

## **Victims' perceptions of traditional and cyberbullying, and the psychosocial correlates of their victimisation**

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## **Victims' perceptions of traditional and cyberbullying, and the psychosocial correlates of their victimisation**

It is well recognised that there are serious correlates for victims of traditional bullying. These have been shown to include increased levels of depression, anxiety and psychosomatic symptoms, in addition to often severe physical harm and even suicide. Bullied students also feel more socially ineffective; have greater interpersonal difficulties, together with higher absenteeism from school and lower academic competence. In the emerging field of cyberbullying many researchers have hypothesised a greater impact and more severe consequences for victims because of the 24/7 nature and the possibility of the wider audience with this form of bullying. However, to date there is scarce empirical evidence to support this. This study sought to compare victims' perceptions of the harshness and impact of bullying by traditional and cyber means. The major findings showed that although students who had been victimised by traditional bullying reported that they felt their bullying was harsher, crueller and had more impact on their lives than those students who had been cyberbullied, the correlates of their mental health revealed that cyber victims reported significantly more social difficulties, higher anxiety levels and depression than traditional victims. The implications for school counsellors and mental health workers are discussed.

Keywords: cyberbullying; bullying; anxiety; depression; perceptions; students

## **Introduction**

It is well established that traditional bullying has negative associations for both the students who are victims and those who bully. The correlates of traditional bullying for victims include increased levels of depression, anxiety and psychosomatic symptoms (Reijntjs, Kamphuis, Prinzie, and Telch 2010). While the direction of causality is still not established, some longitudinal studies in the last decade have shown that students who have been victimised by bullies are at greater future risk for somatic symptoms, anxiety and depression (Fekkes et al. 2006; Kim et al. 2006) and that young children with internalising problems such as withdrawal and anxiety-depression show an increased risk of being bullied (Arseneault et al. 2006, 2008). It has also been found in one longitudinal study (Carbone-Lopez, Esbensen, and Bick 2010) that there were different detrimental associations for girls and boys who had been bullied; girls who had been indirectly bullied increased their drug use whereas boys did not, and while victimised girls showed lower self-esteem this did not occur for boys. In a meta-analysis of 18 longitudinal studies, Reijntjs et al. (2010) found that there were significant associations between peer victimisation and subsequent changes in internalising problems, as well as vice versa: between internalising problems and subsequent changes in peer victimisation. Thus, it was shown that internalising problems function as both antecedents and consequences of peer victimisation. Although these longitudinal studies are not proof of a causal relationship between bullying victimisation and mental health problems, they do suggest a cyclical pattern of influence.

As cyberbullying differs from traditional bullying due to the characteristics of the medium used to bully, it has been hypothesised that its effects could be more severe than those from traditional bullying (Campbell 2005). Depending on the particular circumstances, reasons for this may include a wider audience, anonymity of the bully, the more enduring nature of the written word and images, and the ability to reach the target at any time and in any place, including the target's home. Furthermore, cyberbullies may feel emboldened because they cannot see their targets or their immediate responses and believe that, because of their anonymity, they will not be detected. It has been suggested that this anonymity may increase the intensity of the attacks and encourage them to continue for longer than they would otherwise do face-to-face (Conn 2004).

While it is true that cyberbullying can only threaten physical violence rather than inflict it, research has shown that verbal and psychological bullying may have more negative long term effects for the victims (Reid, Monsen, and Rivers 2004). To date, cross-sectional studies of cyberbullying victimisation have measured the impact in terms of emotional correlates, the subjective perception of impact and the association with mental health through relatively simple measures, identifying that students who have been cyberbullied do report increased emotional stress, compared with those not bullied. This has been shown where students were asked to self-report which specific emotion they had experienced when cyberbullied. In an Australian study of 548 cyberbullying victims, it was reported that students said they felt sad, annoyed, embarrassed and afraid (Price and Dalglish 2010). This reflects what is known about the emotions associated with the earliest studies of traditional bullying (e.g., Rigby and Slee 1993). Anxiety, feeling bad about oneself and not trusting people have also been reported by cyber victims (Raskauskas 2010). Anger was the most dominant emotion for both cyber and traditional victims in a Spanish sample of 12-17-year-olds (Ortega et al. 2009). More severe cyberbullying however, was correlated with a profile of emotions labelled “alone, defenceless and depressed” (Ortega et al. p. 202).

