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Increasing knowledge and self-efficacy through a pre-service course on promoting positive school climate: the crucial role of reducing moral disengagement

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ABSTRACT

Teachers play an important role in promoting a positive school climate, which in turn supports academic achievement and positive mental health among students. This study evaluated the impact of a pre-service teacher education course addressing a range of contributors to school climate. Participants included a cohort of 212 pre-service teachers (75.2% female) who were surveyed during the first week of their teacher preparation program. A second cohort of pre-service students ($n = 199$, 60.8% female) was used as a comparison group. Pre- and post-tests demonstrated positive gains in the knowledge about bullying and self-efficacy in responding and reporting to incidents of students' exposure to violence. Changes in moral disengagement were associated with improvements in knowledge, whereas personal experience with violence predicted changes in self-efficacy. Findings underscore the need for specific instruction in the area of promoting school climate.

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Bullying; peer victimization; moral disengagement; teacher education; school climate

School climate is a broad, multifaceted concept that involves many aspects of the student's educational experience. A positive school climate is the product of a school's attention to fostering safety; promoting a supportive academic, disciplinary, and physical environment; and encouraging and maintaining respectful, trusting, and caring relationships throughout the school community no matter the setting – from Pre-K/Elementary School to higher education. (US Department of Education, 2009)

A positive school climate promotes students' academic success and is also directly associated with good mental health (Thapa, Cohen, Guffey, & Higgins-D'Alessandro, 2013). School climate has been conceptualized in different ways, but is generally recognized as a multidimensional construct that includes domains such as safety, engagement and environment (Bradshaw, Waasdorp, Debnam, & Johnson, 2014), with the possible addition of teaching and learning (Orpinas & Horne, 2006). School climate has become a target for many federal and local school improvement initiatives based on the growing body of research identifying associations between school climate and a wide range of outcomes (US Department of Education, 2009). At the heart of a positive school climate, are students who feel safe, included, and accepted, in their schools (Ontario Ministry of Education, n.d.). Although there

are many stakeholders who share responsibility for creating a positive school climate, there is no question that teachers play an important role.

School climate can both predict, and be affected by a wide range of intersecting behaviours and influences, including school violence, bullying, family and community violence, and homophobia. A meta-analysis including 36 studies documented a moderate effect size for the association between school climate and violence, leading the authors to identify promoting positive school climate as an important violence prevention strategy (Steffgen, Recchia, & Viechtbauer, 2013). Other research has shown that bullying and school climate have a bidirectional influence on each other; high levels of bullying can diminish school climate, and conversely, unhealthy school climates contribute to a social context that allows bullying to occur (Wang, Berry, & Swearer, 2013). There is also a clear association between school climate and the frequency of bullying victimization (Gage, Prykanowski, & Larson, 2014). A positive school climate, where staff members foster an empathic and caring attitude, take reports of bullying seriously, and intervene consistently according to school wide rules, is important in preventing bullying (Wang et al., 2013).

Beyond bullying, there are additional threats to positive school climates, including students' exposure to violence in their families and communities. These experiences can negatively impact students' readiness to learn, but also influence their relationships with their peers (Swaner, Ayoub, Jensen, & Rempel, 2015). Homophobic bullying is also rampant in schools, and can diminish school climate. Conversely, positive school climate plays a significant role in the well-being of LGBTQ youth (Birkett, Espelage, & Koenig, 2009). Furthermore, educators can be faced with difficult situations involving student mental health, and the ways in which mental health and bullying can influence each other (Whitley, Smith, & Vaillancourt, 2013). Although these issues may seem disparate, they all influence the different aspects of school climate (i.e. safety, environment and engagement; Bradshaw et al., 2014).

Students, parents, teachers, school administrators and community partners have a shared responsibility to promote positive school climates. Teachers alone cannot create a positive school climate in the face of the many significant societal challenges that youth face. Nonetheless, teachers play a major role in promoting positive school climates and clearly there is a critical need to prepare teachers to assume this role as part of their pre-service education. Although there is a lack of research on preparing pre-service teachers to address school climate in a comprehensive way, there is existing research on specific school climate-related issues that pre-service teachers feel are lacking in their education. For example, prospective teachers indicate wanting more instruction on bullying and peer victimization (Craig, Bell, & Leschied, 2011). Even practicing teachers report that they do not get sufficient training in bullying and would like additional opportunities (Mishna, Scarcello, Pepler, & Wiener, 2005). These gaps in training related to addressing bullying are consistent with a lack of preparation regarding children's mental health in general that has been documented among pre-service and experienced teachers (Koller, Osterlind, Paris, & Weston, 2004). The Defending Childhood Initiative highlighted the need for recognizing the impact of trauma on children's behaviour in school and the critical role of teacher training (Swaner et al., 2015). In light of these documented gaps in teacher preparation, there is a need to develop and evaluate teacher education initiatives that address teachers' roles in promoting positive school climate.

