

A Two-Year Comparative Analysis of Cyberbullying Perceptions of Canadian (Ontario) Pre-Service Educators

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Abstract

Canadian pre-service teachers in this two-year survey study (year one $n=180$ and year two $n=241$) agreed that cyberbullying is a problem in schools that affects students and teachers. A lack of confidence was found in both years when it came to identifying and/or managing cyberbullying yet participants claimed they would try to act. In comparison to other topics covered in the current teacher preparation program, cyberbullying was believed to be equally important. Our two-year study indicated that teachers should use an anti-cyberbullying infused curriculum which has activities and up-to-date resources. A school-wide approach, in combination with professional development and school assemblies, coupled with counselling from community supports was perceived to be essential to deal with cyberbullying. Year one and year two participants also indicated that parents and community members need to be involved and messages should be put forward via various media sources.

Keywords

Cyberbullying; Online Behavior

Introduction

The rapid development of educational technology within the last decade has excited many educators and students, as the newest technology can be used to enhance learning and teaching and improve student achievement outcomes. Students and teachers can now instantly communicate, and they do, in ever-increasing numbers and frequencies. Social networking (Twitter, Mylife, Facebook, MySpace) via computers and mobile phones (texting & photography) continues to grow as technology usage becomes less expensive and more refined. The result is that, "as of September 2009, 93% of American teens between the ages of 12 and 17 went online, a number that has remained stable since November 2006" (Lenhart, Purcell, Smith, & Zickuhr, 2009, p. 1). Born between 1980 and 2001, some 70 million strong, Millennials, or Generation Y, are instantly adept at technological communications (Henderson & McVay, 2010, p. 92). While usage alone is not often a worry, what is a concern is how technology is used. Recent behaviors within social networks have given rise to cyber violence. Hanewald (2008) only recently presented cyberviolence as a new phenomenon to be studied; therefore little has been written about many of the complexities of cyber abuse. However, litigation via the courts has instigated the rapid development of policy and regulation to deal with cybercrimes and cyber criminals.

Cyberbullying, a form of cyber-violence, is a global issue and the "term used to describe covert, psychological bullying behaviours among mainly teenagers through email, chat rooms, mobile phones, text messages, mobile phone cameras, and websites" (Brown, Jackson, & Cassidy, 2006, p. 1). All bullying is a serious problem afflicting schools around the world (Smith, Cousins, & Stewart, 2005). With so many youth online, the need for supervision, accountability, and consequences for behavior that may

be characterized as cyber violence is imperative. The Government of Canada's national strategy on community safety and crime prevention, established in 1998, was created to support and assist victims, including children, adults, and minorities. Local school boards in Canada, in concert with provincial Ministries of Education, have published booklets on cyberbullying, which contain resources that inform readers about online safety, definitions of cyberbullying, threat descriptions, reactive and proactive measures, and various means to collect evidence. In addition, some useful websites include, www.cyberbullying.ca, www.netsmartz.org, www.cybertip.ca, www.netbullies.com, and <http://www.bullyingcanada.ca/>.

Still, more needs to be done to be proactive. In Canada, the province of Ontario introduced new legislation that added cyberbullying to a list of offences for which a student can be suspended or expelled from school. Moreover, Premier Dalton McGuinty has stated that: "bullying is bullying . . . whether you do it online by way of the latest technology or you're doing it in person or over the old fashioned telephone, it still causes pain and suffering" (CityNews, 2007, p.1). Therefore, we need to reach all education stakeholders with new information; we need to seek out teachers in training to alert pre-service teachers to the issue of cyberbullying. One way is to look at pre-service teachers' current understanding and perceptions of cyber violence and ask them to respond to issues via research questions. In doing so, we begin to discover how prepared these new educators are when confronted with cyber violence issues, new policies governing online behavior, and school community concerns.