Cyberbullying can also have a subjective impact as measured by students’ perceptions of the harshness and impact of the bullying on them. Student interview data recently collected in Australia showed that many young people feel that cyberbullying is far more harmful than traditional bullying. Some reasons for this include: the finding that nearly 50% of those bullied indicated they did not know who was doing the bullying, many finding it hard to get away from the bullying which now followed them into their home, and more young people claiming they would bully others more often using technology and that they could be nastier than they could be face-to-face (Cross et al. 2009). Spears, Slee, Owens, and Johnson (2009) in their qualitative study of the impact and human dimension of covert and cyberbullying, found that cyberbullying in particular, evoked more than anger and sadness: viz strong, negative feelings and emotions and fear and concerns for safety; impacting on self; and dislocating and disrupting relationships (p. 194). However, Smith et al. (2008) found that students qualified the impact of cyberbullying according to the medium employed; they felt text messaging and email bullying had less of an impact than traditional bullying, but that bullying by pictures or video clips had a higher negative impact than traditional

bullying, suggesting a continuum of subjective impact overlapping both forms of bullying. However, the data from the three preceding studies were collected from all students and not only those who were victims of cyberbullying.

So far as victims are concerned, as well as the potential for impacting on wellbeing, cyberbullying has been found to impact on their mental health in the form of depression (Gradinger, Strohmeier and Spiel 2009). Raskauskas (2010) found in a New Zealand study of secondary school students (11-18 years old) that cyber victims reported significantly more depressive symptoms than non-victims, with all victims reporting above the cut-off score of mild to moderate symptoms on the depression measure, and those experiencing cyberbullying more frequently having an increase in self-reported depressive symptoms. These findings were supported by an Australian and Swiss comparison of secondary school students where cybervictimisation was a significant predictor of depressive symptoms. In addition, this predictor was found to be over and above that of being victimised by traditional bullying (Perren et al. 2010). Students who have been cyberbullied have also been shown to have significantly lower self-esteem than those who were not cyberbullied (Patchin and Hinduja 2010).

This study aimed to ascertain the perceptions of students who had been cyberbullied and their mental health. We hypothesised that those students who had been cyberbullied would perceive this bullying as harsher and more impactful on their lives than students who had been traditionally bullied. Additionally we examined the association of being bullied by any form with students' mental health, as measured by their symptoms of social difficulty, depression, anxiety and stress. We hypothesised that cyberbullied students would report more elevated scores on these measures than traditionally bullied students.

## **Method**

### ***Participants***

Data came from a large-scale school-based survey of students' bullying experiences; 3,112 students from grades 6 to 12 (1,572 girls 50.5 % and 1,535 boys 49.4%, 5 missing data) from 29 different schools, both government and non-government in three Australian states participated. The age range was from 9 to 19-years ( $M = 13.96$ ,  $SD = 1.87$ ). Most students were able to access the Internet from their home (87.5%) and owned their own mobile (cell) phone (83.1%).

### ***Procedure***

Ethical clearance was obtained from the universities involved and the various educational systems as well as the participating schools. Participation was voluntary and only students who wished to participate and had written parental consent took part. Approximately 30% of eligible students undertook the survey due to the active parental consent required. No data was available from students who did not return the parental consent form and therefore the demographics of non-responders were not available. The surveys were administered to students in their classrooms during class time by a research assistant, and standardised instructions were read out loud to participants prior to survey administration. There were between 15 and 25 students per testing session and each session took 30 to 45 minutes. The anonymity of the survey responses was emphasised verbally and in writing to the students. The survey was conducted between August and September 2009 (Term 3) when students had spent the previous 6-7 months of the school year together.

### ***Measures***

An anonymous, self-report paper-based survey was conducted, consisting of four sections. The first section asked for demographic information of gender, age and year of school, internet access at home and ownership of a mobile (cell) phone.

The second section obtained information about cyberbullying experiences. The following definition of cyberbullying was provided (following recommendations of Solberg and Olweus (2003) that definitions improve the validity of responses).

