only, Raskauskas (2010) reported that 43% of their sample had experienced at least one incident of text-bullying, with 23% of the sample experiencing this form of bullying more frequently. The majority of victims of text-bullying also reported to be victims of traditional bullying. Students who were victims of both text message and traditional bullying reported more depressive symptoms than those who experienced traditional bullying only and those not involved in bullying.

Two large birth cohort studies exist that have explored factors relating to bullying and victimisation in New Zealand samples. Gibb, Horwood and Fergusson (2011) followed a birth cohort from birth to 30 years of age in Christchurch, New Zealand. Gibb et al. (2011) found that those who bullied or were victims at any time between the ages of 7 and 15 years had higher rates of later self-reported mental health difficulties and adjustment problems at 16-30 years of age. Caspi et al. (2002) looked at genetic factors relating to aggression in male participants involved in the Dunedin multidisciplinary study, a birth cohort that continues to follow individuals born in Dunedin, between 1972 and 1973. They found that boys in this sample who had low monoamine oxidase A (MAO-A) due to a specific genetic allele in combination with low nurturance were at increased risk of being bullies or aggressive-victims.

Sixty percent of this group had been convicted for violent offence by the age of 26 whereas only 4% of boys with low MAO-A and high parental nurturance suffered the same fate. Thus it appears that the children's home environment influenced whether this gene would be expressed as aggressive tendencies or not.

Coggana, Bennett, Hooper and Dickinson (2003) also explore the outcomes of bullying and victimisation in a New Zealand sample. Their cross sectional study looked at the effects of chronic bullying on over 3000 adolescents in New Zealand. They reported that victims had lower self-esteem, suffered more from depression, stress and hopelessness, and were more likely to think about and attempt self-harm and suicide than non-victims.

Given that prevalence estimates of bullying and victimisation vary between different New Zealand samples and different ethnicities, and have been based on varying definitions and measurement periods, it is important to further investigate the extent of the problem in New Zealand. While there is a growing international literature on the correlates of involvement in bullying, New Zealand has a unique multicultural society that differs from other countries on a number of factors (Ward & Masgoret, 2008). As such, bullying and victimisation may present differently. It is clear that bullying and victimisation have negative outcomes for New Zealanders (Coggana et al., 2003; Gibb et al., 2011) and the first step in developing interventions is to clarify the nature of the phenomena so that it can be effectively targeted. As such, the present study aimed to determine the current state of bullying and victimisation in terms of prevalence, and the effects of age, gender, ethnicity and type of bullying in a large representative sample of New Zealand adolescents.

To address the aforementioned issues, rates of bullying and victimisation in this New Zealand sample were compared to international samples and differing measurement approaches were considered when interpreting the results. Age, ethnicity and gender patterns were considered and compared to international samples where possible. This study also uniquely explored both

cyber and traditional forms of bullying and victimisation.

## Method

The current study involved the use of data from the Youth Connectedness Project (YCP). The YCP used a mixed-method, cross-lagged longitudinal design, involving the collection of quantitative and qualitative data from three cohorts of youth starting at ages 10, 12, and 14, over three successive years. Ethical approval for the project was granted by the Victoria University of Wellington Human Ethics Committee. Readers can obtain further information about the YCP from <http://www.vuw.ac.nz/youthconnectedness/index.aspx>.

### Measures and Procedure

Students were administered self-report surveys on lap-top computers at each of the three time points. The survey included 369 questions in total; however, students rarely had to answer all of them due to branching and skipping within the survey. Eleven items asked about the frequency of bullying and victimization in the previous month and were preceded by the following definition of bullying: "Bullying includes any behaviour that is done to try and hurt another person's feelings or body." Bullying and victimisation items were measured on a 5-point Likert scale. Response options were: *Never* (1), *1 to 3 times* (2), *4 to 6 times* (3), *7 or more times* (4), and *Almost daily/daily* (5). The bullying items are reproduced in Appendix 1.