Background

Bullying and the Cyberbully

Bullying is an unacceptable pattern of behavior characterized by harassment and/or domination of one student or teacher through a pattern of threats, constant teasing, or physical abuse (Emmer, Everston, & Worsham, 2006, p. 4). The behaviors may occur in cyberspace and are often devastating for the victim. Stu Auty, president of the Canadian Safe Schools Network, has said that "many teens don't realize how mean and brutal their actions are when they post something negative on-line about another student or teacher" (CityNews, 2007, p.1). It is "proactive aggression that has no clear goal and is often displaced and hostile in intent" (Emmer et al., 2006, p. 6). The educator in the classroom may only see the outcome of this dysfunctional relationship via low grades, scores, and general inferior performance displayed by the victim(s) or witness(es). However, there may be few real-life signs of cyberbullying, as behaviors that cross the line are archived in cyberspace. Hanewald (2008) studied children and discovered that approximately 22% had been cyberbullied at least once. This finding was consistent with research completed in the UK and the United States. Moreover, seven percent of students "experienced cyberbullying more frequently . . . both inside and outside of school although more cyber bullying still occurred outside school" (p. 6). In Canada, Kowalski (2005) looked at 3,700 grade six, seven, and eight students, finding out that cyberbullying affected 18% of all students, with incidents peaking at 21% in eighth grade.

Students witnessing bullying often reports being severely distressed by the experience, as they become fearful that they too will become the target of bullies (O'Connell, Pepler & Craig, 1999). In general, whether a victim or a witness, learning can be affected and achievement diminished as a result. This is often because the victims develop low self-esteem and depression, which results in miserable school lives. Students who are bullied eventually might decide that the only way to retaliate is to resort to violence (Manning & Bucher, 2007). The breaking point for the victim or the witness comes as a shock to peers who have come to know the victim as a quiet, passive person who accepts bullying. Much of the research to date has uncovered a consistent trait pattern that places victims into two categories, passive and aggressive. However, a bullying situation is often complex and covert, and it would be misguided to suggest the situation can be easy to respond to, deal with, or solve.

Development of Bullying

Educators should not assume that bullying is a normal part of childhood (Manning & Bucher 2007). Bullying is learned from peer groups, in the home, or through the media (Emmer et al., 2006). Within schools, bullying may surface quickly and can be a constant source of concern for all members of the school community, particularly teachers, peers, and parents. Bullying, which can be viewed as maladaptive learning, begins early in childhood, when children begin to affirm themselves at the expense of others to achieve social dominance (Rigby, 2004). In some cases Darwinism or 'the survival of the fittest' within a competitive environment, in this case school, is being played out. This understanding is rooted within an evolutionary explanation for bullying, especially within institutions that may place a high value on achieving dominance over others to ensure that the strongest prevail and the human species is prolonged (Rigby, 2004). The myth associated with this point of view suggests that bullying manifests itself via frustration due to failures; however, no research exists to support this belief (Manning & Bucher, 2007). Actually, indirect bullying – which can be defined as social exclusion or damage to a child's status or reputation in an attempt to get others not to socialize with the victim, via online threats, insults, name calling, spreading rumours, writing hurtful messages, or encouragement) seems to begin in elementary school (K-6), peak in middle school (7-8), and decline in high school (9-12), whereas direct bullying remains constant (teasing, taunting, threatening, hitting, and stealing) throughout K-12 (Manning & Bucher, 2007).

Bullies frequently plan and anticipate victim reactions. They are able to bully directly and indirectly in a covert manner. Victims are frequently silent, fearing that disclosure will actually escalate bullying. These realities are problematic for adults who work to reduce bullying. "The British National Children's Home (2005) survey on bullying discovered 58% of students have not told their parents or any other adult about their online experiences" (Hanewald, 2008, p. 11). The result is that most school personnel are unaware of many bullying problems, and the majority of teachers in a recent study suggested they did not know how to deal with indirect bullying. In addition, some adults truly believe bullying is a traditional ingredient of childhood (Mishna, Scarcello, Pepler & Weiner, 2005).