*Cyberbullying is when one person or a group of people repeatedly try to hurt or embarrass another person, **using their computer or mobile phone**, to use power over them. With cyberbullying, the person bullying usually has some advantage over the person targeted, and it is done on purpose to hurt them, not like an accident or when friends tease each other.*

A filter question of “Have you been cyberbullied this year?” (since January this year) was used to establish cybervictimisation and a question “Have you cyberbullied someone this year” to establish cyberbullies and cyber bully-victims (the data on bullies will be published in another paper). If the students answered no they were directed to skip this section. If they answered yes, they were asked three questions concerning feelings when cyberbullied: (1) how did they feel (2) how harsh or cruel the cyberbullying experienced was considered to be and (3) how much of an impact the cyberbullying was thought to have had on their life. The first question used forced

choice from a set of emotions previously found in the literature. The following two questions were answered on a 5 point Likert scale from ‘not at all harsh’ to ‘really harsh’, and from ‘no impact’ to ‘huge impact’.

The third section asked about traditional or face-to-face bullying experiences mirroring the cyberbullying questions. The following definition of face-to-face bullying was provided.

*There are lots of different ways to bully someone. A bully wants to hurt the other person (it's not an accident) and does it repeatedly and unfairly (the bullying has some advantage over the victim). Sometimes a group of students will bully another student.*

The fourth section of the survey used the Strengths and Difficulties Questionnaire to ascertain interpersonal difficulties; and the DASS-21 to ascertain mental health symptoms.

*The Strengths and Difficulties Questionnaire (SDQ)* (Goodman 1997) is a self-report (11-17 years version) behavioural screening device that measures both positive and negative attributes. It has 25 items divided into five subscales: emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems and pro-social behaviour; each subscale has 5 items. All subscales except for pro-social behaviour are summed to obtain a total ‘difficulties’ score. For each item, participants indicate, on a three point scale, how things had been for them over the last six months. The reliabilities for the SDQ for the current study using Cronbach’s alpha were: 0.75 for emotional symptoms; 0.61 for conduct problems; 0.66 for hyperactivity/inattention 0.57 for peer relationship problems; 0.75 for pro-social behaviour and 0.82 for the total difficulties scale.

*The Depression, Anxiety, Stress Scale (DASS-21)* (Lovibond and Lovibond 1995) is a 42-item self-report measure. We used a short form of 21 items, with three 7-item subscales of depression, anxiety and stress. Participants rate the extent to which they experienced each state over the past week on a 4-point Likert rating scale. Summed scores can be calculated for each subscale, and a total score obtained by summing all 21 items. The scores for all items were doubled to ensure consistency with the original 42 item version of the scale. The alpha coefficients obtained for the current study were 0.90 for Depression; 0.85 for Anxiety; 0.87 for Stress, and 0.95 for the Total scale.



The survey ended with a list of counselling services available in the area for any students who became distressed or wanted more information on bullying.

## **Results**

Students self-reported whether they had been traditionally or cyberbullied and traditionally or cyberbullied others by a filter question of yes or no during that school year: This resulted in six groups of victims: 16.1% (500) classified as traditional victims only (Group 1) and 4.5% (139) as cyber victims only (Group 2), 4.5% (140) both cyber and traditional victims (Group 3), 4.7% (147) as traditional bully-victims (Group 4), 1.5% (48) as cyber bully-victims (Group 5), and 5.4% (169) both cyber and traditional bully-victims (Group 6) (See Table 1).

Insert Table 1 about here

### ***Gender and age***

There was no significant difference in gender in the traditional victim only group (G1) or the traditional “bully-victim” group (G4). There was a significant difference in gender, with more girls than boys in the cyber victims only group (G2) ( $t(3105) = -2.65, p < .01$ ); the combined traditional and cyber victims group (G3) ( $t(3105) = -5.24, p < .001$ ) and the combined traditional and cyber “bully-victims” (G6) ( $t(3105) = -2.14, p < .05$ ). However, more boys than girls were classified as cyber “bully-victims” (G5) ( $t(3105) = 2.41, p < .05$ ).

There were age differences found for the following groups; traditional victims ( $r = -.135, p < 0.001$ ), both traditional and cyber victims ( $r = -.080, p < 0.001$ ) and traditional bully-victims only ( $r = -.069, p < 0.001$ ) (all slightly less frequent at older ages). No other groups had any significant age differences.

### ***Harshness***

Of the traditional victims, 66% perceived this type of victimisation as being harsh or very harsh; the corresponding figures were 58.7% for victims of cyberbullying, 59% for traditional bully-victims, and 50% for cyber bully-victims.