When asked about ethnicity, students were provided with the following definition "Every person is part of an ethnic group, sometimes two or more ethnic groups. Some names of ethnic groups are: Samoan, Chinese, Māori, Tongan, New Zealand European." Students were then asked to indicate the ethnic group or groups ("tick all that apply") to which they belonged. A purposeful overrepresentation of Māori participants was effected in this sample. The aim of this was to obtain a sufficient number of Māori participants so that this group could be examined in detail in future analyses of the YCP data.

## Participants

In year one (2006), 2,174 participants were recruited from 78 schools throughout the North Island of New Zealand. A roughly equal number of males and females were obtained for the sample (52% females, 48% males). Participants attended schools from a number of geographical areas in the North Island, including Wellington, Kapiti Coast, Wairarapa, Horowhenua, Taranaki, Hawke's Bay, and Auckland. By the third point of measurement, due to attrition, the number of participants had dropped to 1,774. Data analyses were conducted on individuals who participated in the survey at all three time points. A previous statistical analysis comparing those who participated at all three time points with those who had dropped out revealed that the latter group reported significantly lower levels of future orientation and life satisfaction at T1 than those individuals who had completed all three time points (Jose, Ryan & Pryor, 2012). Males and students from lower decile schools were also less likely to complete all three time points (Jose et al., 2012). A school's decile rating gives an indication of the proportion of its students who reside in low socio-economic communities. According to the New Zealand Ministry of Education, "Decile 1 schools are the 10% of schools with the highest proportion of students from low socio-economic communities, whereas decile 10 schools are the 10% of schools with the lowest proportion of these students" (Ministry of Education, 2014).

## Statistical Analyses

The data were analysed using SPSS 18.0. An analysis of variance (ANOVA) was conducted to determine the size and significance of group differences. For the group comparisons, bullying and victimisation mean item scores were treated as continuous variables.

## Results

Students came from schools that represented the entire range of school deciles (range 1 to 10). The average school decile in the present study was 5.2, which approximated the average for the entire country. In the first year, 52% of respondents identified

as European New Zealanders, 30% as Māori (compared to 15% by census, Statistics New Zealand, 2010), and 20% as Other; this latter group primarily included Pacific Islanders (12%) as well as people who identified as Chinese, Indian, other European, American, African, and a host of other ethnicities.

### Bullying and Victimisation

Total bullying scores were based on the following questions: 'in the last month how often have you bullied other students' (bullying inside school), 'in the last month how often have you bullied young people who do not go to your school/kura' (bullying outside of school), 'in the last month how often have you sent a mean text message to someone' (text bullying) and 'in the last month how often have you bullied others online' (internet bullying). At time one (T1), just over a quarter of the sample reported that they had bullied others using some form of bullying (27%, 95% CI [25%, 29%]) and that this behaviour appeared to decrease at T2 (20%) and at T3 (19%). This range of values is significantly larger than the predicted prevalence rate, 10.7%, based on Craig et al.'s (2009) findings, so Hypothesis 1 was not supported.

Like bullying scores, total victimisation scores were based on four victimisation questions (see Appendix A). Approximately one third of the sample were self-reported victims at T1 (35%, 95% CI [33%, 37%]) and as with bullying, victimisation appeared to decrease at T2 (25%) and T3 (22%).

any experience of victimization or involvement in bullying. Figure 1 and Figure 2 illustrate that bullying and victimisation appeared to be highest in the 12-14 year cohort and then appeared to decrease with age.

item scores averaged across the three time points. Figure 3 illustrates that bullying via text message ( $M = 1.43$ , 95% CI [1.39, 1.46]) appears to be the most common form of bullying followed by in-school bullying ( $M = 1.40$ , 95%