Addressing Bullying

Peer Relations

One of the pillars in the construction of anti-bullying programs are peer relations, as any improvement of such relations impacts student behaviors underpinning bullying. Specific training can include how students and teachers speak to one another (Manning, & Bucher, 2007). Many programs aim to improve peer relations, via agreement concerning school and class rules, class meetings to review and discuss rules, and inclusion of all stakeholders. School and class rules can smooth the progress of peer relations by providing clear standards and boundaries (Kariuki & Ryan 2010). Examples of rules are 'we shall not bully other students'; 'we shall try to help students who are bullied'; and 'we shall make a point to include students who become easily left out'. Knowing what bullying is, both direct and indirect, equips students with critical understandings and the ability to name behaviours.

Most programs aim to alert and guide student relations to diminish isolation and exclusion. Consequences for rule infractions and praise (coaching) for all students can lead to pro-social behavioral outcomes. Regular weekly or monthly participation in class meetings can increase openness and build cohesion in schools and classrooms. Topics of discussion may target school and class rules, peer relationships, and social skills. However, time to complete and even schedule meetings is a challenge in an already compressed curriculum. Class meetings are a priority as they can be used to improve peer relations and increase problem-solving abilities among students as lines of communication are constructed and utilized (Mishna et al., 2005). A lack of time to implement anti-cyberbully resources may actually lead to increased cyber violence.

Responses: Whole School Approach

Even if we know what to do and how to respond, who teaches anti-bullying programs and how they are embraced remain key elements. We know that all students, including those exceptional students who use alternative forms of communication to report incidents that occur to them or others who need to be protected without fear of retaliation for reporting, need support (Hutchinson, 2002). We know school funding can impede programs and school administrators work from a political stance, hence they may mislead the community to ensure a school's image is protected. For example, one Ontario elementary student who now stays at home rather than attending school reported to Mandel (2010) that,

It began with text messages telling her not to come back to school or she'd get beaten up. . . then came the Facebook threats, including one that said if she came to a pre-teen dance in town, she'd be "Morgan 'Rest in Peace' Jones." Her mom says the principal told her to pull her kids out because retaliation is inevitable and he can't ensure their safety. (p.1)

The above case is admittedly rare, yet escalated from cyber violence (cyberbullying) to actual physical threats, and the administration and school could do little to prevent this. We know that a school community questionnaire and its related data can verify the existence of a bullying problem at school long before it reaches such a serious level. The data can indicate breadth, frequency, and type of bullying. We know that limited resources can impair efforts to decrease bullying in schools. To illustrate this need, action researchers sampled 384 schools and discovered that 43% of principals would survey and insert an anti-bullying program, if they had the resources. However, 40% indicated they would not administer a bullying questionnaire because it was not a priority, or they believed bullying was not a problem in their school, while another 14% explained they had no time to survey (Smith et al., 2005). Clearly, school leadership plays a role in the deployment of programs and research in many schools. Stopping pervasive bullying needs coordinated efforts, and changing individual and group perception of the behavior is critical to dealing with consequential issues (Emmer et al., 2006).

The regional municipality of Peel, an area in southern Ontario, has developed the Peel Health Bullying Prevention Initiative, which has multiple lessons for every grade and is meant to be used with an entire school. "The goal is to have every teacher address the issue of bullying by using the lesson plans . . . every student in the school, from kindergarten to grade eight, will be hearing the same message about bullying" (Peel Public Health, 2010).

