

Developing and Evaluating a Child Maltreatment Training Program for Elementary School
Teachers

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Abstract

Child abuse and neglect (i.e., maltreatment) affect a considerable number of children and can negatively impact how children learn and behave in the classroom. Knowledge gaps, false beliefs, and limited skills with regard to child maltreatment are commonly found among teachers, despite their vital role in the lives of maltreated children. In Canada, little has been done to develop training or other supports for teachers around detecting and responding to child maltreatment. This two-study dissertation brings awareness to the training needs of Canadian-based teachers regarding child maltreatment, as well as to the feasibility of developing, implementing, and evaluating child maltreatment teacher training. Study 1 involved a multi-informant assessment of (1) teachers' child maltreatment training needs and (2) factors that may influence teachers' training participation and use of maltreatment-related knowledge and skills. Using surveys and focus groups, qualitative information was gathered from three informant groups in a major urban region in Ontario (i.e., 19 school social workers, 9 child welfare practitioners, and 21 foster caregivers). Study 1 findings highlighted gaps in maltreatment-related knowledge and skills among local elementary school teachers in various areas related to child maltreatment detection and intervention (e.g., trauma-sensitive classroom practices, reporting). Beyond identifying training content needs, Study 1 results also identified multi-level factors that might influence teachers' participation in child maltreatment training, as well as their use of maltreatment-related knowledge and skills. Most commonly, factors included teacher workload issues, teacher beliefs (e.g., negative attitudes toward child welfare), school internal supports (e.g., unavailability of social workers), and school resource structures (e.g., unmet demand for assessments). Building on these results, Study 2 designed, piloted, and evaluated a child maltreatment training curriculum for teachers. The training evaluation followed

Kirkpatrick's (1994) model for evaluating training programs, wherein the first three of four levels were addressed: (1) reaction (participants' perceptions about the training); (2) learning (change in knowledge and/or attitudes); and (3) behaviour (change in actual work practices). A quasi-experimental design was used to gather data from a sample of 45 local teachers (19 intervention and 26 wait-list comparison group participants) with total experience in education ranging from 2 to 39 years. To explore participants' feedback on the training, quantitative and qualitative information was gathered using surveys administered during the training ($n = 19$). To explore preliminary training outcomes, quantitative and qualitative information was gathered using pre- and post-training questionnaires ($n = 45$), as well as post-training interviews ($n = 13$). Training feedback findings supported the usefulness and relevance of training content for local elementary school teachers. Study 2 results also suggest that relatively brief child maltreatment training has the potential to improve teachers' attitudes, knowledge, and likelihood of responding effectively to maltreatment-related issues at school. Although replication with additional samples and more rigorous methodology are needed, these findings represent an important first step in establishing improved training for Canadian school professionals regarding child maltreatment. Collectively, dissertation results also have several research and clinical implications. Foremost, this dissertation offers recommendations for future maltreatment training development, implementation, and evaluation efforts that include teachers and other school-based professionals. Dissertation results also highlight a need for complementary efforts to explore and address the intersection of factors and systems that may influence teachers' participation in maltreatment training and research, as well as their responses to child maltreatment at school.

Keywords: child maltreatment; elementary school teachers; training program; evaluation

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Content of Thesis and Contributions of Authors

This dissertation follows a multiple-article format and is divided into two parts: (1) Needs Assessment of Child Maltreatment Training for Elementary School Teachers and (2) Development and Preliminary Evaluation of Child Maltreatment Training for Elementary School Teachers. The first part has been published as an article in a peer-reviewed journal ¹. The writer of the thesis appears as the first author and the thesis supervisor appears as a co-author. Ms. Weegar took the lead in every aspect of this dissertation, including the literature review and conceptualization of the project, development and implementation of study procedures and methods, development and implementation of the training program, ethics review board applications, data collection, data scoring and analysis, and writing of the thesis. Dr. Romano adopted an advisory role throughout the process and oversaw all abovementioned activities.

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General Introduction

Definition of Child Maltreatment

Child maltreatment (i.e., abuse or neglect) is a type of trauma, which generally refers to any psychologically overwhelming event that threatens a child's sense of safety and contributes to feelings of terror, intense fear, shame, anger, disorganized behaviour, helplessness, and/or worthlessness (American Psychiatric Association [APA], 2013; Deblinger, Cohen, & Mannarino, 2012). Definitions of child maltreatment vary according to standards set by provincial and federal legislation; however, researchers have argued for a consistent definition to assist in monitoring incidence rates of child maltreatment and to allow for comparisons across jurisdictions and countries (Barnett, Manly, & Cicchetti, 1993; Manly, 2005). In an attempt to improve consistency, the U.S. National Center for Injury Prevention and Control has proposed defining child maltreatment as any act(s) of commission or omission by a parent or other caregiver that results in harm, potential for harm, or threat of harm to a child (Gilbert et al., 2009; Leeb, Paulozzi, Melanson, Simon, & Arias, 2008).

Maltreatment experiences are typically categorized as physical abuse, sexual abuse, emotional (or psychological) abuse, neglect, and exposure to intimate partner violence (Fallon et al., 2015). Although any of these maltreatment types can occur separately, they are predominately found in combination and with other types of trauma (e.g., peer violence; Finkelhor, Ormrod, Turner, & Hamby, 2005; Lau et al., 2005; Turner, Finkelhor, & Ormrod, 2010). Maltreatment experiences also tend to occur primarily within the context of a child's family (Gilbert et al., 2009; Trocmé, Fallon, MacLaurin, Hélie, & Turcotte, 2010; U.S.

Department of Health and Human Services, 2015). Accordingly, child maltreatment has often been referred to as a complex trauma because such experiences are typically prolonged and interpersonal in nature. Maltreatment experiences also typically include multiple traumatic experiences and begin early in life when children are most developmentally vulnerable (Cook et al., 2005; Price-Robertson, Rush, Wall, & Higgins, 2013).

Rates of Child Maltreatment

Child maltreatment affects a meaningful proportion of children. In Canada, reliable nation-wide or province-wide statistics on the prevalence of child maltreatment do not exist. However, incidence statistics on the number of new child maltreatment reports within a specified period of time are available. The most recent incidence estimates come from the Ontario Incidence Study of Reported Child Abuse and Neglect – 2013 (OIS-2013; Fallon et al., 2015), which tracked child maltreatment investigations in a representative sample of 17 provincial child welfare agencies during a 3-month sampling period (i.e., October to December) to generate annual provincial estimates of incidence. Estimates indicated that approximately 97,951 maltreatment investigations were conducted across Ontario in 2013 (41.69 per 1,000 children); there also were 27,330 investigations for risk of future maltreatment (11.63 per 1,000 children). From all of these investigations, 34% were substantiated (18.33 per 1,000 children). The incidence rates of substantiated maltreatment were as follows (in order of decreasing incidence):

- Exposure to intimate partner violence (48%; an estimated 20,443 investigations or 8.70 per 1,000 children)
- Neglect (24%; an estimated 10,386 investigations or 4.42 per 1,000 children)
- Physical abuse (13%; an estimated 5,770 investigations or 2.46 per 1,000 children)
- Emotional abuse (13%; an estimated 5,620 investigations or 2.39 per 1,000 children)

- Sexual abuse (2%; an estimated 848 investigations or 0.36 per 1,000 children).

The five cycles of the OIS (i.e., OIS-1993, 1998, 2003, 2008, and 2013) indicate that the number of maltreatment-related investigations has not changed significantly since 2003 (i.e., 53.59, 54.05 and 53.32 per 1,000 children for 2003, 2008, and 2013, respectively). Regarding substantiation, comparisons between OIS-2008 and 2013 indicate that the number of cases in which maltreatment was substantiated or future risk was confirmed has also remained relatively stable (i.e., 19.65 and 20.5 per 1,000 children, respectively). Unfortunately, substantiation findings from the other OIS data collection cycles (i.e., 1993, 1998, and 2003) are not directly comparable because these reports did not separately track investigations of cases where future risk of maltreatment was the only concern. Comparisons to more recent incidence rates are also not possible because the OIS data has not been updated since the 2013 data collection cycle.

The Canadian Incidence Study of Reported Child Abuse and Neglect (CIS) is a national initiative to collect data on children who come to the attention of child welfare due to alleged or suspected maltreatment. Note that OIS data form part of the data collected through the CIS. In the most recent report (CIS-2008; Trocmé et al., 2010), national incidence estimates from a representative sample of 112 child welfare agencies across Canada indicated that there were approximately 235,842 maltreatment-related investigations in 2008 (39.16 per 1,000 children), of which 36% were substantiated (85,440 investigations or 14.19 per 1,000 children). The incidence rates of substantiated maltreatment across Canada were as follows (in order of decreasing incidence):

- Exposure to intimate partner violence (34%; an estimated 29,259 investigations or 4.86 per 1,000 children)
- Neglect (34%; an estimated 28,939 investigations or 4.81 per 1,000 children)

- Physical abuse (17%; an estimated 12,212 investigations or 2.86 per 1,000 children)
- Emotional abuse (9%; an estimated 7,423 investigations or 1.23 per 1,000 children)
- Sexual abuse (3%; an estimated 2,607 investigations or 0.43 per 1,000 children).

Similar to the OIS, the rates of investigation and substantiation found in the CIS have not changed significantly between 2003 and 2008. However, more recent national incidence rates are not available because the CIS was discontinued after the 2008 data collection cycle.

Both the OIS and CIS do not include information about maltreatment cases that were investigated only by the police or about reports that came to the attention of child welfare authorities but were screened out prior to an investigation. Accordingly, these child welfare maltreatment statistics are likely to underestimate the incidence of maltreatment as well as its prevalence (i.e., the true proportion of the population who have experienced maltreatment). Indeed, the gap between the lower reported rates of substantiated maltreatment and the higher reported rates by victims or caregivers has been widely cited (Afifi et al., 2014, 2015; Gilbert et al., 2009; Hillis, Mercy, Amobi, & Kress, 2016; MacMillan, Jamieson, & Walsh; 2003; MacMillan, Tanaka, Duku, Vaillancourt, & Boyle, 2013). For instance, rather than relying on investigated or substantiated cases, MacMillan and colleagues (2013) reported on the rates of maltreatment in Ontario using a representative community-based sample of 1,893 adults 21-35 years of age from the Ontario Child Health Study. Wave 3 (2000-2001) collected data on physical and sexual abuse in childhood, as measured retrospectively before the age of 16. The following prevalence rates were found: physical or sexual abuse (37.9%); physical abuse (31.0%); sexual abuse (15.0%); and both physical and sexual abuse (8.1%). Comparably, nationally representative data from a sample aged 18 and older ($N = 23,395$) from the 2012 Canadian Community Health Survey (CCHS) indicated that 32.1% of the general adult

population reported experiencing child abuse, including physical abuse (26.1%), sexual abuse (10.1%), and/or exposure to intimate partner violence (7.9%; Afifi et al., 2014). Using self-reported data from the same community survey, Afifi and colleagues (2015) also found that only 7.6% of the adult population with a history of child abuse (physical, sexual, or exposure to intimate partner violence) reported having had contact with child protective services during childhood because of their maltreatment experiences.

Impact of Maltreatment on Child Educational Outcomes

Maltreatment can substantially impair children's healthy development and functioning. Children with maltreatment histories are at greater risk of experiencing difficulties across multiple domains, including social and behavioural functioning, psychological well-being, and cognitive and language skills, in both the short- and long-term (Gilbert et al., 2009; Hoch, 2009; Kaplan, Pelcovitz, & Labruna, 1999; Pears & Fisher, 2005; Pears, Kim, & Fisher, 2008; Perfect, Turley, Carlson, Yohanna, & Gilles, 2016; Petrenko, Friend, Garrido, Taussig, & Culhane, 2012; Snow, 2009). Maltreatment tends to exert such a widespread impact on functioning because these domains are interrelated and mutually impact one another (English et al., 2005). Consequently, although maltreatment tends to occur in the home environment, the educational outcomes of children who have experienced maltreatment are often affected.

The research literature on child maltreatment and educational outcomes has tended to focus on academic achievement and performance. However, a child's emotional/psychological well-being and interpersonal/behavioural functioning, as well as the ways in which these various domains of functioning interact with academic achievement, also impact a child's success at school (Shonk & Cicchetti, 2001). This approach is important because many behaviours that maltreated children exhibit (e.g., hypervigilance to perceived cues of danger, disorganized

attachment patterns) can create obstacles at school, such as difficulties processing new information, distinguishing between threatening and non-threatening situations, forming trusting relationships with others, and regulating emotions (Cole, O'Brien, Gadd, Ristuccia, Wallace, & Gregory, 2005; Mash & Barkley, 2014). This is consistent with Slade and Wissow's (2007) heuristic model that (1) links childhood maltreatment to difficulties in both children's mental well-being and academic achievement, (2) hypothesizes a bidirectional relationship between academic achievement and mental well-being (both of which play a role in educational performance and success), and (3) recognizes that mental well-being may mediate the link between childhood maltreatment and academic achievement and, likewise, that academic achievement may mediate the link between childhood maltreatment and mental health. Within this context, this dissertation and the training curriculum described herein explored diverse educational outcomes, including academic achievement, psychological well-being, and interpersonal functioning at school.

Among the documented academic achievement difficulties, children with maltreatment histories have been found to have more failing grades and discipline referrals, as well as worse attendance and classroom performance (Perfect et al., 2016; Romano, Babchishin, Marquis, & Fréchette, 2015). Maltreated children have also been found to consistently score below their non-maltreated peers on language, reading, and mathematical subtests of standardized academic achievement measures (De Bellis, Woolley, & Hooper, 2013; Eckenrode, Laird, & Doris, 1993; Fantuzzo, Perlman, & Dobbins, 2011; Ryan et al., 2018; Shonk & Cicchetti, 2001; Veltman & Browne, 2001). For instance, in a recent U.S. study, Ryan and colleagues (2018) merged statewide child protection and public education data to explore the association between early maltreatment and academic outcomes by the third grade. Their sample included all children born

between 2000-2006 who were enrolled in one of the state's public schools ($n = 732,838$).

Findings indicated that children who had been involved in one or more maltreatment investigations (substantiated or unsubstantiated) scored significantly lower on standardized math and reading tests compared to peers with no involvement. Students with at least one maltreatment investigation were also significantly more likely to be held back in the first or second grade and/or receive special education services. Regarding other academic concerns (e.g., attendance, dropout), Shonk and Cicchetti (2001) compared socioeconomically disadvantaged samples of maltreated ($n = 146$) and non-maltreated ($n = 83$) children and found that maltreated children showed significantly more academic maladjustment (i.e., a greater number of indicators that are predictive of school dropout). Findings also indicated that academic engagement served as a partial mediator of the relationship between maltreatment and academic maladjustment, but the majority of the maltreatment effect remained direct. Indeed, other studies have found that compromised basic academic skills such as reading, writing, and mathematics place children with maltreatment histories at increased risk for short- and long-term academic failure, school dropout, involvement in criminal activity, incarceration, and homelessness (Snow, 2009; Trout, Hagaman, Casey, Reid, & Epstein, 2008).

There is overwhelming research evidence attesting to the adverse short- and long-term impact of maltreatment on children's psychological adjustment across a range of emotional (e.g., mood, anxiety) and behavioural (e.g., substance use, aggression) domains (English et al., 2005; Haskett, Nears, Ward, & McPherson, 2006; Kaplan et al., 1999; Perfect et al., 2016; Romano et al., 2015; Shonk & Cicchetti, 2001; Staudt, 2001; Veltman & Browne, 2001). These difficulties also appear to compromise well-being on both a short-term and long-term basis. In the short-term, findings indicate that the prevalence of clinically significant mental health

difficulties among maltreated children ranges from 40% to 80% (Burge, 2007; Czincz & Romano, 2009), compared to rates of less than 20% for children without maltreatment histories (Polanczyk, Salum, Sugaya, Caye, & Rohde, 2015). In the long-term, Kaplan et al. (1999) found that, among adults who experienced childhood maltreatment, approximately 40% had a lifetime diagnosis of major depressive disorder, roughly 30% had a lifetime diagnosis of a disruptive behaviour disorder (e.g., conduct disorder), and 5% had lifetime odds of suicidal behaviour.

Relatedly, impairments in interpersonal functioning (e.g., social skills deficits, peer rejection) are also disproportionately high among children with maltreatment histories (Anthonysamy & Zimmer-Gembeck, 2007; Bolger & Patterson, 2001; Dodge, Pettit, & Bates, 1994; Kim & Cicchetti, 2010; Lansford et al., 2002; Luke & Banerjee, 2013; Manly, Kim, Rogosch, & Cicchetti, 2001; Shields & Cicchetti, 2001; Staudt, 2001). For instance, in a sample of 400 children between the ages of 4 and 8 (6% of whom had a known history of maltreatment) comprising 24 classrooms across 22 schools in Australia, Anthonysamy and Zimmer-Gembeck (2007) found that maltreated children were less liked by their classmates, less accepted, and more rejected, regardless of whether peer status was based upon child or teacher report. Similarly, in a review of studies on maltreated children's peer relations, Staudt (2001) found that children who experienced neglect tended to lack social skills (e.g., disruptive) and engaged less with peers than physically abused children or children without maltreatment histories. In contrast, children with physical abuse histories tended to respond more aggressively to distress in peer interactions. Research has also found that children with maltreatment histories are more likely than non-maltreated peers to bully others or become victimized by peers (Shields & Cicchetti, 2001).

Impairments in educational outcomes appear to be particularly pronounced among

maltreated children in out-of-home care. This may be partially explained by the fact that these children encounter multiple disruptions in their home environment and, consequently, in their schooling (Trout et al., 2008). Generally speaking, existing research indicates that removal from the family home, combined with past and/or current maltreatment, can drastically impair regulatory capacities (e.g., emotion regulation), interpersonal skills, intrapersonal development, and cognitive functioning (Crozier & Barth, 2005; English et al., 2005; Pears et al., 2008). These impairments can undoubtedly lead to a reduced ability to function successfully within classroom and school settings. Furthermore, studies have found that high school completion rates of youth in-care are significantly lower compared to their same-aged peers (Merdinger, Hines, Osterling, & Wyatt, 2005; Pecora, 2012; Snow, 2009). For instance, a population-based study in Manitoba showed that children whose families received child welfare services were more than twice as likely than the general population not to graduate from high school within seven years (42.8% of children vs. 18.1% respectively; Brownell et al., 2010). On the other hand, positive experiences, engagement, and success in school are likely to be protective factors for maltreated children, including those in out-of-home care. Thus, while children in out-of-home care often present with increased problems in numerous domains, their poor educational progress is gaining increasing attention as one of the greatest needs for this vulnerable population (Jackson, 2013; Stone, 2007; Trout et al., 2008).

Factors Influencing the Consequences of Child Maltreatment

The relationship between childhood maltreatment and developmental outcomes is certainly not linear; a wide range of factors may influence how maltreatment-related effects are manifested among children. Exploring all of the moderating and mediating variables in depth is beyond the scope of the current dissertation. However, several of the more widely cited factors

include, but are not limited to, the child's developmental stage at the time of maltreatment onset, the child's relationship to the perpetrator(s), responses by adult caregivers to maltreatment disclosure, and interacting effects of the frequency, chronicity, type, duration, and severity of the maltreatment experience (English et al., 2005; Haskett et al., 2006; Manly, Cicchetti, & Barnett, 1994; Manly et al., 2001; Veltman & Browne, 2001). For instance, children who experience maltreatment in the home during infancy or toddlerhood when the primary developmental task is to develop attachment relationships with caregivers may display insecure attachment patterns or a confused pattern of relatedness with others, which can interfere with later interpersonal functioning in a school setting (Manly et al., 2001). On the other hand, many maltreated children show considerable resilience in the face of these adverse experiences, which has also been found to be associated with factors across a number of interrelated domains, including child characteristics (e.g., self-regulatory processes), family context (e.g., supportive parenting), and other experiences outside the family environment (e.g., close friendships; Haskett et al., 2006). In summary, childhood maltreatment is not a static phenomenon so individualized, multimodal, and multisystem approaches for understanding the experience of child maltreatment are necessary.

Child Maltreatment Teacher Training

When considering possible interventions for children with maltreatment histories, it is important to acknowledge the various contexts in which children find themselves (e.g., family, school) as well as the interactions occurring within and between these various contexts (e.g., communication between caregivers and teachers about the child; Belsky, 1980; Bronfenbrenner, 1979; Livny & Katz, 2018). To date, much of the research on educational interventions for children with maltreatment histories has focused on child-level academic interventions (e.g.,

tutoring) and caregiver involvement as a way to improve educational outcomes among maltreated children (e.g., Cheung, Lewin, & Jenkins, 2012; Flynn, Marquis, Paquet, Peeke, & Aubry, 2012). These have been important and effective interventions; however, they often have not been met with other more systems-level interventions such as school-based initiatives.

Especially, classroom teachers are in a unique position to intervene with children because of their ongoing, daily contact with children and their ability to observe children over a period of time and in relation to peers. Though other allied professionals (e.g., social workers) are often viewed as the primary providers of mental health services in schools, research suggests classroom teachers are increasingly responsible for implementing mental health interventions, including for children with maltreatment histories. For instance, a systematic review of school mental health intervention studies found that teachers were actively involved in the delivery of nearly 41% of all interventions (Franklin, Kim, Ryan, Kelly, & Montgomery, 2012). Moreover, OIS-2013 data on child protection referrals indicated that school personnel, more than any other professional or non-professional group, accounted for the greatest number of child protection reports for suspected maltreatment (Fallon et al., 2015). Thus, teachers must have opportunities to keep improving their skills with regard to responding sensitively and effectively to the needs of maltreated children in their classrooms. Along these lines, there is international consensus that the lack of effective child maltreatment training is a significant impediment to teachers' ability to support the needs of maltreated children (Abrahams, Casey, & Daro, 1992; Alvarez, Kenny, Donohue & Carpin, 2004; Baweja, Santiago, Vona, Pears, Langley, & Kataoka, 2016; Cerezo & Pons-Salvador, 2004; Falkiner, Thomson, & Day, 2017; Goldman, 2005, 2007; Hinson & Fossey, 2000; Kenny, 2015; Kesner & Robinson, 2002; Krase, 2013; Schols, de Ruiter, & Öry, 2013; Sinanan, 2011).

Theoretical/conceptual considerations. While emerging literature has identified preliminary impacts of child maltreatment training for various professionals (e.g., Mathews et al., 2017; Rheingold et al., 2015), the mechanisms of change underlying training development and the learning process are rarely defined. In the context of training development, learning theories can provide information about the relationships among strategies, context, and participant characteristics in order to improve predictions about the effectiveness of the selected strategies. Consequently, learning theories are considered formative in training design and delivery. Copious theories have been offered to explain how learning is effectively accomplished. However, in training (instructional) design literature, there seem to be three dominant perspectives: behaviourism; cognitivism; and constructivism (Ertmer & Newby, 2013).

According to behaviourism, learning is defined as change in either the form or frequency of observable performance (Winn, 1990). While both learner and environmental factors are considered important, environmental conditions receive the greatest emphasis (i.e., what environmental stimuli lead to a desired response; Ertmer & Newby, 2013). Thus, behavioural learning theories tend to support training strategies that create and strengthen stimulus-response associations, such as the use of instructional cues, practice, and reinforcement (Winn, 1990). In comparison, cognitive learning theories are less concerned with overt, observable behaviour and instead focus on the mental activities that lead to a desired response (e.g., planning, goal-setting, and problem solving; Duffy & Jonassen, 1991; Jonassen, 1991a). Therefore, in addition to environmental influences, learners' thoughts, beliefs, and attitudes are also considered to be influential in the learning and behaviour change process. Finally, building on cognitive learning theories, constructivism argues that learning happens when the mind filters input from the world to produce its own unique reality so that learning occurs by creating meaning from experience

(Jonassen, 1991b). Therefore, constructivists emphasize the flexible use of pre-existing knowledge rather than the acquisition and recall of new knowledge structures.

It has been argued that the selection of guiding learning theories for training development should depend on two factors related to the problem/need: (1) existing knowledge and skill levels among target participants and (2) specific learning outcomes that are desired (Ertmer & Newby, 2013; Khalil & Elkhider, 2016). For learner characteristics, certain learning theories may be more appropriate for different stages of knowledge acquisition (i.e., introductory, advanced, or expert). For instance, Jonassen (1991b) contends that introductory knowledge acquisition is better supported by objective (behavioural and/or cognitive) approaches to learning in order to facilitate mastery of the content (knowing what) and the application of such content in unfamiliar situations (knowing how). In contrast, interpretive (constructivist) approaches tend to be more suitable as learners progress to advanced or expert levels of knowledge, which provides them with the conceptual foundation required to deal with complex or ill-defined problems through reflection-in-action (Ertmer & Newby, 2013). For desired learning outcomes, the type of outcome and the level of cognitive processing required seem to be important. Namely, it is believed that the development of higher-level skills (e.g., critical thinking, problem solving) requires greater depths of processing that cannot be explained by behavioural learning principles entirely. Therefore, in contrast to behaviourism, theories that focus on complex mental processes (e.g., cognitivism) are usually considered more suitable for explaining the acquisition of higher-level skills (Ertmer & Newby, 2013; Schunk, 1991).

A combination of behavioural and cognitive learning principles seemed most appropriate for the dissertation objectives and training goals described herein for several reasons. First, it was assumed that local teachers are not experts in maltreatment-related issues given existing research

for diverse knowledge and skill gaps (Alvarez et al., 2004; Goebbels, Nicholson, Walsh, & De Vries, 2008; Greco, Guilera, & Pereda, 2017; Kenny, 2001a, 2001b, 2004), as well as limited maltreatment training/professional development opportunities in Ontario (King, 2011; Shewchuk, 2014). Therefore, the estimated expertise level of target participants supported the need for behavioural and/or cognitive approaches to learning, not a constructivist approach. Second, the desired outcomes for the intended training program were largely behaviourally-based (e.g., more timely, effective reporting), though understood to be complex and involving several mental processes such as planning and problem solving. For example, the process of reporting is recognized as more complicated than a simple paired association between a stimulus (sign of maltreatment) and a desired response (report to child welfare; Schols et al., 2013). Therefore, the desired training outcomes were assumed to involve higher levels of processing, which supports more than just a behavioural learning approach.

The rationale for considering both behavioural and cognitive approaches was also guided by the belief that no single theory provides a complete framework to explain multi-level influencing factors for teachers' responses to maltreatment-related issues. Indeed, numerous studies have demonstrated that learner/individual and contextual factors at the school-, community-, and case-level seem to influence teachers' maltreatment-related responses (O'Toole, Webster, O'Toole, & Lucal, 1999; Schols et al., 2013; Vanderfaeillie, De Ruyck, Galle, Van Dooren, & Schotte, 2018; Walsh, Bridgstock, Farrell, Rassafiani, & Schweitzer, 2008). Relatedly, other training and implementation research has underscored the importance of evaluating interventions, such as training, while considering multi-level influences on the process from awareness to action (e.g., organizational culture toward desired behaviours; Grimshaw et al., 2001; Michie et al., 2011). As stated above, environmental influences on

learning and desired outcomes (i.e., what environmental stimuli leads to a desired response) tend to be emphasized by behaviourists, while individual-level influences (e.g., learners' thoughts, beliefs, and attitudes) are better explained by cognitivism. Thus, in line with these theories and existing research for influencing factors on teachers' responses to maltreatment, this dissertation aimed to explore both individual and multi-level environmental factors (e.g., school administration support) that might impact desired training outcomes (e.g., accurate reporting, increased use of trauma-sensitive classroom strategies).

Dissertation Objectives

Child maltreatment experiences can have a devastating impact on a number of childhood developmental processes in both the short- and long-term. Despite the frequency of child maltreatment and teachers' vital role in the lives of children, the educational system in Ontario has not invested much in the development and evaluation of training for teachers around identifying and supporting the needs of maltreated children. Therefore, the overall objective of the proposed dissertation was to develop, pilot, and evaluate child maltreatment training for local elementary school teachers. Considering the abovementioned theoretical and conceptual frameworks, this dissertation aimed to develop a training program guided by behavioural and cognitive learning principles that could improve knowledge and possibly lead to desired behaviour changes. This dissertation also aimed to explore individual (e.g., attitudes and beliefs toward child maltreatment) and multi-level environmental factors (e.g., school administration support) that might impact teachers' intentions and whether their intentions are followed by desired behaviours (e.g., accurate reporting).

While many training (instructional) design models have been proposed, all of them include the following fundamental phases: analysis; design; development; implementation; and

evaluation (Khalil & Elkhider, 2016). Summarized by the acronym ADDIE, these phases are considered an easy-to-follow systematic model for designing and developing a learning experience, wherein the outcome of each phase informs the subsequent phase. The current dissertation largely followed the ADDIE model (Figure 1), with Study 1 addressing the initial (analysis) phase and Study 2 focusing on the remaining phases. Specifically, as the first step of program development, Study 1 gathered training needs information from relevant stakeholders (i.e., school-based social workers, child welfare practitioners, foster caregivers of maltreated children). Building on this information, the first objective of Study 2 was to design the training program and deliver a pilot version to local elementary school teachers to explore the feasibility of implementing intended training methods and evaluation procedures. To visually summarize the relationship among needs, resources, activities, outputs, and outcomes for the training program described in Study 2, a logic model was prepared (Appendix A). The second objective of Study 2 was to evaluate the training program by (1) gathering feedback on curriculum content and delivery and (2) exploring preliminary impacts of the training on participants' attitudes, knowledge, and classroom practices regarding child maltreatment. Finally, the third objective of Study 2 was to explore teachers' working relationships, including with school staff and other systems (e.g., child welfare), in order to identify factors that could influence teachers' application of the training as well as their maltreatment-related responses.

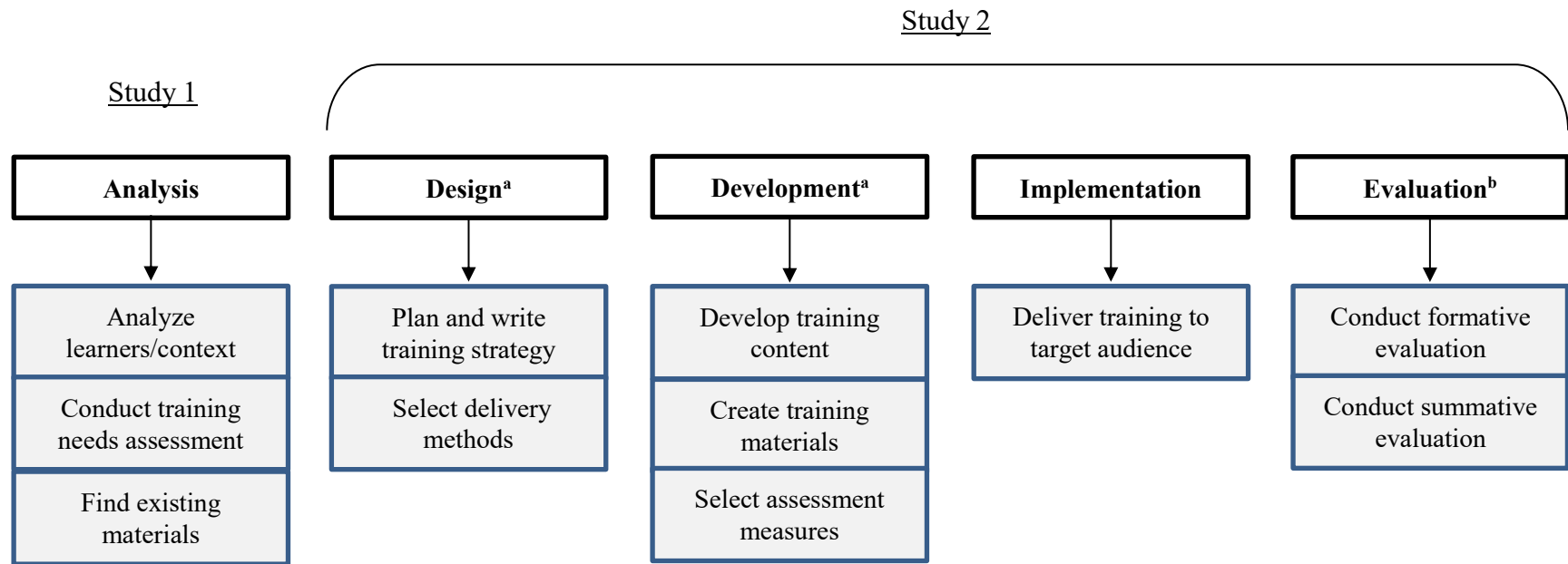


Figure 1. Analysis, design, development, implementation, and evaluation (ADDIE) model phases and steps (adapted from Khalil & Elkhider, 2016).

^aTraining design and development guided by general behavioural and cognitive learning principles (Ertmer & Newby, 2013).

^bTraining evaluation largely guided by Kirkpatrick's (1994) model of training evaluation.

Study 1: Needs Assessment of Child Maltreatment Training for Elementary School Teachers

Teachers' Child Maltreatment Knowledge and Skills

Child maltreatment detection and reporting. According to the *Child, Youth and Family Services Act* (2017), anyone in Ontario who has reasonable grounds to suspect that a child (defined as under 16 years of age) is or may be in need of protection has a legal responsibility to report the information to a child protection agency. Considering teachers' close and ongoing contact with numerous children as well as their awareness of typical child behaviour, they are in critical positions to detect and report suspected child maltreatment (Cerezo & Pons-Salvador, 2004; Crenshaw, Crenshaw & Lichtenberg, 1995). It is therefore not surprising that school personnel are a major source of referrals for suspected child maltreatment. When referral patterns to Ontario child welfare agencies were examined over a 3-month period in 2013, the OIS-2013 found that school personnel reported suspected maltreatment more frequently than any other professional or non-professional group, providing almost one-third (31%) of all reports (Fallon et al., 2015). However, other research has demonstrated that teachers are not dutifully reporting child maltreatment in a timely manner, if at all (Alvarez et al., 2004; Crenshaw et al., 1995; Feng, Huang, & Wang, 2010; Goebbels, Nicholson, Walsh, & De Vries, 2008; Greco, Guilera, & Pereda, 2017; Kenny, 2001a, 2001b; Webster, O'Toole, O'Toole, & Lucal, 2005).

Since it is difficult to observe reporting behaviours as they occur, research in this area has tended to rely on teachers' recall of past reporting behaviours or on case vignettes of legally reportable child maltreatment, where teachers are asked to read the vignette and indicate whether or not they would make a report. For instance, Goebbels and colleagues (2008) used the recall approach with a sample of 296 elementary school teachers from Queensland, Australia (mean teaching experience = 13.7 years). Participants were asked to recall detection- and reporting-

related behaviours during their teaching career, including how frequently they had reported suspected child maltreatment and if they had ever chosen not to report their suspicions. Out of the 239 teachers who had reported child maltreatment at some point during their careers, 18% were found to be inconsistent reporters, meaning they had failed to report one suspected case (30%), two suspected cases (32.5%), or three or more suspected cases (37.5%). In another U.S. study of 197 elementary and secondary school teachers (mean teaching experience = 10.4 years), 11% reported that there was at least one past instance in which they believed child abuse may have occurred but failed to make a report (Kenny, 2001a). This study also used two case vignettes of legally reportable child sexual abuse to explore teachers' reporting behaviour and found that most teachers in their sample would have failed to make a report to child protection services. Specifically, only 26% indicated they would report a situation in which a student confides to a teacher that her stepfather has been touching her inappropriately, and only 11% would report a situation in which the perpetrator of sexual abuse was a teacher.

Several reasons have been cited for teachers' failure to report child maltreatment. Studies have found that teachers who are not reporting their suspicions tend to have limited knowledge and self-confidence regarding reporting procedures (Goebbels et al., 2008; Goldman, 2010; Kenny, 2001a, 2001b, 2004; Walsh & Farrell, 2008; Yanowitz, Monte, & Tribble, 2003). They also tend to lack knowledge about the signs and symptoms of various maltreatment types (Abrahams et al., 1992; Alvarez et al., 2004; Kenny, 2001a, 2004; Márquez-Flores, Márquez-Hernández, & Granados-Gámez, 2016). For instance, in a sample of 200 teachers from a large U.S. school district who had an average career length of 10 years, Kenny (2004) found that only 13% were aware of their school's procedures for reporting abuse, and only 8% were aware of their legal obligation to report. Moreover, only 14.5%, 10.5%, and 8.5% of teachers were aware

of signs that could potentially indicate child sexual abuse, physical abuse, and neglect, respectively.

Trauma-sensitive school practices. Aside from interfering with detection and reporting responsibilities, limited knowledge of child maltreatment can also be problematic when teachers and other school personnel misinterpret or fail to identify children's maltreatment-related behaviour and then respond in potentially adverse ways. Traditional academic responses, such as punitive and exclusionary discipline (e.g., suspensions), can exacerbate trauma-related symptoms and further impair learning (Dorado, Martinez, McArthur, & Leiboitz, 2016; Oehlberg, 2011). If not addressed appropriately at school, trauma-related difficulties can also put affected students at greater risk for school dropout (Porche, Fortuna, Lin, & Alegria, 2011). There is also a growing demand for the educational system to be knowledgeable about trauma and its impact on development and for schools to be trauma-informed (Chafouleas, Johnson, Overstreet, & Santos, 2016). Therefore, it is important to evaluate teachers' understanding and use of trauma-sensitive practices beyond detection and reporting.

Unfortunately, few studies have rigorously explored teachers' knowledge and use of trauma-sensitive practices (Alisic, 2012; Alisic, Bus, Dulack, Pennings, & Splinter, 2012; Crosby, Somers, Day & Baroni, 2016; Dorado et al., 2016; Reker, 2016). Using a qualitative approach, Alisic (2012) interviewed 21 Dutch elementary school teachers (mean teaching experience = 9.9 years) about their experiences working with children exposed to trauma (including child maltreatment). Although some teachers felt confident in working with children after trauma, more prominent themes reflected teachers' challenges with providing optimal support to traumatized children, managing conflicting needs of children with and without trauma histories, and coping with the emotional burden of the work. Similarly, in a U.S.-based study,

Reker (2016) surveyed 327 teachers (mean teaching experience =14.2 years) about their self-efficacy in supporting students experiencing trauma-related symptoms. Findings suggested that teachers felt able to support traumatized students in some areas (e.g., academic needs), although they reported feeling less confident in their ability to support these students' behavioural and emotional needs.

