Cyberbullying, psychological distress and self-esteem among youth in Quebec Schools

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Abstract

Purpose—The advent of new technologies and social media offers a host of possibilities for teenagers to consolidate social networks. Unfortunately, new technologies also represent a potential setting for experiences of victimization.

Methods—The present study explores the prevalence of cyberbullying victimization in a representative sample of 8 194 teenagers in Quebec and the adverse associated consequences.

Results—Results indicate that 18% of boys and close to 1 out of 4 girls report at least one incident of cyberbullying in the past 12 months. Cyberbullying victimization contributes to the prediction of low self-esteem and psychological distress over and above other experiences of bullying in schools or other settings.

Conclusions—Cyberbullying appear as one important target for the design of prevention and intervention services designed for youth.

Keywords

Cyberbullying; psychological distress; low self-esteem

Previous studies have explored the serious consequences associated with bullying by peers and reported that victims present various symptoms and difficulties such as anxiety, depression, suicidal ideation, , low self-esteem, psychological distress and even suicide [1–3]. As noted by Kowalski and colleagues, Internet has become the preferred way for teenagers and youths to bully their peers [4]. The same authors have defined cyberbullying as an intentional, aggressive and repetitive behavior perpetrated by a more powerful individual against someone more vulnerable through the use of technology such as internet, social media and cellular phones. Internet provides a feeling of public overexposure among young victims. Beyond their own social network, those who are friends of perpetrators are also aware of the bullying. In addition to the large spread of information on the web and the

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powerlessness experienced by the victims in their attempts to stop any kind of insults, Internet also offers greater disinhibition that makes perpetrators of cyberbullying more aggressive. Calvete et al. pointed out that cyberbullying is a severe problem; hence, everyone, especially public health authorities, needs to be concerned about its impact on teen mental health [5]. This study aims to explore the contribution of cyberbullying victimization among youths to the prediction of psychological distress and low self-esteem using the *Quebec Youths' Romantic Relationships Survey* (QYRRS).

Methods

Participants

As part of the QYRRS, adolescents were asked to complete a questionnaire about their health, romantic relationships and other life experiences. Participants were recruited through a one-stage stratified cluster sampling of 34 Quebec high schools. The sample included 8 194 students (56.3% were girls) aged 14–20 years with a mean age of 15.4 (± 0.11). A correction weight was given to participants to compensate to biases due to sample design resulting in a weighted sample of 6 540 teens. The research ethic boards of the Université du Québec à Montréal approved this project. All Participants signed an informed consent form.

Measures

The questionnaire included two (2) questions measuring separately cyberbullying victimization “*How many times someone has bullied you (rumors, intimidation, threatening, etc.) using internet (Facebook, MySpace, MSN, email, texto, etc.)*” and other form of bullying “*someone has bullied you at school or elsewhere except via internet*”. Respondents quoted both on a 4-point-scale: *Never* (0), *1 to 2 times* (1), *3 to 5 times* (2) and *6 times and more* (3). We created a dichotomized score for each according to whether the behavior happened at least *1 to 2 times* and more. Psychological distress was assessed using the *Kessler Psychological Distress Scale* [6]. This scale encompasses 10 items rated on a 5-point-scale ranging from 1 (*never*) to 5 (*always*) with a score ranging from 10 to 50 ($\alpha=0.9$). A score of 20 and higher was shown to best represent a clinical score of severe psychological distress [7]. We used the short 4 items version of *Self-Description Questionnaire* to measure one's self-esteem [8]. Responses varied from 0 (*false*) to 4 (*true*) with a score varying from 0 to 16 ($\alpha=0.8$). A dichotomized score was computed based on a cut-off point of 10 or less to represent low self-esteem [9].

Statistical analysis

Using Stata, we computed prevalence of each measure with respect to differences between genders. Then, we performed separate logistic regression to predict distress and low self-esteem using cyberbullying victimization. Covariates included sex, age and other forms of bullying experienced in 12 past months.

Results

Overall, 22.9% of teenagers experienced cyberbullying in the past 12 months. Table 1 shows that girls presented significant higher prevalence of cyberbullying ($p < .0001$), psychological

distress ($p < .0001$) and low self-esteem ($p < .0001$) than boys. Yet, considering other forms of bullying, there was no significant difference across gender ($p = .07$). The overlap between cyberbullying and psychological distress (57.6%), as well as low self-esteem (42.9%) was substantial. Similar results were obtained for other form of bullying, respectively 53.7% and 39.6% for psychological distress and low self-esteem.