Figure 1: Rates of bullying by age across the three cohorts

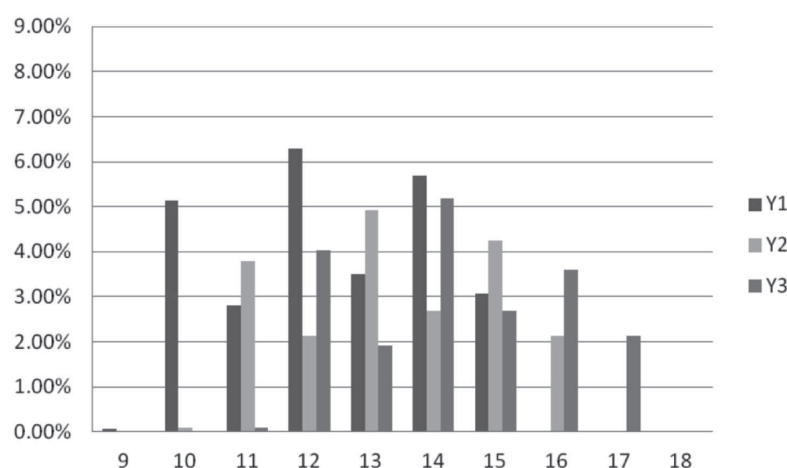


Figure 2: Average rates of victimisation by age across the three cohorts

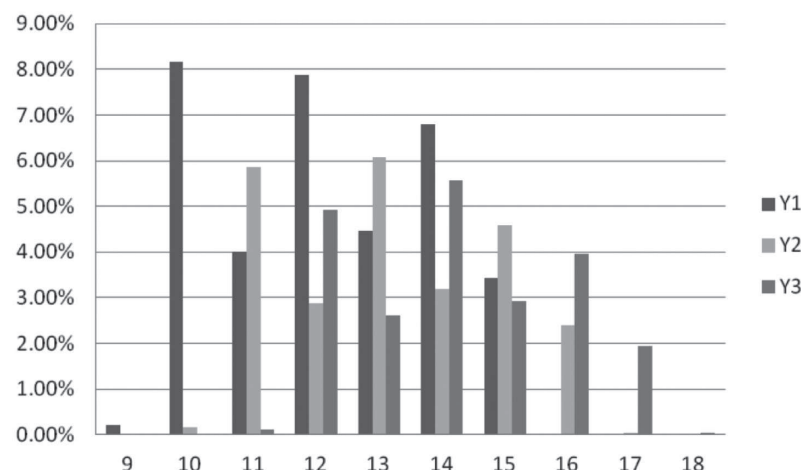


Table 1. Rates of bullying and victimisation in the sample

	Total bullying			Total victimisation		
	T1	T2	T3	T1	T2	T3
Never	73.4%	80.1%	80.6%	65.1%	74.9%	78.0%
1-3 times	18.6%	14.3%	15.0%	23.8%	18.0%	16.3%
4-6 times	3.3%	2.3%	1.9%	5.0%	3.4%	2.8%
7 or more times	2.4%	1.6%	1.1%	3.0%	1.7%	1.3%
Daily/almost daily	2.3%	1.8%	1.4%	3.1%	2.1%	1.7%
Any bullying	26.6%	19.9%	19.4%	34.9%	25.1%	22.0%

CI [1.38, 1.43], outside of school bullying ( $M = 1.20$ , 95% CI [1.18, 1.22]) and bullying via the internet ( $M = 0.98$ , 95% CI [0.95, 1.00]). In terms of rates of victimization, in-school victimisation ( $M = 1.61$ , 95% CI [1.58, 1.65]) appears to be the most common form followed by victimization via text message ( $M = 1.44$ , 95% CI [1.40, 1.47]), victimization outside of school ( $M = 1.26$ , 95% CI [1.24, 1.28]) and internet victimization ( $M = 0.99$ , 95% CI [0.96, 1.01]).