The impact of maltreatment on a child at school. Literature and resources on trauma-sensitive school practices emphasize that understanding the experience of a maltreated child is an important trauma-sensitive intervention in and of itself as it fosters compassion for the child (Cole et al., 2005). Understanding what a maltreated child endures could include knowledge of various impacts of child maltreatment on school functioning (e.g., academics, relationships, behaviour) and maltreatment characteristics (e.g., relationship of perpetrator to the child, duration of maltreatment). Although ample research has documented teachers' desire for more training in this regard (e.g., Alisic, 2012; Baweja et al., 2016), few studies have explored this need in depth by evaluating teachers' current knowledge of how child maltreatment can impact learning and behaviour at school (Dorado et al., 2016; Martin, Cromer, & Freyd, 2010; Yanowitz et al., 2003). One U.S. study (Yanowitz et al., 2003) asked 59 teachers working in kindergarten through grade 12 (mean career length = 14 years) a series of open-ended questions about how child physical and emotional abuse could affect students' behaviour. Findings indicated that teachers' responses tended to fall into four major categories across both types of abuse: impaired social interactions (53%); higher levels of aggression (46%); low self-esteem (46%); and academic difficulties (44%). Compared to other research indicating that most teachers feel they do not have much knowledge about child abuse (e.g., Kenny, 2004), these results were found to be more accurate than expected and suggest that teachers may, in fact, be fairly knowledgeable

about the effects of child maltreatment. Accordingly, Yanowitz and colleagues (2003) suggest that promoting teachers' self-confidence in their knowledge may also be important, as teachers who realize their knowledge about child maltreatment-related effects may be more likely to respond to them. However, further research is needed to confirm this possibility.

More recently, Martin and colleagues (2010) elaborated on Yanowitz et al.'s (2003) study to evaluate teachers' perceptions of the effects of physical abuse, sexual abuse, and emotional neglect on both learning and classroom behaviour. A total of 66 teachers from the U.S. (85%) and Canada (15%) participated in an online survey that included open-ended questions (e.g., *For children that you have known or suspected to have been physically or sexually abused, how do you think the abuse impacted their (1) learning and (2) behaviour?*). The majority of the sample was female (86%) and based in elementary schools (50%), with an average of 13 years of teaching experience. Findings indicated that teachers perceived maltreated students as primarily exhibiting poor attention and disruptive behaviours, as well as internalizing problems, academic difficulties, and other maltreatment-related outcomes (e.g., emotional dependence). However, these results varied by type of maltreatment. For instance, 21% of teachers responded that they did not know how physical and sexual abuse impacted learning and classroom behaviour, compared to one teacher who reported not knowing the impact of emotional neglect. Although more research is needed to corroborate these findings, these studies again highlight that teachers may be fairly knowledgeable about the effects of child maltreatment. Nevertheless, findings may also suggest that teacher education on related topics this area may still be warranted (e.g., identification of maltreatment outcomes across different types of maltreatment, differentiating symptoms of psychological disorders and effects resulting from maltreatment).

Factors Influencing Teachers' Responses to Maltreatment

Insufficient training and limited knowledge and skills undoubtedly influence teachers' ability to respond to child maltreatment. However, teachers' decision-making and actions in cases of child maltreatment are complex and influenced by the interplay of multiple factors, not unlike other professional groups who are opportune to respond to child maltreatment (e.g., health care professionals; Alvarez et al., 2004; Sedlak & Ellis, 2014). Indeed, numerous studies have demonstrated that teacher-, school-, and community-level factors, as well as case characteristics, can promote or hinder teachers' responses to child maltreatment (O'Toole et al., 1999; Schols et al., 2013; Vanderfaeillie et al., 2018; Walsh et al., 2008), such as their work practices and engagement in professional development on maltreatment-related issues.

At the teacher level, studies have predominantly cited the influence of teacher attitudes and beliefs, especially in relation to reporting (Abrahams et al., 1992; Alvarez et al., 2004; Dinehart & Kenny, 2015; Falkiner et al., 2017; Greco et al., 2017; Kenny, 2001a; Schols et al., 2013). Findings from a U.S. nation-wide survey of 568 elementary teachers' reporting behaviours indicated that most had fears of the legal ramifications for false allegations (63%) and negative consequences of child abuse reports (52%), such as damage to the parent-teacher and teacher-child relationship (Abrahams et al., 1992). Underreporting has also been associated with teachers' negative attitudes toward child protection and misconceptions about their role as teachers (Kenny, 2001a; 2004; Schols et al., 2013). For example, Kenny (2004) found that the vast majority of teachers (80.5%) believed they should not be mandated to report child abuse, and only 6.5% believed that child abuse is a serious societal problem. Kenny (2001a) found that one of the most common reasons for teachers' failing to report was distrust in the services offered by child protection agencies. Likewise, research has found that some teachers struggle

with their role in providing trauma-informed classroom support and wonder at what point their role ends and responsibilities of other professionals begin (Alisic, 2012; Alisic et al., 2012).

Beyond attitudes and beliefs, other individual-level factors have been found to influence teachers' maltreatment-related responses, such as teacher demographics (e.g., gender, ethnicity; Greco et al., 2017; Kesner, Kwon, & Lim, 2016) and teaching experience (Alisic et al., 2012; Walsh, Mathews, Rassa, Farrell, & Butler, 2012).

School characteristics (e.g., school size, supportive administration) have also been associated with teachers' attitudes, knowledge, self-efficacy, and behaviours related to child maltreatment (Feng, Wu, Fetzner, & Chang, 2012; Greytak, 2009; Schols et al., 2013; Vanderfaeillie et al., 2018; Walsh et al., 2008); however, these findings have typically suggested a rather limited impact and remain inconclusive. For instance, in a sample of 254 Australian teachers, Walsh and colleagues (2008) found that school characteristics contributed only a small proportion of the variance (5.2-8%) to teachers' detection and reporting of child abuse in case vignettes. In comparison, approximately one-fifth of the variance in teachers' responses was explained by case characteristics, such as maltreatment type and severity. Moreover, other studies have not found significant associations between school characteristics and teacher maltreatment-related behaviour (O'Toole et al., 1999; Vanderfaeillie et al., 2018).

The effect of community-level factors on teachers' responses to maltreatment has received little research attention. Of the few studies that do exist, contextual factors at the community level such as location (e.g., rural versus urban) and child welfare-related variables (e.g., privacy laws) have been cited (Feng et al., 2012; Schols et al., 2013), though again findings are inconclusive. Studies have also found that reporting experiences can significantly affect their willingness to report maltreatment suspicions (Alvarez et al., 2004; Schols et al., 2013; Zellman,

1991). For instance, Zellman (1991) noted instances in which educators were reluctant to report future instances of possible maltreatment because of past efforts that were received with perceived “annoyance” by child protection. However, more research is needed to corroborate these findings and to explore other community-level influences on teachers’ responses to maltreatment.

Finally, case characteristics such as family socio-demographics and cooperativeness, as well as maltreatment severity, type, and frequency, have been commonly related to teachers’ maltreatment detection and reporting (Crenshaw et al., 1995; Egu & Weiss, 2003; Greco et al., 2017; Krase, 2015; Vanderfaeillie et al., 2018; Walsh et al., 2008). For instance, cases of physical and sexual abuse tend to be detected and reported by teachers more often than emotional abuse and neglect (e.g., Vanderfaeille et al., 2018; Walsh et al., 2008). Some research also suggests that children from ethnic minority, low-income families are more likely to be referred for suspected maltreatment (e.g., Krase, 2015; Vanderfaeille et al., 2018), whereas cases involving cooperative, communicative parents are less likely to be reported (e.g., O’Toole et al., 1999; Walsh et al., 2008). However, research on the influence of family characteristics is limited.

The Need for Training of Canadian Teachers

It is highly probable that Canadian teachers are facing similar challenges as those of teachers in other countries with regard to reporting suspected child maltreatment, as well as understanding and responding to maltreatment-related effects. However, research with Canadian-based school personnel is lacking. Importantly, research in Canada has yet to investigate teachers’ awareness of maltreatment-related effects on school functioning among affected students or their knowledge and/or use of trauma-sensitive practices at school. However, several studies have explored Canadian teachers’ maltreatment detection and reporting (King, 2011;

King & Scott, 2014; Tite, 1993; Tonmyr, Li, Williams, Scott, & Jack, 2010). Drawing from a larger 1987-88 study of Ontario female teachers in elementary schools, Tite (1993) investigated the actions they would take for a series of reportable case vignettes (e.g., *a teacher suspects that a bruise on Jimmy's face may have been inflicted by his mother*), as well as actions taken by respondents who revealed experiences with children similar to those described in the vignettes. Based on a sample of 254 teachers with a mean teaching experience of 17.1 years, approximately 95% reported having dealt with past child maltreatment suspicions that were similar to those presented in each of the case vignettes. The most frequently cited experiences were those of hygiene neglect (87%), failure to provide supervision (63.6%), and bruising (54.8%). Despite almost every teacher having experienced at least one similar case during her career, findings indicated that they had formally reported few of their suspicions to child protection services. For instance, only 31.9% of the 49 teachers who revealed past suspicions related to an incest vignette indicated having made a referral to child protection services, and only 18.4% of the 138 teachers who recalled past suspicions related to bruising made a referral. For all remaining vignettes (e.g., exposure to parental violence, hygiene neglect, refusal to access psychological services), fewer than 10% of teachers who recounted similar experiences had reported their suspicions.

More recently, King (2011) sampled 245 Southern Ontario-based teachers within elementary and secondary schools about their experiences, knowledge, and attitudes regarding detecting and reporting suspected child maltreatment, as well as barriers to reporting such suspicions. Participants had an average of 7.91 years of teaching experience, and the majority were female (81%), employed in an elementary school setting (78.4%), and teaching in a regular classroom (69.7%). Findings indicated that reporting experience was fairly common within this sample (51.7%). Regarding perceived competence in detecting child maltreatment, results

indicated that teachers were most knowledgeable in identifying signs of physical abuse (71%) and neglect (62%) compared to other forms of child abuse. In contrast, fewer than half of the teachers reported being aware of the signs of emotional abuse (46.2%), exposure to intimate partner violence (42.4%), and sexual abuse (40.7%). With regard to reporting issues, approximately two-thirds of teachers (68%) indicated being aware of their school's procedure for reporting suspected child maltreatment. Although the majority of teachers (83%) were supportive of child protection services, only 61% indicated that they would report suspected child maltreatment outside of the school, and 25.0% revealed instances in which they had failed to report their suspicions. The majority of teachers (63.5%) reported feeling unprepared from their overall training in the area of child abuse (at the pre-service level or through ongoing professional development) to be able to detect and report suspected maltreatment.

Several studies have also investigated trends in maltreatment case characteristics identified by Canadian teachers (King & Scott, 2014; Tonmyr et al., 2010). Considering 7,725 cases of suspected maltreatment referred to child protection services across Canada by diverse professional groups, King and Scott (2014) found that teachers were more likely to report cases involving significant child functioning problems (e.g., aggression, irregular school attendance) but less likely to report suspicions involving caregiver risks (e.g., alcohol abuse) and family or demographic risks (e.g., unsafe housing conditions). Additionally, in a study of substantiated cases of maltreatment across Canada, Tonmyr and colleagues (2010) found that non-health care professionals (mostly teachers) were significantly more likely to report cases of physical abuse and exposure to intimate partner violence.

In summary, the generalizability of existing international literature to Canada may be limited as legal regulations regarding child maltreatment reporting differ vastly across countries

(Mathews & Kenny, 2008). Despite the utility of the few studies that do exist in Canada, further research with other Canadian-based samples is needed to verify the validity and representativeness of findings on teachers' responses to child maltreatment. Although some Canadian data have confirmed the accuracy of teachers' knowledge regarding reporting procedures and maltreatment indicators, no sources have confirmed their awareness of the potential effects of these adverse experiences on learning and classroom behaviour or their knowledge and use of trauma-sensitive practices at school. Canadian research has also yet to rigorously explore diverse factors influencing teachers' responses to maltreatment. This dearth of research is concerning given the high occurrence of child maltreatment in Canada (Fallon et al., 2015) and the often debilitating, long-term consequences. Research on these issues would be invaluable to help guide future training for teachers about child maltreatment, which currently appears to be perceived by most teachers as inadequate.

Study Objectives

Prior to developing a child maltreatment-focused training for Canadian-based teachers, the current study aimed to better delineate local teachers' training needs because it helps verify (1) what local teachers already know and think about a given topic, which then informs the type of educational content that is needed and (2) what can be done to make training more accessible and useful to local teachers, which can impact recruitment and adherence to the training program as well as implementation of new knowledge (Khalil & Elkhider, 2016; Kirkpatrick & Kirkpatrick, 2007). Thus, the primary purpose of Study 1 was to conduct a needs assessment with diverse stakeholders around a training curriculum for local elementary school teachers regarding child maltreatment.

The specific objectives of this study were to assess teachers' training needs based on

feedback from stakeholders who work closely with teachers, namely school social workers, child welfare practitioners, and foster caregivers of children who have experienced maltreatment. It is important to gather information from individuals who collaborate with teachers to support maltreated children, as teachers may not fully recognize their limitations in responding to maltreatment-related issues. Comparing perspectives among multiple informant groups that have direct involvement with teachers could also identify similar as well as diverse experiences among professionals that expand our understanding of the need/problem. It should be noted that Study 1 also originally aimed to recruit local elementary school teachers; however, access to teachers was not possible after two unsuccessful applications to a research advisory committee that grants access to school staff for non-board initiated research in two local school boards. Instead, this information was gathered from teachers during phone interviews following child maltreatment training (Study 2). Findings from this study were considered in the development of the training curriculum and implementation plan described in Study 2.

Findings from this study were also used to identify supportive factors and barriers at the individual level (e.g., teacher attitudes and beliefs), within local schools and school boards, and within systems influencing educational outcomes for maltreated children (i.e., child welfare, family). Diverse influencing factors were explored for several reasons: (1) existing research suggests that factors at each of these levels may influence the implementation of the training, teachers' participation in training, and teachers' use of maltreatment-related knowledge and skills (King, 2011; Schols et al., 2013; Vanderfaeillie et al., 2018; Walsh et al., 2008, 2012); and (2) guiding behavioural and cognitive learning theories suggest that both environmental and learner characteristics are influential in the learning and change process for complex behaviours, such as teachers' maltreatment-related responses.

Methods

Participants and Recruitment

A multi-informant, primarily qualitative design was used to assess the training needs of elementary school teachers. This study relied on information gathered from three informant groups, namely school social workers (focus groups), child welfare practitioners (focus groups), and foster caregivers of children with maltreatment histories (questionnaires). Although the training program was intended for elementary school teachers, understanding the training needs of teachers in the context of their relationships with other key stakeholders within and outside the school system was important. For instance, teachers' ability to support maltreated children is potentially influenced by their interactions with caregivers, as well as the availability of support within the school and from other community partners (e.g., child welfare). This multi-informant method also facilitated validation of the data through cross verification from multiple sources.

School social workers were included in the current needs assessment given their experience intervening with maltreated children in schools, as well as their role supporting teachers who are trying to meet the unique educational needs of these children. After receiving ethics approval from the University of Ottawa (REB #H11-14-05, approval May 6, 2015; Appendix B), participants were recruited from two local English school boards with written permission from the chief social workers for each board. Once permission was obtained, I delivered a short presentation about the study to social workers as part of their monthly meetings; the study's purpose and methodology were reviewed, and an invitation to participate was extended. Following this presentation, social workers who agreed to participate were asked to provide their name and contact information on a sign-up sheet, following which an information letter/consent form (Appendix A), as well as the time, date, and location of the focus

group session were sent to them by e-mail. School social workers included in the study were required to have at least two years of experience working in the education sector (i.e., to ensure they were fairly experienced in working with teachers), as well as an ability to understand and communicate in English.

In the end, 19 eligible school social workers participated in a focus group specific to members of each school board (two focus groups; $n = 10$ and 9 from each). This sample size surpassed the original goal of recruiting 7-12 social workers, which was originally established because it is consistent with similar research employing these methods (e.g., Walsh & Farrell, 2008) and has been found by other researchers to be sufficient in qualitative analysis to identify core themes (Guest, Bunce, & Johnson, 2006). Group sizes also aligned with what is commonly cited in the literature, namely a minimum of 4 and a maximum of 12 participants per group (Carlsen & Glenton, 2011).

School social workers were predominantly female (78.9%). Years of experience as a social worker in the education sector ranged from 2 to 34 ($M = 10.39$, $SD = 9.20$), with 2 participants (10.5%) working in elementary schools, 2 (10.5%) in secondary schools, and 13 (68.4%) in a mix of both. The remaining two participants (10.5%) were supervisors of social workers in each of their respective boards (i.e., they were not currently working in any particular school). For school social workers who provided information about additional work experience ($n = 15$) as a social worker or in other roles (e.g., child protection worker), total years of experience working with maltreated children ranged from 7.5 to 40 ($M = 20.63$, $SD = 10.15$). All school social workers had training and experience related to child maltreatment as an employee of the school board (e.g., on-the-job experience with maltreated children, training by a child welfare agency on signs and impacts of child maltreatment). Moreover, the majority of

participants (89.5%) described additional maltreatment-related training and/or experience from previous roles (e.g., past employee of a child welfare agency, trauma-focused intervention training as a past employee in a community mental health setting). However, none of the participants described having received training on how to support children with maltreatment histories at school (i.e., trauma-sensitive school practices), including while employed in the education sector or in other settings.

Child welfare practitioners were invited to participate because of their direct involvement with maltreated children within and outside of the school environment. They also have knowledge of current child welfare policies as well as experience working with school staff to meet the educational needs of maltreated children. After receiving ethics approval from the university (Appendix B), participants were recruited from a local child welfare agency with written permission from, and in collaboration with, the mental health service director. I delivered a short presentation about the study to child welfare practitioners as part of their monthly meetings. The purpose, context, and methodology of the study were reviewed, and a formal invitation to participate was issued. Practitioners who indicated interest in the study were asked to contact the mental health service director, following which they were given an information letter/consent form (Appendix C), as well as several dates for upcoming focus group sessions. Child welfare practitioners included in the study were required to have two or more years of experience working directly with children in child welfare (i.e., to ensure they were fairly experienced in working with schools), as well as the ability to understand and communicate in English. Nine practitioners who met the inclusion criteria participated in one of two focus group sessions ($n = 4$ and 5 in each). This sample size was in line with the goal of recruiting 7-12 child welfare practitioners using the same rationale outlined above for school social workers.

Child welfare practitioners were predominantly female (77.8%), with years of experience in child welfare ranging from 8 to 21 ($M = 13.78$, $SD = 4.32$). Most practitioners were child and/or family support workers (66.7%), followed by child protection support workers (33.3%). All practitioners worked with children in care, including Crown Wards who have been permanently removed from the care of their biological parents. Several also worked with caregivers (55.6%) or youth between 18 to 21 years (44.4%) who had aged out of care but were continuing to receive services from the agency. All practitioners described on-the-job experience working with school staff to support children with maltreatment histories, and two of the participants (22.2%) described additional experience working with schools in other capacities (e.g., participated in partnering seminars with school board representatives to explore how school and child welfare systems could work more efficiently together, delivered training to schools about duty to report).

Foster caregivers were included because of their diverse experience working with teachers and other school staff to support the academic, psychological, and behavioural needs of children who have experienced maltreatment (e.g., interaction at parent-teacher interviews). Given their role as a temporary parent for children who cannot live safely with their own parents, foster caregivers also tend to have more varied experience supporting the needs of many children with maltreatment histories (and therefore more varied experience working with teachers), compared to biological parents who may only have experience with their own child. Self-report questionnaires were used to gather training needs information from foster caregivers, rather than focus groups. This strategy was adopted to mitigate any potential disclosure of details regarding their child's maltreatment experiences and to instead keep them focused on training needs.

After receiving university ethics approval (Appendix B), foster caregivers were recruited

from a local child welfare agency with written permission from the mental health service director and in collaboration with agency personnel. Two different recruitment procedures were used. First, a recruitment letter (Appendix D) for an online questionnaire was sent via e-mail to all foster caregivers on the current distribution list at a local child welfare agency; however, an insufficient number of interested caregivers were reached using this method. Subsequently, I delivered a brief presentation about the study to caregivers at the agency, during which time I reviewed the purpose and methodology of the study. Caregivers who agreed to participate were provided with an information letter/consent form (Appendix E) and a paper version of the questionnaire. All caregivers who participated confirmed that at least one child currently in their care had a history of abuse and/or neglect and was enrolled in elementary school (i.e., Kindergarten to Grade 8). The desired number of foster caregivers was 20-30. In the end, considering both online and paper methods, complete data was collected for 21 foster caregivers of maltreated children in elementary school.

Foster caregivers were predominantly mothers (85.7%), and caregiver age ranged from 31 to 70 years ($M = 47.3$; $SD = 11.0$). The majority of caregivers had one foster child with a maltreatment history living in the household (66.7%), followed by two (19.0%) and three (14.3%) foster children. For caregivers who provided information about their employment background ($n = 17$), the majority were employed outside the home on a part-time or full-time basis (50.0%), followed by not employed outside the home (28.6), retired (14.3%), and recovering from an illness or disability (7.1%). Regarding school-related demographics, the majority had children in their care who were currently attending schools in urban communities (83.3%) that primarily served advantaged families (77.8%).

Measures

Focus group guides for school social workers and child welfare practitioners (Appendices F and G), as well as the foster caregiver questionnaire (Appendix H), were developed specifically for the study and tailored according to the specific participant group. The development of measures was guided by existing literature on gaps in maltreatment-related knowledge and skills among teachers (e.g., Alvarez et al., 2004; King, 2011), as well as by research on multi-level factors that might influence teachers' use of maltreatment-related knowledge and skills (e.g., Schols et al., 2013; Vanderfaeillie et al., 2018; Walsh et al., 2008, 2012). The number of questions asked of participants differed according to the amount of direct contact they have with teachers and the methods of data collection (i.e., between 9 and 17 questions across the groups).

Similar themes were explored in the focus groups and the questionnaire to facilitate consistency in the information gathered across the groups and to validate the data through cross verification from multiple sources. Specifically, all participants provided information about (1) teacher training needs (e.g., *What content would be important to cover in a training curriculum for teachers about child maltreatment?*) and (2) each participant's relationship with teachers in supporting the educational needs of maltreated children (e.g., *Please describe the current relationship between social workers and teachers in supporting children who have experienced maltreatment at your school*). Due to their expertise in the areas of mental health interventions for students and the provision of support to families facing hardship, school social workers and child welfare practitioners were also asked to comment on how the relationship between child welfare and schools was supporting the educational needs of maltreated children (e.g., *In your opinion, is the current relationship between child welfare professionals and school personnel*

meeting academic needs of maltreated children? If yes, how is this relationship supporting their academic needs?). Foster caregivers who indicated that the school was aware of their child's maltreatment experiences also described the kinds and quality of support provided by the school in response to this information (e.g., *How did the school respond to the information about your child's abuse and/or neglect experience(s)?*).

Procedures

Training needs information was collected from child welfare practitioners using two semi-structured focus groups conducted at a local child welfare agency. Prior to attending the focus group, the items to be discussed were e-mailed to child welfare practitioners who agreed to participate, as requested by the mental health service director. At the beginning of each focus group, I again reviewed the consent form as well as the study's purpose and guidelines to help the discussion proceed smoothly. Written informed consent was then obtained from each participant. During the discussion, I used the written focus group guide (Appendix F) to facilitate the discussion and ensure all topic areas were covered. Each participant was strongly encouraged to respond to each item. Open-ended questions and queries were used to facilitate further discussion as needed. Each session was audio-recorded and lasted between 60-75 minutes.

Similarly, training needs information was collected from school social workers using two semi-structured focus groups conducted in school board offices. However, the focus group discussion items were not provided in advance (as requested by the chief social workers for each board) but instead were provided to participants at the beginning of the focus group after I reviewed the consent form, study purpose, and discussion guidelines. Written informed consent was then obtained from each participant. During the discussions with school social workers, I again used a written guide (Appendix G) to facilitate the discussion and ensure all topic areas

were covered. Each participant was encouraged to respond to each item. Open-ended questions and queries were used to facilitate further discussion as needed. Each session was audio-recorded and lasted between 60-75 minutes.

For foster caregivers, the questionnaire (Appendix H) was available in both an online and paper format. In the online version, the first page was a consent form, in which participants were asked to click a button indicating they read and understood the form and agreed to participate in the study. For caregivers who completed a paper copy, the consent form was provided and reviewed in person, and then written informed consent was obtained. After consent was obtained (online or written), caregivers were asked to select a category number for their child's school from a list of schools in the urban region and surrounding rural areas, which established general demographic information about the school community without identifying the school. The categories for this list were as follows: (1) urban/advantaged; (2) urban/disadvantaged; and (3) rural/advantaged schools. This list was first established using existing research on the region's neighbourhood characteristics (Parenteau et al., 2008), following which it was reviewed by two school board representatives on the current study's Advisory Committee who were familiar with the demographics of the schools in their respective school boards. After selecting a school category, participants completed the questionnaire, which took approximately 10-15 minutes.

Advisory Committee

Decision making during the development and implementation phases of Study 1 occurred in conjunction with community-based child welfare and education representatives who agreed to be members of an Advisory Committee for this dissertation. The mandate of this committee was to provide guidance and resources in the following areas: gaining access to the education and child welfare sectors for research; developing recruitment strategies; helping establish and

review training curriculum content; and guiding the training implementation process. At the outset of Study 1, the mental health service director from a local child welfare agency was approached to represent the child welfare sector because of her vast experience with local initiatives on improving educational outcomes for children in out-of-home care. For the education sector, the chief psychologists from two local English school boards were invited because of their expertise and vast experience with current mental health operations, policies, and training in their respective school boards. These psychologists also had regular involvement with a local school board research advisory committee and as such, were instrumental to securing access to the teachers for purposes of delivering the training curriculum. Chief social workers from two local English school boards were also invited to be committee members because of their vast experience in schools as social workers and as supervisors for current school social workers, as well as their expertise providing mental health training and support to other school staff. Finally, a representative from the provincial office of education was invited considering her knowledge of province-wide education policies and initiatives (including how they were being implemented locally). This individual also had extensive experience in education, including previous roles as a teacher, consultant, vice principal, principal, and superintendent of schools.

Data Analysis

Descriptive analyses (e.g., means) were used to summarize quantitative data about each sample's socio-demographic characteristics. Descriptive analyses were also used to summarize the quantitative data collected in the caregiver-completed questionnaires, namely priority ratings for training needs on a 10-point scale across specific training content areas. All descriptive analyses were conducted using SPSS 23.0.

Content analysis was used to summarize qualitative information gathered from the focus groups with child welfare practitioners and school social workers, as well as open-ended items included in the caregiver-completed questionnaires. A more directed approach to content analysis (termed “directed content analysis”; Hsieh & Shannon, 2005) was selected for this study in order to 1) condense extensive raw data into a summary format, 2) establish clear links between research questions and summary findings derived from raw data, 3) validate and/or extend existing research, and 4) produce reliable and valid findings by following a systematic set of procedures. Specifically, this deductive approach was selected given the lack of theory in this specific area and therefore the need to validate/extend existing research and possible guiding theories (i.e., behaviourism and cognitivism), which suggest that diverse environmental and individual characteristics are important influencing factors for complex behaviours such as teachers’ maltreatment-related responses.

Prior to analyzing information gathered through the focus groups, verbatim transcriptions were made from the audio-recordings. Existing research summarized in the introduction of this study was used to determine categories (e.g., knowledge & skills) and subcategories of interest (e.g., trauma-sensitive practices). Two reviewers (K. Weegar and a research assistant) independently examined the transcripts to identify sections of content (codes) with a similar meaning or connotation (explicit or implicit). Then, the two reviewers attempted to fit these emergent codes within each of the predetermined categories and subcategories. For example, the code “need maltreatment training for other school professionals” may have emerged if a participant stated that other school personnel need maltreatment training (explicit) or if a participant spoke about how a barrier to teachers’ use of maltreatment-related skills is the lack of awareness about maltreatment-related issues among other staff (implicit). Following independent

parallel coding, the two reviewers engaged in consensus coding by reviewing codes and reaching agreement on common codes and on representative quotations. Given the lack of research on the topic, particularly for theoretical and/or conceptual frameworks, I chose consensus coding to find subjective agreement (rather than objective inter-rater agreement to validate codes generated by one reviewer) to encourage greater flexibility in the analysis. In other words, I believed there was potential value in having multiple perspectives (two independent reviewers) on the coding of the data. Some of the emergent codes did not fit well in the predetermined category and subcategory scheme, so some of the subcategories required further refinement and new subcategories were established where needed. Reviewers also actively searched for discrepant evidence or negative cases that did not concur with what had been concluded to better ensure that important information was not overlooked due to researcher bias (Aherns, 1999; Maxwell, 1998). To further minimize bias, a third reviewer (thesis supervisor) was consulted to review all findings that emerged following independent and consensus coding.

For the qualitative data gathered through the foster caregiver questionnaire, independent parallel coding then consensus coding was also used. Again, coding was initially used to sort data into predetermined categories and subcategories (e.g., reporting-related gaps), followed by more in-depth coding to identify specific codes (e.g., failure to report maltreatment suspicions in a timely manner or all). For all qualitative data, code frequencies were calculated and ranked in order to highlight more common experiences and views (Hsieh & Shannon, 2005). In addition, only the codes discussed by more than one participant were presented. Qualitative analysis was supported using QDA Miner. Table 1 lists the final categories and subcategories, as well as accompanying codes.

Table 1

Categories, Subcategories, and Codes for Study 1 Qualitative Data

Categories & subcategories	Codes
<u>Knowledge & skills</u>	
Detection	Gap in knowledge/skills: child maltreatment signs
Reporting	Existing knowledge/skills: training regarding duty to report, timely child maltreatment reporting Gap in knowledge/skills: duty to report, failure to report maltreatment suspicions in a timely manner or all, child welfare-related responsibilities, responses to disclosures of child maltreatment, over-reporting
Trauma-sensitive practices	Existing knowledge/skills: trauma-sensitive practices, impact of maltreatment and related outcomes on school functioning Gap in knowledge/skills: trauma-sensitive practices, impact of maltreatment and related outcomes on school functioning, impact of maltreatment on brain development, stigma toward students and families with maltreatment histories at school, available supports in schools/school boards, teachers' role in supporting maltreated children
<u>Influencing factors</u>	
Training participation	Teacher: willing to learn and motivation to help maltreated children, overburden and limited resources, attitudes and beliefs, time commitment School: school board priorities Training elements: delivery methods, implementation strategies
Maltreatment-related work behaviour	Teacher: motivation to help maltreated children, attitudes and beliefs, overburden and limited resources School: school board priorities, need maltreatment training for other school professionals, teacher-social worker collaboration, inadequacies in existing educational resources Community: school-child welfare collaboration, school community demographics Case: teacher-foster caregiver collaboration

Results

A number of codes emerged from the data. Foremost, there was unanimous agreement within and across all three participant groups that there is a need for improved teacher training about child maltreatment. Qualitative codes (Table 1) and quantitative training content priorities (Table 2) were organized to address three key questions to better understand the intricacies of this need. The questions were as follows: (1) What gaps exist for teachers regarding maltreatment-related knowledge and skills? (2) What factors may influence delivery of child maltreatment training to teachers? (3) What factors may influence teachers' use of maltreatment knowledge and skills?

Teachers' Maltreatment-Related Knowledge and Skills

Child welfare practitioners and school social workers described knowledge and skills that both existed and were missing among teachers for various child maltreatment topics. Qualitative codes were categorized according to knowledge and skills in the areas of detection, reporting, and trauma-sensitive practices. Foster caregiver perspectives were explored within each of these areas to highlight similarities and differences in opinion, using both quantitative and qualitative questionnaire data.

Detection. Based on the reports of child welfare practitioners and school social workers, detection-related needs (rather than existing knowledge) emerged. Both school social workers ($n = 6$, 31.6%) and child welfare practitioners ($n = 2$, 22.2%) noted that teachers have limited knowledge of child maltreatment signs, including physical (e.g., bruises, malnourished) and behavioural signs (e.g., withdrawal, hypervigilance). For example, school social worker 15 commented: "How to identify bruises that are in abnormal spots or common signs and symptoms or things kids say." Likewise, child welfare practitioner 9 explained: "Other signs can be a little

Table 2

Child Maltreatment Training Content Ratings from Foster Caregiver Questionnaires (n = 21)

Training content area (ranked according to mean score) ^{a,b}	Mean	SD	Range	Ratings 9/10 or 10/10	Ranking
Ways that the classroom teacher can support children who have experienced maltreatment	9.52	0.87	7-10	85.72 %	1
The role of schools in supporting children who have experienced maltreatment	9.47	0.87	7-10	85.72 %	2
Ways that school employees (e.g., teachers) can support themselves so they are more able to assist children with maltreatment histories	9.29	1.06	6-10	77.95 %	3
Signs that a child may be experiencing maltreatment	9.20	1.61	4-10	80.00 %	4
Different types of child maltreatment	9.20	1.96	4-10	75.00 %	4
Reporting suspected child maltreatment	9.15	1.66	4-10	80.00 %	6
How child maltreatment might affect a child's <i>behaviour in the classroom</i>	9.14	1.46	5-10	80.95 %	7
How child maltreatment might affect a child's <i>relationships with others (e.g., teachers, peers)</i>	8.90	1.58	5-10	76.19 %	8
How child maltreatment might affect a child's <i>grades</i>	8.90	1.80	4-10	70.00 %	8
How children of different ages might react to child maltreatment	8.80	1.96	4-10	70.00 %	10
How often child maltreatment happens	8.37	2.24	3-10	63.15 %	11

^aContent areas predetermined based on current research literature on child maltreatment and training needs for teachers (summarized in the introduction for Study 1) and existing training and resources for teachers and other school professionals (Appendix I). ^bFoster caregivers rated the importance of each content area for teacher training on a scale from 1 to 10 (1 = Not important; 5 = Somewhat important; 10 = Very important).

bit harder to understand, like why the kids, you know, are holding the teacher's hand literally all day or the opposite ... you know, pushing everybody away or bullying, right?"

Detection-related needs among teachers were also a prominent finding for foster caregivers. When asked to rate how important it would be to deliver training on the different types and signs that suggest a child may be experiencing maltreatment, the average priority rating for each (i.e., types, signs) was 9.2 out of 10, with 75% and 80% of caregivers rating these areas 9 or 10 out of 10, respectively. These ratings placed types and signs of maltreatment among the top five maltreatment training content areas for teacher training, according to foster caregivers (Table 2).

Reporting. The qualitative codes for existing teacher knowledge and skills around reporting child maltreatment included 1) training on duty to report and 2) reporting in a timely manner. One child welfare practitioner (11.1%) and three school social workers (15.8%) noted that teachers have received training regarding their duty to report. School social worker 10 commented: "We've saturated these schools with training about [duty to report] and the policy has been, you know, um, circulated widely." Two school social workers (10.5%) also described teachers who were reporting suspicions of maltreatment in a timely manner. However, child welfare practitioners did not share this opinion.

In contrast to knowledge and skills, both school social workers and child welfare practitioners more frequently noted reporting needs among teachers. These needs included 1) knowledge about important duty to report elements, 2) reporting in a timely manner or at all, 3) knowledge of child welfare-related responsibilities, 4) responding to disclosures of child maltreatment, and 5) over-reporting. Foremost, child welfare practitioners (n = 5, 55.5%) and school social workers (n = 9, 47.4%) noted that teachers have limited knowledge regarding

important elements around their duty to report, such as how, what, and when to report. School social worker 10 described:

I think it would be important for any curriculum to, uh, again enunciate reporting protocol. What it is, what the legal responsibilities are for teachers ... because there is a reluctance for people to report and it's amazing how even though we've saturated these schools with training about it and the policy has been, you know, um, circulated widely, you still run into teachers and even principals and administrators on a pretty frequent basis where they're like "oh really, so you think I should call?"

Along these lines, participants from both groups also commented on the importance of role distinction, namely a teacher's role as a reporter and not an investigator. Child welfare practitioner 8 commented:

I tell [teachers] the same thing all the time ... I think there should be [training] on duty to report ... I'm like a broken record. "Don't worry. It's your job to report information as you see it. It's our job to make the judgment and to do the investigation. So, just tell me what you saw, no opinion attached to it, nothing ... we'll do the dirty work."

The majority of child welfare practitioners (77.8%) and roughly one-third of school social workers (31.6%) shared that some teachers are not reporting maltreatment suspicions in a timely manner or at all. Child welfare practitioner 6 noted: "It still is quite shocking the delay in reporting." Likewise, social worker 13 highlighted one of the reasons teachers may not be reporting: "[Teachers are] not calling because they want to preserve the relationship with that parent." On the other hand, two child welfare practitioners (22.2%) believed that some teachers are over-reporting, although this sentiment was not echoed by school social workers. Child welfare practitioner 8 explained:

I find when people don't have the experience with our kids, everything is reported and then it just creates a real sort of divide between how we all work together. You know, for example, um, a gentleman walked into the school to pick up his child and [the teacher] smelled beer off his breath but she said, “He wasn't visibly intoxicated. There was no real issues or anything like that, but I have a duty to report any type of suspicious behaviour that may be concerning, right?”

Child welfare practitioners (n = 6, 66.6%) and school social workers (n = 5, 26.3%) also believed that teachers have limited knowledge about child welfare-related responsibilities, such as what happens in child welfare during and following a child maltreatment report. School social worker 5 elaborated on what teachers need to know: “What they can expect from [child welfare] in terms of their response so they know what to look at, what they can expect from it ... and all the facts, that not all children are taken for a long time.” Along these lines, several participants from both groups also believed that teachers need greater understanding about the justification for child welfare involvement. School social worker 4 commented:

More about being realistic about the system, about child welfare ... the parameters, like somebody will mention, “Why isn't that child apprehended?” ... Assumptions are sometimes made on how the system works and that rescuing them and putting them in a foster home is what needs to happen and ... it's not always the best solution.