Training Teachers and Staff

Within a school there are administrators, teachers, teacher assistants, custodial, and office staff. Each adult, no matter the role, senses student bullying either verbally or non-verbally, and it is these perceptions that can be useful to a school that is seeking to reduce, and if possible, eliminate bullying. However, students may not report and teachers may not act, which can only inflame the ongoing bullying. Teachers may not know how to respond, or wrongly identify the behavior as typical childhood activity; however, admittedly the difficulty recognizing bullying behaviour surfaces due to the complex dynamics involved (Mishna et al., 2005). All adults within a school community need to learn to identify bullying, and with this knowledge communicate what they see and hear to support anti-bullying programs. Staff members also need to educate themselves and communicate with other staff members and parents. Teachers should be committed to the reduction and/or eradication of bullying, both in person and online. Hence the Ontario Ministry of Education who oversees Ontario's elementary classrooms have introduced "sweeping changes to their daily curriculum this school year [...] Students will be learning about [...] bullying, cyber stalking, [...] and mental and emotional health under a provincial mandate" (Helmer, 2010). These changes are a response to past research indicating that the nature of the school environment and organizational support are factors that influence teacher awareness and responses (Mishna et al., 2005). It may mean that the school structure, timetable, and environment need to change via supplementary supervision of halls and less unsupervised time, along with new security technologies to monitor online activities. Some schools are turning to Crime Prevention Through Environmental Design (CPTED) to create a safe learning environment (see <http://www.cptedontario.ca/> for more information).

In-service school staff requires current professional development, and administrators need to ensure that staff do not become complacent. Being trained to look for warning signs can assist all educators to be proactive. A focused and dedicated effort to diminish and/or extinguish bullying requires more than just rules and paper curricula; it requires daily human effort to realize a healthy learning environment.

Pre-Service Training

Pre-service education is a period of concentrated study of teaching, instruction, curricula, policy, and administration (Ryan, 2009). Some have concluded that this training falls short, as many pre-service teachers feel inadequately prepared to effectively manage a classroom and complain they receive little to no instruction in classroom management. However when classroom management is incorporated, it is frequently perceived as too theoretical or disconnected from the 'real world' of classrooms (Siebert, 2005). New teachers have a great deal to attend to while performing within the practicum, and having to be aware of the implications of cyber violence and work toward its prevention seems unrealistic at this point in their development. Siebert (2005) explained how "pre-service and in-service teachers frequently identify their experiences in the field as moments when most of their learning about teaching occurred" (p.1). However, if you are being mentored in the field by an educator who does not know how to respond to cyberbullying, or bullying, then the lessons learned may actually be part of the problem.

Li (2005) has suggested that "although a majority of the pre-service teachers understand the significant effects of cyberbullying on children and are concerned about cyberbullying, they do not think it is a problem in our schools" (p. 5). The Alberta study concluded that "A vast majority of our pre-service teachers do not feel confident in handling cyberbullying, [...] they do not know either how to identify the problem, or how to manage it when it occurs" (p. 6). This study is one of only a few to be found in Canada as the research on cyberbullying is minimal in this country (Brown et al., 2006). These findings provided us with a rationale for beginning our analysis of cyberbullying in year one of our own study.

Cyberbullying Outcomes: Year One

The previous sections serve as an introduction to our year one and year two studies. Both phases/years used similar rationales, methods, and data analysis. In the first phase of the study carried out during the 2008-2009 post-secondary (B.Ed.) school year, Kariuki & Ryan (2010) found that of the pre-service teachers ($N = 180$) studied:

- 72% were aware that cyberbullying is a problem in schools
- 89% agreed that children are affected by cyberbullying
- 78% were concerned about cyberbullying
- 92% would do something if cyberbullying occurred in school
- 33% felt confident that they would be able to identify cyberbullying
- 15% were confident about managing cyberbullying.
- 49% viewed cyberbullying as a topic, just as important as other topics covered in the teacher preparation program.
- 56% did not feel that the program had prepared them to manage cyberbullying.

Comparing these outcomes to the earlier Alberta study (Li, 2005) revealed that

a majority (88.9% in Ontario, 65.5% in Alberta) agreed that children were affected by cyberbullying. A majority (79%, in Ontario, 49.7% in Alberta) were concerned about cyberbullying, and only 32.8% in Ontario and 13.1% in Alberta felt confident that they would be able to identify cyberbullying. Further, only 15% in Ontario and 11.1% in Alberta were confident about managing cyberbullying. One finding contrary to the trend was that while a majority (71.7%) of the preservice teachers in the Ontario study were aware that cyberbullying was a problem in schools, a minority (45%) of the of the preservice teachers in the Alberta study were neutral in this regard. (Kariuki & Ryan, 2010)