The Western University Faculty of Education was the first in Canada to implement a pre-service course dedicated solely to issues that affect school climate. This course aimed

to raise awareness about a broad range of issues that affect students and by extension, can negatively impact school climate (e.g. bullying, homophobia, exposure to domestic violence, dating violence, mental health, harassment, and media violence), educate pre-service teachers about their mandated reporting and responding obligations, and provide strategies for preventing and intervening effectively. Beyond the focus on awareness, reporting, and skills, the course has a concurrent goal to increase empathy for and awareness of children and youth living in difficult situations, and a sense of personal responsibility among pre-service teachers. The purpose of this article is to evaluate the impact of this course on pre-service teachers' bullying knowledge and self-efficacy as it relates to reporting and responding to youths' exposure to multiple forms of violence, as well as to look at the role of moral disengagement as a possible predictor of change.

Given the prominence of bullying research, it is not surprising that much of the research on educators' roles in promoting school climate has focused on recognizing and responding to bullying. This bullying research provides a useful starting point for considering factors that may influence teachers' capacity to respond to a wider range of school climate issues. Previous research has shown that although teachers play a critical role in identifying, responding and reducing bullying in schools (Marshall, Varjas, Meyers, Graybill, & Skoczylas, 2009), they tend to overestimate the consistency with which they do so. More recent research has found teachers reporting an increased likelihood to intervene in bullying, but a lack of comprehensive strategies to do so (Burger, Strohmeier, Spröber, Bauman, & Rigby, 2015). Effective intervention by teachers is an important opportunity for reducing rates of bullying. In one of the only studies to look at students' perceptions of teacher behaviour, a multi-level analysis of 4th–6th grade classrooms found that students' ratings of their teachers' efficacy in decreasing bullying was associated with lower rates of peer-reported bullying (Veenstra, Lindenberg, Huitsing, Sainio, & Salmivalli, 2014). Teachers have also been found to have gaps in their ability to recognize and respond to family violence, especially when the violence is not physical (King, 2010). Therefore, beyond bullying, teachers need to be able to recognize and address dating violence, family violence (including exposure to domestic violence), and homophobia experienced by students since numerous jurisdictions have mandated reporting requirements in relation to these other forms of violence as a method for preventing and/or reducing violence.

Given the importance of teacher response and generally low rates of intervention observed in bullying research, it is critical to identify factors that either predict or impede effective responding to bullying and other behaviours that detract from school climate. For example, if teachers do not recognize bullying when it occurs or do not perceive it as serious, they will likely have passive attitudes towards bullying and are unlikely to intervene effectively (Yoon & Kerber, 2003). Perceived seriousness of bullying and self-efficacy have both been identified as potential contributors to effective responding.

Factors that predict effective responding

Researchers have investigated the perceived seriousness of incidents, empathy, likelihood of intervening, and type of intervention as a function of type of bullying by having participants answer questions in relation to specific scenarios (Yoon & Kerber, 2003). Results indicated that compared to verbal bullying and social exclusion, physical bullying was considered the most serious, led to the most empathy for victims, and triggered the highest likelihood

to intervene. Similar findings have emerged with pre-service teachers, whereby covert forms of bullying including relational, homophobic, and cyber were viewed as less serious than overt violence (Craig et al., 2011). Related to perceived seriousness, beliefs about bullying as normative are related to lower likelihood of intervention (Kochenderfer-Ladd & Pelletier, 2008).

This finding that perceived seriousness can predict teachers' responses to bullying could potentially be applied to our understanding of how teachers respond to other issues. Earlier research on pre-service teachers' attitudes about sexuality issues found that many participants perceived gay and lesbian issues as irrelevant to pre-service teachers, in part due to the belief that sexuality is not the concern of teachers or schools (Robinson & Ferfolja, 2001). Presumably, we have made progress in this area in the past 15 years, but this earlier study highlights the need to raise pre-service teachers' awareness about issues that impact students' well-being if we expect teachers to effectively address issues such as homophobia in schools.

Self-efficacy has emerged as an important predictor of teachers' self-reported responding to bullying. For example, teachers' self-efficacy in behaviour management increases the likelihood to become involved with bullies and victims, and decreases the likelihood to ignore bullying incidents (Yoon, Sulkowski, & Bauman, 2016). Self-efficacy (i.e. teachers' beliefs in their ability to successfully intervene to stop incidents or prevent their recurrence) may also act as a moderator variable, enhancing the relationship between perceived seriousness and likelihood of intervening. Thus, a teacher might be inclined to intervene if they believe an incident is serious; however, they are even more likely to intervene if they believe they have the knowledge and skills to intervene effectively (Dedousis-Wallace, Shute, Varlow, Murrily, & Kidman, 2014). Similarly, self-efficacy has been identified as a significant predictor of teachers' intervention in response to homophobic remarks and bullying (Greytak & Kosciw, 2014). Most of this work is limited by cross-sectional designs and teacher reports of anticipated rather than actual anti-bullying behaviour. However, a more recent study indicated that teachers' self-efficacy for anti-bullying action longitudinally predicted actual anti-bullying behaviour (Boulton, 2014). In this longitudinal study, an in-service training increased teacher's self-efficacy for utilizing an anti-bullying intervention, which in turn predicted the use of the intervention. Taken collectively, these findings about perceived seriousness and self-efficacy show that educators need to *recognize* behaviours that negatively affect youth as harmful, but they also need to feel confident that they have the *ability* to respond to these situations effectively.