### Age

Rates of bullying across different age groups were represented by the percentage of participants who reported

### Types of Bullying or Victimization

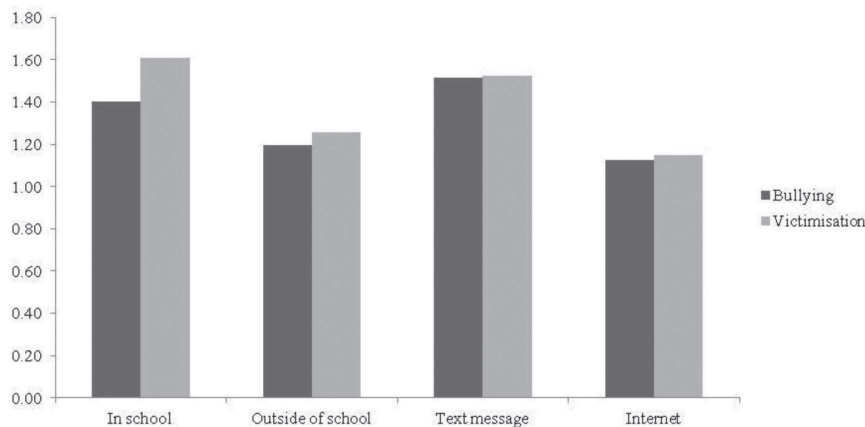
Comparisons between the different types of bullying were based on mean

### Gender

Mean item scores were used to determine whether there were differences in types of bullying by gender. Bullying



Figure 3: Frequency of bullying and victimisation by type



and victimisation rates were averaged across the three time points. 'Total' scores indicate the average of the four different types.

Tables 2 and 3 illustrate the mean scores for each form of bullying and victimisation by male and female participants. A significant difference between males and females on total rates of bullying was found in an ANOVA analysis,  $F(1, 1544) = 3.816, p = 0.05$ . Some gender differences were noted for particular types of bullying. In particular, the ANOVA revealed that males engaged in significantly more bullying inside school than females,  $F(1, 1771) = 18.845, p < 0.001$ , and males also engaged in significantly more bullying outside school than females ( $F(1) = 4.835, p = 0.03$ ). On the other

hand, no significant differences were found in the rates of text ( $F(1) = 0.816, p = 0.37$ ) or internet ( $F(1) = 2.240, p = 0.14$ ) bullying between males and females.

In regard to victimisation, no significant difference was identified between males and females on total rates of victimisation,  $F(1, 1544) = 2.630, p = 0.11$ . Nevertheless, males were victimised significantly more than females inside the school environment, ( $F(1) = 5.929, p = 0.02$ ). But no significant gender differences were found in the rates of victimisation outside of school ( $F(1) = 0.766, p = 0.38$ ), text victimisation ( $F(1) = 0.765, p = 0.38$ ), or internet victimisation ( $F(1) = 0.441, p = 0.51$ ).

Table 2. Average rates of bullying by gender and type of bullying

	Male		Female		Total	
	Mean	SD	Mean	SD	Mean	SD
School bullying	1.47	0.00	1.35	0.00	1.41	0.00
Bullying outside of school	1.22	0.46	1.18	0.38	1.20	0.42
Text bullying	1.41	0.84	1.44	0.79	1.43	0.81
Internet bullying	1.00	0.59	0.96	0.51	0.98	0.55
Total bullying	1.09	0.63	1.02	0.64	1.05	0.63

Table 3. Average rates of victimisation by gender and type of victimisation

	Male		Female		Total	
	Mean	SD	Mean	SD	Mean	SD
School victimisation	1.66	0.76	1.57	0.72	1.61	0.74
Victimisation outside of school	1.27	0.53	1.25	0.44	1.26	0.48
Text victimisation	1.42	0.81	1.45	0.74	1.44	0.78
Internet victimisation	1.00	0.59	0.98	0.54	0.99	0.56
Total victimisation	1.13	0.65	1.08	0.68	1.10	0.67

## Ethnicity

An ANOVA analysis revealed that overall there were no significant differences between the three ethnic categories in relation to average rates of bullying ( $F(2, 1540) = 1.569, p = 0.21$ ). The mean rate of bullying for the NZ European sample was 1.03 ( $SD = 0.62$ ), Māori was 1.08 ( $SD = 0.65$ ) and Other was 1.09 ( $SD = .65$ ). The analysis also confirmed that overall there were no significant differences between the three ethnic categories in relation to average rates of victimisation ( $F(2, 1540) = 2.071, p = 0.13$ ). The mean rate of victimisation for the NZ European sample was 1.07 ( $SD = 0.65$ ), Māori was 1.14 ( $SD = 0.69$ ) and Other was 1.14 ( $SD = .70$ ).