There were no gender differences found in ratings of harshness for traditional victims only or for traditional bully-victims. However, female cyber victims rated the harshness of their cyberbullying ( $M = 2.14$ ) more than male cyber victims ( $M = 1.63$ ) ( $t$

(130) = -2.23,  $p < .05$ ). There were no age differences found for ratings of the harshness of their experiences for three of the groups of victims: cyber victims, traditional victims or cyber bully-victims. There were however, age differences in the perception of harshness of the bullying experienced for the traditional bully-victims ( $r = -.231$ ,  $p < 0.01$ ) with younger age groups rating the bullying as harsher than older age groups.

### ***Impact***

Of the traditionally bullied victims, 36.8% believed that this bullying had a great impact on their lives; the corresponding figures were 29.6% for cyber victims, 30% for traditional bully-victims, and 23% for cyber bully-victims.

There were gender differences. For those students who were traditional victims, females ( $M = 1.41$ ) rated the bullying as more impactful than males ( $M = 1.03$ ) ( $t(486) = -3.70$ ,  $p < .001$ ). For those who were cyber victims, females ( $M = 1.30$ ) rated the bullying as having more impact on their lives than males ( $M = 0.67$ ) ( $t(129) = -2.63$ ,  $p < .05$ ). Female traditional bully-victims ( $M = 2.06$ ) also reported that the bullying had more of an impact on their lives than male traditional bully-victims ( $M = 0.88$ ) ( $t(142) = -2.47$ ,  $p < .05$ ). There were no age differences of the perception of impact for traditional victims, cyber victims or traditional bully-victims. However, there were age differences in the perception of impact for cyber bully-victims ( $r = -.292$ ,  $p < 0.05$ ), with younger bully-victims rating the bullying as having more of an impact than older age groups.

Of those who (a) reported that they were both traditional and cyber victims and (b) completed the question regarding their perceptions of the severity of each form of bullying ( $n = 96$ ): 59.4% ( $n = 57$ ) indicated that traditional bullying was worse than cyber; 12.5% ( $n = 12$ ) felt cyberbullying was worse, and 28.1% ( $n = 27$ ) thought both forms were about the same. Of the 90 who reported being both traditional and cyber “bully-victims” and who completed the question: 47.7% ( $n = 43$ ) reported traditional bullying was worse; 16.7% ( $n = 15$ ) felt cyberbullying was worse and 35.5% ( $n = 32$ ) thought they were much the same.

The three highest reported feelings of cyber victims were being angry, feeling nothing and feeling sad. Cyber bully-victims however, ranked feeling nothing as the highest response, followed by feeling angry and feeling sad. For traditional victims only and traditional bully-victims the three highest reported emotional responses were feeling angry, sad and embarrassed (see Table 2).

Insert Table 2 about here

### ***Mental health***

A MANOVA of victims (traditional, cyber, both cyber and traditional victims, traditional bully-victims, cyber bully-victims and both traditional and cyber bully-victims) by social difficulties and mental health (SDQ and DASS-21) showed significant differences ( $F(10, 2032) = 10.94, p < .001$ . Hotelling's Trace  $T = .011$ , partial  $\epsilon^2 = .051$ ). An examination of the univariate results showed there was a significant difference on the SDQ total difficulties scores ( $F(5, 1018) = 18.19, p < .001$ ) and the DASS total score ( $F(5, 1018) = 12.37, p < .001$ ), between cyber victims and traditional victims.

#### *Strengths and Difficulties Questionnaire*

A post hoc analysis using Tukey HSD showed there were significant differences on the SDQ total difficulties scores between *traditional victims* and both traditional and cyber victims, traditional bully-victims and combined cyber and traditional bully-victims. *Cyber victims* also differed significantly on the SDQ total difficulties scores from both traditional and cyber victims and combined cyber and traditional bully-victims. Those who identified as *both traditional and cyber victims* differed significantly from traditional victims and traditional bully-victims. *Traditional bully-victims* also differed from traditional victims, both traditional and cyber victims and combined cyber and traditional bully-victims. There were no significant differences on the SDQ total difficulties scores between *cyber bully-victims* and all the other categories. *Combined cyber and traditional bully-victims* differed from traditional victims, cyber victims and traditional bully-victims. A combination of form of bullying, traditional and cyber, as well as roles in bullying, victim or bully-victim correlated with the total difficulties scores on the SDQ, with bully-victims scoring higher than victims only.