Moral disengagement and its potential role in effective responding to violence

Moral disengagement has emerged as a social cognitive construct that provides an important context for understanding youth bystander responses to bullying, but it has not yet been explored among teachers. Bandura (2002) developed the construct of moral disengagement to describe a set of social cognitive mechanisms that collectively operate to disengage moral self-sanctions from detrimental behaviours, decreasing guilt feelings over injurious conduct and increasing levels of violence and transgressive conduct. Moral disengagement identifies the underlying social cognitive processes that foster increasing disengagement over time. Applied to teachers, moral disengagement can be conceptualized as the extent to which they view bullying, homophobia, media violence, and/or students' exposure to family

violence as either not important problems and/or not their responsibility to address. Interestingly, teachers' sense of moral obligation to intervene might differ depending on the type of violence. In an exploratory study of teachers' responses to gender-based bullying, teachers were more likely to intervene and try to protect victims in situations involving male-to-female sexual harassment; they were more ambivalent and less likely to intervene in abusive heterosexual dating relationships or homophobic-based bullying (Anagnostopoulos, Buchanan, Pereira, & Lichty, 2009).

In this paper, we are proposing moral disengagement as a third component required for teachers to promote a positive school climate and respond to incidents that threaten school climate. That is, teachers need awareness of the issues (i.e. perceived seriousness), they need the self-efficacy to take action, and they need to see promoting a positive school climate as a fundamental part of their role as teachers.

The purpose of this study was to evaluate the extent to which a course for pre-service teachers increased knowledge about bullying and self-efficacy with respect to responding appropriately in situations involving students' exposure to violence. A secondary purpose was to look at the role of moral disengagement as a possible predictor of change. The specific research questions included: (1) Does the course have a positive impact on teacher candidates' knowledge about bullying and self-efficacy with respect to reporting and responding to different types of students' exposure to violence?; (2) Does the course lead to positive impacts in knowledge and self-efficacy beyond those that would be gained through other courses and practical experience (i.e. would they have learned these things anyway in other courses or fieldwork)?; and, (3) Is decreasing moral disengagement an important component of increasing knowledge and self-efficacy?

Method

Participants

There were two cohorts of pre-service teachers in this study. The first ($n = 212$; 75.2% female) was enrolled in a course addressing a range of contributors to school climate during the first semester of their teacher preparation programme in a large faculty of education. There were 224 students enrolled in the class, indicating a study participation rate of 95%. The mean age was 25.6 ($SD = 5.8$; range = 21–48), with 80% of students between 21 and 27 years old. Approximately, half of the pre-service teachers were in the Intermediate/Senior¹ division (51.6%), 7.6% were in the Junior/Intermediate division, and the remaining 40.8% were in the Primary/Junior division. The second cohort was drawn from second semester students in the same course ($n = 199$; 60.8% female). Differences between the two samples are shown in Table 1; there was a larger proportion of female teachers and those specializing in teaching younger children (i.e. junior/intermediate) in the first cohort. The two cohorts did not differ in age. The pre- and post-intervention analyses in this paper use the first cohort only. The second cohort was used as a comparison group to evaluate intervention effects.

Measures

A survey with three sections was developed for this study. The first section included demographics and information about pertinent experience (including personal and professional

Table 1. Sample characteristics of cohorts 1 and 2.

Characteristics	Cohort 1 % or <i>M</i> (<i>SD</i>)	Cohort 2 % or <i>M</i> (<i>SD</i>)	Comparison statistic
<i>Sex</i>			$\chi^2(1) = 8.20^{**}$
Female	75.2%	60.8%	
Male	24.8%	39.2%	
<i>Division</i>			$\chi^2(2) = 17.33^{**}$
Primary/junior	40.8%	23.6%	
Junior/intermediate	7.6%	3.5%	
Intermediate/senior	51.6%	72.9%	
<i>Age</i>			$F(353) = .07$, n.s.
Mean age	25.63 (5.76)	26.04 (5.68)	

** $p < .01$.

experiences with violence). The second section included questions designed to measure knowledge about bullying, and aspects of moral disengagement as it pertains to identifying and responding to critical developmental forces in the lives of children. The third section included four scenarios describing students who were experiencing exposure to different forms of violence and asked teachers to identify which actions they would take (based on a checklist of possible actions). Each of these sections is described in more detail below.