Figure 4 illustrates the average scores for the different types of bullying amongst the three ethnic categories. ANOVA revealed that there were significant differences between the three ethnic categories in relation to average rates of bullying inside the school ( $F(2) = 22.26, p < 0.001$ ), bullying outside of school ( $F(2) = 24.10, p < 0.001$ ) and bullying via text message ( $F(2) = 26.69, p < 0.001$ ). Across each of these three types of bullying, those who identified as Māori engaged in the highest average rate of bullying, followed by those who identified as "other" and lastly by those who identified as New Zealand European. These differences remained when school decile was included as a covariate. There was no significant difference between the three ethnic categories in the average rates of internet bullying ( $F(2) = 0.142, p = 0.87$ ).

Figure 5 indicates that overall there was little variability in the rates of victimisation between the three ethnic categories. An ANOVA analysis revealed a significant difference between the average ratings of victimisation via text message ( $F(2) = 14.736, p < 0.001$ ). Those who identify as Māori were victimised most, followed by those who identified as "other", and those who identified as New Zealand European were victimised least. Again, these differences remained when school decile was included as a covariate. There were no significant differences in the rates of victimisation between the three ethnic categories in terms of victimisation inside the school ( $F(2) =$

Figure 4: Mean frequencies of different types of bullying by three ethnic categories

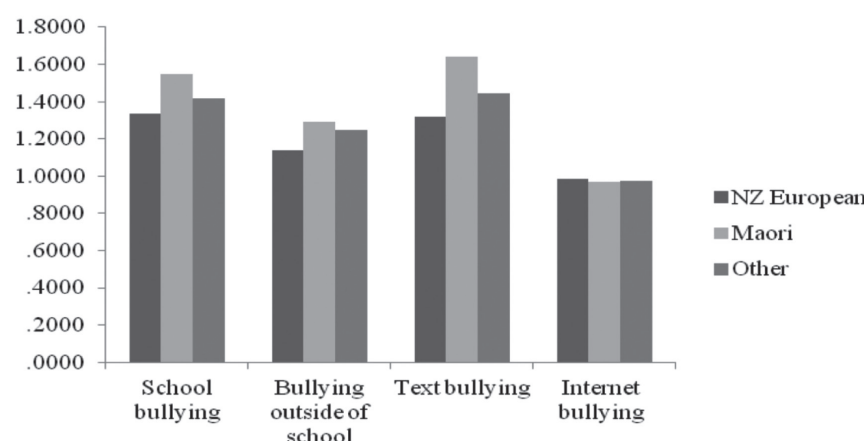
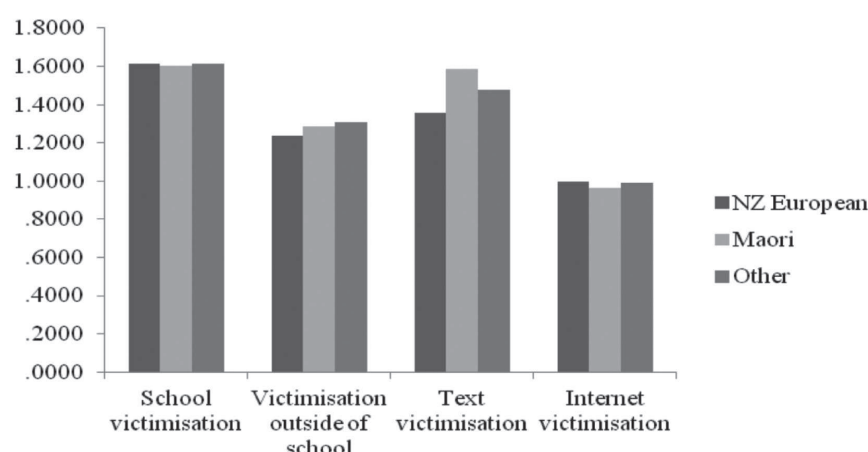