Five school social workers (26.3%) also shared that teachers need support with responding to disclosures of child maltreatment, such as what to do and what to avoid when a child discloses details about maltreatment, as well as how to cope following a disclosure. Child welfare practitioners did not report a need in this area.

Foster caregivers were asked to rate how important it would be to deliver training on

reporting suspected maltreatment. The average rating was 9.2 out of 10, with 80.0% of caregivers rating the priority of this topic as 9 or 10 out of 10. This mean rating placed reporting as 6th out of 11 training content areas to cover with teachers (Table 2). Foster caregiver 11 elaborated: “I think the key [for teachers] is the importance of continuing to report even if they don't feel that they are being heard.” In contrast, when asked to describe how the school responded to a maltreated child in her care, one foster caregiver (4.8%) described the teacher immediately reporting her suspicions for that child, similar to two school social workers that described teachers who were reporting in a timely manner. Consistent with school social workers and child welfare practitioners, another foster caregiver (4.8%) also highlighted the need to improve awareness among teachers regarding the role and responsibilities of child welfare. However, several training needs identified by school social workers and/or child welfare practitioners did not emerge for foster caregivers, including needs related to over-reporting, not reporting in a timely manner or at all, and responding to disclosures of child maltreatment.

Trauma-sensitive practices. When discussing current trauma-sensitive practices among teachers with school social workers and child welfare practitioners, emergent codes for existing knowledge and skills included 1) use of a variety of trauma-sensitive strategies and 2) knowledge of how maltreatment impacts school functioning. Almost all child welfare practitioners (n = 8, 88.9%) and three school social workers (15.8%) shared that some teachers and school staff are using a variety of trauma-sensitive strategies, including introducing academic and non-academic accommodations, focusing on the relationship before behaviour management, teaching emotion regulation skills, supporting caregivers of maltreated children, seeking support, embracing teamwork, and securing linkages to community supports. Along these lines, child welfare practitioner 2 described a recent example where various trauma-sensitive strategies were

implemented to benefit a youth:

This new youth, he is still struggling a little bit but [teachers and other school staff] are slowly integrating him in to his school so he goes out for part of the day, he comes back. If he starts to struggle, they pull him back and they help give him the skills he needs to be successful. And he had an excellent report card this year because they take the time to get to know the kids, to give them the tools that they need to be successful, and to be patient with them in learning those skills and in trying them out. And it's not the end of the world if [the youth] is not [academically] successful. They just try again, and so it's always a learning process.

Child welfare practitioner 1 also shared a recent case example: “[In the classroom] he learned zones. He learned how to tell when he was starting to escalate ... he learned tons of skills to help understand his own self-regulation.” From the perspective of school social workers, social worker 12 commented on teachers’ motivation to seek support from others: “Teachers will contact me directly, um, a lot. I find recently, teachers have been reaching out in terms of how to yield it, like teaching strategy wise, how to support kids who have been through trauma in their classes.” One child welfare practitioner (11.1%) also described how teachers in one school exhibited knowledge of how maltreatment and related outcomes (e.g., child welfare involvement) impact school functioning.

In contrast, qualitative codes related to training needs around trauma-sensitive practices included 1) knowledge and skills related to trauma-sensitive practices, 2) knowledge of how maltreatment and related outcomes (e.g., child welfare involvement) impact school functioning, 3) knowledge of how maltreatment impacts brain development, 4) stigma toward students/families with maltreatment histories, 5) knowledge of supports available within

schools/school boards, and 6) knowledge of the significance of teachers/schools in supporting maltreated children. Although most child welfare practitioners and several school social workers described existing trauma-sensitive practices in schools, almost all child welfare practitioners (n = 8, 88.9%) and the majority of school social workers (n = 10, 52.6%) also reported that teachers and school staff have limited knowledge and skills related to trauma-sensitive practices.

Specifically, both school social workers and child welfare practitioners reported that teachers need greater knowledge about such strategies as focusing on building relationships, using a strengths-based approach, fostering feelings of safety, supporting caregivers of maltreated children, accommodating both academic and non-academic needs (e.g., socio-emotional), and maintaining boundaries. School social worker 18 commented:

I think, ah, that definition and differentiation of roles is important in training as well because I don't think teachers should be trying to be counselors or mental health workers, right? [...] I think the message there is it's not the expectation that you're acting as the mental health experts but just operating from sort of a basic level of understanding because [...] kids manifest their mental health issues at school and [teachers] have key relationships with the kids.

Along these lines, child welfare practitioners and school social workers also shared examples of teachers using practices that they believed were not trauma sensitive, such as behaviour management strategies (e.g., punishment, time out). For instance, child welfare practitioner 2 explained: “[Schools] are pretty quick to [punish]... like really, just give the child a chance to adjust or do something or allow us to support... but I find they are too quick in terms of using suspension and all that.”

Most school social workers (n = 10, 52.6%) and child welfare practitioners (n = 7,

77.8%) reported that teachers have limited knowledge of how maltreatment and related outcomes (e.g., child welfare intervention) impact school functioning, including learning, behaviour, and relationships at school. In terms of behaviour, child welfare practitioner 2 shared:

I think [teachers] need to be aware that kids will be dealing with a lot of his own or her own emotions and coming from a personal home to a total stranger or group home and trying to adjust there, as well as go to school ... asking this child to perform very well is hard. There's a lot that the kids' mind is trying to deal and cope with. So I think [teachers] need to be aware of that and be more, you know, understanding.

Likewise, school social worker 7 commented:

One thing I've heard from teachers is that the child is manipulating them or the child is choosing this behaviour, so just working with teachers around that and sort of ... trying to look at those statements and what's ... give them another perspective. Not just taking the behaviour for its face value but really what's driving that.

In terms of the impact of maltreatment on relationships, several participants from both groups alluded to the need for teachers to understand the role of attachment. For example, social worker 4 noted:

Understanding the attachment piece ... what trauma with these kids means a couple years later and why they're having difficulties with their teachers and with their relationships or any changes or transitions, especially when it's, um, when [maltreatment] is something historical. When it's not in the present, then the teachers sometimes just don't put it together that that's impacting [the student] later.

These findings are important considering existing literature on trauma-sensitive practices that emphasize understanding the experience of a maltreated child as an important trauma-sensitive

intervention in and of itself (i.e., teachers with this in mind will more likely have empathy for the child, which then helps them to respond in more trauma-sensitive ways; Cole et al., 2005; Chafouleas et al., 2016).

For other findings related to trauma-sensitive practices, five child welfare practitioners (55.6%) and four school social workers (21.1%) expressed that teachers have limited knowledge of how maltreatment impacts brain development, and suggested training in this area could be helpful in understanding trauma-related behaviour at school. Child welfare practitioners (n = 4, 44.4%) and school social workers (n = 2, 10.5%) also expressed that students and families with maltreatment histories feel stigmatized at school, especially when there is child welfare involvement, which may negatively impact perceived sense of safety and inclusion. Child welfare practitioner 2 commented: “Once [teachers] know [students] are from a group home, I think how a teacher talks to them is really different than any other kids.” In terms of stigma toward families, child welfare practitioner 1 added:

When the parents come with the [child welfare] worker attached to them, um, or the school knows that [child welfare] is involved with them, [parents] become stigmatized too. So the parents then become that ... under that microscope and, you know, has that, um, prejudice against them just like our kids coming from group homes, right?

School social workers also believed that teachers have limited knowledge of supports available in their own schools/school boards (n = 6, 31.6%), as well as limited knowledge of the significance of their role in supporting maltreated children (n = 2, 10.5%). Regarding the latter, social worker 5 emphasized:

Just the importance of their role and just the protective things they can do to make the child more resilient you know. They have a protective role. Also making those personal

connections with kids ... that's really important in terms of the things they do every day that are really helpful.

Turning to the data collected from foster caregivers, their mean content priority rating for trauma-sensitive practices and for the role of schools in supporting maltreated children was 9.5 out of 10 for both topics, making them the most important ones to cover (Table 2). Nevertheless, similar to school social workers and child welfare practitioners, foster caregivers reported conflicting experiences around teachers' existing knowledge and skills ($n = 7$, 33.3%) and around teachers' gaps in knowledge and skills ($n = 10$, 47.6%). For instance, foster caregiver 10 shared: "The schools have done a great job of supporting and building a relationship with my foster son. He has flourished with a teacher that expects him to learn, behave, be respectful, and take risks." On the other hand, foster caregivers reported teachers needing more training on using trauma-sensitive strategies (e.g., creating a warm and safe environment) and avoiding practices that they believed were not trauma-focused (e.g., not communicating with other support staff in a timely manner). One foster caregiver (4.8%) also described the need to reduce stigma at school toward one of the children in her care.

Similar to school social workers and child welfare practitioners, data from foster caregivers suggest that teachers' understanding of the experience and impact of child maltreatment may be another important training need related to trauma-sensitive practices. When foster caregivers were asked to rate the importance of training on how maltreatment affects children's functioning in different ways at school, the average content ratings out of 10 were as follows (in order from most to least important): classroom behaviour ($M = 9.1$); relationships with others (e.g., peers, teachers; $M = 8.9$); and grades ($M = 8.9$). Interestingly, maltreatment-related impacts did not rank among the top 5 content areas for teacher training according to

foster caregivers (Table 2). Average foster caregiver ratings for age-related maltreatment effects ($M = 8.8$) and maltreatment occurrence ($M = 8.3$) were also rated slightly lower, rendering them the least important topics to cover with teachers. However, qualitative findings from foster caregivers were again conflictual in this regard. Two foster caregivers (9.5%) shared experiences that highlighted teachers' understanding of maltreatment-related behaviour, whereas four caregivers (19.0%) reported experiences that suggested the opposite. Foster caregiver 13 shared:

I had a comment from a teacher about my foster child misbehaving. After explaining that he is going through a lot, the teacher responded that he could not use that as an excuse forever. I think teachers have to know that just because the child is now in care, [it] does not mean that the situation is still not ongoing and stressful for the child.

Consistent with other findings, one foster caregiver (4.8%) also believed that teachers need more training on how maltreatment impacts brain development.

Influencing Factors

Limited knowledge, confidence, and skills are key barriers that influence teachers' ability to detect, report, and respond to child maltreatment and related outcomes (Kenny, 2001a, 2004; King, 2011). In addition, teacher attitudes and beliefs, as well as other teacher-, school-, case- and community-level characteristics, can promote or hinder teachers' responses to child maltreatment (Alvarez et al., 2004; Schols et al., 2013; Walsh et al., 2008, 2012), including their motivation and engagement in maltreatment-related work practices and professional development. Qualitative codes from focus groups with school social workers and child welfare practitioners were categorized according to factors that may influence teachers' participation in training and/or their responses to maltreatment at school (e.g., likelihood of reporting). Where applicable, foster caregiver perspectives were again explored to consider similarities and

differences in opinion within each of these areas.

Training participation. Factors that could impact teachers' participation in child maltreatment training were explored only with child welfare practitioners and school social workers. At the teacher level, several findings emerged: 1) willingness to learn more about child maltreatment and motivation to help these children; 2) overburden and limited resources; 3) attitudes and beliefs; and 4) time commitment. Foremost, the majority of child welfare practitioners (n = 5, 55.6%) and six school social workers (31.6%) believed that many teachers are willing to learn more about child maltreatment and motivated to help these children.

However, both groups highlighted teacher-level factors that may hinder their involvement with training. Several school social workers (n = 6, 31.6%) and two child welfare practitioners (22.2%) stated that teachers are overburdened and under-resourced. Social worker 2 explained:

Even the teachers who really are passionate and care about mental health issues ... they have way too many other things that are prioritized for their day-to-day job. So it's not necessarily a lack of interest. It's a lack of time and energy.

Three child welfare practitioners (33.3%) and three school social workers (15.8%) also mentioned that teacher attitudes and beliefs may be a challenge to training involvement, particularly in terms of beliefs about their role in maltreatment-related issues and their general openness to change. Social worker 17 explained:

That's the one thing teachers say is "I got in this [profession] to teach. I didn't get in this to be a social worker. I didn't get in this to be a doctor, I got in this to teach." I think that's their biggest frustration is all the other roles that a teacher has to play.

Generally speaking, four child welfare practitioners (44.4%) and one school social worker (5.3%) also noted that the time commitment might be too onerous for teachers and might

interfere with their attendance.

For school-level factors influencing maltreatment-related teacher training, five social workers (26.3%) and two child welfare practitioners (22.2%) reported on school board priorities. Child welfare practitioner 8 highlighted that child maltreatment is an area that often goes unnoticed by school boards, which may impact teachers' awareness and motivation to seek training: "[Maltreated children] are so emotionally isolated and physically isolated from other kids, you know? And it's funny that nobody, no one from the school board has recognized that as an issue. They're so busy doing all this other stuff." On the other hand, social worker 18 emphasized recent steps toward prioritizing mental health as a possible facilitator:

One of the things we've done as a school board is to try and roll out some very basics of mental health literacy training ... and I think the message there to teachers is: "It's not the expectation that you're the mental health experts but here's just sort of a basic level of understanding that's important for you to know."

In addition to teacher- and school-level factors, both groups also identified 1) delivery methods and 2) implementation strategies that could influence teachers' involvement in child maltreatment training. Two child welfare practitioners (22.2%) and fourteen school social workers (73.7%) spoke about training delivery methods (i.e., *how* to train teachers), including recommendations related to training length (i.e., half days or series), training format (i.e., in-person), and mandatory as well as on-going training. Social worker 9 argued: "It has to come from the top down... has to be made a priority, a requirement." Certain modes of delivery were also highlighted as likely to improve knowledge uptake during training, such as hands-on activities to apply the material (e.g., role playing, case studies) and opportunities to hear the perspective of a maltreated child (e.g., videos).

Two child welfare practitioners (22.2%) and thirteen school social workers (68.4%) also recommended implementation strategies, such as scheduling training events early in the school year, offering training at schools, and targeting teachers early in their training and/or career. Social worker 15 explained: “It is all academic and teaching focused [in teacher’s college] and so this is never brought up. So that would all be a nice basis to have, even just a one-time session in a course, where it is part of [pre-service] training for teachers.” Some also believed that a greater number of teachers would participate if child maltreatment training could somehow be merged with existing staff functions (e.g., staff meetings, mandated professional development events) to minimize the time required of teachers. However, others believed training implementation would be unsuccessful unless offered separately from existing staff functions. Social worker 8 explained: “Professional development time allocations [in schools] are a very scarce resource. You’d be lucky to get a morning that isn’t curriculum oriented.”

Maltreatment-related work behaviour. Regarding factors that may influence teachers’ responses to child maltreatment, three similar teacher-level influences emerged from focus groups with school social workers and child welfare practitioners: 1) motivation to help children with maltreatment histories; 2) attitudes and beliefs; and 3) overburden and limited resources. Foremost, the majority of child welfare practitioners (n = 5, 55.6%) and approximately one-third of school social workers (n = 6, 31.6%) highlighted that many teachers are motivated to help children with maltreatment histories, which could positively influence their use of maltreatment-related knowledge and skills. Child welfare practitioner 4 commented: “My experience has been for the most part positive with the schools ... I find that most teachers are very supportive of our kids and, um, they are motivated to put proper supports in place.” However, once again, several child welfare practitioners (n = 4, 44.4%) and most school social workers (n = 12, 63.2%)

expressed concerns about the influence of teachers' attitudes and beliefs, including not only attitudes about their role in maltreatment-related issues and openness to change, but also beliefs about consequences of reporting and attitudes towards child protection (i.e., perceived inadequacy of child welfare responses). Regarding beliefs about reporting consequences, child welfare practitioner 9 shared: "Teachers, some schools, really don't want to report the obvious, for obvious reasons, [like] they're trying to keep a relationship with a parent." Likewise, in terms of reporting-related behaviour, social worker 11 commented: "They'll say, 'The CAS [child welfare organization], the CAS does nothing' like a lot ... also 'well we know they do nothing so... why bother?'" Finally, two child welfare practitioners (22.2%) and the majority of school social workers (n = 10, 52.6%) were again concerned that teachers are overburdened and under-resourced, which could interfere with teachers' ability to effectively teach and support their students, as well as their own well-being.

Qualitative codes for school-level factors influencing teachers' maltreatment-related work behaviour included: 1) school board priorities; 2) the need to train other school professionals about maltreatment-related topics; 3) teacher-social worker collaboration; and 4) inadequacies in existing educational resources. Once again, the potential influence of school board priorities emerged during focus groups with both school social workers (n = 7, 36.8%) and child welfare practitioners (n = 2, 22.2%), particularly that school board priorities tend to be academic-focused and do not prioritize prevention. Three child welfare practitioners (33.3%) and two school social workers (10.5%) also spoke about how other school professionals need child maltreatment training, including principals, office administration, and classroom support staff (e.g., behavioural consultants).

At the school level, several school social workers (n = 4, 21.1%) also described effective

teacher-social worker collaboration. Social worker 2 noted: “I think most often, the role between the social worker and the teacher is very good, positively viewed [...] the role of the school social worker in the school dealing with helping either the teacher and or the family in the school setting, I think it’s very positive and essentially works well.” However, there was disagreement on this issue as a significantly greater number of school social workers ($n = 11$, 57.9%) commented on limitations in the teacher-social worker collaboration, particularly due to social workers’ large caseloads and referral/communication inefficiencies. Regarding caseload, social worker 4 explained:

Many of us have about ten schools on average so ... we may only work with one or two particular teachers and there’s a hub, like there’s a resource teacher and all the classroom teachers, we do have some relationships with them and communicate but it’s limited by that fact, in schools there’s hundreds of teachers you deal with in a way.

For referral/communication, social worker 10 elaborated:

Because of the way the referral network works through the principal or the resource teacher, they’ll bring forward a student but they don’t have all the details ... whereas if you could talk to the classroom teacher who spends six hours a day with that kid, you get so much more information and so part of the difficulty is that some of the information that comes to us is filtered and then it’s also filtered [in] how we send it back.

While child welfare practitioners did not comment on the collaboration between teachers and school support staff, the majority ($n = 8$, 88.9%) instead shared concerns about other inadequacies in existing educational resources, including ineffective implementation of accommodations for students with special needs, the school system’s inability to meet the need for psychoeducational assessments, and missing details in student records about extenuating

circumstances that could affect academic trajectories, such as a history of child maltreatment.

Finally, several community-level factors emerged which could influence teachers' responses to child maltreatment: 1) school-child welfare collaboration; and 2) school community demographics. Most child welfare practitioners (n = 7, 77.8%) and school social workers (n = 10, 52.6%) highlighted disparities in the school-child welfare collaboration, such as confusion over each system's roles and responsibilities as well as challenges resulting from family confidentiality and privacy barriers enforced by child welfare. Regarding the latter, social worker 5 commented:

I find schools are often very frustrated with making reports to CAS [child welfare organization] and not knowing the outcome of what has happened with their call and they think... they often say, you know, "We don't know what's happened, we don't know other than this child is safe, um, whether they've taken our call seriously and, um, what the ramifications are for them." ... They just feel this sense of helplessness.

Speaking from the child welfare perspective, practitioner 6 commented:

When you're providing information or education in the moment based on specific cases, schools on the other side have a situation that they perceive is going to be dealt with right away, and for us providing information to say "No, we don't do that"... well then they're frustrated. I'm assuming [teachers] are frustrated because they want the easy answer, for [child welfare] workers to come and take their child, right? So [...] you get the push and pull, who's doing what, how are they doing it, who's going to have the action, and so on.

In contrast, five child welfare practitioners (55.6%) and five social workers (26.3%) described positive interactions related to the school-child welfare collaboration. Child welfare practitioner 4 commented: "You can see it just in teachers' interactions with us, how respectful

they are and that they keep us up to date and they send you e-mails, you know, they invite us to meetings, they ask for your opinion.” Social worker 18 also described upcoming efforts that aim to formalize the collaboration between schools and child welfare:

There is a protocol that is being developed between the school boards, [child welfare], and the Ministry of Education around supporting a lot of the issues we just talked about. So I think that's very positive. There have been protocols of that sort in the past but they, ah, they haven't had a lot of traction because they haven't been sanctioned and this will be sanctioned. So [...] there will be this focus on collaboration and information sharing to support student achievement [for child welfare-involved students] within schools.

Beyond the relationship between schools and child welfare, two child welfare practitioners (22.2%) also emphasized the influence of school community demographics, specifically that teachers from schools in rural or disadvantaged communities tend to respond more effectively to child maltreatment. However, this finding did not arise in focus groups with social workers.

Although foster caregivers were not asked directly about factors that influence teachers' responses to child maltreatment, several influencing factors identified by school social workers and/or child welfare practitioners also were highlighted in foster caregiver accounts. At the school level, eight foster caregivers (38.1%) described inadequacies in existing educational resources for their children with unique educational needs. With regard to the need for psychoeducational assessments, foster caregiver 15 commented: “I find many foster children are significantly behind in school and often have delays, but they generally have no academic supports as school staff are not advocating for testing (e.g., for learning disabilities).” At the community level, in line with the majority of comments from school social workers and child welfare practitioners, three foster caregivers (14.3%) spoke about challenges in the relationship

between schools and child welfare practitioners. Foster caregiver 7 described barriers resulting from confidentiality enforced by child welfare:

Teachers need to be informed of a child's history in order to support their academic needs ... Caregivers could also work better with school personnel in meeting the academic needs of children with abuse histories if we were allowed to disclose some of the history of the child.

Considering recent school-related experiences, foster caregivers also described teacher-level factors that seem to be influencing maltreatment-related responses, including teacher attitudes and beliefs (i.e., beliefs about consequences of reporting, attitudes towards child protection; 9.5%) and overburden (4.8%). For overburden among teachers, foster caregivers were also asked to rate the importance of training for teachers on ways they can support themselves so they are better able to help maltreated children (i.e., self-care). The average rating was 9.3 out of 10, which ranked this topic as the third most important area to cover with teachers (Table 2).

Foster caregivers were also asked to comment on the collaboration between teachers and caregivers in working to support the educational needs of maltreated children. This led to the emergence of a case-level influence that was not identified by social workers or child welfare practitioners. Specifically, the majority of caregivers (n = 17, 81.0%) described the need for improvements in the teacher-foster caregiver collaboration. Foster caregiver 10 commented:

I think we should be more respectful and really take into consideration what the teacher and school staff are observing about these students and their progress. Parents can be defensive but they don't see their child on a day-to-day basis in a classroom, which is often very different from the behaviours they see at home. Parents and teachers should work co-operatively and communicate more frequently for the best interest of the child.

Discussion

To examine child maltreatment training needs for teachers, 9 child welfare practitioners and 19 school social workers participated in focus groups while 21 foster caregivers completed questionnaires. Consistent with existing international literature, there was consensus across all participant groups that child maltreatment training for teachers is currently inadequate. Reports from the participant groups suggest gaps in maltreatment-related knowledge and skills in such areas as detection and reporting of suspected maltreatment and in the use of trauma-sensitive practices. Results also suggested diverse factors at various levels (e.g., school, community) that may influence teachers' participation in training and their use of maltreatment-related knowledge and skills.

What Gaps Exist for Teachers Regarding Maltreatment-Related Knowledge and Skills?

Trauma-sensitive practices. Child welfare practitioners, school social workers, and foster caregivers spoke most about teachers' knowledge and behaviour related to trauma-sensitive practices, wherein mixed findings emerged. Several foster caregivers and school social workers, and almost all child welfare practitioners, described experiences of teachers effectively using trauma-sensitive practices (e.g., focusing on the relationship before behaviour management, teaching emotion regulation skills). However, they placed greater emphasis on teachers' limited knowledge and skills around trauma-sensitive practices. In line with this gap, foster caregivers ranked the use of trauma-sensitive school practices as the most important topic to cover in training for teachers.

It is not surprising that findings emerged for both strengths and limitations considering recent shifts in school practices toward supporting students' socio-emotional learning and mental health (Mental Health Commission of Canada, 2013; Schween & Roger, 2013). It is also

encouraging that teachers seem to be using trauma-sensitive practices, although it is unclear if they are cognizant of their practices as such. In two related studies from other countries (Alisic, 2012; Reker, 2016), findings suggested that teachers feel equipped to support maltreated children in some ways (e.g., academic needs) but not in other ways (e.g., addressing behavioural and emotional needs). Additional research on teachers' awareness and use of trauma-sensitive practices is needed, including studies that make use of such objective assessments as classroom observation. The current study also seems to be the first to consider trauma-sensitive practices among Canadian teachers, although from the perspectives of other professionals and foster caregivers. Thus, further research is needed to replicate these findings.

Maltreatment impacts on school functioning. Within the scope of trauma-sensitive practices, another prominent perspective was that teachers need greater understanding of maltreatment impacts on school functioning (e.g., academics, classroom behaviour). Most child welfare practitioners, as well as several school social workers and foster caregivers, also expressed that teachers could benefit from training on how maltreatment impacts brain development because it may help clarify trauma-related behavioural problems at school. This study is the first to identify a training need for teachers about maltreatment and brain development from the perspectives of other professionals and foster caregivers. Other findings from the current study are inconsistent with existing research that has suggested a fair amount of knowledge among teachers about maltreatment-related effects (Martin et al., 2010; Yanowitz et al., 2003). The difference in findings could imply that other stakeholders have observed gaps in teachers' understanding of maltreatment impacts in spite of teachers' beliefs about their knowledge or that other stakeholders are misinformed. It has also been argued that existing knowledge among teachers does not necessarily preclude training, as research has found teachers

sometimes lack confidence in their understanding of maltreatment-related effects (Yanowitz et al., 2003). In other words, training may still be beneficial if it helps reinforce teachers' confidence in their knowledge as improved confidence could predict teachers' effectiveness in responding to maltreatment-related issues.

Reporting. For perceptions of teachers' reporting-related abilities, several findings from the current study suggested over-reporting and timely reporting. However, gaps in reporting knowledge and behaviour were most frequently described. This included themes supported by all three groups such as teachers having limited understanding of what duty to report means and of child welfare's role in child protection. There were also concerns around teachers not reporting maltreatment suspicions in a timely manner, if at all. These identified gaps are in line with existing literature in Canada and other countries that has found frequent under-reporting among diverse samples of teachers (Crenshaw et al., 1995; Feng et al., 2010; Goebbels et al., 2008; Greco et al., 2017; Kenny, 2001a, 2001b; King, 2011; Tite, 1993; Webster et al., 2005). The persistence of teachers' under-reporting is concerning given the potential consequences of failing to report accurate suspicions, namely the perpetuation of child maltreatment. This finding suggests that efforts are still needed to inform teachers about reporting protocols and procedures, as well as about related topics (e.g., child welfare-related responsibilities) that could influence their reporting behaviour.

Maltreatment signs and symptoms. Some child welfare practitioners and school social workers identified teachers having limited knowledge of maltreatment signs and symptoms, including both physical (e.g., bruises) and behavioural (e.g., hypervigilance) indicators. Additionally, foster caregivers ranked training on this topic among the top five areas to cover with teachers. These findings are generally consistent with existing studies in other countries

(Abrahams et al., 1992; Alvarez et al., 2004; Kenny, 2001a, 2004) that suggest teachers tend to have limited knowledge of maltreatment signs and symptoms. In contrast, King (2011) found that most teachers in a southern Ontario sample reported being knowledgeable about the indicators of maltreatment (in particular physical abuse and neglect). Once again, the difference in findings could suggest that stakeholders have witnessed detection-related gaps among teachers, despite teachers' beliefs about their knowledge and behaviour. In other words, it may be that teachers do not fully recognize their limitations in relation to identifying child maltreatment signs. Again, studies that utilize more objective methodologies (e.g., case vignettes) might be helpful in further evaluating maltreatment detection-related knowledge and behaviour among Canadian teachers.

What Factors Influence the Delivery of Child Maltreatment Training to Teachers?

Teacher- and school-level factors. Child welfare practitioners and school social workers identified factors at the teacher- and school-level that could influence teachers' participation in training. Most commonly, participants believed that teachers are willing to learn and motivated to help maltreated children. However, concerns about teacher overburden, teacher beliefs (e.g., views of their role as distinct from maltreatment-related issues), and school board priorities were also frequently discussed. Findings from the current study both confirm and contest those from other studies. For instance, research in the U.S. and other countries (e.g., Netherlands) has suggested that not all teachers agree with their responsibility to report maltreatment (Kenny, 2004; Schols et al., 2013), whereas research in a Canadian context has found that almost all teachers believed they play a vital role in responding to maltreatment (King, 2011). Findings for school-level factors were not surprising, as school-based research is often challenged by competing priorities (e.g., provincial education mandates that focus on academic achievement

and graduation; Fabiano, Chafoules, Weist, Sumi, & Humphrey, 2014).

Training elements. Several school social workers and child welfare practitioners also identified training delivery methods and implementation strategies that could influence teachers' involvement in child maltreatment training. Most frequently, participants from both groups highlighted the need to implement training with teachers early in their training and/or career. Likewise, other research has illustrated a need for developmentally appropriate trauma-specific training across career stages (Reker, 2016). Interactive modes of delivery were also commonly discussed, such as opportunities to hear the perspective of a maltreated child (e.g., videos) and hand-on activities to apply the material (e.g., case vignettes). Overall, these findings are important to consider in training development as they could inform what might increase training accessibility and usefulness for teachers. Few studies have explored influences on teachers' participation in maltreatment training, so more research is needed to verify the current findings.

What Factors Influence Teachers' Use of Maltreatment Knowledge and Skills?

This study identified teacher-, school-, community-, and case-level influences that may be associated with teachers' use of maltreatment-related knowledge and skills. Other research in Canada and elsewhere has identified multi-level factors influencing teachers' responses to maltreatment-related issues, such as reporting (King, 2011; Schols et al., 2013; Vanderfaeillie et al., 2018; Walsh et al., 2008, 2012). However, it appears this is the first study in Canada to consider these issues from the perspectives of key stakeholders who work with teachers. Furthermore, limited research has considered multi-level influences on teachers' responses to child maltreatment beyond detection and reporting.

Teacher-level factors. Once again, many participants shared examples of teachers who are willing to learn and use maltreatment-sensitive practices. However, an equally prominent

perception among study participants was that teachers seem to be overworked and under-resourced. Concerns related to teacher overburden, exhaustion, and burnout are frequently identified (Borntrager et al., 2012; Johnson et al., 2005), although few studies on teachers' maltreatment-related practices have highlighted these concerns. Findings from the current study are corroborated by recent nation-wide survey data from over 8,000 Canadian educators, which found that 79% reported their stress levels had increased over the last 5 years because of added work demands and work-life imbalance (Froese-Germain, 2014).

Child welfare practitioners and school social workers also commonly stressed the relationship between teachers' responses to maltreatment and their attitudes and beliefs, such as perceived negative consequences of reporting and attitudes toward child welfare. Similar attitudes and beliefs have been recognized in other studies investigating detection, reporting, and trauma-sensitive practices among teachers (Alisic, 2012; Alisic et al., 2012; Falkiner et al., 2017; Greco et al., 2017; Kenny, 2001a, 2004; King, 2011; Schols et al., 2013). For instance, King (2011) found common beliefs among Canadian teachers about negative outcomes as barriers to reporting (e.g., making things worse for the child), whereas the vast majority perceived positive child welfare beliefs as having a facilitating role. Other maltreatment-related studies have also found negative views among teachers about placing more emphasis on children's social and emotional development (e.g., Alisic, 2012), which is a fundamental component of trauma-sensitive school environments (Cole et al., 2005).

School-level factors. At the school level, the teacher-social worker relationship and inadequacies in existing educational resources were most frequently discussed. In terms of their relationship with teachers, school social workers were conflicted. Several suggested that the collaboration is effective in supporting maltreated children, although limitations in relation to

social workers' large caseloads and referral/communication inefficiencies were more commonly described. Child welfare practitioners and foster caregivers did not share concerns about teachers' relationships with other school staff, but instead spoke about educational resource limitations (e.g., accommodations are not implemented consistently, unmet demand for assessments). Collectively, these findings are consistent with other research that finds internal support and resources directly influence teachers' motivation and abilities when detecting and responding to maltreatment (e.g., Goebbels et al., 2008; Schols et al., 2013). Likewise, in their framework for trauma-informed service delivery in schools, Chafouleas et al. (2016) stress the significance of building organizational consensus, staff competencies, and supporting infrastructure.

Case- and community-level factors. Influencing factors at the case and community level were less prominent. Most commonly, the school-child welfare relationship was discussed, usually in the context of relationship difficulties (e.g., disagreement over each system's roles, challenges resulting from confidentiality enforced by child welfare). Indeed, the collaboration between child welfare and education systems is frequently identified in research as a source of stress and frustration (Alvarez et al., 2004), despite the fact that both teachers and child welfare practitioners are ideologically in support of cooperative relationships with each other (Webb & Vulliamy, 2001). For case characteristics, the teacher-caregiver relationship emerged as the only potential influence. Existing, though limited, research has found that cases involving cooperative, communicative parents are less likely to be reported (O'Toole et al., 1999; Walsh et al., 2008). In contrast, case characteristics missing from this study (e.g., maltreatment type and severity) have been found to exert a greater level of influence on teachers' maltreatment-related responses (Walsh et al., 2008; Vanderfaeillie et al., 2018). Absent findings related to case factors

may be due to differences in study procedures (i.e., participants were not asked about case-level factors directly) and/or varying perspectives among teachers and other informants.

Limitations and Future Research Directions

This study has several limitations that need to be considered. Some of the limitations are common to social science research but have been included nonetheless to highlight avenues for future research. First, external validity is limited because the current study used convenience sampling from individuals in one urban region in Ontario. This study also relied on the willingness of child welfare practitioners, school social workers, and foster caregivers to participate. As such, it is unclear if the results can be generalized to teachers in other Canadian settings or to local teachers. Second, given the study's exploratory nature and the reliance on subjective experiences, results must be interpreted within this context. However, study findings make a useful contribution to theory development (e.g., teachers' decision-making processes related to maltreatment reporting). They also point to a number of potential avenues for future research, such as including more rigorous evaluations with teachers and other professionals from larger, representative samples of Canadian schools to examine how results generalize to the population.

Third, the current study is constrained by its data collection methods. A different method was employed with foster caregivers (questionnaires), which meant that no moderator was present to probe for further understanding on open-ended questionnaire items. Therefore, limited qualitative data were gathered from foster caregivers in comparison to the other two participant groups. For school social workers, the involvement of a supervisor in each of the focus groups may have influenced their responses. For child welfare practitioners and school social workers, a focus group format was chosen in response to requests made by participating stakeholder groups

because of efficiency. There are limitations to focus groups, such as participants being hesitant to express their opinions in a group setting, especially when their thoughts oppose the views of others. However, focus groups can also be advantageous because the group format can trigger people to think and talk about things that they may not have otherwise mentioned in individual interviews or surveys. Generally speaking, qualitative methods, such as focus groups, also offer important insights into understanding complex behavioural processes, such as teachers' awareness, motivation, and behaviour in relation to using trauma-sensitive practices (Schols et al., 2013).

Fourth and foremost, access to local teachers was not possible so their perspectives in comparison with other stakeholders could not be examined. Research difficulties with access to teachers are not new and have been cited by other researchers attempting to study teachers' maltreatment reporting (e.g., Walsh et al., 2012) and school mental health more generally (Fabiano et al., 2014). However, a number of techniques were employed to ensure the validity of the data. Perspectives from different participants were obtained (triangulation of sources) and qualitative analyses were conducted and validated by multiple researchers. Thus, inputs from multiple perspectives at the level of participants and researchers permitted a better understanding of evaluation findings. Comparisons were also made with previous research on the same topic, which can speak to the dependability of the data (Thomas, 2006). Finally, teachers' perspectives were eventually investigated in Study 2.

Despite these limitations, participants within and across each of the three groups described overlapping as well as unique experiences in collaborating with teachers to support maltreated children. These findings highlight the importance of gathering perspectives from different informants. It is also worth investigating the perspectives of other stakeholders, as

teachers may not fully recognize their limitations in responding to maltreatment-related issues. It appears this study is one of the first to acknowledge the perspectives of multiple informants who work closely with teachers in supporting maltreated children. In addition to rigorous quantitative methods, future research should continue to use multi-informant, qualitative approaches to examine the complexities of teachers' knowledge and behaviour related to child maltreatment.

Another strength of this study is that it appears to be one of the first to explore perspectives on teachers' knowledge and use of trauma-sensitive practices, as much of the literature to date has focused exclusively on detection and reporting. In fact, all participant groups spoke most frequently about teachers' trauma-sensitive practices, in comparison to detection and reporting abilities. This study also adds to the literature with its focus on factors that may influence teachers' participation in training. International research has advocated for improved child maltreatment training for teachers (e.g., Alisic, 2012; Alvarez et al., 2004; Falkiner et al., 2017; Kenny, 2015; King, 2011; Schols et al., 2013), although most literature exploring influencing factors has focused on teachers' work behaviour (versus their participation in child maltreatment training). Other studies with teachers are needed to verify these findings.

Applied Implications

This study reflects an important effort to consider multiple perspectives in understanding teachers' child maltreatment training needs, as well as factors that may influence their training participation and use of maltreatment-related knowledge and skills. Overall, child welfare practitioners, school social workers, and foster caregivers unanimously endorsed the need to improve child maltreatment training for teachers. In light of the probable positive impact of training (e.g., Cerezo & Pons-Salvador, 2004; Mathews et al., 2017), study results should be used to inform future training efforts for teachers. In particular, gaps corroborated by participants

in all three groups suggest that future teacher training should address the following: 1) trauma-sensitive practices; 2) impact of maltreatment and related outcomes on a child's functioning at school; 3) duty to report; 4) impact of maltreatment on brain development; and 5) warning signs of different types of maltreatment. Given common findings related to teacher overburden, future training should also address teacher well-being (e.g., signs of burnout, self-care strategies).