The first section asked participants about their demographic information about their age, sex and teaching specialization. It also included questions about personal and professional experiences with violence. For example, participants were asked if they had experienced violence in their homes growing up, if they were bullied or bullied others at school, or if they had previous experience working in a shelter or crisis center.

Overall, 89% of participants indicated that they had some personal experience with violence, including growing up with family violence (8.0%), experiencing it as an adult (20.8%), knowing someone close that has experienced violence (42.9%), or having met someone that experienced violence (58.5%). A personal experience with violence score was created by summing the items related to experiencing family violence, experiencing violence as an adult, and knowing someone close who had experienced violence. Personal experience with bullying suggested that many more participants indicated being bullied compared to perpetrating bullying and only one of the 212 respondents acknowledged bullying others often. Finally, a minority of pre-service teachers indicated professional experience with violence. A small number had volunteered at a crisis centre (2.8%), been part of a club or activist group (7.1%), or been part of a violence prevention programme (8.5%). These experiences were summed to create a professional experience with violence score.

The second section of the survey was a knowledge and moral disengagement measure developed for this study. Bullying knowledge was measured by eight questions that reflect common bullying myths (e.g. 'if bullies felt better about themselves they would be less likely to bully'; 'bullying happens mostly when no one is watching'). Although there is a beliefs component to these items, they can be considered knowledge because there is a considerable research base either supporting or invalidating each belief. Scores were calculated based on the sum of items answered correctly. Mean pre-test scores for cohorts 1 and 2 were 6.81 ($SD = 1.32$) and 6.48 ($SD = 1.48$), respectively.

In addition to the knowledge items, 17 items were designed to measure attitudes that can pose barriers for teachers in responding appropriately to situations of violence. These items measured concepts related to moral disengagement, such as minimizing responsibility, blaming the victim, or downplaying the harm of violence. They were designed to address a

wide range of situations corresponding to school climate, including beliefs about their role as teachers, beliefs about the impact of bullying and media violence, and beliefs about their ability address challenging issues such as homophobia. Individual items are presented in Table 1. Participants were asked to rate their agreement on a scale from 1 (strongly disagree) to 5 (strongly agree). Sample items included 'If adults intervene in every incident of bullying then kids will never get a chance to practice conflict resolution on their own' and 'Specialized staff are supposed to address issues of violence, not regular classroom teachers'. These items had adequate internal reliability within the two cohorts as indicated by Cronbach alphas of .79 and .81, respectively.

The final section of the survey was comprised of four scenarios that pre-service teachers could face in their professional practice. These scenarios described a range of issues including exposure to domestic violence, dating violence cyber-bullying, and distributing naked pictures of another student. The scenarios were selected to reflect the complicated types of scenarios faced by teachers in responding to youth who have been exposed to violence, including emerging topics such as responding to cyber-bullying or distribution of naked photos. The actual scenarios were all adapted from actual violence prevention scenarios reported to the local school district in the last few years. They differed in length and amount of detail, consistent with real world scenarios where sometimes there is a chain of events that unfolds and an educator has background information, and sometimes an event or disclosure occurs with very little context. The scenarios are provided in Appendix 1. For each scenario, a number of possible actions were listed that encompassed mandated reporting, and proactive and appropriate strategies, in addition to inappropriate responses. The list of responses was generated by a panel of three experts with significant experience² in addressing violence experienced by youth. The expert panel worked collaboratively to generate a list of possible actions that teachers could take and then reached consensus on which ones were appropriate, based on legislated responsibilities and/or district policies. Participants were given an appropriate responding score by summing all items encompassing mandated reporting and two items indicating appropriate proactive practice. The mandated reporting items were based on a number of pieces of legislation and policies and included requirements to report to child protective services, administrators, or in some cases, families. For example, under Bill 157, educators are required to report any incidents that could negatively affect school climate to administrators (versus having the discretion to handle a situation themselves). The proactive items included whether teachers were likely to follow up with the affected students at a later date (versus dealing with the immediate situation only). Possible scores on the appropriate responding scale ranged from 10 to 50, with mean pre-test scores of 42.0 (SD = 4.24) and 42.7 (SD = 5.0), for cohorts 1 and 2, respectively. The complete survey is available from the first author.

Procedure

For the students in the first semester, the pre- and post-intervention surveys were conducted during the first and last classes of the semester with a researcher explaining the purpose of the study. Surveys were distributed to the entire class with an information sheet attached and students were provided with time in-class to complete the survey. An implied consent procedure was used and students were informed they could take the time to relax or review the course outline if they chose not to complete the survey.

Participants generated unique, confidential identifiers to link their pre- and post-surveys. All participants were provided with a \$5.00 gift certificate to the university cafeteria. The study protocol was approved by the Western University Research Ethics Board. The second semester students completed the pre-survey only in the first class, with the same procedure.