Figure 5: Average frequencies of different types of victimisation by three ethnic categories



(as a bully, a victim or a bully-victim) for each gender by country. As such it is difficult to compare New Zealand to other countries of similar size or demographic to assess whether in fact bullying rates are unexpectedly high. However, setting aside the measurement differences between the two surveys, New Zealand appears to have higher rates of bullying involvement relative to Northern and Western European countries (range 4.8 to 27.1%), but lower rates than Eastern European countries (range 8.9 to 45.2%).

Reported victimisation in the current sample appears to be elevated relative to the international data. The rate of reported victimisation of our sample in year one (34.9%) is very similar to that reported by Fleming and Jacobsen (2009; 34.2%) using the Global School-based Student Health Survey (GSHS), however, both of these figures are high in comparison to other international research (Craig et al., 2009; 12.6%). Fleming and Jacobsen (2009) used a very similar indicator of victimisation to the current study (self-reported victimisation on at least one day in the past month) but employed samples from lower to middle income countries. Since New Zealand is a high-income country, it is possible that the different rates of victimisation could be influenced by the difference in socioeconomic status.

Although rates of bullying and victimisation appear to be high in this sample in comparison with other countries worldwide, it is unclear why this might be the case. The reasons behind these differences require further delineation so that intervention programmes can be appropriately adapted for the New Zealand context. For example, comparing the intervention programmes or policies pertaining to bullying in the countries surveyed may account for some of the difference in prevalence rates.

Although many studies differentiate between cyberbullying and traditional bullying, few explore the subtypes of cyberbullying such as bullying over the internet or bullying via text messaging. The use of this distinction in the present data highlighted some important differences from previous New Zealand research in several

0.043,  $p = 0.958$ ), victimisation outside of school ( $F(2) = 2.902$ ,  $p = 0.055$ ), or internet victimisation ( $F(2) = 0.449$ ,  $p = 0.639$ ).

## Discussion

A growing international literature demonstrates that the experience of bullying is a common problem, with incidences varying in regards to a number of factors, including age, gender, ethnicity and bullying type. The present study adds to this body of literature through its focus on the correlates of bullying and victimisation amongst New Zealand adolescents. This study's findings are largely comparable to international data; however, some key differences emerged, including the prevalence of traditional victimisation, the prevalence and nature of different forms of cyber aggression, and the rates of bullying in regard to this ethnically unique sample in New Zealand.

In our sample, the average rate of reported engagement in bullying for year one (26.5%), was more than double the average rate of bullying (10.7%) reported by Craig et al. (2009) from the Health Behaviour in School-aged Children (HBSC) study. Although the rate in our New Zealand sample was higher than that reported by Craig et al. (2009), these rates might be comparable when the differing inclusion criteria between the two studies are considered. Craig et al. (2009) only classified individuals as bullies if they were also not victims and if they bullied others at least twice per month, whereas; inclusion criteria for the present study included individuals who bullied at least once per month, regardless of their victim status. Unfortunately, Craig et al. do not identify the mean rates of bullying specifically by each country surveyed. Instead, they give the rates of involvement in any form of bullying



regards. In the current sample, reported engagement in bullying with text messaging was the most popular means of bullying, followed by bullying inside school, bullying outside of school, and lastly, internet bullying. Although both Wang et al. (2009) and Li (2006) found that traditional bullying was more common than cyberbullying, they did not differentiate between different forms of cyber aggression.

In other countries, traditional victimisation has been reported to be more common than cyber victimisation (Li, 2006). However, in the present study, in-school victimisation was the most common form followed by text victimisation, victimisation outside of school, and lastly internet victimisation. Few previous studies have differentiated between the different types of cyber victimisation, which may explain the unique findings in our sample. We suggest that it is important to distinguish among different forms of cyber aggression because they seem to occur at different rates, and they may also have differential outcomes.