Beyond informing training for teachers, identified gaps in teachers' knowledge and skills could also be used to equip other school staff and external collaborators that work closely with teachers. For instance, school support staff (e.g., social workers, psychologists) could use current findings to systematically explore individual teachers' strengths and difficulties, and subsequently provide them with tailored advice when supporting a maltreated student. School administrators could use study findings to guide trauma-specific assessments of their staff and subsequently address school-wide areas of need. Child welfare directors could use study findings to educate their staff and improve interactions with teachers (e.g., inform intake workers about common worries and challenges experienced by teachers when calling to report their suspicions, and how to respond to teachers' concerns more effectively).

This study also identified training methods and implementation strategies that may increase training accessibility and usefulness for teachers, such as incorporating hands-on opportunities (e.g., case examples) and delivering training to teachers early in their training and/or career. Results also suggest that teachers' participation in training may vary according to factors related to the teacher (e.g., overburden, negative attitudes toward child welfare) and the school (e.g., school board priorities). Future child maltreatment training development and evaluation efforts should take these factors into consideration.

Finally, this study shed light on the complex interplay of teacher, school, community, and

case factors that may affect teachers' decision-making and actions in response to maltreatment. Especially, this study confirms the importance of teacher- and school-level influences. Although many participants believed that teachers are motivated to help children with maltreatment histories, all three groups were commonly concerned about teacher workload issues and teacher beliefs (e.g., negative attitudes toward child welfare). This study appears to be one of the first to highlight teacher overburden as a critical issue related to the education of children with maltreatment histories. Namely, the perceptions of other professionals and foster caregivers suggest that efforts are needed to reduce burden among teachers beyond simply acknowledging this issue in child maltreatment training (e.g., more resources for children with significant behavioural needs, such as increased staff support; improved school-wide training regarding staff mental health). At the school level, common perspectives across study participants suggest that limitations in the internal support and resource structures are likely to influence teachers' motivation and abilities when detecting and responding to maltreatment. Case- and community-level factors were less prominent, with the exception of results related to the relationship between education and child welfare (e.g., limited communication between systems).

Once again, results for influencing factors could be used to inform future training efforts for teachers (e.g., address teacher misconceptions about child welfare). However, training alone will not be able to address all challenges discussed within this study, a theme that also been highlighted in reviews of reporting behaviour (Bunting, Lazenbatt, & Wallace, 2010). Therefore, study findings that cannot be addressed through training deserve attention from researchers, professionals, and policy makers. Especially, findings suggest that improvements in teachers' relationships with school-based support staff (i.e., social workers), educational resources (e.g., psychoeducational assessments), and the school-child welfare collaboration are needed.

Regarding the latter, recent efforts have been made in Ontario to clarify roles and formalize the partnership between local education and child welfare agencies (i.e., Joint Protocol for Student Achievement; Ministry of Education and Ministry of Children and Youth Services, 2015).

However, the effectiveness of this initiative and its local agreements has yet to be determined.

In summary, child welfare practitioners, school social workers, and foster caregivers assert that many teachers want to do more to support vulnerable children, such as those who have experienced maltreatment. By virtue of their long-term engagement with diverse children, teachers have, perhaps, the greatest opportunity of any professional to watch and act in response to child maltreatment. Equipping teachers with the necessary knowledge and skills to act effectively could improve the quality of life for children at-risk or experiencing maltreatment. Current findings corroborate a long-standing need to improve child maltreatment training for teachers. Although improved teacher training is not the complete solution, the potential for positive impact is worth pursuing, including in Canada where little maltreatment-related training has been developed for teachers. Future training efforts should also continue to explore the intersection of factors and systems that may influence teachers' participation in training and/or their responses to maltreatment at school.

Study 2: Development and Preliminary Evaluation of Child Maltreatment Training for Elementary School Teachers

There is international consensus that limited training opportunities are a significant impediment to teachers' reporting of child maltreatment, as well as their response to maltreatment-related behaviour in the classroom (Abrahams et al., 1992; Alvarez et al., 2004; Baweja et al., 2016; Cerezo & Pons-Salvador, 2004; Falkiner et al., 2017; Goldman, 2005, 2007; Hinson & Fossey, 2000; Kenny, 2015; Kesner & Robinson, 2002; Krase, 2013; Schols et al., 2013; Sinanan, 2011). One of the largest studies to explore the availability and quality of child maltreatment training for teachers is the National Teacher Survey (NTS), which was conducted by the U.S. National Committee for the Prevention of Child Abuse in the early 1990s (Abrahams et al., 1992). The final NTS sample included 568 elementary teachers from 40 different U.S. school districts. The teachers had varying levels of experience, namely 20% had been teaching for 1-5 years, 19% for 6-10 years, and 44% for 11-20 years. Results indicated that only 49% of teachers reported receiving some in-service training about child maltreatment (e.g., identification of victims, reporting procedures), and two-thirds of these teachers viewed the training as insufficient. Most (65%) also indicated that a major obstacle to consistent reporting was the lack of sufficient knowledge on how to detect and report suspected maltreatment.

Current nation-wide surveys of child maltreatment training for teachers are not available. However, recent qualitative research studies corroborate findings reported by Abraham and colleagues (1992), with most teachers reporting that child maltreatment training is insufficient at both the pre- and in-service level (Baweja et al., 2016; Falkiner et al., 2017; Schols et al., 2013). In Australia, Falkiner and colleagues (2017) interviewed 30 primary school teachers randomly sampled from the state of Victoria who had an average of 16.7 years of experience. Participants

reported that they had received either no training or inadequate training related to child maltreatment, which was compromising their legal responsibility to report maltreatment (e.g., lacked confidence in the signs). Similarly, information gathered from 33 Australian universities about child protection training in teacher education found that 76.6% of the 14,500 students who potentially graduate each year do not participate in any dedicated courses on child maltreatment (Arnold & Maio-Taddeo, 2007; Walsh et al., 2011).

In the U.S., Kenny (2001b) investigated knowledge about child abuse in a small sample of 28 first-year teachers. The majority of the teachers were regular education teachers (82%), and the rest were teaching special education. When asked to describe the quality of their professional training, their responses were comparable to those reported by Abraham and colleagues (1992), as well as studies with Australian teachers (e.g., Arnold & Maio-Taddeo, 2007). Specifically, only 26% described the training as adequate, while the remaining 60% described it as minimal and 15% as inadequate. In a more recent study, Baweja and colleagues (2016) interviewed various school stakeholders (e.g., teachers, school-based clinicians) across 11 schools from three geographical regions that were involved in the implementation of a school-based trauma program (Cognitive Behavioral Intervention for Trauma in Schools). After participating in the implementation of the program for one year, the large majority of teachers (90.9%) and most clinicians (66.7%) reported a need for increased, recurring trauma-informed teacher training, including topics such as identifying traumatized students and trauma-related reactions.

In Canada, research with teachers has likewise demonstrated limited training for teachers about child maltreatment, with the majority of teachers describing their training on the topic as inadequate. Based on a sample of 245 elementary and secondary school teachers in Ontario with an average of 17.1 years experience, King (2011) found that 63.5% reported feeling unprepared

from their overall training in the area of child abuse at the pre-service level or through ongoing professional development. This does not mean that professional development on child maltreatment is not occurring in schools; however, training appears to be implemented at random, and little documentation exists as to how or when teachers are trained or how the training is evaluated. In fact, in a recent analysis of 64 school board child abuse reporting policies and procedures in Ontario, approximately 70% (n= 44) did not include information on how or when teachers would receive professional development on child maltreatment, or very little detail was provided about available training opportunities so their quality could not be determined (Shewchuk, 2014). Child maltreatment training for Canadian teachers at the pre-service level has yet to be explored.

Child Maltreatment Training Programs for Teachers

A large variety of written materials have been developed with the aim of increasing teachers' knowledge of and ability to intervene in a maltreatment-sensitive manner, including but not limited to detecting and reporting child maltreatment (e.g., Bell, Limberg, & Robinson, 2013; Cole et al., 2005; Craig, 2008, 2016; Kenardy, De Young, Le Broque, & March, 2011; National Child Traumatic Stress Network [NCTSN], 2008; Souers & Hall, 2016). Several training programs about child maltreatment have also been developed specifically for school professionals (e.g., Lesley Institute for Trauma Sensitivity, 2015; Madison Metropolitan School District, 2013; NCTSN, 2013; Wisconsin Department of Public Instruction, 2013), although many have been developed in the United States and only a few have been evaluated (Hawkins & McCullum, 2001a, 2001b; Hazzard, 1984; Kenny, 2007; Kenny, Lopez-Griman, & Donohue, 2017; McGrath, Cappelli, Wiseman, Khalil, & Allan, 1987). Furthermore, many of the training programs that have been evaluated have largely focused on identifying signs of maltreatment and

on reporting procedures.

As an example, the Southern Australia Education Department Mandated Notification Training program includes one day of training designed to increase educators' awareness of personal factors influencing responses to child maltreatment, signs of maltreatment, and knowledge of legal reporting requirements and procedures (Department of Family and Community Services, 1997). Hawkins and McCullum (2001a, b) compared 41 educators who had recently completed this training, 73 who had previously completed the training, and 31 who had not completed the training on confidence in their ability to detect child maltreatment, awareness of reporting procedures and what should be reported, and how to respond to disclosures. Educators recently receiving this training indicated increased confidence in their ability to recognize the indicators of abuse, in their awareness of reporting responsibilities, in their knowledge of what constitutes reasonable grounds for reporting, and in their skills around how to respond appropriately to a child's disclosure of abuse, compared to the other two groups (Hawkins & McCallum, 2001a). These educators also provided more appropriate responses to hypothetical situations involving child maltreatment, and they were more likely to identify sexual maltreatment in vignettes, compared to the other groups (Hawkins & McCallum, 2001b). However, the results are limited by the low response rate for post-training questionnaires in that only 37% were returned to the researchers.

Building on an earlier single-group study that evaluated web-based training for student teachers (Kenny, 2007), Kenny and colleagues (2017) conducted a large-scale group comparison study evaluating an updated web-based program to assist U.S. students training to become teachers in identifying and reporting child maltreatment. Training included information about the incidence and prevalence of child maltreatment, descriptions and indicators of abuse, emotional

and behavioural signs of child maltreatment, legislative mandatory reporting duties, as well as statistics and reporting procedures related to reporting suspected child maltreatment. The study used a convenience sample of 1,690 students ($n = 1,297$ in the intervention group and 393 in the control group) from one U.S. post-secondary university. Results indicated significant improvements in participants' knowledge of child maltreatment types and reporting laws because of the training, and participants generally reported enjoying the training program. However, this study did not consider fidelity to the web-based program nor did it account for participants who were missing data at post-test. More rigorous research designs using randomization and in-service teachers are also needed.

Comparatively, Carter, Bannon, Limbert, Docherty, & Barlow (2006) systematically reviewed studies published between 1994 and 2005 that evaluated training and procedural interventions for health professionals about child maltreatment identification and management. Fifteen studies that evaluated training programs by exploring learning achievement, attitudinal change, and/or behaviour were included; the majority of studies (80%) were from the U.K. or the U.S. Seven of the evaluated training programs (47%) were delivered to a multi-disciplinary audience, while the others focused on specific health professionals (e.g., physicians, nurses, medical students). One of the studies with a multi-disciplinary audience included teachers (Cerezo & Pons-Salvador, 2004). Results from this systematic review suggest that child protection training can positively influence professional knowledge, attitudes, and behaviour in relation to child protection. Two studies found objective improvements as a result of the training intervention (i.e., improvements in tested knowledge and detecting behaviour), while four others found subjective (self-reported) improvements in confidence, knowledge, and awareness. However, this systematic review also found an absence of rigorous, evidence-based approaches

to the evaluation of training programs. For instance, 7 (46.7%) of the included studies utilized a pre- and post-training design, 3 (20%) used a control group, and only 1 (6.7%) objectively evaluated change in behaviour (i.e., detection of abuse).

There remains a need for studies that rigorously evaluate child maltreatment training with teachers, using control groups and pre- and post-designs, as well as objective and longer-term outcome evaluation (i.e., other than immediate post-intervention evaluation). However, rigorous evaluations of child maltreatment training programs for other professionals are emerging (e.g., Mathews et al., 2017; Rheingold et al., 2015). Most recently, Mathews and colleagues (2017) conducted a single-blind test-retest randomized controlled trial evaluating *iLookOut for Child Abuse*, an online educational program designed to improve knowledge and attitudes among early child care providers toward their duty to report child maltreatment. To evaluate *iLookOut*, 762 child care providers from the state of Pennsylvania (i.e., staff at licensed facilities taking care of children under 5 years of age) were randomized to intervention or wait-list control groups and completed pre- and post-training assessments, as well as 4-month follow-up assessments. Findings suggested that *iLookOut* contributed to significant improvements in reporting-related knowledge (e.g., mechanisms for reporting) and attitudes (e.g., role of reporting in promoting children's long-term well-being) among child care providers, which were largely sustained at follow-up. Findings support training for professionals who work with children, though further research is needed to evaluate such training with professions other than early child care.

In Canada, very little maltreatment-related training has been developed and evaluated with teachers, particularly regarding the effects of maltreatment on learning and classroom behaviour, as well as effective strategies for responding to such behaviour. In one of the earliest (and only) studies to evaluate such training for Canadian teachers, McGrath et al. (1987)

explored the efficacy of a two-hour teacher awareness workshop to assist Ontario elementary teachers with detecting and reporting child maltreatment. A randomized controlled trial design was used in which all teachers in each participating school were randomly assigned to either immediate teaching (experimental group) or delayed teaching (control group). Both groups completed three questionnaires evaluating their knowledge about indicators of child maltreatment, as well as their understanding of legislative requirements and school board policies specific to reporting. A total of 184 teachers from 10 schools (mean teaching experience of 15.6 years) participated in the research. Results indicated that workshop participants were more familiar with indicators of sexual and emotional abuse than control participants, but there were no differences for physical abuse and child neglect. Workshop participants were also more knowledgeable of institutional structure and legal issues than control participants at a subsequent 3-month follow-up. Although the interpretation of study results was compromised due to attrition over time in the experimental condition (33.3%), this study offers support for developing and evaluating training programs about child maltreatment with Canadian teachers. However, more research is needed with an updated training program to verify these findings.

Study Objectives

Despite longstanding appeals for the need to develop and evaluate child maltreatment training programs for teachers, the education field in Canada has invested little in this area for current or pre-service educators. Furthermore, previous training programs and related evaluation research internationally have focused largely on identifying and reporting child maltreatment. To my knowledge, no research has evaluated child maltreatment training for teachers that include topics other than detection and reporting. Building on the information gathered in Study 1, the first objective of Study 2 was to design such a training curriculum and then deliver a pilot

version to local elementary school teachers to explore the feasibility of implementing the intended training methods and evaluation procedures. The second objective was to evaluate the training curriculum by (1) gathering feedback on the usefulness and relevance of the training content for local elementary school teachers and (2) exploring preliminary evidence of its impact on teachers' knowledge, attitudes, and classroom practices regarding child maltreatment. Finally, the third objective was to explore teachers' current working relationships, including with school staff and other systems (i.e., child welfare, family), to identify factors that could influence teachers' application of the training content as well as their maltreatment-related responses.

As earlier stated, the current dissertation largely followed the ADDIE model (Figure 1; Khalil & Elkhider, 2016), with Study 1 addressing the initial (analysis) phase and Study 2 focusing on all of the remaining phases. For the evaluation component of the ADDIE model (objective 2), Kirkpatrick's (1994) four levels of learning evaluation, one of the most recognized methods of evaluating training programs, largely guided the approach. In Kirkpatrick's model, each of the four levels provides valuable information that together creates a chain of evidence for the effectiveness of a program. For the current study, evaluation measures and procedures outlined below were developed to address the first three levels of Kirkpatrick's model: (1) reaction, or participants' perceptions about the training; (2) learning, or the degree to which participants acquire the intended knowledge and/or change in attitudes as a result of the training; and (3) behaviour, or change in actual work practices as a result of the training program. Note that this evaluation did not address the fourth level of Kirkpatrick's model (results), which focuses on the impact of the training on desired outcomes (e.g., improved educational outcomes for children with maltreatment histories).

The evaluation (objective 2) also employed a mixed-methods approach to data collection

(Greene, 2008; 2012), as both quantitative and qualitative data were obtained and analyzed. A mixed-methods approach was used because it was believed that incorporating both quantitative and qualitative methods would allow a better understanding of teachers' experiences with child maltreatment training, as well as their experiences with responding to maltreatment-related issues. In other words, due to the complexity of processes and influencing factors involved in teachers' maltreatment-related responses, qualitative methods were included to expand upon quantitative findings (e.g., to explore the role of contextual factors in teachers' maltreatment-related work behaviour) and to offer a more differentiated understanding of the implications (Berliner, 2002; Bonell, Fletcher, Morton, Lorenc, & Moore, 2012; Greene, 2008, 2012). However, quantitative methods were prominent. Thus, as coined by Greene (2012), a "lite" mixed-methods structure was used in Study 2 because the mixing of methods involved a dominant methodology (quantitative) supplemented by a secondary methodology (qualitative).

In terms of the evaluation (objective 2), it was hypothesized that participants would report a positive learning experience as the training would address an important knowledge gap for teachers. It was also expected that participants' attitudes toward child maltreatment (e.g., beliefs about child welfare involvement), as well as their knowledge (e.g., reporting procedures, maltreatment impacts) and work practices would improve from pre- to post-training. In terms of factors influencing teachers' use of maltreatment-related knowledge and skills (objective 3), it was hypothesized that multi-level factors would emerge (e.g., teacher overburden, school board priorities) consistent with Study 1 and other findings (e.g., Schols et al., 2013; Vanderfaeillie et al., 2018; Walsh et al., 2008).

Methods

Participants

This study included individuals with teaching experience who were currently residing in a major urban region in Ontario or its surrounding areas. Interested individuals were required to meet two inclusion criteria: (1) two or more years of experience teaching at the elementary level (kindergarten to Grade 8) and (2) ability to understand and communicate in English as all training and evaluation materials were in this language. There was limited research available on child maltreatment training for teachers to guide a priori power calculations for sample size targets. It has also been argued that power calculations for pilot studies are extraneous because their primary objectives are to test procedures and obtain estimates of parameters for the full trial sample (Thabane et al., 2010; Whitehead, Julious, Cooper, & Campbell, 2016). Nevertheless, a priori power analyses were used to determine a rough estimate of the sample size required to find a large standardized mean difference (G*Power; Erdfelder, Faul, & Buchner, 1996). A total sample of 42 (21 in each study condition) was deemed adequate to find a large effect of $d = 0.80$ with 80% power and an alpha level of .05. My sample size was thus close to a priori analysis recommendation, as well as in line with general guidelines for pilot sample sizes of two-armed trials to be able to detect medium and large effect sizes (Whitehead et al., 2016).

Forty-five teachers from different schools/school boards in the region met inclusion criteria to participate in the study. All teachers were assessed at two time points, namely at the pre-training assessment and post-training assessment (approximately 1.5 months after the pre-training assessment). Group assignment was non-randomized and instead based on teachers' availability to attend training (i.e., teachers available to attend training were assigned to the intervention condition, and those who were not available were assigned to the wait-list

comparison group). Although randomized group assignment was intended, several participants randomly assigned to the intervention group could not attend the training (more details in the Results section below). Teachers in the wait-list comparison group were to continue ‘as usual’ and invited to attend a second training workshop (March 2018) after they had completed questionnaires prior to and following training for the first intervention group (December 2017).

Originally, 20 teachers were available the first training workshop so they were assigned to the intervention condition. However, only 15 teachers attended the first training workshop. As intervention group size was below the targeted size of 21 participants per group, a second recruitment period took place from January to February 2018. Four new teachers were recruited who were eligible to participate and available to attend the second training workshop. Given the small number of teachers recruited during the second recruitment period, all four teachers were assigned to the intervention condition (i.e., a second intervention group).

Independent samples *t*-tests and chi-square analyses (exact test used if needed) were conducted to assess the equivalence of the two intervention groups at their pre-training assessment. There were no statistically significant differences ($p > .05$) between the two intervention groups in terms of age, gender, employee status, grade(s) currently teaching and previously taught, years of experience in education, and maltreatment-related work experience (e.g., past training), which seems to indicate baseline equivalence between the two intervention groups. Considering their baseline equivalence, the small sample size of the second intervention group ($n = 4$), and the short amount of time between the two training workshops (3 months), the two intervention groups were combined as one for all statistical analyses. In the end, 26 teachers comprised the wait-list comparison group and 19 comprised the intervention (training) group.

Training Development

Development and implementation of the training program (objective 1) was guided by a number of sources. Generally, decision-making at most steps was informed by discussions with the six child welfare and education representatives who agreed to be members of my Advisory Committee (see Study 1 for more details). In addition, Study 1 findings, literature on teachers' maltreatment training needs (summarized in the introductory section of Study 1), and behavioural and cognitive learning principles (summarized in the general introduction) were used to guide decision-making about necessary training content, as well as delivery and implementation strategies (e.g., duration, format). When appropriate, research related to maltreatment training for allied professionals (e.g., early childhood educators) and/or other general training implementation and evaluation literature were also considered. Finally, existing training materials and written resources (Appendix I) were reviewed and adapted for the new training curriculum, where applicable. Once the training curriculum was drafted, a preliminary review was completed: (1) all content was reviewed by four individuals with substantial teaching experience (mean years of experience = 17) who did not participate in the pilot training evaluation and (2) a preliminary run of the training was delivered to four psychology graduate students to test training implementation (e.g., timing). Table 3 provides an overview of the decision-making and development process that is described in more detail in the results section.

Training Evaluation

Generally speaking, Kirkpatrick's (1994) four levels of learning evaluation guided the evaluation. As shown in Table 3, two additional sources of information were also used to determine the intended evaluation elements: (1) other literature on conceptual frameworks, best practices, and/or guidelines for evaluation procedures (e.g., Greene 2008, 2012; WWC

Table 3

Overview of Training Development, Implementation, and Evaluation

Elements	Sources of Information for Decision-Making						Intended Design	Actual Implementation
	1. Research Literature ^a			2. Training Needs Assessment (Study 1)	3. Advisory Committee	4. Preliminary Review		
	Teacher-Focused Literature	Other Professional Training Literature	Other Literature					
Content-related								
1. Types of child maltreatment	Y ^{1,2}	--	--	--	--	--	Module 1	Module 1
2. Prevalence of child maltreatment	Y ^{1, 3-5}	--	--	--	--	--	Module 1	Module 1
3. Teachers' role in supporting maltreated children	--	--	--	Y	--	--	Module 1	Module 1
4. Signs of child maltreatment	Y ^{1,3-14}	--	--	Y	--	Y	Module 2	Module 2
5. Reporting suspicions of child maltreatment	Y ^{1, 3-4, 9-11, 13-16}	--	--	Y	--	Y	Module 2	Module 2
6. Child welfare system	Y ^{1, 4}	--	--	Y	--	--	Module 2	Module 2
7. Responding to disclosures of child maltreatment	Y ^{9, 13}	--	--	Y	--	Y	Module 2	Module 2
8. Impact of maltreatment on children's school functioning	Y ^{3, 8, 17-18}	--	--	Y	--	Y	Module 3	Module 3
9. Impact of maltreatment on brain development	Y ¹⁷	--	--	Y	--	Y	Module 3	Module 3

10. Trauma-sensitive classroom strategies	Y ^{1, 5-8, 17, 19}	--	--	Y	--	Y	Module 4	Module 4
11. Teacher self-care	Y ⁶⁻⁷	--	--	Y	--	--	Module 5	--
12. Trauma-sensitive school environments	Y ¹⁹	--	--	Y	--	--	Module 6	--
Process-related								
13. Training format	In-person or online ²⁰	In-person or online ²¹⁻²³	In-person ²⁸⁻²⁹	In-person	In-person	In-person	In-person	In-person
14. Training duration	--	2 to 5 hours ²²⁻²⁵	< 30 hours (median 6.5 hours) ³⁰	Half days or series	Full day	Full day	Half days or full day (5-6 hours total)	Full day (5.5 hours of training total)
15. Training delivery methods	--	Case examples ²⁶ Group discussion ²⁷	Chances to practice material ²⁸⁻³¹ Group discussion ²⁸⁻³⁰	Case examples	--	Case examples	Didactic with case examples and group discussions, case culmination activity	Didactic with case examples and group discussions, case culmination activity
16. Training schedule	--	--	--	Early in the school year	Not September or June	--	Late fall/early winter	December and March
17. Training location	--	--	--	Schools/school boards	Schools/school boards	--	Schools/school boards	Off-site
Evaluation-related ^b								
18. Evaluation design	--	--	RCT ³²	--	RCT	--	RCT	Quasi-experimental group design
19. Group assignment			Random assignment ³²	--	--	--	Random assignment	Non-random assignment
20. Comparison group	--	--	--	--	Wait-list	--	Wait-list	Wait-list

21. Sample size	--	--	Pilot study 10-15 per group for medium to large effects ³³	--	--	--	$N = 42$ (21 per group) ^c	$N = 45$ ($n_1 = 19, n_2 = 26$)
22. Recruitment	--	--	--	--	Local schools & principals, teacher organizations	--	Local schools & principals, teacher organizations	Education graduate programs, snowball sampling, social media
23. Data collection methods	--	--	Mixed- methods ³⁴⁻³⁵	--	Mixed- methods	--	Mixed- methods	Mixed-methods

Notes. Y = yes, information source used in the decision-making for that training element; RCT = randomized controlled trial.

^aNumbers in superscript correspond to the references listed below. ^bKirkpatrick's (1994) four levels of learning evaluation also largely guided the evaluation approach. ^cTarget sample sizes were also guided by a priori power analyses, which were used to determine the estimated sample size for a large standardized mean difference (G*Power; Erdfelder et al., 1996).

References for the table: 1. Schols et al., 2013; 2. Vanderfaeille et al., 2018; 3. Goldman & Grimbeek, 2015; 4. Greco et al., 2017; 5. Reker, 2016; 6. Alisic, 2012; 7. Alisic et al., 2012; 8. Baweja et al., 2016; 9. Falkiner et al., 2017; 10. Kenny, 2004; 11. King, 2011; 12. Márquez-Flores et al., 2016; 13. Walsh & Farrell, 2008; 14. Webster et al., 2005; 15. Goebbels et al., 2008; 16. Kenny, 2001a; 17. Dorado et al., 2016; 18. Martin et al., 2010; 19. Chafouleas et al., 2016; 20. Rheingold et al., 2015; 21. Kenny, 2007; 22. Mathews et al., 2017; 23. Smeeckens et al., 2011; 24. Alvarez et al., 2010; 25. Hawkins & McCallum, 2001a; 26. Alvarez et al., 2004; 27. Turner et al., 2017; 28. Ertmer & Newby, 2013; 29. Khalil & Elkhider, 2016; 30. Lauer, Christopher, Firpo-Triplett, & Buchting, 2014; 31. Burke & Hutchins, 2007; 32. What Works Clearinghouse (2017) *Standards Handbook*; 33. Whitehead et al., 2016; 34. Greene, 2008; 35. Greene, 2012.

standards) and (2) consultations with the Advisory Committee to explore anticipated challenges at a local level and generate possible solutions. As recommended by the WWC (2017) *Standards Handbook* and the Advisory Committee, a randomized controlled trial (RCT) design with random assignment to form the intervention and wait-list control groups was intended.

Considering guidelines for pilot study sample sizes (Whitehead et al., 2017) and a priori power analyses, a minimum sample of 42 teachers (21 in each group) was intended. Subsequently, the planned recruitment procedures included distributing research invitations to local schools, school boards, and teacher organizations, as the Advisory Committee believed this would be the most effective way to reach the target sample size. Considering discussions with the Advisory Committee and conceptual research illustrating the value of mixed-methodology for complex social phenomena (Greene 2008, 2012), this evaluation also aimed to use a mixed-methods data collection approach.

Despite the intention to conduct a RCT, a non-randomized quasi-experimental design was ultimately used as a result of challenges with a small sample size and restricted dates for the training that posed scheduling issues (i.e., several participants randomly assigned to the intervention group could not attend the training). Therefore, group assignment was non-randomized and based on teachers' availability to attend training; teachers available to attend training were assigned to the intervention condition, and those who were not available were assigned to the wait-list comparison group. Recruitment procedures were also adjusted because the local research advisory committee that grants access to teachers denied my application to recruit teachers directly from schools. In addition, relevant teacher organizations could not distribute research information to teachers without approval from this same research advisory committee. Instead, teachers were recruited for this study through one of three ways: (1)

snowball sampling; (2) social media; or (3) graduate-level education courses at a local university (more details in the Recruitment section below). Using the above-mentioned recruitment procedures during two recruitment periods, the intended sample size was reached. All remaining evaluation elements were carried out as intended.

Measures

Background and training. Prior to the training, teachers provided information on a number of socio-demographic variables, work background, and any previous child maltreatment training (Appendix J).

Feedback on the training curriculum. Concerning the first level of Kirkpatrick's Training Evaluation Model (i.e., reaction, or participants' perceptions about the training), teachers completed short feedback forms immediately after each training module (Appendix K). In these forms, which were developed for the current study, teachers were asked to rate from 1 to 5 the extent to which (1) each of module objectives was achieved (e.g., *My understanding has improved regarding how often child maltreatment happens*) and (2) their level of satisfaction with content delivery and relevance (e.g., *Activities/presentations were effective in delivering the information*). At the end of the training, teachers completed a more general feedback form (Appendix L), which was developed for the current study and asked for: ratings from 1 to 5 regarding satisfaction with content delivery and relevance (e.g., *An appropriate amount of material was covered during the training*); ratings from 1 to 5 for the extent to which overall training objectives were achieved (e.g., *I am more aware of the impact of maltreatment on the development and behaviour of children*); and suggestions to improve the training program (e.g., *What changes would you suggest to improve the training program overall?*). This general feedback form also asked participants to rank the modules in order from most to least helpful.

Attitudes and knowledge related to child maltreatment. In line with the second level of Kirkpatrick's model (i.e., learning, or the degree to which participants acquire the intended knowledge and/or change in attitudes as a result of the training), maltreatment attitudes and knowledge were assessed in six ways. First, prior to and following the training, a modified version of the Educators and Child Abuse Questionnaire (ECAQ; Kenny, 2001a) was used to evaluate teachers' attitudes toward child maltreatment and their knowledge of maltreatment signs and reporting procedures (Appendix M). This modified version was used by King (2011) to better align with the Canadian context in which teachers report cases of suspected child maltreatment. It consists of 26 statements related to teachers' (a) competence in identifying signs of child maltreatment (5 items), (b) competence in reporting procedures (6 items), (c) attitudes toward teachers' role related to child maltreatment (6 items), (d) attitudes toward teacher role expectations (3 items), and (e) attitudes toward outside agency involvement (6 items). Items are rated on a 5-point Likert scale ranging from (1) 'strongly disagree' to (5) 'strongly agree'. Items from the original ECAQ have been used in several previous studies examining teacher knowledge and attitudes (Kenny, 2001b; Kenny, 2004; Kenny & McEachern, 2002). In the current study, the Cronbach's alpha for the entire measure was .82, with the five subscales achieving internal consistency values of .78, .72, .88, .56, and .78, respectively. These values are comparable to internal consistency values reported by King (2011) and generally range from acceptable to good, except for attitudes toward teacher role expectations (which has poor internal consistency).

Second, to further gauge attitudes toward reporting prior to and following the training, teachers rated 17 factors that represent perceived deterrents to reporting and 12 factors that may support reporting (Appendix N). These factors were also used in research by King (2011), who

generated a list of items from a review of the reporting literature and feedback from education, child protection, and maltreatment experts. All items are rated on a 5-point Likert scale ranging from (1) 'strongly disagree' to (5) 'strongly agree' regarding how the factor may deter or encourage reporting. For ease of interpretation, teachers' responses for each item were dichotomized using the cut-off of 4 on the 5-point scale to distinguish their ratings for each of the barriers/supports to reporting as (0) 'no' or (1) 'yes'. Dichotomized item scores were summed to generate two scores: a Total Perceived Barrier score ranging from 0-17 and a Total Perceived Support score ranging from 0-12. Prior to dichotomization, good or excellent internal consistency scores were found for both scales (Cronbach's $\alpha = .91$ and $.81$), which is consistent with previous research (King, 2011).

Third, prior to and following the training, teachers completed a modified version of the Recognition of Child Maltreatment Test (Alvarez et al., 2010; Donohue, Alvarez, & Schubert, 2015) to further assess their ability to detect child maltreatment (Appendix O). This measure consists of four scenarios of reportable child maltreatment and four scenarios that are not reportable. These scenarios cover four types of maltreatment, namely physical abuse, neglect, sexual abuse, and emotional abuse. They were originally developed by Alvarez et al. (2010) who generated an initial pool of 19 scenarios from a literature review of indicators of child maltreatment; these were then reviewed by two independent child welfare practitioners for validation purposes in order to determine whether the scenarios reflected sufficient indication of maltreatment to warrant a report or not. Scenarios with 100% agreement between practitioners were included. For the current study, slight modifications to the context of the vignettes were made so that they were school-based, as the original vignettes were written for mental health professionals. Furthermore, given that child welfare practitioners in the U.S. originally validated

these vignettes, three local practitioners (i.e., intake workers at the local child welfare agency) and one Canadian researcher with expertise in child protection were consulted to confirm whether each vignette warranted a report based on Canadian child protection standards.

To complete this measure, teachers were asked to read each vignette and rate their likelihood of suspecting child maltreatment and of reporting such a scenario to child welfare on a 7-point scale from (1) 'highly unlikely' to (7) 'highly likely'. For scenarios that did not warrant a report, responses were reverse scored so that all scores would reflect accuracy in distinguishing between scenarios warranting and not warranting a report. For ease of interpretation, teachers' responses for each vignette were dichotomized using the cut-off of 5 on the 7-point scale to distinguish their ratings for the vignettes as (0) 'incorrect' or (1) 'correct'. Dichotomized vignette scores were then summed to create total scores for correctly identified scenarios and correctly reported scenarios, with possible scores ranging from 0-8. Given that this was a vignette measure, it could not assess actual detection and reporting at work. Therefore, this measure was included in the second level of Kirkpatrick's model. However, teachers' personal histories of detecting and reporting were collected as part of the demographic information and included as one of the pre- to post-training variables listed below for Kirkpatrick's third level.

Fourth, prior to and following the training, teachers answered open-ended questions about how maltreatment impacts their students (Appendix P). These items were based on Martin et al. (2010) who examined teachers' beliefs about how physical and sexual abuse and emotional neglect affect student learning and classroom behaviour. For the present study, the items were modified to ask about the effects of all types of child abuse and neglect. Specifically, teachers responded to four questions, two each for child abuse and neglect, that asked about their knowledge of maltreatment impacts on (1) learning and (2) behaviour.

Fifth, prior to and following the training, teachers responded to one open-ended question about their awareness of trauma-sensitive strategies to support children with maltreatment histories (Appendix Q). This item was created for the current study, as no previous research has reported on teachers' awareness of trauma-sensitive classroom strategies.

Lastly, following the training, teachers were invited to participate in an interview to gather additional information about their perceived changes in maltreatment-related knowledge as a result of the training (Appendix R).

Self-reported behaviour related to child maltreatment. For the third level of Kirkpatrick's model (i.e., behaviour, or change in work practices as a result of the training), behaviour change was subjectively assessed in two ways. First, prior to and following training, teachers were asked to indicate how many reports they had been involved in directly or indirectly (e.g., reported to administration or a social worker who then reported to child welfare) and how many times they had suspicions of maltreatment that they did not report (Appendix S). In the latter case, teachers were asked to explain their decision not to report their suspicions. Second, during post-training interviews, teachers responded to a series of items exploring perceived change in work behaviour as a result of participation in the training (Appendix R). Specifically, teachers were asked open-ended questions about change in (1) work practice and (2) their working relationships with others.

Influencing factors. Although not directly linked with Kirkpatrick's levels, I gathered additional information during the post-training interviews about teachers' relationships with others who work with them to support maltreated children. Eight open-ended items explored teachers' perceptions of their current working relationships with four stakeholder groups (i.e., school-based social workers; other school staff such as administration, vice-principals, and

principals; child welfare practitioners; and foster caregivers of maltreated children), as well as their perceived needs from these groups in order to feel more supported in their work with maltreated children (Appendix R). Findings from these items were used to explore influencing factors that could influence teachers' application of new knowledge following training, as well as their maltreatment-related responses at school (Gallagher-Mackay, 2011).

Procedure

Ethics approval was obtained from the Health Sciences and Science Research Ethics Board of the University of Ottawa before the commencement of this study (REB #H09-16-07, approved May 12, 2017; Appendix T).

Recruitment. Diverse strategies were used to recruit participants. First, a recruitment poster (Appendix U) was distributed to professors in education at a local university who were currently teaching graduate courses and/or continuing education courses, considering that these courses would likely involve experienced teachers. With permission from professors, I then attended lectures and presented the training and research study, including an overview of what participation would entail. Interested participants who met eligibility criteria were asked to leave their name and contact information, following which I contacted them by e-mail with the consent form to sign and return (Appendix V). At this time, participants were also provided additional details about the training program and associated evaluation components. Concurrently, the same recruitment poster (Appendix U) was distributed via social media platforms (i.e., Facebook, Reddit) in public online groups for teachers in the urban region and surrounding areas. Finally, "snowball sampling" was also used (Sadler, Lee, Lim, & Fullerton, 2010). In both of the latter recruitment scenarios, teachers who were interested in the training and research study were asked to contact me directly by phone or e-mail, after which the same follow-up procedures described

above were used. Participants recruited using one of these strategies were also encouraged to forward study information to other colleagues who might be eligible and interested in the study.

Data collection prior to the training. Pre-training assessment took place approximately two weeks prior to training delivery. At this time, teachers were sent an e-mail message inviting them to complete a questionnaire package online through a survey website (www.qualtrics.com). This package contained the following measures: socio-demographic information and previous maltreatment-related training (Appendix J); attitudes and knowledge related to child maltreatment (Appendices M, N, O, P, and Q); and self-reported behaviour related to child maltreatment (Appendix S).