Intervention – course for pre-service teachers focused on promoting positive school climate

The Safe Schools course at Western University's Faculty of Education was one of the first courses to focus exclusively on the range of issues that can affect school climate, as well as strategies for teachers to improve school climate. It began as a small course in 2005 with approximately 20 students and has grown to classes of over 200–250 students per semester. Students received 18 h of instruction over the course of the semester. The course addresses a wide range of topics under the umbrella of school climate. These include safety (including bullying, including cyberbullying, child abuse and exposure to domestic violence, homophobia, and media violence), environment and teaching and learning aspects of school climate (including comprehensive prevention programming, and integrating prevention activities in a cross-curricular approach) and the importance of promoting healthy relationships with students as a means of improving school climate. Beyond awareness of the issues, there is an emphasis on prevention, appropriate responding, specific strategies and skills, and knowing the legislated requirements for reporting and responding. Addressing legislative requirements is particularly important because of the speed with which educators' responsibilities have expanded in this regard. Finally, because of the role of attitudes and beliefs in determining teacher responding, there is an emphasis on developing empathy for victims, mobilizing educators to play a proactive role, and promoting a more nuanced understanding of violence-related issues. There is an underlying message throughout the course about the importance of embracing an enhanced role as a teacher as someone who connects with youth and promotes a safe and caring environment versus a more limited role focusing on teaching academic subjects.

Results

Developing a moral disengagement measure for educators

The frequency of endorsement for each moral disengagement item is provided in Table 2 as a percentage of participants who either agreed or strongly agreed with each statement. We conducted an exploratory factor analysis with the 22 moral disengagement items to investigate the factorability of the data. The Kaiser–Meyer–Olkin measure of Sampling Adequacy was .80 (and well above the recommended cut-off of .60). Similarly, the eigenvalues for the first two factors were 4.7 and 1.6 indicating that the two-factor solution could be explored. Nonetheless, a 2-factor solution using an Oblimin Rotation to facilitate the correlation between factors did not produce a meaningful second factor. Subsequently, factor loadings were calculated for all items on a one-factor solution. Three items with factor loadings smaller than .32 were dropped and the remaining items were summed to create a moral disengagement scale. Higher scores on the scale indicate a greater degree of moral

Table 2. Frequency of endorsement and factor loadings for the moral disengagement scale.

Moral disengagement item	Item endorsement (% agree or strongly disagree)	Factor loading (<i>n</i> = 212)
Because my main responsibility as a teacher is to teach numeracy and literacy, there is little time to teach violence prevention	1.4	.65
Bullying programs are important in high-risk schools but not necessary in more academic schools	1.4	.63
There are so many roots to violence that there is not much that individual teachers or schools can do to stop violence	2.4	.63
Today's youth are savvy enough to distinguish the difference between violence in video games and violence in real life	15.5	.57
Specialized staff members (e.g. EAs, admin, Social Workers) are supposed to address issues of violence, not regular classroom teachers	1.9	.54
Being bullied at some point during the school year makes youth better equipped to handle tough situations in the future	7.1	.54
Violence in schools isn't as big a problem as we think it is – the media has just sensationalized a few rare cases like Columbine	3.8	.50
If adults intervene in every incident of bullying, kids will never get the chance to practice conflict resolution on their own	27.9	.49
I am not a trained counselor and addressing the homophobia that LGBTQ youth face is outside my mandate as a teacher	2.4	.48
Even if I am a good role model, it won't make much difference for a child exposed to domestic violence because I can't replace a parent	8.0	.48
Teachers have little impact on children whose parents model unhealthy attitudes and behaviors	6.6	.47
People worry too much about violent video games and movies – lots of well-adjusted adults enjoy these and are not affected	34.5	.46
Most violence happens outside of school hours so there is not much I can do about it as a teacher	2.9	.46
Bullying in schools is a universal problem that need both attention and action (REVERSED)	93.4	.45
The word 'gay' is used inappropriately by youth so often that there is no point in intervening	5.7	.44
If children learn how to ignore bullying, then they won't be as affected by it	9.4	.40
Most youth will get bullied at some point during their school years – it is just part of being a kid	33.0	.40
As a teacher I can play a major role in teaching kids healthy relationships (REVERSED)	97.2	.36
<i>Items that did not load significantly on moral disengagement factor</i>		
A student's academic achievement is influenced by how safe they feel at school (REVERSED)	82.1	
Most bullying is really just two kids having a disagreement	.9	
I can't influence what my students are watching or doing online after school	13.6	

disengagement (i.e. associated with higher degree of minimizing responsibility, minimizing consequences, etc.). The items and factor loadings are shown in Table 2, along with the items that did not load significantly.

Factors associated with moral disengagement

Next, differences in moral disengagement were explored on the basis of descriptive information including sex, age, and teaching division (i.e. primary, intermediate, or senior) with pre-intervention data from both cohorts (*n* = 354) using ANOVAs. Female students scored significantly lower on moral disengagement (*M* = 26.04, *SD* = 5.08) than males (*M* = 29.86 *SD* = 5.41), $F(1,352) = 42.10, p < .001$. Similarly, there were group differences based on pre-service teachers' division (i.e. the age group with which they were being trained to work).