In regard to gender and age trends in bullying and victimisation, the current sample appears to follow similar patterns to those reported in other New Zealand samples and other countries. In line with other research (Due et al., 2005; Pelligrini & Long, 2002), bullying and victimisation decreased with age after the transition to high school. Also in line with previous research, traditional bullying was more common in males than females (Barboza et al., 2009; Li, 2006). In-school victimisation was also more common in males than females, but there were no differences between the genders for victimisation outside of school.

Gender differences in regard to cyberbullying and victimisation are not clear-cut in the literature. Some evidence indicates cyberbullying is more prevalent amongst males (Li, 2006; Wang et al., 2009), whereas, some suggests it is equally likely in the two genders (Beckman et al., 2013). The present study supports the 'no difference' finding in the literature as no difference was found between males and females for internet or text bullying. No difference was found between males and females in the rates of text or internet

victimisation, which differs from previous literature in which females are more likely to be cyber victims than males (Beckman et al., 2013; Kowalksi & Limber, 2007; Wang et al., 2009). When different forms of cyber victimisation are explored, the pattern is slightly different. Where the current study found no gender differences in text messaging or email victimization, Slonje and Smith (2008) found that females were more often victims of email bullying (but had similar levels of text message victimisation) than males. It should be pointed out, however, that Slonje and Smith's (2008) measure of *email* bullying differed from the present broader measure of *internet* bullying, and hence, this discrepancy may explain the difference.

Māori individuals were purposefully oversampled in this sample such that there were large enough numbers so that bullying and victimisation rates amongst this group could be effectively assessed. When the rates of the four different types of bullying and victimisation were averaged, no differences were found between Māori individuals, New Zealand European participants, and those categorised as 'Other' ethnicity. However, differences between ethnic groups were noted when the subtypes of bullying and victimisation were considered. In regard to bullying others, Māori individuals reported engaging in more bullying inside school, outside school, and text bullying than New Zealand Europeans or 'other' ethnicities. No differences were found in the rates of internet bullying. In regard to victimisation, Māori individuals reported more text victimisation than 'Others' or New Zealand Europeans. No other differences across the ethnic groups in rates of victimisation either on the internet, inside of school or outside of school were identified.

It is difficult to compare these ethnic group findings with international studies, as it is unclear whether higher or lower rates may be observed in a certain group due to their majority or minority status, or some specific factor related to their ethnicity such as degree of acculturation, socio economic status, religious affiliation, etc. In terms of ethnic group research, much of this work compares ethnic groups within

the U.S. (Nansel et al., 2001; Seals & Young, 2003; Spriggs et al., 2007), for example, Caucasian Americans with Hispanic Americans. It is possible that marginalised ethnic minorities such as Hispanic youth in the U.S. and Māori youth in New Zealand share sufficient commonalities to allow a comparison, but at this juncture insufficient data has been collected worldwide to permit such analyses.

New Zealand is unique in that it is a multicultural society with a high percentage of recent immigrants (i.e., one in five New Zealanders were born overseas; Department of Labour, 2009). It has a bicultural history, formed with the signing of the treaty of Waitangi between the British immigrants and Māori natives in 1840 (Lyons, Madden, Chamberlain, & Carr, 2011). European immigrants have been the majority cultural group in New Zealand since the mid-1850s, however, most New Zealanders strongly endorse multiculturalism and the divide between cultural groups within New Zealand is less than in other Western countries (Ward & Masgoret, 2008). If there is a small divide between cultural groups within New Zealand, the observed inter-ethnic group differences must exist for some other reason such as discrepancy in privilege between different ethnic groups or some other factor or combination of factors. The effects remain when accounting for school decile, therefore, socio-economic status may not be the explaining factor; however, this measure may not be sensitive enough to fully account for the complexity of socio-economic disparity. As with much of the previous literature pertaining to ethnicity and bullying (Nansel et al., 2001; Seals & Young, 2003; Spriggs et al., 2007), the results do not conclusively account for the observed differences between ethnic groups. Further research is needed to determine whether these differences are due to minority status, contextual variables such as school composition, or some other factor.