In order to distinguish the different groups (intervention or comparison group), the questionnaire link sent to each group was modified slightly to identify the group to which the participant belonged. When participants clicked on the link, they were first directed to the consent form. They were instructed to read the consent form and click on a button indicating that they had read and understood the form and that they agreed to participate. Participants were then asked to develop a code, which they entered at each of the two data collections (prior to and following training) so that their responses could be matched. After establishing their unique code, participating teachers then responded to several screening questions to ensure they met study inclusion criteria. Participants who did not meet criteria were re-directed to a page thanking them for their time. Participants who were eligible for the study were directed to the questionnaires, which took approximately 30-45 minutes to complete. Participants were able to terminate the study at any time without any penalty or consequence to their participation in the training.

Training delivery. Two relatively identical workshops were delivered in December 2017

and March 2018; each lasted one full day and took place outside of working hours at the University of Ottawa. Delivery methods included didactic presentations, group discussions, question and answer periods, and case examples. I delivered all didactic presentations, and Dr. Elisa Romano and I co-facilitated group discussions and question and answer periods. See the results section below for more details about training implementation.

Fidelity monitoring. For both workshops, one research assistant was present to complete a fidelity checklist (Appendix W) to monitor the degree to which the intended training program was implemented, to keep track of time for the delivery of each module, and to record other general notes about training delivery (e.g., content that participants tended to discuss in depth).

Data collection during the training. Immediately after each training module, teachers were asked to complete a brief feedback form specific to that module (Appendix K). At the end of the training, teachers were also asked to complete a longer feedback form about the overall training program (Appendix L). For both workshops, a research assistant was present to gather the completed feedback forms from participants.

Data collection following the training. After allowing enough time for teachers in the intervention group to consider and potentially apply what they learned at the training (i.e., approximately one month following training), all teachers in the study were contacted by e-mail to complete the same questionnaire package a second time. The e-mail included a link to the same questionnaire package sent out prior to the training, except for the items about socio-demographic information and previous maltreatment-related training (Appendix J). At about the same time, all teachers assigned to the intervention condition were invited to participate in a phone interview that focused on: (1) perceived changes in maltreatment-related work practices and knowledge as a result of the training; (2) potential changes in relationships at work with

colleagues, students, caregivers, and child welfare practitioners as a result of the training; and (3) changes in these relationships that still need to take place in order to better support children with maltreatment histories (Appendix R). Thirteen teachers agreed to participate. Each interview was audio-recorded and lasted between 27 to 75 minutes (mean = 49.1 minutes).

Compensation. To express appreciation for their participation, participants were sent a \$25 Amazon gift card each time they participated in one of the data collection components that occurred outside of the training (i.e., pre- and post-training questionnaires, and post-training phone interviews).

Statistical Analysis

Descriptive and univariate analyses of quantitative data, and content analysis of qualitative data, were used to address the first three levels of Kirkpatrick's (1994) model of program evaluation (research objective 2). Content analysis of qualitative data was also used to explore teachers' working relationship needs (research objective 3). All quantitative analyses were conducted using SPSS 25.0 and all qualitative analyses were supported using QDA Miner. Code frequencies were calculated for all qualitative data in order to highlight more common experiences and views (Hsieh & Shannon, 2005), and only codes discussed by more than one participant were included in the final results.

As a series of analyses (including multiple comparisons) were completed as part of the training evaluation, experiment-wise error was a concern. Therefore, the use of Bonferroni or other similar adjustments was considered. However, such adjustments represent a primary focus on Type I error, whereas Type II errors (not finding true group difference) are equally as important. This argument is especially true for the current study because it is a pilot implementation and evaluation study, and as such, it is meant to highlight areas that require

further research (e.g., with larger, representative sample sizes). Therefore, Type II errors were of greater concern so adjustments were not applied.

Training feedback (level 1 of Kirkpatrick's model). Two types of analyses addressed the first level of Kirkpatrick's model, namely reactions to the training. Descriptive analyses summarized the quantitative data collected in the training feedback forms (e.g., mean ratings for how well the training addressed its objectives), and content analysis summarized the qualitative information gathered from the open-ended items (e.g., what participants found most and least helpful about the training program). For content analysis of this data, a combination of deductive and inductive approaches was used. Specifically, the analysis was initially deductive because questions from the feedback forms were used to pre-determine categories of interest (e.g., suggested changes to the training program). The development of content-driven codes was then inductive, as two reviewers (K. Weegar and a research assistant) independently examined the data to identify sections of content with a similar meaning or connotation. Then, the two reviewers attempted to fit these emergent codes within each of the predetermined categories. Independent parallel coding by these two reviewers was followed by consensus coding to reach agreement on codes and representative quotations. A third individual (thesis supervisor) reviewed all findings that emerged following independent and consensus coding to further minimize bias. In total, 19 participants returned feedback forms during the training sessions (82.6% response rate across the two workshops).

Training impacts (levels 2 and 3 of Kirkpatrick's model). Two approaches were used to investigate changes in participants' knowledge, attitudes, working relationships, and work practices, which generally correspond to levels 2 and 3 in Kirkpatrick's model. First, analysis of covariance (ANCOVA) via regression was used to evaluate changes in (1) maltreatment-related

attitudes and beliefs (e.g., perceived barriers and supports in the process of reporting maltreatment suspicions) and (2) maltreatment-related knowledge (e.g., knowledge of trauma-sensitive strategies), with baseline scores on the outcomes serving as the covariates. These analyses included 26 wait-list comparison participants and 19 intervention participants. ANCOVA via multiple regression was chosen because it has been recommended as the most powerful approach for analyzing pre- to post-training comparison group designs (Gliner, Morgan, & Harmon, 2003). The ANCOVA approach takes into account any differences in the pre-training scores of the intervention and comparison groups, which are likely to occur with nonrandomized designs, thereby reducing error variance by adjusting the post-training scores (Dimitrov & Rumrill, 2003).

Second, content analysis was used to summarize qualitative information from the post-training interviews ($n = 13$) about perceived changes in knowledge, working relationships, and work practices surrounding maltreatment as a result of the training. A more deductive approach to content analysis (termed “directed content analysis”; Hsieh & Shannon, 2005) was selected for the interview data in order to (1) establish clear links between research questions and summary findings derived from the raw data and (2) validate and/or extend existing research. Specifically, this deductive approach was selected given the lack of theory and research regarding teachers’ knowledge and behaviour related to child maltreatment issues and, therefore, the need to validate/extend existing research that exists. The coding scheme and findings from Study 1 also provided relevant guidance a priori, supporting the rationale for a more deductive approach.

Prior to analyzing information gathered from the interviews, verbatim transcriptions were made from the audio-recordings. The coding scheme and results from Study 1, together with other existing research (summarized in the introduction for Study 1), were collectively used to

determine categories (e.g., perceived changes in knowledge), subcategories (e.g., reporting), and codes (e.g., option to consult child welfare anonymously) that comprised the initial coding scheme. Then, to validate the coding scheme, two reviewers (K. Weegar and a research assistant) independently coded four of the transcripts (30.7% of the transcripts that were randomly picked; Campbell, Quincy, Osserman, & Pederson, 2013). The reviewers demonstrated 90.85 percent agreement using the coding scheme, meeting an acceptable level of inter-coder reliability (Campbell et al., 2013). Therefore, one reviewer (K. Weegar) coded all remaining transcripts using this scheme. While coding the transcripts, reviewers also actively searched for discrepant evidence or negative cases that did not concur with what had been concluded to better ensure that important information was not overlooked due to researcher bias (Aherns, 1999; Maxwell, 1998). To further minimize bias, a third individual (thesis supervisor) was consulted to review all findings that emerged.

Scoring qualitative data for pre-post comparisons. For qualitative measures that were administered prior to and following the training (Appendices P and Q), teachers' responses were first coded based on a combination of deductive and inductive coding methods (Martin et al., 2010; Stemler, 2001). The initial coding scheme for maltreatment-related effects was guided by an existing coding scheme (Martin et al., 2010), as well as existing research on maltreatment-related effects (e.g., Shonk & Cicchetti, 2001). It included four a priori categories: academic/learning difficulties; externalizing behaviour; internalizing behaviour; and interpersonal difficulties. Although these categories encompassed the majority of teachers' responses, three categories were added to capture other maltreatment-related outcomes that were identified by teachers: physical well-being and development; self-harm; and sexual behaviour. Two final categories were created to include teachers who indicated that they did not know

abuse- or neglect-related effects (unknown effects), or affirmed negative effects but did not describe them further (negative effects). Teachers' responses were not restricted to one category but were coded into as many categories as appropriate (see Appendix X for examples of categories and responses).

Existing research and resources (e.g., Craig 2008, 2016) largely guided the initial coding structure for trauma-sensitive classroom strategies, as no other studies have published relevant coding schemes. The initial coding scheme included four a priori categories: classroom environment, emotion regulation, relationship-focused strategies, and self-care. Although these categories encompassed the majority of teachers' responses, three categories were added to capture other trauma-sensitive strategies that were identified by teachers: academic accommodations, monitoring and responding to child safety and well-being (e.g., reporting suspicions of maltreatment), and continuing professional development. A final category was created to include teachers who indicated that they did not know any trauma-sensitive practices. Teachers' responses were not restricted to one category but were coded into as many categories as appropriate (see Appendix Y for examples of categories and responses).

For maltreatment-related effects and trauma-sensitive practices, independent parallel and consensus coding (two reviewers), followed by consultation with a third reviewer, was used to minimize individual researcher bias. All reviewers were blind to participants' group assignment while coding. Following the completion of coding, each participant's response (at pre- and post-training) was scored 0 or 1 for each of the identified categories. Individual category scores were then summed to create a total maltreatment-related effects (or trauma-sensitive strategies) score ranging from 0-8, with higher scores indicating greater knowledge. ANCOVA via regression was then used to evaluate changes in teachers' category scores for maltreatment-related effects and

trauma-sensitive practices, with baseline scores on the outcomes serving as the covariates.

Data screening. Prior to testing the hypotheses related to training impacts, all pre-training quantitative data was screened for missing data, outliers, skewness, and kurtosis in accordance with guidelines presented by Tabachnick and Fidell (2013). All variables had less than 5% missing data (i.e., 1 or 2 participants from the total sample), with the majority of variables having no missing data. Furthermore, results from the Little Missing Completely at Random (MCAR) test were not significant ($\chi^2 [122] = 104.82, p = .87$), suggesting that missing data did not depend on other qualities of the sample (Tabachnick & Fidell, 2013). Due to the relatively small amount of missing data across few variables, cases with missing data were dropped from the analyses. One extreme univariate outlier was found from the comparison group (i.e., z score < -3.3 on total perceived supports to reporting at pre-training); as such, this outlying case was assigned a raw score one unit larger than the next most extreme score in the distribution (Tabachnick & Fidell, 2013). All variables were normally distributed (i.e., no significant issues with skewness or kurtosis using a critical z score of ± 1.96).

Equivalence of groups at pre-training. Independent samples t -tests and chi-square analyses (exact test used if needed) were conducted to assess pre-training equivalence of the intervention and comparison groups. There were no statistically significant differences ($p < .05$) between the intervention and comparison groups at the pre-training assessment in terms of age, gender, employee status, grade(s) currently teaching and previously taught, years of experience in education, maltreatment-related work experience (e.g., past training), attitudes and beliefs related to child maltreatment (ECAQ scores), perceived barriers and supports to reporting, recognition and reporting of child maltreatment case vignettes, exposure or experience with reporting, and knowledge of maltreatment-related effects and trauma-sensitive strategies. This

seems to indicate baseline equivalence despite non-randomization.

Attrition. From pre- to post-training, six teachers from the comparison group (23.1%) and one from the intervention group (5.3%) withdrew from the study. The overall rate of attrition was 15.6%. Reasons for dropout are unknown, although no association was found between dropping out and socio-demographics (e.g., age, work experience), attitudes and beliefs related to child maltreatment (ECAQ scores), perceived barriers and supports to reporting, reporting of child maltreatment case vignettes, exposure or experience with reporting, and knowledge of maltreatment-related effects and trauma-sensitive strategies. As recommended by the What Works Clearinghouse (WWC) *Standards Handbook* (2017, pp. 9-11), differential attrition (i.e., the percentage point difference in the rates of attrition for the intervention and control groups) was also explored because this type of attrition can contribute to potential bias of estimated effects. In this study, the differential attrition of 17.8% is likely to introduce attrition bias according to WWC standards. Considering the smaller sample size, the differential attrition rate, and the intention-to-treat principle that all subjects be included in the final analysis, post-training outcome scores for participants who withdrew from the study were imputed. The expectation maximization (EM) algorithm was chosen because simple imputation methods, such as the last observation carried forward, are generally not recommended (Little et al., 2012; Schafer & Graham, 2002). EM is also an acceptable method of imputation according to WWC standards.

Effect size index. Reporting effect sizes to supplement *p*-values is highly recommended by most scholars and professional organizations to speak to the practical significance of study findings (Sun, Pan, & Wang, 2010). As endorsed by the WWC *Procedures Handbook* (2017, pp. 13-14), the standardized mean difference known as Hedges' *g* was used as the index of effect size for pre-post comparisons. Hedges' *g* is very similar in magnitude to, but slightly more

conservative than, Cohen's d , because it corrects for bias due to small sample size. As recommended by the WWC (2017, pp. E-4) for the calculation of Hedges' g when used with ANCOVA, the difference between the *adjusted* post-training means of the intervention and comparison groups is divided by the *unadjusted* pooled within-group standard deviation. To correct for the small sample size, the effect size estimate was then multiplied by a factor of $\omega = [1 - 3/(4N - 9)]$, with N being the total sample size (Hedges, 1981). A 95% confidence interval for each effect size estimate was also calculated (Ellis, 2010).

Considering the absence of existing literature to guide effect size interpretation, Cohen's (1988) benchmarks of 0.20 (small), 0.50 (medium), and 0.80 (large) were applied with the caveat that these benchmarks need to be adjusted when more research on child maltreatment training for teachers becomes available (Ellis, 2010; Thompson, 2007). Furthermore, according to the WWC *Procedures Handbook* (2017), an effect size equal to or greater than 0.25 should be deemed "substantively important", even though the effect size may not have reached statistical significance, because it reflects a minimum 10-percentile point difference between the means of the comparison and intervention groups on a normal distribution. As such, the current study applied the criterion of 0.25 to denote effects that could be considered substantively important, even if they were not statistically significant.

Influencing factors. Factors that might influence teachers' use of maltreatment-related knowledge and skills were explored descriptively, using qualitative summaries generated by content analysis from the post-training interviews ($n = 13$). Similar to the analysis of other post-training interview data for levels 2 and 3 of Kirkpatrick's model, a more deductive approach was used (i.e., "directed content analysis"; Hsieh & Shannon, 2005). The coding scheme and results from Study 1, together with other existing research (summarized in the introduction for Study 1),

were collectively used to determine subcategories (e.g., community-level factors) and codes (e.g., school-child welfare collaboration) that comprised the initial coding scheme. Then, to validate the coding scheme, two reviewers (K. Weegar and a research assistant) independently coded four of the transcripts (30.7% of the transcripts that were randomly picked). The reviewers demonstrated 90.85 percent agreement using the coding scheme, meeting an acceptable level of inter-coder reliability (Campbell et al., 2013). Then, one reviewer (K. Weegar) coded all remaining transcripts using this scheme. A third individual (thesis supervisor) was again consulted to review all findings that emerged.

Results

Training Implementation

Table 3 illustrates the intended training program compared to what actually took place for content- and process-related elements.

Training content. Three sources of information were used to determine the intended training content: (1) teacher-focused maltreatment research; (2) Study 1 findings for training needs; and (3) preliminary review of training content by four individuals with substantial teaching experience (mean years of experience = 17) who did not participate in the pilot evaluation. Considering all information sources, the intended training curriculum included modules that mapped onto the following: (1) introduction to child maltreatment; (2) identifying and reporting child maltreatment; (3) how maltreatment impacts children's functioning at school; (4) trauma-sensitive classroom strategies; (5) enhancing teacher well-being; and (6) trauma-sensitive school environments. I also intended to include a case culmination activity and conclusions (Module 7). Final training materials included: (1) PowerPoint slides to facilitate the delivery of the training content; (2) a participant manual; and (3) a reference list for additional

module-related readings.

Implementation of the training program content was comparable for the first (December 2017) and second (March 2018) training workshops. In both cases, only 5 of the 7 modules were delivered due to time constraints; content related to teacher well-being and self-care (module 5) and trauma-sensitive school environments (module 6) were omitted, although occasionally these topics were addressed in group discussions. All participants also had the manual that covered this material. For both workshops, fidelity monitoring indicated that modules 1 and 7 were implemented exactly as intended (i.e., 100% of the slides were presented in both workshops). The vast majority of content was also covered for modules 2 and 3 (mean percentage of slides presented = 87.5% and 91.3% for modules 2 and 3, across the two workshops). For both of these modules, omitted content included videos and group discussion questions. For module 4, approximately half of the content was reviewed (mean percentage of slides presented across both workshops = 52.9%). However, content review for this module differed from other modules because it was tailored to participants' needs. Near the start of module 4, participants were shown a list of trauma-sensitive classroom strategies and asked to indicate which strategies were unfamiliar or unclear. Therefore, omitted content for module 4 included classroom strategies that the majority of participants indicated were already known to them.

Training process. Six sources of information were used to determine the intended training process: (1) teacher-focused maltreatment research; (2) allied professional (e.g., early child care providers) maltreatment training research; (3) general training design, implementation, and evaluation literature (e.g., guiding behavioural and cognitive learning principles); (4) Study 1 findings for training needs; (5) consultations with the Advisory Committee; and (6) preliminary review of training process by piloting the delivery with graduate students. Although

there is research evidence attesting to the effectiveness of both in-person and online maltreatment training with teachers and/or allied professionals, the remaining sources of information (e.g., Advisory Committee) were in support of in-person training. Both cognitive and behavioural theories also support the importance of active reflection and feedback in learning (Ertmer & Newby, 2013), which is difficult to accomplish online. For instance, a behaviourist would argue that feedback in practice situations, such as case examples, is useful to modify behaviour in the desired direction (reinforcement). Similarly, cognitivists would suggest that feedback in training is helpful to guide and support accurate mental connections (e.g., discussion opportunities that encourage participants to make connections between learned content and relevant examples). Therefore, for training format, the decision was made to deliver training to teachers face-to-face. In terms of the duration, training research with other allied professionals suggested that workshops between 2-5 hours in duration appear to be effective (e.g., Alvarez et al., 2010; Smeekens et al., 2011), while a review of short-term professional development research supported training durations of 30 hours or less (median = 6.5 hours; Lauer et al., 2014). Therefore, the intention was to deliver 5-6 hours of training. There were mixed opinions about whether to deliver the training at once or over shorter sessions (i.e., half days), so either option was intended. Considering training research with other professionals (e.g., Turner et al., 2017), behavioural and cognitive learning principles (e.g., Ertmer & Newby, 2013), and general training literature (e.g., Burke & Hutchins, 2007), intended training delivery methods included didactic presentations supplemented with case examples and group discussion questions, as well as a case culmination activity (Module 7). Finally, as there was no research literature to guide training location and time of year, Study 1 findings and consultation with the

Advisory Committee were used to determine that training should take place during the late fall/early winter and on-site for teachers (i.e., at schools or at the school board).

As intended, the workshops were delivered in-person, lasted one full day (9:00 AM to 4:00 PM with breaks, 5.5 hours of training total), and took place in the winter. Also as intended, delivery methods included group discussions and case examples, in addition to didactic presentations. Although the plan was to deliver training on-site for teachers, the workshops took place outside of working hours and off-site at the University of Ottawa because the local research advisory committee that grants access to teachers denied our requests to work with teachers at schools or on school board property. Therefore, changes to training location were made to allow teachers' participation without needing this committee's approval.

Sample Description

Socio-demographics. Table 4 shows that teachers were 24 to 61 years old ($M = 35.18$; $SD = 10.10$), predominately female (86.7%), and currently employed as a teacher with permanent status (full- or part-time; 55.6%). At the pre-training assessment, the majority were teaching grades 4–6 (42.2%), followed by grades 1–3 (35.6%), and finally kindergarten, grades 7–8, or not currently teaching in an elementary school (22.2% each). The majority had experience teaching multiple elementary grades (91.1%), with total experience in education ranging from 2 to 39 years ($M = 10.56$, $SD = 8.30$). Some also had experience working with maltreated children beyond their current role as an elementary school teacher (e.g., group home counselor, early childhood educator; 22.2%). There were no statistically significant differences ($p > .05$) between the intervention and comparison groups at the pre-training assessment in terms of age, gender, employee status, grade(s) currently teaching and previously taught, years of experience in education, and maltreatment-related work experience.

Table 4

Demographic Characteristics and Work Experience

Variable	Total (N = 45)		Comparison (n = 26)		Intervention (n = 19)		χ^2	t
	n (%)	M (SD)	n (%)	M (SD)	n (%)	M (SD)		
Age		35.18 (10.10)		37.69 (10.85)		31.73 (8.01)		2.02
Gender (female)	39 (86.7)		21 (80.8)		18 (94.7)		1.85	
Current employee status							5.58	
Permanent (part- or full-time)	25 (55.6)		16 (61.5)		9 (47.4)			
Occasional	16 (35.6)		6 (23.1)		10 (52.6)			
Other (e.g., volunteer)	4 (8.9)		4 (15.4)		0 (0.0)			
Grade(s) currently teaching ^a								
Kindergarten	10 (22.2)		7 (26.9)		3 (15.8)		0.79	
Grade 1 – 3	16 (35.6)		8 (30.8)		8 (42.1)		0.62	
Grade 4 – 6	19 (42.2)		11 (42.3)		8 (42.1)		0.00	
Grade 7 – 8	10 (22.2)		5 (19.2)		5 (26.3)		0.32	
Not currently teaching at an elementary school	10 (22.2)		6 (23.1)		4 (21.1)		0.03	
Years of experience in education		10.56 (8.30)		12.29 (9.75)		8.18 (5.09)		1.67
Grade(s) previously taught ^b								
Kindergarten	27 (60.0)		14 (53.8)		13 (68.4)		0.97	
Grade 1 – 3	39 (86.7)		21 (80.8)		18 (94.7)		1.85	
Grade 4 – 6	39 (86.7)		21 (80.8)		18 (94.7)		1.85	
Grade 7 – 8	19 (42.2)		11 (42.3)		8 (42.1)		0.00	
Other experience working with maltreated children	10 (22.2)		6 (23.1)		4 (21.1)		0.03	

Notes. For group comparisons, chi-square tests (exact test used if needed) and independent samples *t*-tests were used

^aSome participants (n = 14; 31.1%) were currently teaching multiple elementary grades. ^bThe majority of participants (n = 41; 91.1%) had experience teaching multiple elementary grades.

Maltreatment-related training experience. Inadequate training around child maltreatment topics has frequently been noted in past studies; teachers in this sample also reported this problem. When participants were asked to rate the quality of their training to date, teachers perceived it to have been inadequate ($n = 29$; 64.4%) or somewhat adequate ($n = 15$; 33.3%). In other words, only one teacher (2.2%) felt their previous training had been adequate in addressing child maltreatment issues. These findings are likely due to the fact that the majority of teachers (62.2%) had never received any training about reporting procedures or any other child maltreatment topics. Moreover, even for teachers who had received training related to child maltreatment issues ($n = 17$; 37.8%), the majority believed it was inadequate in addressing the topic (58.8%). For instance, several teachers noted that opportunities to apply material (e.g., case examples), pertinent content (e.g., what happens after a report is made), and refreshers were lacking from their previous training experiences. There were no statistically significant differences ($p > .05$) between the intervention and comparison groups at the pre-training assessment in terms of maltreatment-related training experience.

Training Feedback (Level 1 of Kirkpatrick's Model)

Across the two training workshops, 19 out of the 23 teachers who participated in training returned feedback forms (82.6% response rate).

General training feedback. Both quantitative and qualitative information was gathered to explore participants' feedback on the overall training program, such as participant ratings for the extent to which training objectives were achieved (quantitative), as well as suggestions for improvement (qualitative). Beginning with quantitative data, the mean score across all items related to the achievement of training objectives was 4.54 out of 5 ($SD = 0.62$). Specifically, the average score for the first two general training objectives (i.e., increase teachers' awareness of

maltreatment-related impacts, increase teachers' awareness of trauma-sensitive responses) were 4.79 and 4.68 out of 5 respectively, with all participants believing that these objectives were achieved (i.e., ranked as 4 or 5 out of 5). For the third objective (i.e., increase teachers' confidence in their capacity to support maltreated children in the classroom), the average response was 4.47 out of 5 and almost all (94.7%) reported that this objective was achieved. Likewise, almost all participants (89.4%) believed the last training objective (i.e., increase teachers' confidence in their capacity to detect and report child maltreatment) was achieved, with the average response being 4.21 out of 5.

In terms of their satisfaction with training content delivery and relevance, the mean score across all items was 4.52 out of 5 ($SD = 0.62$). Specifically, the majority of participants (89.5%) believed that the chosen delivery methods were effective, with the average rating being 4.45 out of 5 for that item. Most participants were also satisfied with the amount of content covered (78.9%), though the average item rating was slightly lower (4.08 out of 5). For training content relevance, almost all participants (94.7%) believed that they would be able to apply training content in their classroom and that the training would affect their work performance (mean item rating = 4.58 and 4.74, respectively). Moving forward, all participants were also interested in obtaining more information about child maltreatment (mean item rating = 4.74).

At the end of the training, participants also ranked the delivered modules in order based on what they found to be most helpful for their work. According to their mean rankings, Module 2 on identifying and reporting child maltreatment ($M = 1.84$; $SD = 1.12$) was the most useful module, followed by Module 4 on trauma-sensitive classroom strategies ($M = 2.61$; $SD = 1.15$), Module 3 on maltreatment-related impacts on school functioning ($M = 2.68$; $SD = 0.95$), Module

7 on case culmination activity and conclusions ($M = 3.61$; $SD = 1.65$), and Module 1 on the introduction to child maltreatment ($M = 3.95$; $SD = 1.18$).

Turning to qualitative data, six codes emerged regarding the query “What did you find most helpful about the training program?” that were related to either training content (i.e., reporting, maltreatment signs, trauma-sensitive strategies, maltreatment-related effects) or delivery (i.e., case examples, group discussions). Content-related codes were more frequent. Reporting-related content, representing 57.9% of the responses, was the most helpful element reported by participants. For example, one participant responded: *Taking us through our rights, obligations, and expectations for reporting. Acknowledging the “grey zone” of reporting and fears of legitimacy.* Subsequently, content related to maltreatment signs (47.4%), effects of maltreatment (21.1%), and strategies to support maltreated children (10.5%) were reported as helpful. For delivery-related codes, responses related to case examples (e.g., *Discussion of the case study to culminate other module discussions*) and group discussions (e.g., *The chance to discuss our experiences and listen to the experiences of others*) were close in frequency (15.8% and 10.5%, respectively).

When participants were asked, “What did you find least helpful about the training program?” the majority of participants (58.9%) cited something that was less helpful. Out of these responses, four codes emerged that were again related either to the training content (i.e., introduction to the topic, overall too much content) or its delivery (i.e., group discussions, videos). For example, regarding content that was less helpful, one participant responded: *Overall background and definition; it was good to go over, but I think it could have been less in depth given that most were aware of the definitions.* For training delivery (i.e., group discussions), one

participant noted: *Some of the participant conversation was great, but ill timed. Maybe start the day with a brief sharing session?*

When asked to identify the three most important things they learned that might change their work practices, responses fell into seven categories. Two of the categories were under the general theme of reporting duty, which was a highly frequent response (89.5%). Participants highlighted the utility of learning about how both reports (e.g., *I don't have to give my name when reporting*) and consultations with child welfare (e.g., *I can ask an anonymous question to CAS [Children's Aid Society]*) can be done anonymously. The remaining five categories emphasized learning related to maltreatment-related effects (44.4%), trauma-sensitive strategies (44.4%), maltreatment signs (44.4%), self-care (22.2%), and types of maltreatment (16.7%). For the latter, one participant commented: *Going over types of maltreatment, especially educational neglect and exposure to family violence.*

Regarding the query “What would you like to learn more about moving forward?” the most common responses were related to trauma-sensitive schools (31.6%; e.g., *How to work more collaboratively with school team and outside support*). The remaining responses fell into trauma-sensitive classroom strategies (26.3%), maltreatment signs (21.1%), self-care (15.8%), and other child welfare procedures (e.g., how the foster care system works; 15.8%). For trauma-sensitive classroom strategies, one participant elaborated: *Some sample "plans" put in place to support students facing maltreatment or affected by maltreatment*. Regarding self-care, one participant responded: *More concrete strategies for managing my reactions*.

The final question asked participants “What changes would you suggest to improve the training program overall?” Most participants (89.5%) suggested at least one change. Responses fell into five categories: group discussion (36.8%); content-related (21.1%); case examples

(15.8%); and training length (10.5%). Most commonly, participants suggested changes related to group discussion elements, especially increasing opportunities for small group discussion and minimizing larger group discussions. For instance, one participant noted: *To periodically include some small group sharing/discussions. This would allow some voices to “feel” heard without compromising our ability to move forward through the material.* For training content, one participant suggested: *More discussion on support for teachers (e.g., how to work more collaboratively with school team and outside support).* For case examples, one participant responded: *I think that a greater variety of case activities would make it more engaging. The case study was great!* For training length, participant responses generally suggested increasing the length (e.g., two days).

Module-specific feedback. Quantitative (Table 5) and qualitative (Table 6) information was also gathered to explore participants’ feedback on the modules. Beginning with quantitative data (Table 5), the average response for items evaluating module-specific objectives was 4.61 out of 5 across all delivered modules, with mean items within modules ranging from 4.32 to 4.90. Table 5 also shows that the overwhelming majority of participants believed that module-specific objectives were achieved, ranging from 78.9% (i.e., Module 3 objective to improve understanding of how children of different ages react to maltreatment) to 100% (e.g., all Module 1 objectives). In terms of teachers’ satisfaction with module delivery and relevance, the mean score across all modules was 4.57 out of 5. Almost all participants believed the chosen delivery methods were effective across the modules, ranging from 94.7% (e.g., Module 3) to 100% (e.g., Module 7). Likewise, most participants believed they could apply module-specific learning in the classroom, ranging from 78.9% (e.g., Module 1) to 94.7% (e.g., Module 2).

Table 5

Quantitative Results from the Module Training Feedback Forms at Post-Training (n = 19)

Source and items ^a		Item rating (out of 5)		Objective achieved ^b		Agree or strongly agree	
		M	SD	<i>n</i>	%	<i>n</i>	%
Module 1: Introduction to child maltreatment	My understanding has improved regarding:						
	The definition of child maltreatment	4.90	0.32	19	100.0	--	--
	The different types of child maltreatment	4.79	0.42	19	100.0	--	--
	How often child maltreatment happens	4.61	0.49	19	100.0	--	--
	Activities/presentations were effective in delivering the information	4.79	0.42	--	--	19	100.0
	I will be able to apply what I learned in this module in my classroom	4.29	0.77	--	--	15	78.9
Module 2: Identifying & reporting child maltreatment	My understanding, confidence, and abilities have improved regarding:						
	Signs that a child may be experiencing maltreatment	4.42	0.69	17	89.5	--	--
	Reporting suspicions of maltreatment	4.76	0.42	19	100.0	--	--
	How to respond to disclosures of maltreatment	4.50	0.69	17	89.5	--	--
	Activities/presentations were effective in delivering the information	4.61	0.49	--	--	19	100.0
	I will be able to apply what I learned in this module in my classroom	4.61	0.59	--	--	18	94.7
Module 3: How does maltreatment impact functioning at school?	My understanding has improved regarding:						
	How children of different ages react to child maltreatment	4.32	0.82	15	78.9	--	--
	The impact of child maltreatment on <i>brain development</i>	4.63	0.60	18	94.7	--	--
	The impact of child maltreatment on <i>classroom behaviour</i>	4.68	0.58	18	94.7	--	--
	The impact of child maltreatment on <i>relationships with others</i>	4.53	0.61	18	94.7	--	--

	The impact of child maltreatment on <i>academic performance</i>	4.58	0.61	18	94.7	--	--
	Activities/presentations were effective in delivering the information	4.68	0.58	--	--	18	94.7
	I will be able to apply what I learned in this module in my classroom	4.47	0.84	--	--	17	89.5
Module 4: Trauma-sensitive classroom strategies	My understanding, confidence, and abilities have improved regarding:						
	Strategies for directly supporting children who have experienced maltreatment	4.37	0.76	16	84.2	--	--
	Other trauma-sensitive classroom strategies (i.e., classroom strategies that benefit all children, including when maltreatment or other trauma histories may not be known)	4.53	0.61	18	94.7	--	--
	Activities/presentations were effective in delivering the information	4.37	0.60	--	--	18	94.7
	I will be able to apply what I learned in this module in my classroom	4.47	0.77	--	--	18	94.7
Module 7: Case activity and conclusions ^c	Extent to which module objectives were achieved:						
	To apply content covered in the training to a case vignette	4.89	0.33	17	100.0	--	--
	To review take-home messages from the overall training program	4.65	0.61	16	94.1	--	--
	Activities/presentations were effective in delivering the information	4.82	0.39	--	--	17	100.0

Notes. Across the two training workshops, 19 out of the 23 teachers who participated in the training returned feedback forms (82.6% response rate).

^aFeedback on modules 5 and 6 was not collected because these modules were not implemented in the actual training program.

^b“Objective achieved” means that the item was ranked 4 or 5 out of 5. ^cTwo participants returned incomplete Module 7 feedback forms, so percentages are presented for participants with complete data ($n = 17$).

Table 6

Summary of Recommended Changes from the Module Training Feedback Forms at Post-Training (n = 19)

Source ^a	Codes	Example quotes	n (%) ^b
Module 1: Introduction to child maltreatment	Case examples	“A few more examples of different types ... or perhaps a small case where you can identify the various types within.”	4 (25.0)
	Group discussion	“Keeping examples from participants to a minimum (e.g., people sharing long experiences or stories that will be talked about later on) ... It's not necessarily something you can control, but try to keep it short.”	3 (18.8)
	No recommended changes	“I thought it was well done (not too much information, not too little).”	8 (50.0)
Module 2: Identifying and reporting child maltreatment	Content-related	“I would have appreciated more information on recognizing the signs. Recognizing signs could be its own module and make reporting separate.”	6 (35.3)
	Group discussion	“More small group interaction over whole group discussion.”	5 (29.4)
	Modes of delivery	“Could we have a representative present from CAS [a child welfare agency]?”	2 (11.8)
	No recommended changes	“I found this module clear and facts were presented in a relevant and logical manner.”	3 (17.6)
Module 3: How does maltreatment impact functioning at school?	Case examples	“Give more examples of how a child of different ages reacts to maltreatment (how to spot it).”	6 (35.3)
	Content-related	“More detail would be helpful about the impact of maltreatment on brain development, and how it manifests”	3 (17.6)
	Group discussion	“I found we are delving more into off topic conversations and I'm getting restless.”	2 (11.8)
	No recommended changes	“Keep it as it is.”	8 (47.1)

Module 4: Trauma-sensitive classroom strategies	Content-related	“I’d like more concrete strategies in addition to what we generated as a group.”	5 (38.5)
	Group discussion	“Have a board to write down the ideas and strategies everyone is sharing about for how to manage the classroom.”	4 (30.8)
	No recommended changes	“I thought this module was very helpful to actually bring back to the classroom and implement.”	3 (28.1)
Module 7: Case activity and conclusions	Video case example	“It was great to have a small group discussion about the video. Maybe having the written transcript of the video so as to have [the child’s] narrative to refer to?”	4 (33.3)
	No recommended changes	“I enjoyed the opportunity to look at a case study to apply the knowledge we learned today.”	7 (58.3)

Notes. Across the two training workshops, 19 out of the 23 teachers who participated in the training returned feedback forms (82.6% response rate); percentages do not always add to 100 because teachers’ responses were not restricted to one category.

^aFeedback on modules 5 and 6 was not collected because these modules were not implemented in the actual training program.

^bPercentage of teachers who responded to “What changes would you suggest to improve the module/training program overall?” on the module feedback forms (Module 1: $n = 16$; Modules 2 and 3: $n = 17$; Module 4: $n = 13$; Module 7: $n = 12$).

To gather qualitative feedback for each of the modules, participants were asked, “What changes would you suggest to improve the module?” Table 6 provides a summary of the responses per module. For the introduction to child maltreatment (Module 1), no recommended changes was the most common response (50.0%), followed by recommendations to increase the number of case examples (25.0%). Likewise, for maltreatment-related impacts (Module 3), most suggested no changes (47.1%), though this was closely followed by recommendations to add more case examples (35.3%). For both identifying and reporting child maltreatment (Module 2) and trauma-sensitive classroom strategies (Module 4), the most frequent finding was content-related adaptations (35.3% and 38.5%, respectively). For example, for reporting, one participant commented: *Talk more about the process of an investigation, as it might affect the teacher also, not just the outcome for the student.* Finally, for Module 7, the majority suggested no changes (58.3%), followed by suggestions for slight adaptations to the case activity (e.g., provide a written transcript of the video and/or more than one opportunity to watch the case video).

Training Effects on Teachers’ Attitudes (Level 2 of Kirkpatrick’s Model)

Attitudes and beliefs related to child maltreatment. Child maltreatment attitudes and beliefs were measured using a modified version of the Educators and Child Abuse Questionnaire (ECAQ; Kenny, 2001a; King, 2011). Items are rated on a 5-point Likert scale ranging from (1) ‘strongly disagree’ to (5) ‘strongly agree’ and then summed to create five subscale scores and a total score. At pre-training, there was no statistically significant difference between the comparison and intervention groups on the ECAQ total ($t[43] = -0.59; p > .05$) or any of the five subscale scores (t scores ranging from -1.92 to 0.44; $p > .05$). Therefore, pre-training ECAQ results are presented below for the total sample ($N = 45$; see Table 7 for pre-training means and SDs by group).