#### *DASS*

A Post hoc analysis using Tukey HSD showed differences in DASS total scores for *traditional victims* and both traditional and cyber victims and combined cyber and traditional bully-victims. *Cyber victims* also differed significantly on the DASS total score from both traditional and cyber victims. Those who identified as *both traditional and cyber victims* differed from traditional victims, cyber victims, traditional bully-victims and cyber bully-victims on the total DASS score. *Traditional bully-victims* also differed from both traditional and cyber victims and combined cyber and traditional

bully-victims. There were significant differences in DASS total scores for *cyber bully-victims* and both traditional and cyber victims. *Combined cyber and traditional bully victims* differed from traditional victims and traditional bully-victims on the total DASS score. The form of bullying as well as the role, again influenced students' total DASS scores with the form of bullying, traditional, increasing the score more than the role of victim or bully-victim.

Traditionally bullied students reported lower social difficulties than those who had been cyberbullied (See Table 3). Regardless of the type of bullying, all students who had reported being victimised, had significantly higher scores on mental health measures than those who had not been bullied. In addition, the students who had been cyberbullied were significantly more anxious and depressed than the students who had been traditionally bullied. Those who were bullied in both ways had similar anxiety and depression scores to cyberbullying victims.

Insert Table 3 about here

## **Discussion**

This current study adds to the literature on the harshness and impact of victimisation by comparing the perceptions of students' who have been (1) cyberbullied, (2) traditionally bullied (3) bullied by both forms (4) traditional bully-victims (5) cyber bully-victims and (6) both traditional and cyber bully-victims. Additionally, this study examined the association of being bullied in the various forms with their mental health, as measured by their symptoms of social difficulty, depression, anxiety and stress.

The major findings of this study showed that although students who had been victimised by traditional bullying reported that they felt their bullying was harsher, crueller and had more impact on their lives than those students who had been cyberbullied, the correlates of their mental health revealed that cyber victims reported significantly more social difficulties, higher anxiety levels and depression than traditional victims. Importantly, those who were bullied in both ways had similar anxiety and depression scores to cyberbullying victims, suggesting the power of cyber victimisation to impact over and above traditional victimisation. These findings are in line with researchers' hypotheses that cyberbullying would have greater effects on victims than traditional bullying.

In addition, victims' perceptions of the severity, harshness and impact of bullying were found to be a function of gender and type, with girls reporting more

victimisation through traditional and cyber means than boys. This qualification of impact and severity is in line with Slonje and Smith's (2008) study, which reported that students in general tempered their views on the impact of cyberbullying according to the medium employed, suggesting a subjective continuum of impact in relation to cyber and traditional bullying. Whilst their study reported that students perceived that text and email bullying were less impactful than traditional bullying, and that cyberbullying using static or video images was the most impacting, in the current study, victims' perceptions of impact differed according to their gender and victimisation experiences (traditional, cyber or both and as victim or bully-victim).

Surprisingly, this study found that students who had been *traditionally* bullied rated their bullying experience as harsher than those who had been cyberbullied. This was further emphasised by those students who had been bullied by both forms: traditional bullying was still rated to be the harsher form of the two. This is in contrast to studies where students have expressed the opinion that cyberbullying is harsher than traditional bullying because of the possible anonymity of the bully, that it is hard to get away from the cyberbully and that cyberbullies can be nastier (Cross et al. 2009; Spears et al. 2009). These previous studies however, asked all students about their perceptions of their experience and not only those students who *had been* bullied. As will be discussed below, perceptions of harshness and impact could be an artefact of the presence of a real, known audience, versus an unknown, cyber one. On the other hand perhaps the immediacy of the physicality of traditional bullying seems harsher than text or pictures.

Students who were traditional victims also perceived that this form of bullying had more of an impact on their lives than those who had been cyberbullied. Again, this was surprising, given the hypotheses associated with the unique aspects linked with online bullying: the wider audience, anonymity of the bully; the more enduring nature of the written word; and the ability to reach the target anytime and anywhere has led adults to consider this form of bullying could be perceived as harsher and more impactful than traditional bullying.

Gender and age differences revealed that girls, who were victimised either by cyberbullying or traditional bullying, reported that their bullying was harsher and had more impact on their lives than boys. This is perhaps because girls' bullying relies on covert manipulation of friendship structures within the peer group (Leckie 1996, 1997)

and that they are more distressed by any kind of bullying due to their emphasis on peer evaluation and the importance of maintaining relationships (Rudolph and Conley 2005).