Cyberbullying Research: Year Two

The outcomes and comparisons, while noteworthy, were believed to be only a portion of the necessary results required to raise the profile of cyber violence, within our own post-secondary programs and others across Canada. Hence, new research was undertaken. The current study, the second year of a two-year study, considered the following questions, which are similar to year one:

1. To what extent does cyberbullying concern pre-service teachers in Ontario?
2. Can pre-service teachers identify and respond to cyberbullying in schools?
3. How do pre-service teachers in this year two study compare to pre-service teachers in the year one study with regards to knowledge of and concerns about cyberbullying?
4. How do pre-service teachers in this study view their preparedness?

Methods

A total of 241 pre-service teachers (61% female and 39% male), aged 23 to 51, enrolled in a post degree, one-year B.Ed., program within a teacher preparation institution in Ontario, Canada responded to a cyberbullying questionnaire. The questionnaire was administered by instructors who volunteered to participate after the final teaching practicum in March 2010. This survey round complemented an earlier year one inquiry which surveyed 180 different pre-service educators. All pre-service teachers present on the day of the administration completed the survey fully, hence we can claim a 100% completion rate with no surveys incomplete or inadmissible. We were sure that all participants could complete the survey as they had during year one, and previously during the research of Li in 2005.

As stated earlier, this second year study is partially a replication of Li's (2005) Alberta study. While some of the items in the original questionnaire were adapted, the items that this paper focuses on were not changed from the year one questionnaire. Li (2008), when reporting on instrument development, noted how "two methods were used to establish the content validity of the instrument: First, the instrument was developed based on an existing, field-tested instrument, namely, the 'Teachers' Attitude about Bullying Questionnaire' developed by Siu (2004)" (p. 5). Li further explained how cyberbullying posed unique traits yet there were many parallels between bullying and cyberbullying. This existing bullying instrument thus provided solid foundation for the development of the "cyberbullying survey, in terms of its validity. Second, a multidisciplinary panel of experts (ranging from educators and psychologists to statisticians) had reviewed the instrument" (p. 5). Five reviewers had rated the appropriateness of items to their dimensions by assigning values of 1 (relevant), 0 (cannot decide), or -1 (not relevant). Ninety six percent of the items were rated as 1, indicating high content validity. The remaining items (4%) were revised based on the experts' suggestions. All questionnaire items used a 5-point Likert scale. Permission to use and adapt the questionnaire was granted by the author, (Li, 2005) in 2007.

Results

Tables 1 through 4, present the statements posed and our findings in years one and two. In all tables, the Likert-scale categories "strongly disagree" and "disagree" were combined to indicate low levels of concern and/or confidence; similarly, the categories "strongly agree" and "agree" were grouped to indicate high levels of concern and/or confidence. Folding these categories into a three point scale was done to summarize indications in an unambiguous manner. Also, all percentages were rounded to ease comprehension and comparison. Due to sample size differences between years we included both the percentages and actual numbers of respondents in the results.

Table 1: Personal Perceptions of Cyberbullying*

Statement	Year	Disagree or Strongly Disagree (% , n)	Neutral (% , n)	Agree or Strongly Agree (% , n)
1. Cyberbullying is a problem in schools	One	7 (11)	22 (39)	72 (130)
	Two	2 (5)	19 (43)	80 (193)
2. Children are affected by cyberbullying	One	4 (7)	7 (13)	89 (160)
	Two	2 (5)	4 (10)	94 (226)
3. I am concerned about cyberbullying	One	4 (7)	16 (29)	80 (144)
	Two	3 (7)	16 (39)	81 (195)
4. I feel confident in identifying cyberbullying	One	30 (54)	37 (67)	33 (59)
	Two	26 (63)	44 (106)	30 (72)
5. I am confident in managing cyberbullying	One	45 (81)	40 (72)	15 (27)
	Two	40 (97)	37 (89)	23 (55)
6. If cyberbullying occurred at a school I would do something	One	2 (3)	6 (11)	92 (166)
	Two	3 (7)	29 (70)	68 (164)

*In year one, $n=180$; in year two, $n=241$. Percentages are rounded to the nearest whole number.