At pre-training, ECAQ total scores ranged from 75 to 119, with an average of 100.0 ($SD = 9.62$) that is on the higher end of the scale (possible maximum = 130). Regarding teachers' *beliefs in their competence to identify signs of suspected child maltreatment* (subscale 1), the pre-training mean score was 15.11 out of 25 ($SD = 3.19$). For *beliefs in their competence in reporting maltreatment* (subscale 2), the average score at pre-training was 22.31 out of 30 ($SD = 4.03$). In terms of *attitudes toward their role in child maltreatment issues* (subscale 3), teachers' mean pre-training score was 27.78 out of 30 ($SD = 2.73$). For *attitudes toward other role expectations* (e.g., general demands placed on teachers; subscale 4), the average score at pre-training was 9.02 out of 15 ($SD = 2.19$). Lastly, regarding teachers' *attitudes toward others' involvement in supporting children* (e.g., caregivers, child welfare agencies; subscale 5), the pre-training mean score was 25.78 out of 30 ($SD = 3.37$).

To examine potential changes in attitudes and beliefs related to child maltreatment as a result of the training, ANCOVA via regression was used. Table 7 presents the post-training means (adjusted for the effect of the pre-training scores), standardized regression coefficients, and effect size statistics (i.e., Hedges' g with 95% confidence intervals). Regarding teachers' overall beliefs and attitudes related to child maltreatment (i.e., ECAQ total score), the difference between the adjusted post-training group means was statistically significant ($\beta = 0.38$, $t[42] = 3.80$, $p < .001$, 1-tailed; Table 6). The effect size (g) was 0.82, suggesting a large effect according to Cohen's (1988) benchmarks that is well above the WWC (2017) threshold of 0.25. Subsequently, adjusted post-training group means for the ECAQ subscales were explored to identify which specific beliefs and attitudes were affected by the training.

There were statistically significant group differences for three out of the five subscales at post-training (i.e., subscales 1-3; Table 7). For teachers' *beliefs in their competence to identify*

Table 7

Maltreatment-Related Attitudes and Beliefs: Comparison versus Intervention Group Results

Variable	Comparison (<i>n</i> = 26)				Intervention (<i>n</i> = 19)				Comparison vs. Intervention				
	Pre-training (baseline)		Adjusted ^a post-training		Pre-training (baseline)		Adjusted post-training		β^b	<i>t</i>	Hedges' <i>g</i>	Lower limit (<i>g</i>)	Upper limit (<i>g</i>)
	M	SD	M	SD	M	SD	M	SD					
Beliefs and attitudes toward maltreatment	99.27	9.85	101.08	6.79	101.00	9.47	108.88	6.80	0.38***	3.80	0.82	-1.91	3.55
Belief in competence in identifying signs of child maltreatment	15.23	2.75	17.44	2.37	14.95	3.78	20.95	2.37	0.55***	4.90	1.27	0.48	2.06
Belief in competence in reporting procedures	22.54	4.26	22.02	2.71	22.00	3.77	24.30	2.71	0.31**	2.79	0.61	-0.45	1.68
Attitudes toward teachers' role in child maltreatment issues	27.27	3.00	27.49	1.82	28.47	2.20	28.96	1.83	0.33**	2.64	0.70	0.10	1.30
Attitudes toward teachers' role expectations	8.50	1.75	8.39	1.42	9.74	2.56	8.62	1.43	0.05	0.53	0.11	-0.50	0.72
Attitudes toward outside role involvement	25.73	3.95	25.66	2.20	25.84	2.48	26.14	2.20	0.08	0.73	0.16	-0.71	1.03
Perceived barriers to reporting maltreatment	6.73	4.18	8.08	4.11	8.68	3.93	6.01	4.13	-0.22	-1.64	-0.43	-1.81	0.95
Perceived supports to reporting maltreatment	9.73	2.01	9.99	1.67	10.47	1.71	10.79	1.67	0.23	1.57	0.46	-0.03	0.96

Notes. * $p < .05$; ** $p < .01$; *** $p < .001$.

^aPost-training means adjusted for the effect of the pre-training scores. ^bSignificance for ANCOVA via regression results based on 1-tailed tests.

various child maltreatment types (subscale 1), the difference between the adjusted post-training group means was statistically significant ($\beta = 0.55$, $t[42] = 4.90$, $p < .001$, 1-tailed). The effect size (g) was 1.27, suggesting a large effect according to Cohen's (1988) benchmarks that is well above the WWC (2017) threshold of 0.25. Likewise, for teachers' *beliefs in their competence about reporting procedures* (subscale 2), the difference between the adjusted post-training group means was statistically significant ($\beta = 0.31$, $t[42] = 2.79$, $p < .05$, 1-tailed). The effect size (g) was 0.61, suggesting a medium effect according to Cohen's (1988) benchmarks that is above the WWC (2017) threshold of 0.25. Regarding teachers' *attitudes toward their role in child maltreatment issues* (subscale 3), the difference between the adjusted post-training group means was statistically significant ($\beta = 0.33$, $t[42] = 2.64$, $p < .05$, 1-tailed). The effect size (g) was 0.70, suggesting a medium effect according to Cohen's (1988) benchmarks that is above the WWC (2017) threshold of 0.25. Effect sizes for the remaining subscales were below the WWC (2017) threshold and less than small according to Cohen's (1988) benchmarks.

Perceived barriers and supports to reporting. Beliefs about barriers and supports to reporting were measured using a questionnaire developed by King (2011). This measure includes a list of factors that are to be rated on a 5-point Likert scale ranging from (1) 'strongly disagree' to (5) 'strongly agree' on how the factor may deter or encourage reporting. Items are dichotomized and summed to create a Total Perceived Barriers score and a Total Perceived Supports score. At pre-training, there was no statistically significant difference between the comparison and intervention groups on the Total Perceived Barriers ($t[43] = -1.59$; $p > .05$) and Total Perceived Supports scores ($t[43] = -1.30$; $p > .05$). Thus, pre-training results for perceived barriers and supports to reporting are presented below for the total sample ($N = 45$; see Table 7 for pre-training means and SDs by group).

At the pre-training assessment, the Total Perceived Barriers score ranged from 0 to 16, with teachers endorsing an average of 7.56 barriers ($SD = 4.15$) out of the 17 that were provided. This placed the average Total Perceived Barriers score for the whole sample in the lower end of the possible range (i.e., 0-17). Reporting barriers related to a fear of being wrong about maltreatment suspicions ($M = 3.80$; $SD = 1.10$), worrying about making things more problematic for the child ($M = 3.73$; $SD = 0.84$), and worrying about how to interact with the child and family following a maltreatment report ($M = 3.67$; $SD = 1.22$) were the three most common barriers to reporting at pre-training according to mean item rankings.

To examine potential changes in barriers to reporting as a result of the training, ANCOVA via regression was used. Table 7 shows that the difference between the adjusted post-training group means was not statistically significant ($\beta = -0.22$, $t[41] = -1.64$, $p > .05$, 1-tailed). However, the effect size (g) was -0.43 , which exceeds the WWC (2017) threshold of -0.25 and represents a small-to-medium effect according to Cohen's (1988) benchmarks.

For Total Perceived Supports at the pre-training assessment, scores ranged from 5 to 13, with teachers endorsing an average of 10.04 supports ($SD = 1.91$) out of the 13 that were provided. This placed the average Total Perceived Supports score in the higher end of the possible range (i.e., 0-13). Teachers' desire to help the child or family ($M = 4.42$; $SD = 0.66$), receiving support from school administration ($M = 4.40$; $SD = 0.86$), and receiving support from school colleagues ($M = 4.33$; $SD = 0.80$) were the three most common supports at pre-training according to mean item rankings.

ANCOVA via regression was again used to examine potential changes in supports to reporting as a result of the training. Table 7 shows that the difference between the adjusted post-training group means was not statistically significant ($\beta = 0.23$, $t[42] = 1.57$, $p > .05$, 1-tailed).

However, the effect size (g) was 0.46, which is above the WWC (2017) threshold of 0.25 and a small-to-medium effect according to Cohen's (1988) benchmarks.

Training Effects on Teachers' Knowledge (Level 2 of Kirkpatrick's Model)

Recognition and reporting of child maltreatment (based on case vignettes). To further assess their ability to detect child maltreatment, teachers completed a modified version of the Recognition of Child Maltreatment Test (Alvarez et al., 2010; Donohue et al., 2015). This measure includes four scenarios of reportable child maltreatment and four scenarios that are not reportable. To complete this measure, teachers were asked to read each vignette and rate their likelihood of suspecting child maltreatment and of reporting such a scenario to child welfare on a 7-point scale from (1) 'highly unlikely' to (7) 'highly likely'. Dichotomized vignette scores (using the cut-off of 5 on the 7-point scale) were then summed to create total scores for correctly *recognizing* and correctly *reporting* maltreatment case vignettes.

At the pre-training assessment, there were no statistically significant differences between the comparison and intervention groups on recognition ($t[42] = 0.02; p > .05$) or reporting ($t[41] = -1.57; p > .05$) of maltreatment case vignettes. Thus, pre-training results for case vignette scores are presented below for the total sample ($N = 45$; see Table 8 for pre-training means and SDs by group). Based on the eight case vignettes, teachers correctly recognized child maltreatment approximately half of the time at pre-training ($M = 4.64$; $SD = 1.16$, range from 2 to 7 correctly identified vignettes). Twice as many teachers made Type I errors for detection (i.e., falsely detecting maltreatment; 36.5%) compared to Type II errors (i.e., failure to detect maltreatment; 18.3%) across the vignettes.

To examine potential changes in recognition of maltreatment case vignettes as a result of the training, ANCOVA via regression was used. Table 8 presents the post-training means

Table 8

Maltreatment-Related Knowledge: Comparison versus Intervention Group Results

Variable	Comparison (<i>n</i> = 26)				Intervention (<i>n</i> = 19)				Comparison vs. Intervention				
	Pre-training (baseline)		Adjusted ^a post-training		Pre-training (baseline)		Adjusted post-training		β^b	<i>t</i>	Hedges' <i>g</i>	Lower limit (<i>g</i>)	Upper limit (<i>g</i>)
	M	SD	M	SD	M	SD	M	SD					
Recognition of maltreatment (based on case vignettes)	4.64	1.19	4.60	0.92	4.63	1.17	4.95	0.91	0.16	1.23	0.32	0.01	0.63
Reporting of maltreatment (based on case vignettes)	4.17	1.13	4.45	1.08	4.68	1.00	5.17	1.09	0.31*	2.10	0.64	0.31	0.96
Abuse-related effects	2.54	1.36	3.20	0.75	3.00	0.94	3.81	0.75	0.23*	2.66	0.47	0.10	0.84
Neglect-related effects	2.50	1.27	3.70	0.85	3.00	1.05	3.93	0.85	0.10	0.86	0.20	-0.11	0.52
Trauma-sensitive strategies	2.27	1.40	2.78	0.95	2.17	1.34	3.37	0.95	0.22*	2.08	0.43	0.04	0.83

Notes. * $p < .05$; ** $p < .01$; *** $p < .001$.

^aPost-training means adjusted for the effect of the pre-training scores. ^bSignificance for ANCOVA via regression results based on 1-tailed tests.

(adjusted for the effect of the pre-training scores), standardized regression coefficients, and effect size statistics (i.e., Hedges' g with 95% confidence intervals). At post-training, the difference between the adjusted group means was not statistically significant ($\beta = 0.16$, $t[41] = 1.23$, $p > .05$, 1-tailed). However, the effect size (g) was 0.32, which is slightly above the WWC (2017) threshold of 0.25 and a small effect according to Cohen's (1988) benchmarks. At post-training, a comparable percentage of teachers from the intervention (27.8%) and comparison groups (27.4%) made Type I detection errors (i.e., falsely detected maltreatment). However, almost none of the teachers who received training (2.8%) made Type II errors (i.e., failed to detect maltreatment) versus 16.9% of teachers in the comparison group.

For reporting of maltreatment case vignettes, teachers accurately intended to report (or not report) about half of the scenarios at pre-training ($M = 4.40$; $SD = 1.09$, range from 2 to 6 correctly reported vignettes). However, in contrast to detection-related errors, a comparable number of teachers made Type I (i.e., falsely reporting maltreatment) and Type II (i.e., failure to report maltreatment) reporting errors at pre-training, with 36.9% and 33.1% making these errors across the vignettes on average.

ANCOVA via regression was used to explore the impact of training on teachers' ability to accurately report maltreatment in case vignettes. Table 8 shows that the difference between the adjusted post-training group means was statistically significant ($\beta = 0.31$, $t[40] = 2.10$, $p < .05$, 1-tailed). The effect size (g) was 0.64, suggesting a medium effect according to Cohen's (1988) benchmarks that is well above the WWC (2017) threshold of 0.25. Similar to detection vignette scores, a comparable percentage of teachers from the intervention (36.1%) and comparison groups (33.6%) made Type I errors (i.e., falsely reported maltreatment) at post-training. However, few teachers who received training (5.6%) made Type II reporting errors (i.e.,

failed to report maltreatment), compared to roughly one-third of teachers in the comparison group (35.9%).

Knowledge of maltreatment-related effects on student classroom functioning.

Teachers' knowledge of maltreatment-related effects was explored using open-ended questions about how maltreatment may impact a child's functioning at school (separately for child abuse and neglect in line with Martin et al., 2010). Coding of qualitative data was both deductive and inductive in that it was guided by an existing coding scheme (Martin et al., 2010) and existing research on maltreatment-related effects (e.g., Shonk & Cicchetti, 2001), as well as other maltreatment-related outcomes that emerged from teachers' responses in this sample. Each participant's response was then scored 0 or 1 for each of the identified categories, which were then summed to create total category scores for abuse- and neglect-related effects ranging from 0-8. At pre-training, there were no statistically significant differences between the comparison and intervention group means regarding category scores for abuse-related effects ($t[43] = -1.27$; $p > .05$) and neglect-related effects ($t[43] = -1.40$; $p > .05$). Thus, pre-training results are presented below for the total sample ($N = 45$; see Table 8 for pre-training category score means and SDs by group).

For abuse-related effects at pre-training, teachers' category scores ranged from 0 to 5 out of 8 ($M = 2.73$; $SD = 1.21$). Table 9 shows that the vast majority of teachers were able to identify externalizing (e.g., aggression, defiance; 95.6%) and internalizing behaviour problems (e.g., withdrawal, anxiety; 82.2%) as a result of child abuse. In contrast, fewer teachers were aware of abuse-related impacts on interpersonal difficulties (e.g., attachment difficulties; 37.8%), academic/learning difficulties (e.g., delays in academic skills; 33.3%), and physical well-being and development (e.g., brain development; 20.0%). Very few to no teachers identified sexual

Table 9

Teacher Responses for Maltreatment-Related Effects on Student Classroom Functioning (Pre-Training)

Category ^a	Total (N = 45)		Comparison (n = 26)		Intervention (n = 19)	
	Abuse n (%)	Neglect n (%)	Abuse n (%)	Neglect n (%)	Abuse n (%)	Neglect n (%)
Externalizing behaviour	43 (95.6)	36 (80.0)	24 (92.3)	20 (76.9)	19 (100.0)	16 (84.2)
Internalizing behaviour	37 (82.2)	30 (66.7)	20 (76.9)	16 (61.5)	17 (89.5)	14 (73.7)
Interpersonal difficulties	17 (37.8)	19 (42.2)	9 (34.6)	2 (34.6)	8 (42.1)	10 (52.6)
Academic/learning difficulties	15 (33.3)	15 (33.3)	7 (26.9)	9 (34.6)	8 (42.1)	6 (31.6)
Physical well-being and development	9 (20.0)	20 (44.4)	5 (19.2)	10 (38.5)	4 (21.1)	10 (52.6)
Unknown effects ^b	2 (4.4)	1 (2.2)	2 (7.7)	1 (3.8)	0 (0.0)	0 (0.0)
Sexual behaviour	2 (4.4)	0 (0.0)	1 (3.8)	0 (0.0)	1 (3.8)	0 (0.0)
Negative effects ^c	0 (0.0)	2 (4.4)	0 (0.0)	1 (3.8)	0 (0.0)	1 (5.3)
Self-harm ^d	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)

Note. Percentages do not add to 100 because teachers' responses were not restricted to one category.

^aCategories are presented in order of frequency (%) from highest to lowest for maltreatment-related effects (abuse- and neglect-related effects combined) based on the total sample. ^bThis category was created to include teachers who indicated that they did not know how abuse or neglect impacted their students. ^cThis category was created to include teachers who affirmed negative effects, but did not describe them further. ^dThis category emerged from teachers' responses at post-training (n = 2; 4.4% of the total sample at post-test).

behaviour problems (4.4%) and self-harm (0%), and a couple of teachers (4.4%) indicated not knowing any abuse-related effects on student classroom functioning. To examine potential changes in knowledge of maltreatment-related effects as a result of the training, ANCOVA via regression was used. For teachers' knowledge of abuse-related effects, Table 8 shows that the difference between the adjusted group means for category scores was statistically significant, in the hypothesized direction ($\beta = 0.23$, $t[42] = 2.66$, $p < .05$, 1-tailed). The effect size (g) was 0.47, suggesting a small-to-medium training effect according to Cohen's (1988) benchmarks that is above the WWC (2017) threshold of 0.25.

For neglect-related effects, teachers' category scores at pre-training ranged from 0 to 5 out of 8 ($M = 2.71$; $SD = 1.20$). Table 9 shows that the majority of teachers were able to identify externalizing (80.0%) and internalizing behaviour problems (66.7%) because of child neglect, though less frequently than for abuse-related effects. However, more teachers identified neglect-related impacts on interpersonal difficulties (42.2%) and physical well-being and development (44.4%). At pre-training, one-third of teachers (33.3%) also described academic/learning difficulties as a result of child neglect. Only one teacher (2.2%) out of the entire sample indicated not knowing any neglect-related effects on student classroom functioning. Two teachers (4.4%) affirmed negative neglect-related effects, but did not describe them further. For teachers' knowledge of neglect-related effects at post-training, Table 8 shows that the difference between the adjusted post-training means was not statistically significant ($\beta = 0.10$, $t[42] = .86$, $p > .05$, 1-tailed). The effect size (g) was 0.20, which is a small effect according to Cohen's (1988) benchmarks that is below the WWC (2017) threshold of 0.25.

Knowledge of trauma-sensitive strategies. Teachers' knowledge of trauma-sensitive strategies was evaluated using data collected from an open-ended question inquiring what a

teacher could do to support a maltreated child at school. Coding of qualitative data was both deductive and inductive in that it was guided by existing research and resources (e.g., Craig 2008, 2016), as well as other trauma-sensitive strategies that emerged from teachers' responses at pre-training. Each participant's response was then scored 0 or 1 for each of the identified categories, which were then summed to create a total category score for trauma-sensitive strategies ranging from 0-8. There was no statistically significant difference between the comparison and intervention groups regarding category scores for trauma-sensitive strategies at pre-training ($t[43] = 0.27; p > .05$). Therefore, pre-training results are presented below for the total sample ($N = 45$; see Table 8 for pre-training category score means and SDs by group).

Teachers' pre-training category scores for trauma-sensitive strategies ranged from 0 to 5 out of 8 ($M = 2.22$; $SD = 1.36$). Table 10 shows that the majority of teachers described relationship-focused strategies (66.7%) and classroom environment modifications (e.g., consistent and predictable routines; 53.3%). Related to relationship-focused strategies, one teacher responded: *Making sure they [students] understand that you are always there for them, that no matter what happens, how they act, or what they say, they can always come back to you and you will always be there supporting them*. Roughly one-third of teachers also described strategies related to emotion regulation (37.8%) as well as monitoring and responding to child safety and well-being (e.g., monitoring for signs of maltreatment; 33.3%). For emotion regulation, one teacher commented: "Explicitly teach calming strategies to deal with challenging emotions like spaghetti toes or deep belly breathing". A small proportion of teachers also described strategies related to academic accommodations (11.1%), self-care (11.1%), and continuing professional development (8.9%). Only three teachers (6.7%) out of the entire sample indicated not knowing any trauma-sensitive classroom strategies.

Table 10

Teacher Responses for Trauma-Sensitive Strategies (Pre-Training)

Category ^a	Total	Comparison	Intervention
	(<i>N</i> = 45)	(<i>n</i> = 26)	(<i>n</i> = 19)
	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
Relationship-focused strategies	30 (66.7)	18 (69.2)	12 (63.2)
Classroom environment	24 (53.3)	14 (53.8)	10 (52.6)
Emotion regulation	17 (37.8)	8 (30.8)	9 (47.4)
Monitoring and responding to child safety and well-being	15 (33.3)	10 (38.5)	5 (26.3)
Academic accommodations	5 (11.1)	4 (15.4)	1 (5.3)
Self-care	5 (11.1)	3 (11.5)	2 (10.5)
Continuing professional development	4 (8.9)	2 (7.7)	2 (10.5)
Unknown strategies ^b	3 (6.7)	2 (7.7)	1 (5.3)

Note. Percentages do not add to 100 because teachers' responses were not restricted to one category.

^aCategories are presented in order of frequency (%) from highest to lowest based on the total sample. ^bThis category was created to include teachers who indicated that they did not know any trauma-sensitive practices.

To examine potential changes in knowledge of trauma-sensitive strategies as a result of the training, ANCOVA via regression was used. At the post-training assessment, Table 8 indicates that the difference between the adjusted group means for category scores was statistically significant, in the hypothesized direction ($\beta = 0.22$, $t[42] = 2.08$, $p < .05$, 1-tailed). The effect size (g) was 0.43, suggesting a small-to-medium training effect according to Cohen's (1988) benchmarks that is above the WWC (2017) threshold of 0.25.

Post-training interview data. To further explore potential training effects on teachers' knowledge, teachers who participated in post-training interviews ($n = 13$) responded to open-ended questions to explore perceived changes in maltreatment-related knowledge following the training. Table 11 shows that the resulting codes were categorized according to five subcategories, which corresponded with the training modules of detection, reporting, maltreatment-related effects, trauma-sensitive practices, and teacher well-being.

Two codes emerged for improvements in teachers' detection-related knowledge: 1) child maltreatment signs and 2) child maltreatment types. Most teachers ($n = 10$; 76.9%) described improved knowledge of child maltreatment signs, especially for behavioural indicators (e.g., withdrawal, unexpected behaviour changes). Teacher 8 commented: "In my teaching experience I might have seen lethargy, but I might not have used that word in a maltreatment context as a sign of it. So I think that was particularly helpful." Most teachers ($n = 7$; 53.8%) also reported that the training had expanded their understanding of child maltreatment types, namely that they were now more aware of different forms of child neglect (i.e., educational neglect) and the fact that exposure to family violence is a type of child maltreatment.

For training effects on reporting-related knowledge, five codes emerged: 1) anonymous consulting; 2) anonymous reporting; 3) possible significance of cumulative reporting; 4)

Table 11

Categories, Subcategories, and Codes for Post-Training Teacher Interviews (n = 13)

Categories & Subcategories	Codes
<u>Perceived change in knowledge</u>	
Detection	Child maltreatment signs, child maltreatment types
Reporting	Anonymous consulting, anonymous reporting, possible significance of cumulative reporting, reporting procedures, typical child welfare outcomes
Maltreatment-related effects	Impact of maltreatment on school functioning, age-related maltreatment effects
Trauma-sensitive practices	Relationship-focused strategies, supporting caregivers of maltreated children
Teacher well-being	How working with maltreated children can affect teachers' well-being
<u>Perceived change in work practice</u>	
Detection	Monitoring for signs of maltreatment
Reporting	Reporting suspicions to child welfare
Trauma-sensitive practices	Relationship-focused strategies, staff discussions about maltreatment-related topics, classroom environment modifications, support for caregivers of maltreated children, emotion regulation strategies
<u>Influencing factors</u>	
Teacher-level	Training needs, overburden and limited resources
School-level	Teacher-social worker collaboration, teacher-administration collaboration, teacher-teacher collaboration, child maltreatment training for other school staff, school/school board priorities
Community-level	School-child welfare collaboration
Case-level	Teacher-caregiver collaboration

reporting procedures; and 5) typical child welfare outcomes. Most teachers ($n = 7$; 53.8%) reported that the training had informed them of the option to consult child welfare anonymously regarding maltreatment suspicions. Teacher 7 stated: “The part of it that was surprising to me was that you could call (child welfare) with concerns to see if they are reportable or not.” Similarly, most teachers ($n = 7$; 53.8%) commented that the training had taught or reminded them of the option to remain anonymous when reporting suspicions to child welfare. Teacher 2 described the effect of this new knowledge on her feelings about reporting:

I think during the training we discussed that I don’t have to give my name or something ... I was a little worried before how much the parents would find out about that. I think that’s really, you know, made me a bit calmer about reporting and less afraid to do so.

For other findings related to reporting knowledge, four teachers (30.8%) described learning about the possible significance of cumulative reporting. Teacher 13 explained: “Knowing now that small things can add up, so that when you call and report, you might think that your call doesn’t really add anything, but if those calls keep adding they can add up to something that means intervention for a family.” Several teachers ($n = 3$; 23.1%) also described improved knowledge of reporting procedures (e.g., who should report, what to report), while two teachers (15.4%) described a better understanding of typical child welfare outcomes following a report (i.e., most children remain with their biological parents).

Two codes emerged for advances in teachers’ understanding of maltreatment-related effects: 1) impact of maltreatment on school functioning (i.e., classroom behaviour, academic performance, social functioning) and 2) age-related maltreatment effects. Foremost, the majority of teachers ($n = 9$; 69.2%) commented that their knowledge of the impact of maltreatment on school functioning had improved. Most of these teachers reported that their understanding of

classroom behaviour effects had increased; for example, teacher 2 spoke about how reminders of traumatic memories can lead to unexpected behaviours:

How certain situations, you know, my acts and other students' acts can trigger trauma reactions in the classroom ... if a child, you know, has a temper tantrum or storms out of the room because of something that happens, that could be a sign for a trigger of trauma.

Some teachers also described having a better understanding of the impact of maltreatment on academic and social functioning as a result of the training. Several teachers ($n = 5$; 38.5%) described improvements in their knowledge of age-related maltreatment effects, namely that the short- and long-term impact of maltreatment can look very different depending on the developmental stage of the child when maltreatment occurs.

For trauma-sensitive practices, two findings emerged: 1) relationship-focused strategies and 2) understanding caregivers' perspective. Six teachers (46.2%) described improvements in their knowledge of relationship-focused strategies, such as fostering feelings of safety and acknowledging good choices and strengths. Teacher 9 explained:

I think more understanding that you don't always know what happened that morning or what happened that night or what happened last year... it's good to be aware that you never know where that child comes from and who they might need and what they might need and so just treating every situation carefully to make sure that the message is sent across that "I'm not here to punish you" ... "I'm here to help you."

Four teachers (30.8%) also described shifts in their understanding of caregiver perspectives, such as increased empathy for caregivers who had been perpetrators of maltreatment. For example, while describing one of her current student's circumstances, teacher 11 shared: "Since the

training it sort of made me remember that (the mother) is going through something too, right ... she obviously needs help too.”

Finally, for teacher well-being, the majority ($n = 9$; 69.2%) believed that the training had increased their awareness of how working with maltreated children can affect teacher well-being. Teacher 2 commented: “I didn’t realize how much ... (students) are always coming to me with little problems ... all these little things add up and I learned how it is really draining me, you know, all together.” Several teachers also described how the training helped to normalize their reactions and experiences. For example, teacher 2 noted:

I found having those conversations about teachers’ well-being was more reassuring ... we are all in our little classrooms and we’re kind of in a hole in the wall and we don’t really talk to other teachers about this kind of stuff as openly as we should ... It wasn’t really in the module but it felt like those kind of conversations definitely helped, as kind of an added bonus, to make us feel like we’re not alone.

Training Effects on Teachers’ Work Practices (Level 3 of Kirkpatrick’s Model)

Reporting behaviour. Prior to and following training, teachers were asked to indicate whether they had been involved in a report to child welfare directly or indirectly (e.g., reported to administration or a social worker who then reported to child welfare), how many times they had been involved in a report, and how many times they had suspicions of maltreatment that they did not report. At pre-training, there were no statistically significant differences between the intervention and comparison groups regarding direct or indirect experience with reporting ($X^2 = 1.84$, $p > .05$) or number of past reports to child welfare ($t = 1.50$; $p > .05$). Therefore, pre-training results for reporting behaviour are presented below for the total sample ($N = 45$).

Reporting suspected child maltreatment was a common experience among this sample of teachers, as over half indicated having been involved in a report directly or indirectly at the pre-training assessment (62.2%). Most teachers (42.2%) had made at least one direct report to a child welfare agency over the course of their teaching career, with the number of previous direct reports ranging from 1 to 30 ($M = 5.39$; $SD = 7.79$). Approximately one-third of teachers (35.6%, $n = 16$) also reported they chose not to report their suspicions on at least one occasion. Reasons for not reporting included: uncertain or not confident about suspicions (43.8%); not enough evidence to report (18.8%); other staff suggested not to report (18.8%); other staff were already involved with the child (18.8%); or other (e.g., mistrust in child welfare, child denied maltreatment when asked; 12.5%). At post-training, according to the questionnaire data, only one intervention group participant had been indirectly involved in a report since the training, and none of the participants from either group indicated having made a direct report. Therefore, there was insufficient data to examine pre-post comparisons and training effects on teachers' reporting behaviour.

Post-training interview data. Teachers who participated in post-training interviews ($n = 13$) were also asked open-ended questions to explore perceived changes in maltreatment-related work behaviour since the training. Table 11 shows that the resulting codes were categorized into three topic areas corresponding with the training modules of detection, reporting, and trauma-sensitive practices.

Regarding improvements in teachers' detection-related practices, eight teachers (61.5%) described increased monitoring for signs of child maltreatment. Teacher 7 commented: "I'm being more sensitive when kids say things ... a mental note that maybe I need to check in with that child ... also for some of the symptoms that were mentioned in the training because they are

little flags here and there that come up.” Related to this, several teachers also spoke about documenting their suspicions more when monitoring. Teacher 9 explained: “I really felt like your message about documenting everything was helpful. And so I’ve made a point of noting down a few things that I’m keeping my eye on... I’ve made a point of making sure I’m documenting everything because ... it’s all those little things that add up.”

For changes in work practices related to reporting, several teachers noted being more likely to report their maltreatment suspicions, although there had been no opportunity to test this belief since the training. However, two teachers (15.4%) described reporting maltreatment suspicions to child welfare as a result of the training. Teacher 12 described how the training motivated her to report suspicions regarding two current students:

I had to report, yeah, two of them ... doing the training kind of, ah, motivated me to put the connections together I’d say... like put all the different, the different issues or events that have happened, put them all together and be like oh, there’s an issue here.

Teacher 8 described her experience with reporting outside of the school setting:

Anecdotally I can say that recently I was walking down the street and ... across the street from me there was a gentleman with two young children and I felt that his tone... his tone sort of popped my ears first and then I looked over ... Watching it I thought, boy, this is the kind of thing that before I attending the training I would have thought, well, I guess I should leave it alone. Because of the training, I felt like I should do something and so I did. They asked for my name and because I had just sat in your training, I said, “oh, I was under the impression that calls can be anonymous” and she said, “yes they can be.” So I decided to remain anonymous.

For training effects on trauma-sensitive practices, five codes emerged: 1) relationship-focused strategies; 2) staff discussions about maltreatment-related topics; 3) classroom environment modifications; 4) support for caregivers of maltreated children; and 5) emotion regulation strategies. Foremost, ten teachers (76.9%) described increased use of relationship-focused strategies in their classrooms, such as fostering feelings of safety and increasing attention to positive behaviours. Teacher 7 commented on her increased use of several strategies:

Just providing them with more opportunities for positive attention, for recognizing positive behaviours more often... you know, give 6 positive things for 1 negative, that sort of thing. Giving them more opportunities to talk in a time where it's not learning time ... Providing a private space where they can do that ... and just listening mostly.

Regarding improvements in other trauma-sensitive classroom strategies, teaching emotion regulation strategies (e.g., increasing students' vocabulary to express emotions) and classroom environment modifications (e.g., increasing classroom safety) were each described by four of the teachers (30.8%).

The majority of teachers ($n = 9$; 69.2%) also reported having greater staff discussions about maltreatment-related topics after the training, such as what to report to child welfare or how maltreatment might be affecting a child's behaviour. Teacher 9 described how talking more about child maltreatment also influenced her relationships with staff: "I shared what I learned... and then other people started coming to me to ask more about what I learned ... in short, it has actually placed me in a little bit of a leadership role on this issue now." Finally, four teachers (30.8%) also described increased efforts to support caregivers of maltreated children. For example, Teacher 2 commented: "I decided to do more for that student who I think is neglected at home. I've invited the parents to a meeting to try and find ways to better support them."

Factors Influencing Teachers' Use of Maltreatment-Related Knowledge and Skills

Existing research studies, as well as Study 1 findings described herein, indicate that multi-level characteristics, such as teacher attitudes and supportive school administration, can promote or hinder teachers' responses to child maltreatment (Alvarez et al., 2004; Schols et al., 2013; Walsh et al., 2008, 2012). Table 11 shows that codes from post-training interviews (n = 13) were categorized according to teacher-, school-, community-, and case-level factors that may influence teachers' use of maltreatment-related knowledge and work practices.

Teacher-level factors. Two codes emerged for teacher-level factors influencing maltreatment-related work behaviour: 1) outstanding training needs and 2) overburden and limited resources. Foremost, teachers who completed post-training interviews described outstanding training needs that were either content- or delivery-focused. Specifically, all teachers (100.0%) described specific content needs related to the following topics (ranging from most to least frequently discussed): existing school- and community-based resources; trauma-sensitive classroom strategies; child welfare procedures; teacher well-being; reporting; building positive relationships with caregivers; and trauma-sensitive schools. Most teachers (n = 7; 53.8%) also underscored the need for recurrent training. For example, teacher 13 commented: "A refresher on the really key points once a year. It can even be 2 hours or an hour refresher. I find those things really helpful to keep things fresh and remember our responsibility." Six participants (46.2%) also shared concerns that teachers are overburdened and under-resourced, which could interfere with teachers' ability to respond to maltreatment-related issues, as well as address their own well-being. Teacher 8 commented:

Lacking support ... you may be lucky to have one teaching assistant where sometimes you need four. So with that I think the biggest challenge is that sometimes you really are

in survival mode. Everyone has to have lunch. Everyone has to be wearing their boots. I just don't have time to get out my notebook or to really pay attention or to wonder what their sleepiness is about ... the biggest challenge is lack of support and time and resources.

School-level factors. Findings for school-level factors influencing teachers' maltreatment-related work behaviour included: 1) teacher-administrator collaborations; 2) teacher-social worker collaborations; 3) the need to train other school professionals about maltreatment-related topics; 4) teacher-teacher collaborations; and 5) school/school board priorities. Almost all teachers (n = 12, 92.3%) described the significance of teacher-administrator collaborations, such as with their principals or vice-principals, in either enhancing or hindering teachers' ability to respond effectively maltreatment-related issues. Most teachers described feeling adequately supported and collaborative in their relationships with administrators, though some commented on limitations. For instance, teacher 5 commented:

I went to my principal ... because I have suspicions for one of my students in my class for educational neglect because he has severe special needs and the parents are just completely ignoring all recommendations by everybody. Well, the principal didn't support me in the fact that maybe I should call.

The large majority of teachers (n = 10; 76.9%) also spoke about the role of teacher-social worker collaborations; in contrast to predominately positive teacher-administrator collaborations, limitations in relationships with social workers' were most frequently discussed (e.g., lack of communication), particularly due to social workers' large caseloads. Teacher 8 explained:

I guess that it feels sparse. I recall at least a dozen social workers I've worked with in my classroom when teaching, but none of them have I ever had more than a handful of

meetings with. I've always thought that is a shame because I think that they have lots of great things to tell me. If they weren't so sparse on time, I would have liked to have more time to discuss with them or to strategize or hear what they were thinking, you know.

Other school-level results were less common. Six teachers (46.2%) spoke about how all school professionals need child maltreatment training, including other teachers, principals, and office administration (e.g., secretaries). Teacher 7 commented: "I think that as a staff, managing children with significant needs, we all have to be on the same page and trained so, you know, if we come up with a plan, then people have to be consistent across the board." Similarly, four teachers (30.8%) discussed the importance of effective collaborations among teachers, such as collaborative relationships wherein teachers seek support from one another and share common views regarding the unique needs of maltreated children. Finally, the potential influence of school/school board priorities emerged during interviews with four teachers (30.8%), particularly that school and school board priorities tend to overlook maltreatment-related issues.

Community-level factors. Ten out of thirteen teachers (76.9%) discussed limitations related to the school-child welfare collaborations, such as feeling disconnected from the child welfare system (e.g., insufficient communication) as well as challenges resulting from family confidentiality and privacy barriers enforced by child welfare. Teacher 7 explained:

I just think we need regular contact ... if there is a change in a situation that we need to know about, we need to know about it in a timely manner so that we can support the child. Quite often we'll see a behaviour in the child and it turns out that something has happened that we weren't informed about ... and I understand there is a confidentiality issue, but if there is something significant changing, how can we support the child if everything is a secret?

Teacher 4 also highlighted challenges within child welfare that may prevent opportunities to improve the system's relationship with schools: "Caseloads are huge. They're overwhelmed and ... there are a lot of barriers in that, you know, we don't call as often, even if it's just for a suggestion, because we hear that they are overworked and overburdened."

Case-level factors. The majority of teachers ($n = 11$; 84.6%) spoke about teacher-caregiver collaborations, with most suggesting the need to improve communication and increase positive interactions. For example, Teacher 6 explained:

The thing that comes to mind would be maintaining that open communication and trying to bridge that first and foremost because without it, it gets really challenging, especially if that parent holds any resentment ... or just to kind of fix that relationship or to maintain that relationship by saying "hey we're going to help you support that child at school, what are strategies that can help?" and then also in the opposite way, continuing to give updates to the parent about how the child's doing at school.