Most students who reported being victimised, also reported experiencing anger more than other emotions, as found with Ortega et al.'s study (2009), however, it was those being victimised through traditional means, rather than those being cyberbullied, who reported feeling more anger, humiliation and embarrassment overall. This could account for why these students felt their bullying was harsher, crueller and had more impact on their lives than those students who had been cyberbullied.

The role of the audience and bystanders needs consideration here, particularly in terms of future research. Although it has been speculated that the wider audience online could potentially cause more harm to victims through extended humiliation and embarrassment, this does not seem to be so in this sample. The power of the known, actual peers may cause greater humiliation than an unknown, potential audience online. Bystanders who are physical witnesses to traditional bullying could cause students more anger, embarrassment and humiliation through their immediate, real, physical presence and their actual contribution to the power of the social dynamic. The *potential* audience may not be perceived to be comprised of peers known to them; rather it is an anonymous ether, not visible or tangible in terms of those who matter most to them at this time: their at-school peers. The abstract nature of a *potential, largely unknown* audience may also mean that for young people in this study, online humiliation and embarrassment is not highly relevant, whereas the *actual* audience poses a more immediate threat to these concerns. Consideration of these cognitive elements related to being bullied on and offline is an area of future research and one which could shed further light on young people's perceptions of victimisation. By contrast, victims of cyberbullying, in reporting higher correlates of mental health, demonstrated severity of effect, not in terms of emotions or humiliation or embarrassment at the hands of their immediate peers, but in terms of the level of anxiety, depression, and social difficulties experienced more generally.

The current study has demonstrated that the consequences for victims of bullying are not homogenous and can be qualified by gender and type of bullying experienced. Differentiating between the consequences for those victimised traditionally: viz feelings of anger, humiliation and embarrassment, and the increased mental health concerns as reported by victims of cyberbullying and indeed both forms of bullying, would seem to be important not only in terms of developing tailored

interventions for victims but also in terms of the mental health implications for this generation of cyber-active youth.

#### *Limitations and strengths*

A limitation of this study was that there was common method variance because the measures of all the variables came from the same rater. That is, both bullying experiences and mental health problems were self-reported by the children and therefore the correlations might be inflated. The study was also cross-sectional and not longitudinal, so it is not known if these correlates are antecedents or consequences. Furthermore, only a single item assessed bullying.

There are quite a few methodological problems with existing research on cyberbullying correlates. The first of these is the extent to which the study has accurately identified those students who have been involved in cyberbullying. This is most commonly accomplished by self-reports, which are very commonly used in bullying research and are considered valid and reliable (Ladd and Kochenderfer-Ladd, 2002). However, there is controversy over whether an accurate definition is included in surveys, which is a strength of this study. Surveys also either ask a global question as to whether a student has experienced cyberbullying, or students may be given discrete behavioural examples. These two measures give different results (Cross et al. 2009). This study provided both a global filtering question as well as specific sections related to each type of bullying; traditional, cyber and both, as well as victim/perpetrator and witness perspectives.

Secondly, many early case studies on the correlates of cyberbullying do not consider the overlap of traditional and cyberbullying, and failed to account for the considerable overlap of students who are involved in both traditional bullying and cyberbullying as well as the role in bullying of victim or “bully-victim” (see Tokunaga 2010 for a review). This was considered in the present study. Furthermore, well validated and widely used questionnaires were used to assess mental health with a large, diverse sample of students.

#### **Implications**

Although it has been shown that cyberbullying is mainly conducted outside of school hours and outside of school grounds (Cross et al. 2009; Smith et al. 2008), it is a vexatious problem for schools as parents and the community are increasingly turning to schools to provide preventative strategies and to manage incidents of cyberbullying. As there is a considerable overlap between those students who traditionally bully and those

who cyberbully and victims of traditional bullying are 10 times more likely to be a cyber victim it follows then that evidence-based strategies such as the KiVa program (Salmivalli et al. 2011) could be a starting point for schools dealing with cyberbullying. Research on a consensual definition of cyberbullying is needed so that the whole school community agrees on what cyberbullying is and when the incident is aggression rather than bullying. Further work is also needed on an agreed measure of determining cyberbullying incidence so that schools will have accurate baseline data upon which to determine whether the prevention and intervention strategies are effective. However, it needs to be acknowledged, that as technology advances, that there will always be a need to revisit definitions and behaviours in accordance with new developments. Clearly, those being targeted through cyber means, are at greater risk than those being targeted traditionally, yet it must not be forgotten, that *all* students reporting victimisation in this study had poorer mental health scores than those not targeted, indicating that bullying overall needs to be continually addressed in schools, but that cyberbullying requires greater focus and attention to support those being victimised in this way.