Table 3. Comparison of two cohorts on moral disengagement, bullying knowledge, and self-efficacy with sex covaried.

	Moral disengagement		Bullying knowledge		Self-efficacy	
	df	<i>F</i>	df	<i>F</i>	df	<i>F</i>
Sex	1	38.96*	1	.06	1	7.65*
Cohort	1	1.56	1	3.63	1	3.16

* $p < .05$.

Intermediate/Senior candidates had the highest moral disengagement ($M = 28.29$, $SD = 5.62$) compared to either Junior Intermediate ($M = 23.89$, $SD = 4.11$) or Primary/Junior ($M = 25.82$, $SD = 4.86$), $F(2, 351) = 12.06$, $p < .001$. Post hoc analyses indicated that the Intermediate/Senior group differed from both the Primary/Junior and Junior/Intermediate, but the latter two groups did not differ from each other. Personal experience with violence was not significantly correlated with moral disengagement ($r = -.05$, n.s.).

Changes in knowledge and self-efficacy following the course

Pre- and post-intervention bullying knowledge scores were compared with a repeated measures General Linear Model. Bullying knowledge was found to increase significantly from pre-test (60%) to post-test (78%). The mean difference with a repeated measures GLM produced a Greenhouse–Geisser $F(1) = 9.4$, $p < .01$. There was no significant sex interaction, indicating that males and females showed similar increases in bullying knowledge. Similarly, self-efficacy regarding appropriate responding was found to increase significantly from pre-test ($M = 42.0$, $SD = 4.4$) to post-test ($M = 44.5$, $SD = 5.7$). The mean difference with a repeated measures GLM produced a Greenhouse–Geisser $F(1) = 20.8$, $p < .01$.

To account for the possibility that first semester students underwent changes in moral disengagement, bullying knowledge, and self-efficacy as a result of other courses or practical experience, the pre-intervention scores for first semester students were compared to pre-course scores for second semester. Scores were compared between the pre-course surveys for both samples controlling for sex. Once sex was covaried, the two cohorts did not differ on moral disengagement, knowledge, or self-efficacy, as indicated by the non-significant effect for cohort (see Table 3).

Moral disengagement as a predictor of change in knowledge and self-efficacy

Pre- and post-moral disengagement scores were compared with a repeated measures General Linear Model. Results indicated that moral disengagement decreased from pre-test ($M = 26.6$, $SD = 5.2$) to post-test ($M = 25.5$, $SD = 6.3$) and that the difference was statistically significant ($F(1) = 6.0$, $p < .05$). There was no significant sex interaction, indicating that males and females showed similar decreases in moral disengagement, even though males scored higher than females at both points.

To investigate the role of change in moral disengagement in predicting the other outcomes, a change score was calculated by subtracting the pre-test moral disengagement score from the post-test score, such that a negative change score marks a reduction in moral disengagement. Overall, there was a slight decrease in moral disengagement ($M = -1.12$, $SD = 5.7$) but there was a lot of variability among participants with change scores ranging

Table 4. Moral disengagement as predictor of pre-post change on bullying knowledge and self-efficacy.

	Bullying knowledge				Self-efficacy			
	β	<i>T</i>	95% confidence interval		β	<i>t</i>	95% confidence interval	
			Lower	Upper			Lower	Upper
<i>Step 1</i>								
Pre-test score	.41	.41**	.29	.61	.24	3.01**	.11	.54
<i>R</i> ²		.17				.05		
<i>F</i>		30.87				9.05		
<i>Step 2</i>								
Pre-test score	.45	.42**	.30	.62	.22	2.73**	.08	.50
Sex (female)	.38	.12	-.08	.83	.15	1.93	-.05	4.08
Personal exp		-.04	-.22	.13	.24	3.09**	.45	2.06
Professional exp		.03	-.36	.57	-.06	-.79	-2.86	1.23
<i>R</i> ²		.19				.11		
<i>F</i>		8.47				5.73		
<i>Step 3</i>								
Pre-test score	.40	.40**	.28	.60	.21	2.68**	.07	.49
Sex (female)	.12	.11	-.09	.81	.15	.19	-.04	4.06
Personal exp		-.03	-.20	.14	.25	3.12**	.49	2.09
Professional exp		.05	-.31	.61	-.05	-.70	-2.75	1.31
Moral disengagement change score	-.18	-.18*	-.08	-.01	-.14	-.13	-.29	.03
						-1.73		
<i>R</i> ²		.22				.13		
<i>F</i>		8.28				5.25		

p* < .05; *p* < .01.

from -16.0 to 32. An inspection of frequencies indicated that approximately 6% of students increased in moral disengagement by 6 or more points (i.e. 1 SD) over the course of the semester. To look at the role of this change in moral disengagement on the knowledge and self-efficacy outcomes, stepwise linear regression analyses were undertaken controlling for time 1 bullying knowledge or self-efficacy in step 1, adding sex, personal experience with violence and professional experience with violence in step 2, and finally the moral disengagement change scores in step 3. Results indicated that only change in moral disengagement was a significant predictor of increases in bullying knowledge. For self-efficacy, only personal experience with violence was a significant predictor of increases (see Table 4).