However, several teachers highlighted positive experiences with caregivers of children with maltreatment histories. Teacher 7 explained: "All of the conversations I've had with parents have been them trying to improve the situation so they can provide the best life for their children. I have never had to interact with a caregiver who did not have their child's best interests at heart."

Discussion

To date, few efforts in Canada have been directed at developing effective child maltreatment training for current or pre-service educators. This study added to the research literature, as well as to maltreatment-related programs and resources for educators, by designing, piloting, and evaluating a child maltreatment training curriculum for teachers in a major urban region in Ontario.

Training Implementation

Building on the information gathered in Study 1, the first objective of Study 2 was to design a child maltreatment training program for elementary school teachers and then deliver a pilot version to explore the feasibility of implementing intended training methods. The training development process culminated in a child maltreatment training program for local elementary school teachers that entailed six content-specific modules (e.g., how maltreatment impacts children's functioning at school), as well as a seventh module comprising a case culmination activity and take-home messages. The large majority of training content was delivered as intended, except for modules related to teacher well-being and trauma-sensitive school environments because of time constraints. Instead, these modules were partially addressed through group discussions and supplementary material. The majority of training process elements (e.g., training length, delivery methods) were carried out as planned. The exception to this was training location; the workshops took place outside of working hours and off-site because the local research advisory committee that grants access to teachers denied our requests to work with teachers at schools or on school board property. Comparisons to existing research are limited. While some studies exist for teachers' training needs (e.g., Kenny, 2015, McKee & Dillenburger, 2009) and training outcomes (e.g., Hawkins & McCallum, 2001a, McGrath et al., 1987), there is a gap in research on development and implementation experiences for child maltreatment training. Likewise, in their narrative review of the implementation and evaluation of other trauma-focused school interventions, Zakszeski, Ventresco, and Jaffe (2017) found that the literature infrequently reported important program implementation and evaluation components (e.g., treatment integrity). Such information is needed to explore procedural feasibility or the need for modifications, as well as to clarify whether outcomes are attributable to

the intervention. Therefore, additional research is needed to build upon current development and implementation findings.

Training Feedback (Level 1 of Kirkpatrick's Model)

The second objective of Study 2 (i.e., training evaluation) followed Kirkpatrick's (1994) model for evaluating training programs, wherein the first three of four levels were addressed. The first component of objective 2 was to appraise the training curriculum by gathering feedback on the usefulness and relevance of the training content for local elementary school teachers. Both quantitative and qualitative information was gathered to explore participants' feedback on the overall training program ($n = 19$). It was hypothesized that participants would report a positive learning experience, as the training would address an important knowledge gap for teachers. Indeed, only one teacher (2.2%) from the current study reported that their previous training had adequately addressed child maltreatment issues.

Consistent with my hypothesis, participants who participated in training and returned feedback forms (82.6% response rate) reported a positive learning experience that addressed their maltreatment-related training needs in some capacity. Almost all participants believed that the general training objectives were achieved, the chosen delivery methods were effective, and the amount of content covered was satisfactory. Quantitative rankings indicated that the module on identifying and reporting child maltreatment was the most useful, followed by modules on trauma-sensitive classroom strategies, maltreatment-related impacts on school functioning, a case culmination activity, and an overview of child maltreatment (e.g., definitions, prevalence). Qualitative data corroborated these findings; for instance, when asked to identify what was most helpful about the training, the most common response was reporting-related content (e.g., how both reports and consultations with child welfare can be done anonymously). Positive responses

to the training are not surprising considering the abundance of research highlighting the need for greater teacher education on maltreatment-related topics (Kenny, 2015), including Study 1 findings that indicate inadequate child maltreatment training for local teachers as well.

The majority of participants also suggested at least one change to the training program, including for specific modules and/or the training overall. Across all recommendations, suggestions for the delivery methods were most common (e.g., increased opportunities for small group discussions, more case examples). These results are consistent with both cognitive and behavioural learning theories, which support the importance of opportunities for reflection and feedback in learning (Ertmer & Newby, 2013). However, content-related changes were also proposed, particularly for modules that addressed classroom strategies, detection, and reporting (e.g., more information about the investigation process after a report has been made to child welfare). Comparisons to existing literature are limited, as few studies have gathered feedback from teachers who recently completed child maltreatment training (i.e., most results focus exclusively on potential training impacts). Among these limited studies, however, findings likewise suggest that participants want more group discussions, especially after difficult content (e.g., video clips of maltreated children; Kenny et al., 2017), as well as more in-depth content (Kenny, 2007).

Preliminary Training Effects (Levels 2 & 3 of Kirkpatrick's Model)

The second component of objective 2 was to evaluate the training curriculum by exploring preliminary evidence of its impact on teachers' knowledge, attitudes, and classroom practices regarding child maltreatment. Both quantitative and qualitative information was gathered using pre- and post-training questionnaires ($N = 45$), as well as post-training interviews ($n = 13$). It was expected that participants' attitudes toward child maltreatment (e.g., beliefs

about child welfare involvement), as well as their knowledge (e.g., reporting procedures, maltreatment impacts) and work practices, would improve from pre- to post-training. Consistent with this hypothesis, the current study showed preliminary evidence of improvements in maltreatment-related knowledge and attitudes (supported by quantitative and qualitative findings), as well as work practices (supported by qualitative findings), for teachers who had completed the training program.

Maltreatment-related attitudes and beliefs. Overall, teachers who participated in this study held relatively positive attitudes and beliefs about child maltreatment. More specifically, pre-training results suggested that teachers had positive attitudes toward their role and others' involvement (e.g., child welfare agencies) in supporting maltreated children, as well as fairly positive beliefs in their competence to respond to maltreatment-related issues (e.g., reporting). Teachers in this study also endorsed many supports to reporting their suspicions of maltreatment (i.e., an average of 10.04 supports out of the 13 provided). However, most teachers perceived several barriers to reporting (e.g., fear of being wrong about maltreatment suspicions, worrying about making things more problematic for the child) and held beliefs that overall expectations placed on teachers are excessive. Likewise, existing research has delineated diverse attitudes and beliefs among teachers regarding maltreatment, such as beliefs about teachers' critical role in detecting child maltreatment (e.g., King, 2011) and beliefs that seem to impede teachers' reporting (e.g., fear of repercussions for the child after reporting; Falkiner et al., 2017). However, studies in other countries have found some different attitudes among teachers. For example, in the Netherlands, Schols et al. (2013) found that many teachers held negative attitudes toward child welfare, which contrasts with the current finding that most teachers at pre-training had positive attitudes toward others' involvement, including child welfare agencies. This difference

in findings could be due to several factors, such as differences between child welfare systems across countries and/or variability in teachers' individual experiences with child welfare personnel. Consistent with this latter possibility, Study 1 results with school social workers, child welfare practitioners, and foster caregivers suggested that several local teachers held negative beliefs toward child welfare (e.g., perceived inadequacy of child welfare responses).

Post-training quantitative analyses found that the maltreatment training program had statistically significant and large positive effects on teachers' overall attitudes and beliefs related to child maltreatment, which exceeded those attained over time by the wait-list comparison group ($g = 0.82$). More specifically, statistically significant and medium-to-large effects were found for teachers' beliefs in their competence to identify signs of child maltreatment ($g = 1.27$), attitudes toward their role in child maltreatment issues ($g = 0.70$), and beliefs in their competence with reporting procedures ($g = 0.61$). Moreover, even though the effects were not statistically significant, 'substantively important' effects (according to the WWC [2017] guidelines) were found for beliefs about barriers and supports to reporting; at the post-training assessment, teachers in the intervention group perceived fewer barriers ($g = -0.43$) and more supports to reporting their suspicions of child maltreatment ($g = 0.46$). It should be noted that the effect size confidence intervals included 0 for some of these statistically significant or 'substantively important' effects (e.g., belief in their competence with reporting procedures). This could suggest there is not enough data or that the data are too variable to make a precise estimate. This could also suggest that future replications may not find similar training effects. Thus, future studies with additional, larger samples are needed.

Still, these findings offer preliminary evidence for short-term improvements in attitudes and beliefs among teachers who participated in training, particularly for teachers' beliefs about

their competence to identify child maltreatment and role in maltreatment-related issues. These preliminary effects are consistent with other outcome studies involving teachers or other professionals, which have likewise identified positive training effects on maltreatment-related attitudes and beliefs (Hawkins & McCallum, 2001b; Hazzard, 1984; Mathews et al., 2017; Rheingold et al., 2015). More specifically, non-randomized controlled group studies with teachers have found increases in participants' confidence in their ability to recognize and report maltreatment signs (Hawkins & McCallum, 2001b; Hazzard, 1984). Likewise, in a randomized controlled trial with early child care educators, Mathews and colleagues (2017) found that reporting-related attitudes in the intervention (online training) group changed positively, with effect sizes ranging from 0.22 to 0.52 that were largely sustained at 4-month follow-up.

Maltreatment-related knowledge. At the pre-training assessment, teachers who participated in this study held some accurate knowledge about different maltreatment-related issues. Specifically, results suggested that teachers' recognition and reporting of maltreatment case vignettes was accurate approximately half of the time. For maltreatment-related effects, pre-training results indicated that the vast majority of teachers were able to describe externalizing (e.g., aggression) and internalizing (e.g., withdrawal) behaviour problems. However, other maltreatment-related effects (e.g., academic/learning problems, interpersonal difficulties) were less commonly reported. For trauma-sensitive practices, most teachers were aware of classroom environment modifications and relationship-focused strategies (e.g., addressing challenging behaviours in ways that repair and maintain relationships). These findings are comparable to Study 1 results, which proposed that some teachers are knowledgeable and effective in the areas of reporting and trauma-sensitive practices. Many of these findings are also consistent with previous studies on teachers' maltreatment-related knowledge (Dorado et al., 2016; Martin et al.,

2010; Vanderfaeille et al., 2018; Yanowitz et al., 2003). For example, using an open-ended survey with 59 experienced teachers in the U.S., Yanowitz and colleagues (2010) also found that teachers were fairly knowledgeable about the effects of child maltreatment (i.e., many teachers could cite behavioural, interpersonal, and academic difficulties). Likewise, Vanderfaeille and colleagues (2018) found that teachers were usually able to correctly identify child abuse in vignettes, although they detected emotional abuse less frequently than other types.

Post-training quantitative analyses found that the training program had statistically significant and small-to-medium positive effects on teachers' knowledge in relation to reporting of maltreatment (based on case vignettes; $g = 0.71$), abuse-related effects on classroom functioning ($g = 0.47$), and trauma-sensitive strategies ($g = 0.43$). Especially, teachers in the intervention group were found to make fewer Type II reporting errors (i.e., failure to report maltreatment). Even though the effect was not statistically significant, a 'substantively important' effect (according to the WWC [2017] guidelines) was also found for teachers' knowledge related to child maltreatment detection (based on case vignettes; $g = 0.32$). Again, fewer Type II errors (i.e., failure to detect maltreatment) were made by teachers who participated in training, compared to the wait-list comparison group. Similar to training outcomes for maltreatment-related attitudes and beliefs, the effect size confidence interval included 0 for one of the 'substantively important' knowledge effects (i.e., detection of maltreatment based on case vignettes). Again, future studies with additional, larger samples are needed.

Likewise, qualitative findings indicated that teachers perceived improvements in their knowledge in relation to detection, reporting, maltreatment-related effects, and trauma-sensitive practices after completing the training. Specifically, the majority of participants described improved knowledge of child maltreatment signs (i.e., behavioural indicators), maltreatment-

related effects on student classroom functioning, child maltreatment types (i.e., different forms of child neglect, exposure to family violence), relationship-focused strategies, and the option to remain anonymous when consulting or reporting to child welfare. Post-training interview results also indicated that teachers believed their knowledge related to well-being had improved (i.e., more than two-thirds of teachers believed that the training increased their awareness of how working with maltreated children can affect their well-being), despite omitting content related to this topic during implementation.

Collectively, quantitative and qualitative findings suggest preliminary evidence for improvements in maltreatment-related knowledge across diverse topic areas as a result of the training. Current findings that support improvements in teachers' knowledge related to reporting were most prominent. This is not surprising considering existing studies that have found limited knowledge and self-confidence among teachers regarding reporting procedures (Falkiner et al., 2017; Goebbels et al., 2008; Goldman, 2010; Kenny, 2001a, 2001b, 2004; Márquez-Flores et al., 2016; Walsh & Farrell, 2008). Likewise, in one of the only studies to evaluate maltreatment training for Canadian teachers, McGrath et al. (1987) found that trained participants were more familiar with maltreatment indicators and legal reporting requirements (e.g., when to report maltreatment suspicions to child welfare) than control participants at a subsequent 3-month follow-up. Recently, Mathews and colleagues (2017) also found considerable training effects on knowledge of reporting-related issues among early child care providers, with large effect sizes (0.75-0.91) at both post-intervention and follow-up assessments. Quantitative and qualitative results from the current study were also consistent in suggesting possible training-related impacts on teachers' knowledge of trauma-sensitive strategies, particularly relationship-focused strategies (e.g., fostering feelings of safety) and knowledge of detection-related topics (e.g.,

signs, types). Again, these findings are consistent with existing teacher-focused literature, which finds inadequate training and limited knowledge in these areas (Alisic, 2012; Alisic et al., 2012; Falkiner et al., 2017; Kenny, 2001a, 2004; Márquez-Flores et al., 2016; Reker, 2016).

Both quantitative and qualitative results also highlight the potential impact of training on teachers' understanding of maltreatment-related impacts on classroom functioning; however, quantitative evidence was found only for teachers' knowledge of abuse-related impacts (i.e., the effect size for neglect-related impacts was below the WWC standard of 0.25). To my knowledge, this is the first study to explore possible training effects on teachers' knowledge of maltreatment-related impacts on classroom functioning. Therefore, it is difficult to appraise the validity of these findings. However, several studies have explored teachers' existing knowledge in this area (Dorado et al., 2016; Martin et al., 2010; Yanowitz et al., 2003). Martin and colleagues (2010) surveyed 66 teachers from the U.S. (85%) and Canada (15%) and found that teachers' understanding of the effects of child maltreatment varied by maltreatment type: 21% of teachers were unaware of how physical and sexual abuse impacted learning and classroom behaviour, compared to only 1.5% who indicated they did not know the impact of emotional neglect. This may imply that teachers' baseline knowledge of neglect-related impacts is higher, which could affect training outcomes. However, at the pre-training assessment for the current study, there was no apparent difference by type in overall knowledge of maltreatment effects. This may suggest that other factors influenced the difference in training outcomes for abuse- and neglect-related impacts, such as training-specific factors (e.g., insufficient content for neglect-related impacts).

Finally, qualitative findings suggested that the training had an impact on teachers' understanding about their well-being. This was somewhat surprising considering that content on well-being and self-care was omitted during training implementation, although intermittent

group discussions and supplementary materials addressed these topics. This may suggest that non-didactic training methods for addressing teachers' well-being could lead to short-term knowledge effects. However, comparisons to quantitative data to verify this finding were not possible (i.e., quantitative measures at the pre- and post-training assessments did not evaluate teachers' knowledge of well-being and self-care). Therefore, more research is needed to build upon these findings.

Maltreatment-related work practices. Not surprisingly, reporting suspected child maltreatment was a common experience among teachers, as the majority indicated having been involved in a report directly or indirectly at least once in their careers. However, around one-third of teachers also reported they chose not to report their suspicions on at least one occasion for various reasons (e.g., uncertain or not confident about suspicions, other staff suggested not to report). Comparably, research with 245 experienced teachers in Southern Ontario found that the majority had direct or indirect reporting experience, although one-quarter had revealed instances in which they had failed to report suspected child maltreatment (King, 2011).

At post-training, quantitative results for work practices from the online questionnaires were limited; only one intervention group participant had been indirectly involved in a report since the training, and none of the participants from either group indicated having made a direct report. Therefore, there was insufficient quantitative data to examine pre- to post-training changes on teachers' reporting behaviour. However, qualitative findings from the post-training interviews indicated that teachers' perceived training-related effects on their work practices related to detection, reporting, and use of trauma-sensitive practices. The vast majority of participants described increased use of trauma-sensitive practices at school after the training, with most reporting more frequent use of relationship-focused strategies in the classroom or

more frequent staff discussions about maltreatment-related topics. Post-training interview results also indicated that many participants were monitoring for maltreatment signs more often, while two participants described reporting their suspicions to child welfare as a result of the training.

In summary, self-report, qualitative findings from teachers suggest preliminary improvements in maltreatment-related work practices after completing maltreatment training. Some of the current findings are comparable to existing research with teachers and other allied professionals (e.g., child care providers); for instance, other studies have also found training effects for participants' sharing of maltreatment-related information with colleagues (e.g., Hazzard, 1984; Rheingold et al., 2015). However, training effects related to increased monitoring and use of trauma-sensitive practices in the classroom appear to be novel among teacher-focused studies. It is also estimated that further changes to teachers' work practices (e.g., reporting behaviour) may have occurred if more time had passed since the training. For instance, at their post-training assessment, Rheingold and colleagues (2015) found no training-related impacts in child care providers' work behaviour (i.e., preventive behaviours, such as talking to a child or other adults about sexual abuse). However, training-related impacts emerged at the 3-month follow up (i.e., the number of preventive behaviours increased significantly more for child care providers who received training). More rigorous studies with longer-term follow-ups are needed to explore child maltreatment training effects on teachers' work practices.

Factors Influencing Teachers' Use of Maltreatment-Related Knowledge and Skills

The third objective of the current study was to explore teachers' current working relationships, including with school staff and other systems (i.e., child welfare, family), in order to identify factors that could influence their application of the training content as well as their maltreatment-related responses. To address this objective, qualitative data from post-training

interviews were used ($n = 13$). It was hypothesized that multi-level influences would emerge (e.g., teacher overburden, school board priorities), consistent with Study 1 findings and other existing studies (e.g., Schols et al., 2013; Vanderfaeillie et al., 2018; Walsh et al., 2008). In line with this hypothesis, findings related to teacher-, school-, community-, and case-level influences emerged.

Influencing factors at the school level were most prominent. Teachers discussed their relationships with other school professionals, including administrators (e.g., principals) and school social workers, wherein conflicting findings emerged. Most teachers described feeling adequately supported by and collaborative with their administrators. However, for teacher-social worker relationships, the majority of participants described limitations (e.g., infrequent communication) due to social workers' large caseloads. Similarly, in Study 1, school social workers described limitations in their relationships with teachers as a result of unwieldy caseloads and referral/communication inefficiencies (e.g., limited direct contact with teachers). These findings are also consistent with other research that indicates internal support and resources directly influence teachers' motivation and abilities when detecting and responding to maltreatment (e.g., Goebbels et al., 2008; Schols et al., 2013).

Other school-level findings, though less common, also emphasized staff support and agreement (e.g., child maltreatment training for all school staff to improve consistency in understanding) as positive influences on teachers' maltreatment-related responses. Again, this is consistent with Study 1 wherein both child welfare practitioners and school social workers spoke about the need to train other school personnel (e.g., principals) so that teachers feel confident and supported in responding to maltreatment-related issues at school. Indeed, in their blueprint for trauma-informed service delivery in schools, Chafouleas et al. (2016) stressed the significance of

building organizational consensus and staff competencies at all levels. However, other research has suggested a small-to-absent relationship between school characteristics (e.g., school size, supportive administration) and teachers' attitudes, knowledge, and behaviours related to child maltreatment (O'Toole et al., 1999; Vanderfaillie et al., 2018; Walsh et al., 2008). Influencing factors at the teacher-level were also common. All interview participants identified several outstanding training needs that could influence teachers' use of maltreatment-related knowledge and skills. Teachers described specific content needs related to various topics, with the majority wanting more information about existing school- and community-based resources. Many teachers also underscored the need for ongoing training. Indeed, other teacher-focused maltreatment research, as well as general training literature, has emphasized the importance of continuing education or follow-up support (e.g., in-service booster sessions) for skill implementation and maintenance in the longer term (Kenny, 2015; Lauer et al., 2014). For teacher-level influences, almost half of the participants also expressed concerns that teachers are overburdened and under-resourced, which could interfere with both their well-being and effectiveness in responding to maltreatment-related issues. This was also a prominent theme in Study 1 and aligns with other emerging research underscoring concerns about teacher exhaustion, burnout, and secondary traumatic stress (Borntrager et al., 2012; Caringi et al., 2015). Nevertheless, little research on teachers' child maltreatment knowledge and skills has considered this issue.

At the case and community level, most teachers highlighted school-child welfare and teacher-caregiver collaborations as important influences on teachers' maltreatment-related responses. For school-child welfare collaborations, the majority of teachers emphasized relationship difficulties (e.g., insufficient communication between systems, challenges resulting

from confidentiality enforced by child welfare). Likewise, in Study 1, child welfare practitioners, school social workers, and foster caregivers spoke about the partnership between schools and child welfare most commonly in the context of relationship difficulties. Indeed, the collaboration between child welfare and education systems is frequently identified in research as a source of stress and frustration (Alvarez et al., 2004). Nevertheless, the effect of community-level factors on teachers' responses to maltreatment has received little research attention. Similarly, almost all teachers spoke about teacher-caregiver collaborations in the context of needed improvements (e.g., increased communication and positive interactions). Again, this is comparable to Study 1, wherein foster caregivers described shortcomings in their relationships with teachers (e.g., infrequent contact). However, several teachers in the current study also described positive experiences with caregivers (e.g., collaborative conversations focused on the needs of the child), which may have influenced their ability to support children with maltreatment histories. Existing, although limited, research has found that cases involving cooperative, communicative parents are less likely to be reported (O'Toole et al., 1999; Walsh et al., 2008). More research is needed to build upon these findings, including studies that explore potential associations between caregiver factors and teachers' use of trauma-sensitive classroom strategies.

Limitations and Future Research Directions

This study has several limitations that need to be considered. First, external validity is limited because the current study used convenience sampling from individuals in one major urban region in Ontario and its surrounding areas. This study also relied on the willingness of teachers to participate, which likely led to a sample of participants with more favourable views of the training program and the value of learning about maltreatment-related topics. As such, it is unclear if the results can be generalized to teachers in other Canadian settings or to teachers

throughout the selected region. However, study findings make a useful contribution to theory development, such as factors influencing teachers' decision-making related to implementation of maltreatment-related knowledge and skills. This study also reveals a number of potential avenues for future research, such as training implementation and evaluation studies with larger, more representative samples of teachers to examine how results generalize to the population.

Second, this study has important design limitations. Although the use of a comparison group was a relative strength of the study, I was unable to use random selection from the teacher population, nor was there random assignment to groups. Random assignment would have improved the likelihood of true group equivalency and improved the generalizability of the findings. Recruitment procedures had to be adjusted because of the local research advisory committee's decision, which did not allow for the recruitment of teachers directly from schools. Due to difficulties with recruitment, I was only able to reach a sample size deemed adequate to find large effects according to a priori analyses. I also had to combine two intervention groups. However, there were no statistically significant differences between the two intervention groups in terms of age, gender, employee status, grade(s) currently teaching and previously taught, years of experience in education, and maltreatment-related work experience (e.g., past training), which seems to indicate baseline equivalence between the two groups. Moreover, results from pre-training analyses suggested baseline equivalence between the intervention and comparison groups despite non-randomization. Nevertheless, future research should employ more rigorous recruitment and group assignment methods, such as randomization. Future studies should also explore barriers and facilitators to research-education collaborations, in order to allow more direct access to teachers and other school professionals for maltreatment-related research.

Third, this study is limited by its data collection methods. Foremost, this pilot evaluation

relied predominantly on self-reported information from teachers. Several of the measures also had inherent limitations. The use of case vignettes to evaluate teachers' detection and reporting behaviour provides a somewhat simplistic portrayal of the decisional processes that may take place in real life, such as the complexities of teachers' decision to report or not. Nevertheless, when direct observation is not possible, the use of case vignettes is thought to produce more valid results than individuals' beliefs about their actual practices (Taylor, 2006). Some of the measures used in the pre- and post-training questionnaires were developed and/or adapted for the current study (e.g., modified version of the Recognition of Child Maltreatment Test; Alvarez et al., 2010; Donohue et al., 2015), so the validity of such measures cannot be guaranteed. Retrospective questioning about reporting also raises the possibility of memory bias and presents a risk to participants who may reveal illegal activity (e.g., failure to report according to law). This is, however, mitigated by the use of non-identifiable data collection; indeed, around one-third of all teachers (35.6%; $n = 16$) indicated that they had failed to report their suspicions on at least one occasion. Considering all data collection limitations, employing additional assessment methods (e.g., direct observations, record review) and including the perspectives of additional stakeholders (e.g., school personnel, family members) may heighten the accuracy and utility of data in future studies. More standardized, psychometrically valid measures should also be used to effectively evaluate teachers' maltreatment-related knowledge, attitudes, and behaviour (e.g., Baker, Brown, Wilcox, Overstreet & Arora, 2016). Finally, a longer follow-up assessment might have captured additional changes in teachers' work practices (e.g., reporting behaviour) as a result of having had more time and opportunities to use the training knowledge and skills.

Despite these limitations, important information regarding implementation and feasibility of child maltreatment training for teachers was gathered. Preliminary changes in teachers'

knowledge, attitudes, and work behaviour after the training were also evident. In other words, study results indicate that a brief training for teachers may affect maltreatment-related knowledge and skills, albeit the practical implications are still unclear. Consequently, this preliminary evaluation achieved what has been argued as the primary objective of pilot studies, namely to test procedures and obtain estimates of parameters for a future large-scale trial (Thabane et al., 2010; Whitehead et al., 2016). Another strength of this study is its contribution to the gap in rigorous, evidence-based approaches to the evaluation of child protection training programs (e.g., few studies with comparison groups; Carter et al., 2006). Finally, this study appears to be one of the first, to my knowledge, that explored training effects on teachers' knowledge and skills for areas other than detection and reporting, such as awareness of maltreatment-related effects on school functioning and use of trauma-sensitive practices. However, results must be regarded as tentative until they are replicated with analogous teacher samples using methodologies that are more rigorous.

Applied Implications

This study reflects an important step toward developing and disseminating child maltreatment training that effectively meets the needs of Canadian teachers. Foremost, this mixed-methods study has implications for the feasibility and acceptability of child maltreatment training for elementary school teachers, including suggestions for both content and delivery components. Training feedback findings offer support for the usefulness and relevance of training content for local elementary school teachers, particularly for content related to reporting suspicions of child maltreatment (e.g., how both reports and consultations with child welfare can be anonymous). Module content for maltreatment indicators (e.g., behavioural signs), trauma-sensitive practices (e.g., relationship-focused strategies), and maltreatment-related effects (e.g.,

how reminders of traumatic memories can lead to unexpected behaviours in the classroom) was also cited as relevant and helpful. Thus, future maltreatment training with teachers should continue to prioritize these topics.

Results from feedback gathered during the training, as well as post-training interview findings, also identified outstanding training needs for teachers that warrant consideration by future training efforts. Especially, participant feedback findings suggest a need for more content related to trauma-sensitive practices (e.g., strategies for building positive relationships with caregivers), trauma-sensitive school environments, teacher well-being/self-care, and child welfare processes (e.g., risk assessment procedures, foster care system). Findings from post-training interviews also suggest that teachers may benefit from more training on reporting-related topics (e.g., what a typical report to child welfare might look like), as well as information about existing school- and community-based resources for children with maltreatment histories.

Findings from implementation experiences, fidelity data, and participant feedback offer important information regarding the feasibility of maltreatment training delivery methods, one of the main objectives of pilot studies (Thabane et al., 2010). Many of the intended delivery processes were successfully implemented as intended and well received by participants, which supports the appropriateness and viability of proposed short-term, in-person maltreatment training programs. Especially, participants spoke about the usefulness of opportunities to apply and rehearse material (e.g., case examples, group discussions). Many teachers also suggested increasing training opportunities to discuss and apply complex material. These comments, which are supported by both cognitive and behavioural learning theories (Ertmer & Newby, 2013), indicate that maltreatment training for teachers may continue to offer a balance of didactic and interactive elements though increase opportunities for practicing material. Another lesson

learned from implementation was that there was too much planned content for the intended training length, so future training with teachers may need to include a longer duration in order to cover all necessary content.

Several delivery and evaluation elements had to be altered as a result of denied applications to the local research advisory committee (e.g., changes to the training location and recruitment procedures), which did not allow direct access to teachers through local schools. Instead of the intended RCT design, non-randomized group assignment was used due to scheduling challenges on the part of teachers. Thus, this study raises a number of fundamental issues related to the process of conducting intervention outcome research with educators and other school-based stakeholders. Additional work is needed to explore barriers and facilitators to research-education collaborations so that access to teachers may be improved for future maltreatment training evaluations, as well as other trauma-related research and practice agendas within school settings.

Preliminary outcome findings suggest that child maltreatment training for elementary school teachers has the potential to improve teachers' attitudes, knowledge, and likelihood of responding effectively to maltreatment-related issues at school. The extent to which this will translate into sustained improvements in teachers' maltreatment-sensitive practices is currently unknown. However, these results signify an important step toward future research with larger samples and more rigorous methodologies, which could explore longer-term training effects on teachers' attitudes, knowledge, and work behaviour. For instance, training outcome results from this pilot study could be used to support sample size calculations for a full trial sample with Canadian teachers.

Finally, post-training interviews emphasized multi-level factors that may influence

teachers' engagement with training and their decision-making and responses to maltreatment-related issues. Predominately, teachers spoke about barriers and facilitators in their working relationships. However, prominent findings related to teacher overburden and outstanding training needs (e.g., need for recurrent training and/or consultation) were also identified.

Regarding their working relationships, teachers described communication inefficiencies with child welfare practitioners, school social workers, and caregivers, which may be impairing their ability to support children with maltreatment histories at school. In contrast, with their administrative staff (e.g., principals), most teachers described supportive, collaborative interactions that, in some cases, fostered their confidence and willingness to address maltreatment-related issues (e.g., reporting suspicions to child welfare). Such findings offer important insights regarding the translation of new knowledge from maltreatment training into teachers' practice. Specifically, despite improvements in teachers' attitudes and knowledge, diverse factors affect whether behaviour will actually change. Thus, future evaluations of maltreatment training for teachers should also consider these contextual factors when exploring training outcomes. Consistent with Study 1, current findings also suggest that training alone will not be able to address all challenges identified by teachers. Interventions that complement training initiatives are needed to reduce teacher overburden and exhaustion, as well as to improve their working relationships, in order to enhance teachers' ability to support children at-risk or experiencing maltreatment.

General Discussion

There is international consensus that inadequate training is a significant impediment to teachers' reporting of child maltreatment and their response to maltreatment-related behaviour in the classroom (Abrahams et al., 1992; Alvarez et al., 2004; Baweja et al., 2016; Cerezo & Pons-Salvador, 2004; Falkiner et al., 2017; Goldman, 2005, 2007; Hinson & Fossey, 2000; Kenny, 2015; Kesner & Robinson, 2002; Krase, 2013; Schols et al., 2013; Sinanan, 2011). Research with Canadian teachers has likewise demonstrated limited training on child maltreatment (King, 2011; Shewchuk, 2014). Findings from this two-study dissertation bring awareness to the training needs of Canadian-based teachers regarding child maltreatment detection, reporting, and trauma-sensitive practices. Dissertation findings also draw attention to the feasibility of developing, implementing, and evaluating child maltreatment training that is useful, relevant, and potentially impactful for teachers in Canada. The objective of Study 1 was to conduct a needs assessment with diverse stakeholders around a child maltreatment training program for elementary school teachers from an urban setting in Ontario. The objectives of Study 2 were threefold: (1) to design the training program and deliver a pilot version with local teachers to explore the feasibility of intended training and evaluation procedures; (2) to evaluate the training program by gathering feedback and exploring preliminary impacts; and (3) to explore teachers' working relationships in order to identify factors that could influence their use of training knowledge and skills, as well as their maltreatment-related responses.

Major Findings

Study 1. With regard to teachers' training needs, Study 1 identified gaps in maltreatment-related knowledge and skills among local elementary school teachers in various areas related to child maltreatment detection and intervention. These included the following: knowledge and

skills related to trauma-sensitive practices, including knowledge of maltreatment impacts on brain development and school functioning; knowledge and behaviour around duty to report and the role of child welfare; and detection-related knowledge (i.e., awareness of maltreatment signs and symptoms). Based on Study 1 findings, I could be confident that there was a training need for local elementary school teachers on various maltreatment-related topics.

Beyond identifying training content needs, Study 1 results highlighted multi-level factors that might influence teachers' participation in child maltreatment training, as well as their use of maltreatment-related knowledge and skills. Most commonly, factors included workload issues, teacher beliefs (e.g., negative attitudes toward child welfare), school internal supports (e.g., unavailability of social workers), and school resource structures (e.g., unmet demand for assessments). Case- and community-level factors were less prominent, with the exception of results related to the relationship between education and child welfare (e.g., challenges resulting from family confidentiality barriers enforced by child welfare). Study 1 also identified training methods and implementation strategies that may increase teacher training accessibility and usefulness, such as incorporating hands-on opportunities (e.g., case examples). Finally, results also suggested that teachers' participation in training might vary according to factors related to the teacher (e.g., overburden) and the school (e.g., school board priorities).

Study 2. The results of Study 1, in conjunction with other relevant past research, discussions with my Advisory Committee, and existing training materials and written resources, were used to develop the training program that was piloted and evaluated in Study 2. Most intended training content and process elements (e.g., training length, delivery methods) were successfully implemented, which supports the utility and procedural feasibility of the developed training program. However, there were several modifications to the intended methods (i.e.,

adaptations to the recruitment procedures and study design) as a result of denied applications to access teachers directly through local schools and school boards. Thus, Study 2 also raised a number of issues that warrant further investigation related to research collaborations with educators and other school-based stakeholders.

In addition to development and implementation findings, important evaluation results emerged in Study 2 that correspond with the first three of four levels in Kirkpatrick's (1994) model for evaluating training programs: (1) reaction (participants' perceptions about the training); (2) learning (change in knowledge and/or attitudes); and (3) behaviour (change in actual work practices). Training feedback supported the usefulness and relevance of training content for local elementary school teachers, especially for modules on identifying and reporting child maltreatment. Feedback results also highlighted participants' need for opportunities to apply and rehearse material (e.g., case examples, group discussions). Regarding preliminary training outcomes, Study 2 also suggests that relatively brief child maltreatment training has the potential to improve teachers' attitudes, knowledge, and likelihood of effectively responding to maltreatment-related issues at school. However, consistent with Study 1, themes from teacher interviews also highlighted the multi-level factors that might influence teachers' use of maltreatment-related knowledge and skills, despite their participation in maltreatment training.

Theoretical Applications

In line with behavioural and cognitive learning theories (Ertmer & Newby, 2013; Khalil & Elkihder, 2015) and other training and implementation literature (Grimshaw et al., 2001; Michie et al., 2011), this dissertation shed light on the complex interplay of both learner (teacher) and environmental (school-, community-, and case-level) factors in influencing teachers' decision-making and actions in response to maltreatment, including their participation in child

maltreatment training. In Study 1, child welfare practitioners and school social workers identified teacher (individual) and school (environmental) factors that could influence training participation. In a positive manner, it was noted that teachers are willing to learn and motivated to help maltreated children. However, there were concerns about teacher beliefs and attitudes (e.g., negative beliefs toward their role in maltreatment-related issues), teacher overburden, and school board priorities. In Study 2, post-training interviews also emphasized the multi-level factors that may influence teachers' responses to maltreatment-related issues, such as communication inefficiencies in their collaborations with child welfare practitioners, school social workers, and caregivers. Other research has likewise identified multi-level factors influencing teachers' responses to maltreatment-related issues, such as reporting (King, 2011; Schols et al., 2013; Vanderfaeillie et al., 2018; Walsh et al., 2008, 2012). Collectively, this suggests that both environmental and learner characteristics are influential in the learning and change process for teachers' maltreatment-related behaviour, supporting a combination of behavioural and cognitive learning mechanisms. However, to my knowledge, this dissertation is the first in Canada to consider influencing factors from the perspectives of teachers and other key stakeholders who work with them. Additional studies are needed to corroborate current findings and explore other influencing factors in order to further evaluate and expand upon theories of learning and behaviour change in the context of teachers' maltreatment-related work practices.

Logic model. Developing a logic model is an essential component of program development and evaluation because it helps to construct a reasonable illustration of how the program should work (program theory), so that the plausibility of the program can be assessed (Alkin, 2011; Rossi, Lipsey, & Freeman, 2004). This is especially important for pilot studies of programs wherein assessing the feasibility of the program is a major objective. Thus, the

development and appraisal of the logic model for this dissertation (Appendix A) has important theoretical applications for future training efforts. Several current findings supported the developed model. For instance, Study 1 and 2 findings verified many of the needs (e.g., underreporting maltreatment suspicions). Preliminary outcome findings from a quasi-experimental comparison group design also suggest that some desired short-term outcomes were reached using the intended activities and outputs. However, some of the lessons learned suggest adaptations to the original logic model (e.g., adding recurrent training and/or consultation to intended activities). Additionally, this dissertation could not address all aspects of the model (e.g., long-term outcomes). Thus, future efforts that likewise aim to enhance maltreatment-related capacities among teachers and other school professionals could use the developed logic model as a guide. However, this model requires further evaluation and adaptation to reflect maltreatment training needs and experiences among diverse samples of school-based professionals.

Research Applications

This dissertation also has several research applications. First and most importantly, there are significant gaps in our understanding of teachers' knowledge, beliefs, and practices in response to maltreatment. Existing training programs and evaluation studies have focused mostly on identifying and reporting child maltreatment, thereby neglecting other maltreatment-related topics that are relevant to classroom teachers. Indeed, other studies outside of Canada, though limited, have found gaps in teachers' knowledge and use of trauma-sensitive practices, as well as their knowledge of how child maltreatment can impact learning and behaviour at school (Alisic, 2012; Alisic et al., 2012; Dorado et al., 2016; Martin et al., 2010; Reker, 2016; Yanowitz et al., 2003). Likewise, beyond detection and reporting, dissertation findings highlight significant

training needs related to trauma-sensitive practices, effects of maltreatment and related outcomes on a child's functioning at school, and effects of maltreatment on brain development.