Regarding the 241 preservice teachers in year two, we concluded that pre-service educators clearly realized cyberbullying was a problem in both phases of our study, as 72% in the first year and 80% in the second year agreed or strongly agreed with this statement. This result, in combination with question four results, suggests that in each year only a minority of respondents felt confident they could identify cyberbullying (44% in year one and 33% in year two). We suggest that participants acknowledged the problem, yet felt unsure how to identify the symptoms during these two years.

Even more noteworthy is the overall similarity of response rates when comparing year one to year two. Most outcomes were within a five percent range of difference. For instance, when examining the “neutral” column in Table 1, the only item to deviate from this trend was statement six, “If cyberbullying occurred at a school I would do something”. Six percent ($n=11$) in year one differed drastically from the year two outcome of 29% ($n=70$). This difference correlates with the gap in responses for “agree/strongly agree”; in year one 92% ($n=166$) agreed, but in year two this fell to 68% ($n=164$).

Also of note for item 6 is that more participants chose to be “neutral” in year two (29% compared to 6%); because cyberbullying is such a perplexing and illusive problem, they told us they may not do anything in response to it. This increased neutral stance in year two could be related to responses to the item that asked about the teacher preparation program respondents were about to graduate from, as 50% of participants did not believe that this program had prepared them to manage cyberbullying, even though about half of pre-service teachers surveyed (49%) viewed cyberbullying as a topic that is just as important as other topics covered in the teacher preparation program (see Table 2).

Table 2: Pre-Service Teacher Perceptions Regarding Preparation to Deal with Cyberbullying

Statement	Year	Disagree or Strongly Disagree (% , n)	Neutral (% , n)	Agree or Strongly Agree (% , n)
20. My current teacher-preparation program has been preparing me to manage cyberbullying	One	57 (103)	29 (52)	14 (25)
	Two	51 (120)	23 (55)	26 (66)
21. In comparison to other topics covered in my current teacher-preparation program, cyberbullying is just as important	One	26 (46)	26 (46)	49 (88)
	Two	23 (56)	28 (67)	49 (118)

*In year one, $n=180$; in year two, $n=241$. Percentages are rounded to the nearest whole number.

Again, year one indications were similar to year two outcomes as displayed in Table 3. Most items listed in this table, except for item 10 with its high neutral value in year two, were within a five percent range of difference. When asked about instruction, policy and professional development it was apparent that our year two sample believed that schools should develop policies on cyberbullying. Therefore, we suggested local efforts and regional emphasis, supported by local Boards of Education, need to concentrate on cyberbullying, to align themselves with their own new teachers' perceptions and beliefs.

In addition, our participants believed schools should use professional development (PD) days to train staff with regards to cyberbullying and develop and implement a cyberbullying curriculum to teach children about this ever-increasing area of concern. Respondents further agreed that school administrators should organize school-wide activities to deal with cyberbullying. Clearly, our study indicates that teachers believe the school, curriculum, and administration should be involved to actively educate students and the wider community about cyberbullying. Lastly, in this area, the belief that surveys should be given to children to ask them about their experiences of being cyberbullied was strongly endorsed. Table 3 displays these outcomes in more detail.