Discussion

The results of this study documented positive impacts of a course designed to teach pre-service students about aspects that affect school climate. Benefits included an increase in participants' knowledge about bullying and self-efficacy for responding to difficult situations involving students' exposure to violence. Furthermore, this study identified moral disengagement as a measureable factor to consider in teacher education and one that shows significant sex differences (such that males scored higher than females). Decreasing moral disengagement corresponded with increases in bullying knowledge, suggesting that countering moral disengagement may make information more salient for pre-service teachers. In an intensive programme where pre-service teachers experience information overload, decreasing moral disengagement may help them prioritize learning about the myriad issues that influence school climate. This finding about moral disengagement is consistent with our experience teaching this course over the past decade in that the course seems to have

the most impact when it goes beyond facts and procedures and engages pre-service teachers in empathy building and real world scenarios. Weston and colleagues have argued that focusing on teacher dispositions is an important adjunct to the requisite skill development (Weston, Anderson-Butcher, & Burke, 2008). We would add that a critical part of this course is in supporting students to envision their roles as teachers in a comprehensive way, and to embrace the opportunities they have to influence school climate in a positive manner, thereby supporting student achievement and mental health.

Our finding that personal experience with violence predicted an increase in self-efficacy suggests that teachers with personal experience of abuse and bullying may be even more sensitized to these problems and see the need to intervene (and thus experience greater benefit from learning specific intervention strategies). This finding is consistent with recent work by Yoon and colleagues found that teachers with personal experiences of being bullied were more likely to intervene in bullying and to involve other adults, compared to those who did not report experiences of being bullied (Yoon et al., 2016).

Although scores on bullying knowledge and self-efficacy increased in a way that was statistically significant, the actual mean differences were modest, suggesting that there is work still to be done on developing effective interventions for pre-service teachers in these areas. Similarly, while moral disengagement decreased overall, it increased for a subset of the group. One possibility is that the setting was not conducive to creating the changes intended, in that the engagement required to build empathy and decrease moral disengagement is not easily achieved in a room of 200 students, and may require more than 18 h of instruction. There are so many important topics to include in a course designed to address all aspects of school climate. The course could easily fill twice the number of instructional hours currently allotted to it, but in the past, there have been many barriers to expanding this component of education.

In addition to the limited number of course hours, the large group size might be a barrier to pre-service teachers acquiring the skills needed to increase self-efficacy. Self-efficacy might be better increased with small group work that includes skills practice rather than simply offering role play demonstrations of such skills (as was done in this case). Fortunately, with a recent move to two-year teacher education in Ontario and the resultant reorganizing of the programme at this Faculty of Education, there will be an opportunity to test the impact of different delivery models. Starting in 2016, there will be a cohort of pre-service teachers who take a combined 36-h course in Social Emotion Learning and Mental Health Literacy in small groups (i.e. two groups of 25 students), whereas the remaining 250 students will take an 18 h Mental Health Literacy course separately in an online format. Both groups will take the 18 h course evaluated in this paper. This diversity of delivery models will provide an excellent natural experiment in the conditions under which pre-service teachers best develop the attitudes, skills, and self-efficacy required to promote all aspects of positive school climate and student mental health.

There are several limitations to consider in this study. First, the sample has two sources of bias in that the students were enrolled one particular course and were also all drawn from one Faculty of Education. The former is not anticipated to have much impact because a significant majority of students (approximately 70%) enrolled in this faculty take this course. A more important limitation is the reliance on responding to hypothetical scenarios as a measure of self-efficacy. The pre-service teachers had not gained student teaching experience at the point of this study and might have been naïve in their estimates of what they

would actually do in these situations. Even among practicing teachers, perceived likelihood to intervene does not predict the quality of the intervention (Yoon, 2004). In addition, all of the measures were developed specifically for this study, in part because we wanted the measurement package to be as brief as possible, to minimize the lost instructional time in a course that is only 18 h in duration. There are advantages to developing measures, especially in an area with a lack of existing measurement options, in that it can increase the relevancy and specificity for the research questions at hand. However, there are significant limitations to developing measures for a study in that they lack well-established psychometric properties compared to measures that have been used in numerous studies. Finally, this study measured knowledge related to bullying whereas school climate is a broader topic that includes multiple issues. This limitation was offset by the moral disengagement measure, which addressed a wider range of topics.