Results in Table 2 show that sex (OR=2.7), cyberbullying victimization (OR=1.9) and others variables significantly predicted psychological distress. In the same way, low self-esteem is significantly predicted by sex (OR=1.8) and cyberbullying (OR=1.5).

Discussion

We analysed data from a large youth sample in Quebec high schools to document psychological distress and low self-esteem related to cyberbullying.

Results first showed that teenage girls were more likely to report being victims of cyberbullying compared to boys and they also have a higher prevalence of psychological distress and low self-esteem. Regarding to cyberbullying, Schneider and colleagues reported a lower proportion (15.8%) than our study, but they had also found a higher proportion of girls affected than boys. Inversely, considering other forms of bullying there is no significant difference between girls and boys. The results also showed greater prevalence of psychological distress and low self-esteem among victims of cyberbullying than non-victims.

This study also revealed that youths bullied via internet present a slightly higher prevalence of psychological distress and low self-esteem compared to victims of other forms of bullying. The findings of the logistic regression suggest we should be aware about the nature of the bullying itself, the use of Internet as a way of harassment and mocking could lead to a feeling of overexposure. For that reason, victims of cyberbullying may be more likely to develop psychological distress and low self-esteem.

Cyberbullying victims were more likely to be girls than boys. It would have been relevant to also examine the perpetrators of cyberbullying by gender, an aspect that has not been evaluated by the QYRRS. While some studies presented girls as the more frequent perpetrators of cyberbullying [10], others failed to identify any significant difference between genders [5].

Our study presents some limits as the measure used to evaluate cyberbullying did not document all the possible experiences sustained. It is also possible that victims display psychological distress and low self-esteem even before having experienced cyberbullying and further analysis may gain by relying on a longitudinal design. Nonetheless, our data suggest that cyberbullying is a serious public mental health issue among adolescents. Awareness programs and psychological support should be considered particularly among teens to avoid possible severe consequences of this growing phenomenon that can unfortunately even lead them far as suicide.

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Implications and Contribution

Findings from QYRRS suggest that girls are more likely to experienced cyberbullying as well as psychological distress and low self-esteem. Furthermore, victims of cyberbullying show more psychological distress and low self-esteem. Awareness programs and psychological support should be considered among young to avoid possible severe consequences of the cyberbullying.

Table 1

Prevalence of measures (N=6 540)

	Total % (CI)	Girls % (CI)	Boys % (CI)	<i>p</i>
Cyberbullying victimization	22.9 (21.5; 24.2)	26.4 (24.2; 28.6)	18.1 (16.0; 20.2)	0.0001
Bullying in school or elsewhere	26.0 (24.4; 27.6)	27.3 (24.7; 29.8)	24.4 (22.5; 26.3)	0.07
Psychological distress	40.7 (37.8; 43.7)	50.7 (48.4; 52.9)	27.0 (24.4; 29.7)	0.0001
Low self-esteem	33.3 (30.8; 35.8)	39.1 (36.5; 41.7)	25.5 (23.1; 27.8)	0.0001

Table 2

Prediction of psychological distress and low self-esteem (N=6 540)

	β	SE	OR	95% CI
Psychological distress ($F(4, 23) = 72.7 ; p < .0001$)				
Sex	1.0 ***	0.07	2.7	2.4 ; 3.2
Age	0.15 ***	0.03	1.2	1.1 ; 1.2
Cyberbullying victimization	0.64 ***	0.07	1.9	1.6 ; 2.2
Bullying in school or elsewhere	0.50 ***	0.08	1.6	1.4 ; 1.9
Low self-esteem ($F(4, 22) = 29.5 ; p < .0001$)				
Sex	0.61 ***	0.07	1.8	1.6 ; 2.1
Age	-0.01	0.03	0.99	0.9 ; 1.1
Cyberbullying victimization	0.39 ***	0.06	1.5	1.3 ; 1.7
Bullying in school or elsewhere	0.21 **	0.06	1.2	1.1 ; 1.4

Note:

: $p < 0.001$;**
: $p < 0.01$