Table 3: Opinions about Using Instruction, Policy, and Professional Development to Deal with Cyberbullying

Statement	Year	Disagree or Strongly Disagree (% , n)	Neutral (% , n)	Agree or Strongly Agree (% , n)
7. Schools should develop policies on cyberbullying	One	5 (9)	6 (10)	90 (161)
	Two	3 (7)	6 (15)	91 (219)
8. Schools should use professional development days to train staff about cyberbullying	One	4 (6)	12 (22)	84 (152)
	Two	3 (7)	12 (29)	85 (205)
9. Teachers should use a curriculum on cyberbullying to teach children	One	7 (13)	32 (59)	60 (108)
	Two	11 (26)	30 (72)	59 (142)
10. Teachers should organize classroom activities to deal with cyberbullying	One	10 (18)	15 (27)	75 (135)
	Two	9 (22)	23 (55)	68 (164)
11. School administrators should organize school-wide activities to deal with cyberbullying	One	7 (13)	14 (25)	79 (142)
	Two	8 (19)	17 (41)	75 (181)
12. Surveys should be given to children to ask them about their experiences of being cyberbullied	One	4 (7)	16 (29)	80 (144)
	Two	7 (17)	14 (34)	79 (190)

*In year one, $n=180$; in year two, $n=241$. Percentages are rounded to the nearest whole number.

The statements in Table 4 were identified as both school and community-related areas of concern. Participants indicate that school committees should be formed to look at the problem of cyberbullying. Parents should be involved, and the topic needs to be part of assemblies. In the area of support, pre-service teachers believed that schools should link with community resources to deal with cyberbullying, children should receive counselling to deal with cyberbullying, and television and related media should be used to distribute cyberbullying information. Table 4 displays this information.

Table 4: Pre-Service Teacher Views of the Role of School and Community in Addressing Cyberbullying

Statement	Year	Disagree or Strongly Disagree (% , n)	Neutral (% , n)	Agree or Strongly Agree (% , n)
13. Committees should be formed in schools to look at the problem of cyberbullying	One	9 (16)	26 (47)	65 (117)
	Two	10 (24)	24 (58)	66 (159)
14. Schools should discuss cyberbullying with parents	One	4 (7)	6 (11)	90 (162)
	Two	3 (7)	7 (17)	90 (217)
15. School assemblies should address cyberbullying	One	3 (6)	14 (30)	80 (144)
	Two	6 (15)	10 (24)	84 (202)
16. Schools should link with community resources to deal with cyberbullying	One	4 (7)	15 (27)	81 (146)
	Two	3 (7)	13 (32)	84 (202)
17. TV and other media should discuss cyberbullying	One	5 (9)	10 (18)	85 (153)
	Two	3 (7)	11 (27)	86 (207)
18. Children should receive counselling to deal with cyberbullying	One	4 (7)	12 (22)	84 (151)
	Two	1 (2)	15 (37)	84 (202)
19. School resources should be used to help teachers deal with cyberbullying	One	5 (8)	12 (22)	83 (150)
	Two	3 (7)	12 (29)	85 (205)

Note. (n= number of participants – each number was rounded)

Discussion

Initially, we undertook this investigation to explore the extent to which cyberbullying concerned Ontario pre-service teachers. We concluded that a majority (72% in year one and 80% in year two) of pre-service educators viewed cyberbullying as a serious concern and a compelling problem for students, schools, and the wider community. This was possibly due to the recent increase in the number of computers in use (access), the increasing availability of wireless internet residentially and commercially (retailers), and improved handheld communication devices, which offer users tempting opportunities for misuse. Instant messaging and image sharing means that we can now instantly distribute and publish these 'moments in time,' in a manner that is not only new, but also becoming increasingly efficient and commonplace. However, not all images and messages may be appropriate, approved, or legal, hence the concern in our educational communities and beyond.

Cyberbullying, a version of cyber violence, is a recent and rapidly growing concern in education that has legal implications such as prosecution of cyber criminals (Hanewald, 2008). We know this area needs attention, and our work in this area is motivated by fundamental questions. Our second question asked:

Can pre-service teachers identify and respond to cyberbullying in schools? The short answer is 'we hope so', yet our study revealed that 103 of the 180 pre-service teachers in year one and 120 of 241 in year two of our sample indicated they were not prepared. As a result of this and similar findings in other research, there are continued calls for teacher training in this vital area that can also be viewed as a prevention strategy (Brown et al., 2006; Espelage & Swearer, 2004; Hanewald, 2008). The results of our year two survey echo the earlier findings of Li (2005), who concluded that teacher preparation programs need to aggressively incorporate opportunities for pre-service teachers to acquire the skills and knowledge needed to foster confidence in identifying and managing cyberbullying in schools. While according to Espelage and Swearer (2004), very little research has been conducted on the attitudes of teachers towards bullying, since 2004 the area has grown to include online (cyber) bullying. The findings of Espelage and Swearer also point to the need for further research on the perceived level of preparedness of teachers in the field, who may, coincidentally, identify and attend to cyberbullying issues regularly.