Future research directions include the need for better evaluation measures for pre-service teachers. In the current study, pre-test scores on the bullying knowledge questionnaire were fairly high, suggesting that the degree of difficulty might have been too low. Furthermore, the use of checklists for teachers to indicate their responses to scenarios might have provided very different results than if the participants had been required to generate the solutions. Even disentangling the difference between perceived likelihood of responding and real-world actions will likely require designs that are both multi-method and longitudinal in nature. Ideally, we could compare self-report measures with observations of actual behaviour in the school setting or responses to simulations to develop strong multi-method designs and also to investigate the extent to which self-report measures converge with actual behaviour. Although actual observation of teacher response is logistically difficult, some researchers have utilized teachers' responses to video vignettes as a proxy (Yoon et al., 2016). Multi-informant designs that include student ratings could also illuminate teachers' actual effectiveness in these domains. Another important area for future endeavours is measuring and exploring reporting and responding that extends beyond the minimum requirements. That is, what do really effective teachers do to promote school climate and respond to youth who have been exposed to violence?

Previous research has documented the desire for pre-service teachers and teachers to receive education in issues that fall under the umbrella of school climate. These include a desire for more training in responding to bullying and other forms of violence (Blain-Arcaro, Smith, Cunningham, Vaillancourt, & Rimas, 2012; Craig et al., 2011), training in recognizing and responding to child abuse (King, 2010), training in the area of responding to student mental health concerns (Canadian Teachers' Federation, 2012; Rothi, Leavey, & Best, 2008), and training in responding comfortably to sensitive issues including sexuality, grief and loss (Lynagh, Gilligan, & Handley, 2010). Although this evaluation addressed only certain aspects of these pre-service teacher education needs, the clear implication arising from this study is that specific instruction can increase knowledge and self-efficacy for responding to challenging situations. Establishing such courses as a foundational piece of pre-service teacher education represents a proactive response away from the current situation where these gaps in education need to be addressed once teachers are out in the field (Koller et al., 2004).

The findings in this paper do not merely reiterate the need for such training; they also identify potentially important components to include in such training. It is not enough to teach the facts about bullying, homophobia, family and community violence, and other threats to school climate. A sense of personal conviction and self-efficacy must also be

fostered among pre-service teachers. The findings of this study suggest that specifically targeting moral disengagement by fostering a sense of personal responsibility, increasing optimism that teachers can have a positive impact, and promoting empathy for victims of bullying and other forms of violence may increase the likelihood of appropriate responding. Ultimately, our findings underscore the need for a larger reconceptualization of how we socialize pre-service teachers to understand their professional roles. We need to provide them with opportunities to understand the extent to which they can be active agents in promoting positive school climates, and as a result, help create environments that maximize the likelihood of academic, social-emotional, and psychological success for all learners.

Notes

1. In Ontario, pre-service teachers are designated as Primary/Junior (kindergarten to grade 6), Junior/Intermediate (grades 4–10) or Intermediate/Senior (grades 7–12) depending on the grades they are preparing to teach.
2. The experts' roles included: Safe Schools Learning Coordinator of a large school district (with responsibility for all prevention activities and responding to incidents); nationally recognized trainers for violence prevention and related topics; and, one was a member of the Ministry of Education's Safe Schools Action Team.

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Appendix 1. Violence scenarios provided to participants

Exposure to domestic violence

Dean, a grade 2 student of yours, frequently has been asking you if he and his younger sister can stay in your classroom to clean up. He is worried about going home and when you inquire further he gets angry and closes himself off. He will regularly ask you during the day if he can 'check up' on his little sister in the kindergarten class. He doesn't have many, if any, friends his own age. When you asked the class to draw a family portrait, you were alarmed because he portrayed his father holding a beer and with an angry expression. He portrayed his mother with a sad face and with a dark or perhaps 'black' eye. He drew himself and his sister between his two parents with sad faces. After following up with this situation, you find out from Dean that he and his sister are children exposed to domestic violence.

Dating violence

Over the weekend, a grade 8 male student Rob hit his girlfriend Jessica after he saw her kiss another guy. You as the teacher hear about this incident from Jessica's best friend. All of these students attend the school you work at. Jessica's best friend disclosed to you that Jessica does not wish to return to the school because she does not feel safe near Rob.

Bullying, including cyber-bullying and racism

Nadia is a student in your class who wears a hijab or headscarf for religious purposes. At the beginning of the school year, Nadia was friendly, outgoing, and did well in her classes. However, after a few months, you notice her grades have dropped, she has sudden outbursts in class, and is acting very anti-social. As her teacher, you are worried about her and suspect that something is wrong. After approaching Nadia, she discloses to you that over the past few weeks she has been receiving emails from a person that she did not recognize. One email included an attachment of a monkey wearing a hijab named 'Nadia'. Nadia deleted that email and did not tell anyone about it until now. After that email, she said she has continued to receive more and more embarrassing and threatening emails from this unknown sender. Another email in particular included a link to an 'I hate Nadia' webpage, and a forum where people could insult Nadia anonymously.

Dating violence through circulating photos electronically

A 16 year old boy sends topless photos of his 15 year old girlfriend (who is a student at your school) to his friends via email.