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Table 1

Number and gender of cyber and traditional victims and bully-victims

Table 2

Reported feelings of victims

Table 3

Mean scores for victims and bully-victims

Table 1. Number and gender of cyber and traditional victims and bully-victims

	Gender		Total number
	Male	Female	
<b>Cyberbullying</b>			
Victims	53 (3.5%)*	85 (5.4%)*	139 (4.5%)
Bully-victims	32 (2.1%)*	16 (1%)*	48 (1.5%)
<b>Traditional bullying</b>			
Victims	230 (15%)	269 (17.1%)	500 (16.1%)
Bully-victims	74 (4.8%)	73 (4.6%)	147 (4.7%)
<b>Cyber and traditional bullying</b>			
Victims	39 (2.5%)*	101 (6.4%)*	140 (4.5%)
Bully-victims	70 (4.6%)*	99 (6.3%)*	169 (5.4%)
Uninvolved students	939 (61.2%)	871 (55.4%)	1813 (58.3%)

\* Significant difference between gender  $p < .001$

Table 2. Reported feelings of victims

	Cyber victims	Cyber bully-victims	Traditional victims	Traditional bully-victims
Feelings				
Angry	34% (48)	29% (14)	49% (243)	56% (82)
Sad	24% (34)	13% (6)	35% (173)	32% (47)
Humiliated	9% (12)	6% (3)	17% (86)	14% (21)
Scared	16% (22)	8% (4)	9% (45)	9.5% (14)
Embarrassed	8% (11)	8% (4)	20% (98)	22% (33)
Felt nothing	30% (42)	50% (24)	14% (68)	18% (26)

Table 3. Mean scores for victims and bully-victims

	Strengths and Difficulties Questionnaire (SDQ)						DASS 21			
	Emotional symptoms score M (SD)	Conduct problem score M (SD)	Hyperactivity score M (SD)	Peer problem score M (SD)	Total Difficulties score M (SD)	Pro-social behaviour score M (SD)	Depression M (SD)	Anxiety M (SD)	Stress M (SD)	DASS total M (SD)
Cyberbullying										
Victims	3.5 (2.74)	2.3 (2.20)	4.1 (2.29)	2.5 (2.10)	12.5 (7.06)	6.9 (2.38)	11.16 (11.91)	8.23 (9.83)	11.36 (9.94)	30.84 (29.71)
Bully-victims	2.5 (2.36)	3.0 (2.22)	4.7 (2.25)	3.2 (2.13)	13.5 (6.12)	5.7 (2.94)	8.05 (8.23)	7.22 (9.58)	9.56 (8.63)	24.83 (24.81)
Traditional bullying										
Victims	3.1 (2.55)	2.0 (1.61)	3.7 (2.31)	2.2 (1.80)	11.0 (5.94)	7.6 (1.93)	7.72 (9.17)	6.00 (7.10)	9.29 (8.60)	23.02 (22.53)
Bully-victims	3.1 (2.56)	2.8 (2.02)	4.6 (2.35)	2.1 (1.74)	12.7 (5.88)	6.7 (2.21)	8.13 (9.68)	6.57 (7.29)	10.61 (9.62)	25.31 (24.45)
Cyber and traditional bullying										
Victims	4.7 (2.82)	2.7 (1.89)	4.5 (2.22)	3.3 (2.15)	15.3 (6.48)	7.5 (2.05)	14.62 (12.00)	11.73 (10.00)	15.35 (10.92)	41.70 (29.83)
Bully-victims	4.0 (2.67)	3.6 (2.20)	5.1 (2.26)	2.9 (2.12)	15.6 (6.52)	6.4 (2.59)	12.09 (12.12)	9.41 (10.39)	14.13 (11.15)	35.63 (31.55)
Uninvolved students	2.5 (2.24)	1.8 (1.68)	3.7 (2.20)	1.7 (1.63)	9.7 (5.68)	7.1 (2.09)	5.92 (8.66)	4.75 (7.18)	6.9 (8.29)	17.57 (22.28)