Our third question asked: How do pre-service teachers in the year two survey compare with the pre-service teachers in the year one survey? What we discovered is that all results, with only two items as exceptions, could be viewed as closely related to one-another. As illustrated in our tables, a five percent range of difference was commonplace between year one and year two responses. We conclude that pre-service students continue to perceive the cyberbullying as an important issue for schools, educators, and the wider community.

To reiterate, participants from year one differed from year two on statement six that said, 'if cyberbullying occurred at a school I would do something'. While the proportion of respondents who disagreed/strongly disagreed with this statement in year one differed minimally from year two, the percentage of pre-service teachers who agreed/strongly agreed decreased from 92 to 68, with a corresponding increase in neutral responses from 6 to 29%. This suggests that participants may be more hesitant to act, possibly because cyberbullying is such a clandestine and personal problem that teacher response would be muted.

Our fourth question asked: How do pre-service teachers in this study view their preparedness? The increase in neutral responses on statement six was associated with pre-service teacher perceptions of their teacher preparation program, as more than 50% of both the year one and year two sample groups thought that the program had not prepared them adequately to manage cyberbullying. And yet, 49% viewed cyberbullying as a topic just as important as other topics covered in their teacher preparation program. As a result, our participants increasingly indicated they would be hesitant to act because cyberbullying is such a covert and illusive problem. The topic is not formally detailed in any course outlines, and yet cyberbullying has become a somewhat common topic in local, regional, and national media coverage, which could account for about half of our participants believing they were aware of prepared for this growing concern in both classrooms and the larger community.

Conclusions and Recommendations

Participants in our year two survey strongly believe that cyberbullying is a problem in schools that affects students and teachers. Our pre-service teachers did not believe they were confident in identifying or managing cyberbullying, yet they would try to do something anyway. Participants suggested that in comparison to other topics covered in the current teacher-preparation program, cyberbullying is just as important; however, they did not believe they were prepared to manage cyberbullying. In addition, there were strong suggestions that teachers should use a child-friendly curriculum with activities and resources related to cyberbullying. A school-wide approach is deemed best, using professional development for educators, school assemblies, and student counseling from community supports. Also, parents and community members need to be involved and messages should be put forward via such media as television to boost awareness, knowledge, and concerns.

A useful yet four year old literature overview completed by fellow Canadian researchers Brown et al. (2006) suggested the implementation of "Acceptable-use policies that expand on online use and behaviour to include **both** school and home use" (p. 1). In addition, we agree with their suggested

infusion of “administrative policy that interconnects local school policies for government and public accountability, which establish standards for responsibility in responding for staff” (p.1). It is essential to provide an opportunity for students to have a voice in policy,

so that new or reformed policies are more consensual than autocratic or imposed” and revisit zero-tolerance policies, “given the oft demonstrated exacerbation of harm to students sanctioned by them, such as exclusion from the school learning environment and psychological effects of negative labelling. (p. 1)

Our investigation has added support for many existing recommendations, as we further advocate for school-wide policies on cyberbullying, as well as professional development days to train staff on the subject of cyberbullying. School-wide activities should be implemented to deal with cyberbullying, and school committees should be formed to look at the problem of cyberbullying. Assemblies and community resources to deal with cyberbullying also need to be made available. Children should receive counseling to deal with cyberbullying, and teachers should use an anti-cyberbullying curriculum to instruct children. Finally, periodical surveys should be given to children to learn more about their experiences in cyberspace.

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