### Limitations

Collectively, these results contribute to the existing body of literature pertaining both to New Zealand and international research.

However, some limitations within this research should be noted. As mentioned above, methodological differences in the time frame of measurement used for bullying behaviour and in the phrasing of questions pertaining to bullying behaviour may have impacted self-reported rates of bullying and victimisation, and thus may account for some of the observed differences in prevalence rates. The present research experiences the same limitation as it does not align with the majority of research in terms of the measurement period used. Different approaches to the measurement of bullying and victimisation including self report, peer nomination, teacher nomination or behavioural observation, also limit the comparability of results. Little consensus exists about which approach is best; however, it is largely agreed that rates of bullying and victimisation vary according to measurement methods (Cole, Cornell & Sheras, 2006; Griffin & Gross, 2004; Swyer et al., 2008). Bullying research would benefit from consensus among researchers in their approach to assessment.

One commonly reported issue with self report is that individuals may under-report the prevalence of bullying or victimisation in which they are involved (Solberg & Olweus, 2003). Although anonymity was preserved in this study and this was emphasised to students, it is unclear whether the levels reported do in fact represent the true levels of student involvement in bullying and victimisation. Using multiple measures of bullying and victimisation, such as peer report and self report, may have lead to more reliable results but this was not achievable within the scope of this study.

Although large and in many ways representative of New Zealand adolescents, the sample was drawn only from schools throughout the North island of New Zealand. As such it may not provide a good representation of adolescents living in the South island of New Zealand and cannot be taken to represent New Zealand as a whole.

## Conclusions

Despite the above limitations, this study adds to existent literature pertaining to bullying and victimisation

internationally and provides a much needed overview of the state of bullying and victimisation within a New Zealand sample. The sample used also had a number of methodological strengths including the number of different schools sampled within New Zealand with a range of school deciles, the large sample size, and the longitudinal design.

The results indicate that rates of both bullying and victimisation may be elevated compared to international samples and therefore higher than expected. Differing rates of bullying and victimisation were found across the different types of these phenomena, with both bullying and victimisation via text messaging being more common than anticipated. Gender and age trends in bullying and victimisation were comparable to international research; however, differences were noted in regard to cyberbullying and victimisation with no differences being found between the two genders. Ethnicity showed no overall difference for average rates of bullying and victimisation, but when the differing types were explored; Māori individuals engaged in more bullying inside school, outside school, and text bullying and were subjected to more text victimisation than New Zealand Europeans or 'other' ethnicities.

If the rates are accurate, they indicate that bullying is a significant issue for New Zealand adolescents and bullying in New Zealand may present somewhat differently than in other countries. Consequently, more research is needed to specifically understand New Zealand adolescents. As such, intervention programmes within New Zealand may need to be adapted to cater specifically to the needs of Māori students such that this problematic behaviour can be ameliorated.

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## Appendix 1

### Bullying/victimisation questions

In the last month, how often have you seen other student(s) being bullied in your school/kura?
In the last month, how often have <u>you bullied</u> other students?
In the last month, how often have you <u>been bullied</u> by other students?
Is your school/kura trying to do anything to stop bullying?
How well do you think you school's/kura's actions to stop bullying have helped?
In the <u>last month</u> , how often have <u>you bullied</u> young people who do not go to your school/kura?
In the <u>last month</u> , how often have you <u>been bullied</u> by young people who do not go to your school/kura?
In the <u>last month</u> , about how often have you <u>sent a mean text</u> message to someone?
In the <u>last month</u> , about how often have you <u>received a mean text</u> message from someone?
In the last month how often have you bullied others online?
In the last month how often have you been bullied by others online?

*Note:* the final two questions (regarding internet bullying/victimisation) were not included in the year one survey.