Considering common findings related to teacher overburden, training needs related to teacher well-being were also identified (e.g., signs of burnout, self-care strategies). However, more rigorous studies are needed to corroborate current findings, such as more research with teachers and other professionals from larger, representative samples of Canadian schools and studies that make use of objective outcome assessments like classroom observation.

Second, this study raised a number of fundamental issues related to recruiting and gaining access to teachers for research. Although this dissertation did not aim to identify barriers and facilitators to research-education collaborations more generally, several findings may be relevant in this regard. Foremost, this dissertation highlighted teacher overburden as a critical issue related to the education of children with maltreatment histories, which may have also impacted teachers' willingness to participate in child maltreatment research. Study 1 findings also highlighted school board priorities in the sense that child maltreatment is an area that often goes unaddressed. Indeed, research in school settings is often challenged by competing priorities (e.g., provincial education mandates that focus on academic achievement and graduation; Fabiano et al., 2014). Thus, for local school-based stakeholders (e.g., school board research advisory committees), there may be little incentive to collaborate with researchers on maltreatment-related issues relative to other topics. Continued work is needed to explore possible barriers and facilitators to research-education collaborations so that access to teachers may be improved for future maltreatment training evaluations, as well as other trauma-related research and practice agendas within school settings.

Third, for future training-related research, this dissertation highlights the value of: 1)

conducting a multi-informant needs assessment prior to training development, implementation, and evaluation; and 2) gathering both qualitative and quantitative data for a pilot trial of a new training program. It has long been argued that a comprehensive needs assessment is crucial before training development because it helps verify what intended participants already know and think about a given topic (which then informs gaps that need to be addressed) and what can be done to make training programs more accessible and useful for intended participants (Khalil & Elkhider, 2016; Kirkpatrick & Kirkpatrick, 2007). Likewise, in line with the ADDIE model (Figure 1), starting with a training needs assessment (Study 1) led to the development of a maltreatment training program that intended to address the needs of local teachers, including both content- and process-related needs, thereby increasing the likelihood of its utility and impact. Adopting a multi-informant approach to the needs assessment was invaluable, as it identified themes that were both common and unique across diverse individuals who work with teachers to support maltreated children. In other words, involving multiple participant groups likely uncovered maltreatment training needs for local teachers that may not have been recognized by one participant group alone. It is also worth investigating the perspectives of other stakeholders, as teachers may not fully recognize their limitations in responding to maltreatment-related issues. Thus, future research should continue to consider multi-informant approaches to examine the complexities of teachers' knowledge and behaviour related to child maltreatment.

By incorporating qualitative methods, this dissertation was able to illustrate complexities related to the context and implementation of the developed training curriculum, which quantitative methods might have overlooked. For instance, qualitative findings from both studies ascertained diverse factors that might influence teachers' participation in child maltreatment training, as well as their use of maltreatment-related knowledge and skills at school. When there

was insufficient quantitative data in Study 2 to examine training effects on teachers' work behaviour, qualitative information from post-training interviews helped delineate possible changes in detection, reporting, and use of trauma-sensitive practices that could serve as targets for future study. Thus, this dissertation corroborated existing conceptual literature that argues for mixed-methodology when studying complex social behaviour (e.g., Greene, 2008, 2012). Even with larger-scale RCTs, qualitative methods have been argued to be invaluable in delineating the intricacies of decision-making and experience at each phase of the research process, which often go unnoticed in quantitative studies. For instance, in their multi-site RCT of a housing program for homeless individuals with mental illness, Nelson, Macnaughton, and Goering (2015) demonstrated how qualitative methods led to important insights at all stages of the research process, including conception, planning, implementation, and outcome evaluation (e.g., a more nuanced understanding of *how* quantitative outcomes were achieved).

Practical Applications

This dissertation has practical implications for the professional development of teachers on maltreatment-related topics. Although outcome findings were preliminary, teachers who participated in training demonstrated improved outcomes in attitudes, knowledge, and self-reported behaviour. Study 2 findings also suggested that the developed training program was largely useful and feasible to deliver with local teachers. Thus, this dissertation offers support for further research and investment in child maltreatment training for teachers locally and more broadly (e.g., with teachers in other Canadian cities). In particular, future efforts should include content- and delivery-related components supported by current findings (e.g., need for training on maltreatment topics beyond detection and reporting, emphasis on interactive opportunities to apply learned material). Future training and evaluation efforts could use the logic model that was

prepared for this dissertation (Appendix A) as a guide for program and research planning (e.g., to clarify relationships between client needs and the intended resources, activities, outputs, and outcomes of the training program). Future training design efforts should also consider principles from both behaviourism and cognitivism as a guiding framework, given the consistency found between current results and these theories (e.g., all support the importance of opportunities for reflection and feedback in learning; Ertmer & Newby, 2013).

This dissertation also has applications for teachers-in-training, as findings could be used to encourage and guide training on maltreatment-related topics in pre-service teacher education programs. Indeed, in Study 1, school social workers and child welfare practitioners advocated for maltreatment training with teachers early in their training and/or career. Similarly, other research has demonstrated a need for developmentally appropriate trauma-specific training across career stages (Reker, 2016). However, additional research would be needed to build upon current findings because little is known about child maltreatment training for Canadian teachers at the pre-service level.

Beyond informing training for teachers, this dissertation has important implications for education, child welfare, and family systems that intersect to support children with maltreatment histories. In conjunction with existing research (Alvarez et al., 2004; Schols et al., 2013; Vanderfaeillie et al., 2018; Walsh et al., 2008), findings suggest needed improvements to resources and relationships within and between these systems to support teachers in responding to maltreatment-related issues at school. For the education system, findings related to workload issues, teacher beliefs, school internal supports, and school resource structures warrant consideration. For instance, dissertation findings imply that varied efforts are needed to reduce burden among teachers, such as greater resources for children with significant behavioural needs

(e.g., increased staff support) and improved school-wide training regarding staff mental health. Findings from this dissertation also suggest that child maltreatment issues are not consistently prioritized in education. However, further work is needed to explore maltreatment-related attitudes and beliefs at a more systemic level among educational institutions. Regarding external collaborators, stakeholders within child welfare should also take current findings into consideration. For instance, child welfare directors and managers could use study findings to educate their staff about common beliefs and experiences among teachers when responding to maltreatment-related issues (e.g., inform intake workers about common fears experienced by teachers when calling to report their suspicions).

Dissertation findings could also be used to inform potential changes *between* interacting systems (i.e., school-child welfare and teacher-caregiver collaborations). Most frequently, participants from both studies spoke about the school-child welfare partnership in the context of relationship difficulties (e.g. disagreement over each system's roles, challenges resulting from child welfare-enforced confidentiality). Similarly, foster caregivers in Study 1 and teachers in Study 2 spoke about needed improvements to teacher-caregiver collaborations (e.g., increased communication). However, several teachers in Study 2 also described positive experiences with caregivers (e.g., collaborative conversations focused on the needs of the child), which may have influenced their ability to support children with maltreatment histories. Thus, efforts to promote effective communication between collaborating individuals and systems are needed. For instance, teachers may have added confidence in child welfare if there were increased dialogue with child welfare staff beyond what is required to support individual students, such as interactive opportunities to address teachers' questions and misperceptions (e.g., typical outcomes following a report to child welfare). Similarly, opportunities that promote shared

knowledge and goal setting across teacher-caregiver partnerships could be beneficial, such as information sharing events to collaboratively discuss strategies for supporting the educational needs of maltreated children.

Conclusions

Despite the high prevalence of child maltreatment and teachers' vital role in the lives of children, little research and public attention has focused on how to support Canadian teachers in responding to maltreatment-related issues at school. Dissertation findings from the needs assessment (Study 1) and training development and pilot evaluation (Study 2) represent important steps toward establishing improved maltreatment training for Canadian teachers. Although current findings are promising, establishing the validity of maltreatment training for Canadian teachers necessitates further decision-making grounded in rigorous and comprehensive research methodology. Future research requires better methods of assessing gaps in teachers' maltreatment-related knowledge and skills, greater emphasis on topics other than maltreatment detection and reporting, and greater consideration of multi-level factors that influence teachers' participation in training and/or maltreatment-related work behaviour. Such studies can then guide larger-scale implementations of effective maltreatment training for teachers and other school professionals in Canada, in order to better equip teachers and potentially improve the lives of children at-risk or experiencing maltreatment.

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Appendix A

Logic Model

	Child Maltreatment Training and Capacity Building within the Education System
Needs	- Knowledge gaps regarding child maltreatment-related topics (e.g., signs of maltreatment, maltreatment-related effects on a child's functioning at school) - Negative attitudes related to child maltreatment (e.g., about the child welfare system) - Underreporting suspicions of child maltreatment - Lacking skills to attend to maltreatment-related behaviour in the classroom/at school
Targets	- Elementary school staff in Ottawa - Teachers - Support staff (e.g., guidance counsellors) - Administrative staff (e.g., principals, vice-principals, office staff)
Activities	- Deliver knowledge transfer and capacity building training workshops - Training evaluation/research activities
Outputs	- Training curriculum (modular format) - Training materials (training manual, participant manual) - Supplemental handouts, including references for additional readings related to the training
Outcomes	Short Term - Increased knowledge - Improved attitudes - Increased sensitivity/awareness in schools Long Term - Increased reporting - Increased skill development (e.g., trauma-sensitive classroom/school interventions)

Appendix B

Ethics Approval (Study 1)

Note: Partial ethics approval was received on May 6, 2015 to begin data collection with caregivers and child welfare practitioners (see below). Amendments to study procedures were approved (and therefore full ethics approval was received) on February, 10, 2016 to allow recruitment and data collection from social workers instead of classroom teachers.

File Number: H11-14-05

Date (mm/dd/yyyy): 05/06/2015



Université d'Ottawa
Bureau d'éthique et d'intégrité de la recherche

University of Ottawa
Office of Research Ethics and Integrity

Ethics Approval Notice**Health Sciences and Science REB****Principal Investigator / Supervisor / Co-investigator(s) / Student(s)**

<u>First Name</u>	<u>Last Name</u>	<u>Affiliation</u>	<u>Role</u>
Elisa	Romano	Social Sciences / Psychology	Supervisor
Kelly	Weegar	Social Sciences / Psychology	Student Researcher

File Number: H11-14-05**Type of Project:** Independent Student Project**Title:** Developing and educational curriculum on child maltreatment for primary school personnel: A training needs evaluation

Approval Date (mm/dd/yyyy)	Expiry Date (mm/dd/yyyy)	Approval Type
05/06/2015	05/05/2016	Ia (partial)

(Ia: Approval, Ib: Approval for initial stage only)

Special Conditions / Comments:Partial Approval (as of May 6th, 2015): Recruitment and data collection may only begin at the Children's Aid Society (CAS).

Note: Full approval is pending the approval from the Ottawa-Carleton Research Advisory Committee (OCRAC). Once received, a copy of approval must be submitted to the Ethics Office (at uOttawa), at which time full approval may be granted. Recruitment and data collection may not begin within School Boards until full approval has been granted.

Appendix C

Consent Form for Focus Groups for Child Welfare Practitioners and School-Based Social Workers (Study 1)

Title of the Study: Developing an educational curriculum on child maltreatment for primary school personnel: A training needs evaluation

Principal Researcher: Kelly Weegar, B.A. (Hons.), Ph.D. Candidate, Clinical Psychology, University of Ottawa; Telephone: 613-562-5800

Project Supervisor: Dr. Elisa Romano, Associate Professor, Clinical Psychology, University of Ottawa; Telephone: 613-562-5800

You have been invited to participate in this research study because you have been identified as an individual with pertinent expertise. As such, the purpose of this information and consent form is to provide you with sufficient information to ensure that you understand the nature of this study and its requirements. Before agreeing to take part in this research, we ask that you review this information notice carefully.

Task to be completed:

The focus group that you have been invited to participate in is being conducted by Ms. Kelly Weegar, a doctoral student in clinical psychology, under the direct supervision of Dr. Elisa Romano from the Children's Well-Being Lab at the School of Psychology, University of Ottawa. The aim of the focus group is to identify training needs and current knowledge of local primary school personnel (e.g., teachers) and other important stakeholders (e.g., social workers, child welfare professionals) about child maltreatment and classroom strategies to support the unique needs of maltreated children. Information obtained from the focus groups will be used in the development of a future training curriculum on child maltreatment for school personnel. The focus group is anticipated to last approximately 1 – 1 ½ hours, and it will be audio-recorded.

Rights and responsibilities:

We would really appreciate your honesty when responding to the questions in the focus groups. You are free to refuse to participate or to withdraw from the study at any time without penalty. However, your data will still be used should you choose to withdraw from the study because focus group data are highly dependent on the overall group discussion (i.e., it is important that there are no missing links in the discussions that are recorded). In this case, all potentially identifying information would be removed.

Anonymity and confidentiality:

Please note you will be exposing your identity and responses to others participating in the same focus group. Otherwise, your answers are strictly confidential and no one will be informed of

your answers. Only Dr. Romano and Ms. Weegar will have access to the data, which will be kept for 10 years on a password-protected computer in Dr. Romano's laboratory. Some participants' responses may be presented verbatim during presentations of results; however, if this were to happen, any potentially identifying features such as job titles and areas of work will be omitted and replaced with pseudonyms and general terms. Only the primary researcher and supervisor will have unrestricted access to any personally identifying data and the pseudonyms that link data to participant identities. Any quotes will also likely be abbreviated to facilitate the reading of the results.

Risks and benefits:

Participation in this study is not expected to involve any risks; however, the benefits of this research are significant. If future training on child maltreatment for primary school personnel is going to effectively meet the content and delivery needs of its participants, it is imperative that we gain an understanding of the current knowledge about child maltreatment in our target audience, as well as any supportive factors and barriers within our local schools and school boards that could effect the implementation of such a curriculum. As such, information gathered from the focus groups will be used to inform the development of a training curriculum that can adequately address the needs of the stakeholders and participants to be served by the program.

For you individually, participating in this study is likely to prompt you to reflect upon the topic, which you may find enriching and beneficial. For instance, you may be prompted to reflect upon your knowledge, attitudes and/or experiences when supporting children who may be having difficulties with learning, relationships and/or behaviour at school as a result of maltreatment.

Data storage and use:

Data from this study are being collected as part of a research project that could become part of Ms. Weegar's doctoral thesis. Data will be used for research purposes only in that they will be presented at psychology conferences and published in scientific journals; however, dissemination of this research will not include any personally identifying information. Your data will be stored electronically on a password-protected computer in Dr. Romano's laboratory. Data from this study will be kept for 10 years, after which point they will be deleted. Only Dr. Romano and Ms. Weegar will have access to the data.

Additional information:

Please note that this project is being conducted independently of [insert the school board and school from which this participant is being recruited, or the Children's Aid Society]. Therefore, your participation is completely voluntary (i.e., you are not obligated to participate), and whether or not you decide to participate will have no impact on your current employment at the [insert school board and school from which this participant is being recruited, or the Children's Aid Society]. Should you have any questions or require additional information, please contact the Protocol Officer for Ethics in Research, Office of Research Ethics and Integrity, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 154, Ottawa, ON, K1N 6N5; Tel.: (613) 562-5387; E-mail: ethics@uottawa.ca. Any questions about the current study may be addressed to Ms. Kelly Weegar or the project supervisor (Dr. Elisa Romano).

Informed consent:

By signing and returning this form to the researcher, you are agreeing to participate in the proposed research project and to having the focus group session audio recorded. There are two copies of this consent form, one of which is yours to keep.

☐

Yes, I agree to participate and to having the interview audio recorded.

Name – please print

Signature

Date

Researcher's signature

Date

Appendix D

Recruitment Letter for Foster Caregivers (Study 1)

Has a foster child in your care experienced any harm outside of school that impacted their classroom functioning?

If so, you may be eligible to participate in an online research study being conducted at the University of Ottawa. Specifically, we are seeking caregivers of children who have experienced maltreatment (i.e., physical, emotional, or sexual abuse and/or neglect) **who are currently in primary school (JK – grade 8)**. Schools are important communities for children who have experienced maltreatment because school personnel can help all children succeed with the proper knowledge and resources, despite any hardships a child may have endured. *Your participation in this study will help us better understand how school environments might be changed to more effectively support the needs of children who have experienced such difficult life events.*

What does participation involve?

- Anonymously answer a series of questions that take approximately 15-20 minutes to complete
- The study is available online and can be completed from any computer with Internet access, in the convenience of your home or office
- Please note that the study is only available in English and only one caregiver per family is required to participate

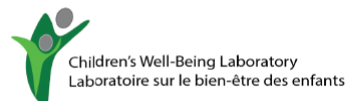
Interested?

- Log on to: http://uottawapsy.az1.qualtrics.com/SE/?SID=SV_02pBbrJa9sslzYx

Questions?

- Contact Kelly Weegar (Ph. D. Student) or Dr. Elisa Romano (Supervisor) by phone at **(613) 562-5800**.

Please note that this project is being conducted independently of the Children's Aid Society of Ottawa and the local school boards. This research has ethical approval from the University of Ottawa, as well as approval from the Children's Aid Society of Ottawa. Your consent to participate will be obtained online prior to beginning the survey.



Appendix E

Consent Form for Foster Caregiver Questionnaires (Study 1)

Title of the Study: Developing an educational curriculum on child maltreatment for primary school personnel: A training needs evaluation

Principal Researcher: Kelly Weegar, B.A. (Hons.), Ph.D. Candidate, Clinical Psychology, University of Ottawa; Telephone: 613-562-5800

Project Supervisor: Dr. Elisa Romano, Associate Professor, Clinical Psychology, University of Ottawa; Telephone: 613-562-5800

You have been invited to participate in this research study because you have been identified as an individual with pertinent expertise. As such, the purpose of this consent form is to provide you with sufficient information to ensure that you understand the nature of this study and its requirements. Before agreeing to take part in this research, we ask that you review this information notice carefully.

Task to be completed:

This study is being conducted by Ms. Kelly Weegar, a doctoral student in clinical psychology, under the direct supervision of Dr. Elisa Romano from the Children's Well-Being Lab at the School of Psychology, University of Ottawa. The goal of this study is to determine the training needs and priorities of school professionals (e.g., teachers) and other stakeholders (including caregivers) for a training program to be developed for school personnel about how maltreatment affects children's functioning at school and how school personnel can support the unique needs of these children. In other words, we want to learn about your child's experience at school after experiencing maltreatment and how you think the school environment could be changed to better support the needs of your child. Should you decide to participate, you will be invited to complete a questionnaire, which will take approximately 15-20 minutes.

Rights and responsibilities:

We would really appreciate your honesty when responding to the questions in the questionnaire. You are free to refuse to participate or to withdraw from the study at any time without penalty.

Anonymity and confidentiality:

Your answers are strictly confidential (i.e., your name will not be collected) and no one will be informed of your answers. You will also be asked to establish your own unique 6-character code before you begin the questionnaire to ensure your data remains completely anonymous. Only Dr. Romano and Ms. Weegar will have access to the data, which will be kept for 10 years on a password-protected computer in Dr. Romano's laboratory. Some participants' responses may be presented verbatim during presentations of results; however, if this were to happen, any

potentially identifying features would not be included as we did not collect this type of information from you. Any quotes will also likely be abbreviated to facilitate the reading of the results.

Risks and benefits:

Participation in this study is not expected to involve any risks; however, the benefits of this research are significant. Specifically, if future training on child maltreatment for primary school personnel is going to effectively educate school professionals to meet the needs of maltreated children, it is imperative that we understand current strengths and limitations within schools from the perspective of the caregivers of children who have experienced maltreatment.

For you individually, participating in this study will prompt you to reflect upon your child's experiences at school after experiencing maltreatment, which could be both positive and negative. If, as a result of your participation in this study, you experience any adverse effects, please contact the principal researcher, Ms. Kelly Weegar or the project supervisor Dr. Elisa Romano.

Data storage and use:

Data from this study are being collected as part of a research project that could become part of Ms. Weegar's doctoral thesis. Data will be used for research purposes only in that they will be presented at psychology conferences and published in scientific journals; however, dissemination of this research will not include any personally identifying information. Your data will be stored electronically on a password-protected computer in Dr. Romano's laboratory. Data from this study will be kept for 10 years, after which point they will be deleted. Only Dr. Romano and Ms. Weegar will have access to the data.

Additional information:

Please note that this project is being conducted independently of the Children's Aid Society of Ottawa. Should you have any questions or require additional information, please contact the Protocol Officer for Ethics in Research, Office of Research Ethics and Integrity, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 154, Ottawa, ON, K1N 6N5; Tel.: (613) 562-5387; E-mail: ethics@uottawa.ca. Any questions about the current study may be addressed to Ms. Kelly Weegar or the project supervisor (Dr. Elisa Romano).

Informed consent:

By signing and returning this form to the researcher, you are agreeing to participate in the proposed research project. There are two copies of this consent form, one of which is yours to keep.

☐

Yes, I agree to participate in the proposed research project.

Name – please print

Signature

Date

Researcher's signature

Date

Appendix F

Focus Group Guide for Child Welfare Practitioners (Study 1)

Date: _____

Investigators: _____

Number of participants: _____

Protocol & Guidelines for the Focus Groups*Before the focus group*

- The investigators will thank the participants for agreeing to participate in the focus group, describe the project, review the consent form, obtain the consent of the participants and check whether each agrees to having the discussion audio-taped before starting interviewing and recording.
- The investigators' tone of voice is very important. Each will adopt a friendly, casual, conversational tone, while remaining pleasant and professional. In addition, each will look interested and not surprised by the comments of the participants.
- Investigators can summarize, in one or two lines, the opinions expressed by a participant, mainly using their own words regularly throughout the interview. In other words, they will demonstrate active listening.
- Investigators can request clarification of unrecognized words.
- Investigators can ask for clarifications if a statement made by a participant is not clear.
- Investigators should avoid interrupting and allow a participant time to finish his/her thought. However, the investigator designated as the moderator reserves the right to bring the group to order if necessary.
- Investigators should take notes in an unbiased and representative way of what is said by the participants. Investigators may request to slow down or take a break to have the time to take notes.
- Investigators should consider the time and try to complete the focus group on time as it has been scheduled.
- At the end of the focus group, investigators may ask for time to review the guide and ensure that all major issues have been adequately covered.
- Investigators can summarize their understanding of the main ideas addressed by the participant to ensure that it reflects their opinions/comments.

After the focus group

- As soon as possible, preferably within hours of the focus group, investigators must clarify their notes.
- Investigators must communicate between them to compare their understanding of the focus group discussion.

Introduction

First, we would like to thank you for agreeing to meet with us.

We are here today to ask you some questions related to explore what you would consider needs and priorities for training to increase teacher's understanding about child maltreatment and academic functioning. We believe that the discussion will last about 1 to 1 ½ hours. However, we wish to remind you that, as detailed in the consent form, you can leave the discussion at any time and you can refrain from answering certain questions.

I'd like to start by quickly reviewing a few important details/guidelines to keep in mind for today's discussion:

- Feel comfortable to say what you think and feel. There are no right or wrong answers. This discussion is completely voluntary and will remain confidential. In other words, we will not reveal the identity of any of you who have spoken today, and we ask that you refrain from talking about other people's opinions outside of the focus group. In terms of confidentiality, we also ask that you provide minimal details about individual cases in order to protect the identities of the individuals involved.
- As part of the focus group, I would like to hear from everyone about each item, so I will do my best to make sure that everyone's thoughts are considered and everyone is provided a similar amount of time to contribute. At times, I will also summarize the main ideas addressed by one of you to ensure that it reflects your opinions/comments
- Please be aware that we have no link with your child welfare organization or any local schools or school boards. We are here to gather information and opinions, positive or negative.

The information gathered here today will be used to ensure that the training curriculum I intend to develop and pilot as part of my doctoral thesis adequately addresses the current need for maltreatment-sensitive school environments, and will be accessible and useful to the intended audience and other key stakeholders.

Do you have any questions before we start the group discussion?

Questions

Ice breakers

1. Please present yourself and describe your role/functions/responsibilities within the child welfare system.
2. How many years have you been working with children in out-of-home care who have experienced abuse and/or neglect?

Needs/challenges regarding the relationship between child welfare and schools

3. Please describe the current relationship between child welfare professionals and school personnel in supporting children who have experienced maltreatment at school.
4. In your opinion, is the current relationship between child welfare professionals and school personnel meeting the academic needs of maltreated children? If yes, how is this relationship supporting their academic needs?
5. What could child welfare professionals do to better support school personnel in meeting the academic needs of children in out-of-home care who have experienced maltreatment?
6. What do you need from school personnel to feel guided and supported in your work with children who have experienced maltreatment?

Needs/challenges regarding a training curriculum for school personnel

7. Do you believe there is a need for improved training for school personnel about child maltreatment and strategies to support these children at school?
8. What content would be important to cover in a training curriculum for school personnel about child maltreatment?
9. What challenges do you foresee in implementing such a curriculum?

Conclusion

These were the questions we had to ask you today. Thank you for the time you have allowed us. Your answers and questions will be incredibly valuable. Is there anything else you would like to add? Do you have any questions or comments you would like to ask us before we finish the session?

Appendix G

Focus Group Guide for School-Based Social Workers (Study 1)

Date: _____

Investigators: _____

Number of participants: _____

Protocol & Guidelines for the Focus Groups*Before the focus group*

- The investigators will thank the participants for agreeing to participate in the focus group, describe the project, review the consent form, obtain the consent of the participants and check whether each agrees to having the discussion audio-taped before starting interviewing and recording.
- The investigators' tone of voice is very important. Each will adopt a friendly, casual, conversational tone, while remaining pleasant and professional. In addition, each will look interested and not surprised by the comments of the participants.
- Investigators can summarize, in one or two lines, the opinions expressed by a participant, mainly using their own words regularly throughout the interview. In other words, they will demonstrate active listening.
- Investigators can request clarification of unrecognized words.
- Investigators can ask for clarifications if a statement made by a participant is not clear.
- Investigators should avoid interrupting and allow a participant time to finish his/her thought. However, the investigator designated as the moderator reserves the right to bring the group to order if necessary.
- Investigators should take notes in an unbiased and representative way of what is said by the participants. Investigators may request to slow down or take a break to have the time to take notes.
- Investigators should consider the time and try to complete the focus group on time as it has been scheduled.
- At the end of the focus group, investigators may ask for time to review the guide and ensure that all major issues have been adequately covered.
- Investigators can summarize their understanding of the main ideas addressed by the participant to ensure that it reflects their opinions/comments.

After the focus group

- As soon as possible, preferably within hours of the focus group, investigators must clarify their notes.
- Investigators must communicate between them to compare their understanding of the focus group discussion.

Introduction

First, we would like to thank you for agreeing to meet with us.

We are here today to ask you some questions related to explore what you would consider needs and priorities for training to increase teacher's understanding about child maltreatment and academic functioning. We believe that the discussion will last about 1 to 1 ½ hours. However, we wish to remind you that, as detailed in the consent form, you can leave the discussion at any time and you can refrain from answering certain questions.

I'd like to start by quickly reviewing a few important details/guidelines to keep in mind for today's discussion:

- Feel comfortable to say what you think and feel. There are no right or wrong answers. This discussion is completely voluntary and will remain confidential. In other words, we will not reveal the identity of any of you who have spoken today, and we ask that you refrain from talking about other people's opinions outside of the focus group. In terms of confidentiality, we also ask that you provide minimal details about individual cases in order to protect the identities of the individuals involved.
- As part of the focus group, I would like to hear from everyone about each item, so I will do my best to make sure that everyone's thoughts are considered and everyone is provided a similar amount of time to contribute. At times, I will also summarize the main ideas addressed by one of you to ensure that it reflects your opinions/comments
- Please be aware that we have no link with your child welfare organization or any local schools or school boards. We are here to gather information and opinions, positive or negative.

The information gathered here today will be used to ensure that the training curriculum I intend to develop and pilot as part of my doctoral thesis adequately addresses the current need for maltreatment-sensitive school environments, and will be accessible and useful to the intended audience and other key stakeholders.

Do you have any questions before we start the group discussion?

Questions

Ice breakers

1. Please present yourself describe your role/functions/responsibilities within your school(s).
2. How long have you been working as a social worker in the school system?
3. Do you work primarily in primary schools or secondary schools, or a mix of both?
4. How much experience would you say you have working with children who have experienced abuse and/or neglect?

5. Have you ever received any training about child maltreatment impacts and/or strategies to support maltreated children at school? If yes, please describe the training you have received.

Needs/challenges regarding a training curriculum for school personnel

6. Do you believe there is a need for improved training for teachers about child maltreatment and strategies to support these children at school?
7. What content would be important to cover in a training curriculum for teachers about child maltreatment?
8. What would be effective ways to deliver this training (e.g., one day in-person conference, a series of short in-person training workshops, online webinars, etc.)?
9. What challenges do you foresee in implementing such a curriculum?

Needs/challenges regarding the relationship between social workers and teachers in schools

10. Please describe the current relationship between social workers and teachers in supporting children who have experienced maltreatment at your school.
11. In your opinion, is the current relationship between child welfare professionals and teachers meeting academic needs of maltreated children? If yes, how is this relationship supporting their academic needs?
12. What do you need from teachers to feel guided and supported in your work with children who have experienced maltreatment?
13. What could social workers do to better support teachers in meeting academic needs of children who have experienced maltreatment?

Needs/challenges regarding the relationship between child welfare and schools

14. Please describe the current relationship between child welfare professionals and school personnel in supporting children who have experienced maltreatment at your school.
15. In your opinion, is the current relationship between child welfare professionals and school personnel meeting academic needs of maltreated children? If yes, how is this relationship supporting their academic needs?
16. What do you need from child welfare professionals to feel guided and supported in your work with children who have experienced maltreatment?
17. What could school social workers do to better support child welfare professionals in meeting academic needs of children who have experienced maltreatment?

Conclusion

These were the questions we had to ask you today. Thank you for the time you have allowed us. Your answers and questions will be most valuable in the development of the future maltreatment-training curriculum for teachers we discussed today. Is there anything else you would like to add? Do you have any questions or comments you would like to ask us before we finish the session?

Appendix H

Foster Caregiver Questionnaire (Study 1)

Screening Questions

1. Child abuse is any form of physical, emotional, and/or sexual mistreatment that causes injury or emotional damage to a child. *Physical abuse* includes any type of physical harm inflicted by a parent or caregiver, such as punching, choking, or hitting with/without an object. *Emotional abuse* includes any type of emotional harm inflicted by a parent or caregiver, such as threats of violence, calling the child names (e.g., stupid), or telling the child hurtful things (e.g., wishing they were never born). *Sexual abuse* includes any sexual activity (contact and non-contact) between an adult/older individual and a child, such as oral, vaginal, or anal penetration or sexual touching.

Has a child currently in your care ever experienced abuse?

☐ Yes

☐ No

2. Child neglect is the failure of a parent or caregiver to provide a child with the conditions that are essential for their physical and emotional development and well-being. This includes failure to provide basic needs, such as food and shelter, and emotional needs, such as caregiver warmth and attention. Has a child currently in your care ever experienced neglect?

☐ Yes

☐ No

(If the participant answers yes to either #1 or #2, they will be asked to complete the rest of the survey. If the participant answers no to both, they will not be asked to complete the rest of the survey; instead, they will be directed to a page that thanks them for their time)

Socio-Demographic Information

Please answer the following questions.

3. What is your sex?

☐ Male

☐ Female

☐ You don't have an option that applies to me. I identify as: _____

4. What is your age? _____

5. What is your relationship to the child currently in your care with a history of abuse and/or neglect? If more than one child currently in your care has a history of abuse and/or neglect, please respond once for each child.

Child #1:

- ☐ Biological parent
- ☐ Foster parent
- ☐ Step parent
- ☐ Other family member (e.g., grandparent, uncle, aunt)
- ☐ Other: _____

Child #2:

- ☐ Biological parent
- ☐ Foster parent
- ☐ Step parent
- ☐ Other family member (e.g., grandparent, uncle, aunt)
- ☐ Other: _____

Child #3:

- ☐ Biological parent
- ☐ Foster parent
- ☐ Step parent
- ☐ Other family member (e.g., grandparent, uncle, aunt)
- ☐ Other: _____

6. What do you consider to be your current main activity?

- ☐ Not employed outside the home
- ☐ Employed outside the home (part- or full-time basis)
- ☐ Going to school
- ☐ Going to school and employed outside the home
- ☐ Recovering from illness or disability
- ☐ Retired
- ☐ Other: _____

Training Needs – Individual Children

Thinking of the child or children in your care with a history of abuse and/or neglect, please answer the following questions by clicking or entering the answer that seems most appropriate for you.

7. Is your child's school aware of his/her abuse and/or neglect experience(s)? If more than one child currently in your care has a history of abuse and/or neglect, please respond once for each.

Child #1:

- ☐ Yes
- ☐ No

Child #2:

- ☐ Yes
- ☐ No

Child #3:

☐ Yes

☐ No

(If yes to #7)

7a. How did the school respond to the information about your child's abuse and/or neglect experience(s)?

7b. In your opinion, did the school respond adequately to the information about your child's abuse and/or neglect experience(s)?

☐ Yes

☐ No

(If no to #7b)

7c. How could school personnel have responded better to the information about your child's abuse and/or neglect experience(s)?

Training Needs – General

8. In your opinion, is there a need for improved training for school personnel about child maltreatment and strategies to support these children at school?

☐ Yes

☐ No

9. On a scale of 1 to 10, please rate how important it would be to cover each of the following content areas in a training program for school personnel about child maltreatment:

(1 = Not important; 5 = Somewhat important; 10 = Very important)

- How often child maltreatment happens
- The different types of child maltreatment
- Signs that a child may be experiencing maltreatment
- How children of different ages might react to child maltreatment
- Reporting suspected child maltreatment
- How child maltreatment might affect a child's grades
- How child maltreatment might affect a child's behaviour in the classroom
- How child maltreatment might affect a child's relationships with others (e.g., peers)
- Ways that the classroom teacher can support children who have experienced maltreatment
- The role of schools in supporting children who have experienced maltreatment
- Ways that school employees (e.g., teachers) can learn to care for themselves so they are able to support children with maltreatment histories

10. What other content areas should be covered in a training program for school personnel about

child maltreatment?

11. What would you like to see change in schools to better support the academic needs of children with a history of abuse and/or neglect?

12. What could caregivers do to better support school personnel in meeting the academic needs of children with a history of abuse and/or neglect?

Thank you for your time and participation! If you have any questions, please contact:

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Appendix I

Child Maltreatment Training Materials and Resources (Study 2)

Source	Training Program/Materials		Other Resources	
	<i>Overview</i>	<i>Target Audience</i>	<i>Overview</i>	<i>Target Audience</i>
Casey Family Programs (United States) ^a	Endless Dreams Training Curriculum (2010): Aims to increase awareness of the educational needs of foster youth, as well as policies, procedures, and practices at school that facilitate the educational success of youth in care and their transition to self-sufficiency in adulthood *	Caregivers and professionals who impact the educational lives of foster youth	Endless Dreams Video (2013): Short video that compliments the Endless Dreams training curriculum, also aiming to increase awareness of the educational needs of foster youth	Caregivers and professionals who impact the educational lives of foster youth
Canadian Centre for Child Protection (Canada) ^b	Commit to Kids Online Child Sexual Abuse Prevention Training (2015): Aims to educate professionals within child-serving organizations about child sexual abuse, including signs and effects, how to handle disclosures, and strategies to reduce the risk of child sexual abuse **	Professionals working with children	Online resources about child sexual abuse, such as a quick reference card reviewing steps for reporting child abuse, and facts about disclosures of child sexual abuse	Caregivers and professionals working with children
Eric Rossen and Robert Hull, Editors; University of Oxford (United States)	None	N/A	Supporting and Educating Traumatized Students: A Guide for School-Based Professionals (2013): Book reviewing the impact of numerous traumatic experiences on children and adolescents (including maltreatment), as well as strategies for school-based professionals to help improve their educational outcomes at school	School professionals
Kristen Souers and Pete Hall, Authors; ASCD (United States)	None	N/A	Fostering Resilient Learners: Strategies for Creating a Trauma-Sensitive Classroom (2016): Book reviewing strategies to build a trauma-sensitive learning environment for students across all content areas, grade levels, and educational settings	School professionals
Lesley Institute for Trauma Sensitivity (United States) ^c	Series of four university courses that aim to increase awareness about the impact of childhood trauma on learning, and what schools can do to help students **	School professionals	Free online tool for schools to assess how they are doing in terms of sensitivity to children's learning and trauma	School professionals

Source	Training Program/Materials		Other Resources	
	<i>Overview</i>	<i>Target Audience</i>	<i>Overview</i>	<i>Target Audience</i>
Madison Metropolitan School District (United States) ^d	Trauma Informed Practices (2013): Series of training videos (modules) created by staff at the Madison Metropolitan School District on trauma-informed school practices	School professionals	None	N/A
Ministry of Child and Youth Services (Ontario, Canada) ^e	None	N/A	Resource kit including posters, informational brochures and other materials to promote child abuse prevention and awareness (focus on detection and reporting)	General public
Ministry of Education (Alberta, Canada) ^f	None	N/A	Online resources about trauma-informed practice, including short videos (i.e., about trauma-informed practice, and the science of toxic stress and brain development) and a list of external links	School professionals
National Child Traumatic Stress Network (United States) ^{g, h, i}	Child Welfare Trauma Training Toolkit (2013): Teaches strategies for using trauma-informed child welfare practice to enhance the safety, permanency, and well-being of children and families who are involved in the child welfare system	Professionals working with children who are in child welfare and who have experienced traumatic events	Child Toolkit for Educators (2008): Designed to provide basic information about working with traumatized children in the school system Other trauma-related online resources (e.g., fact sheets)	School professionals
Susan Craig, Author; Paul H. Brooks Publishing Co. and Teachers College Press (United States)	None	N/A	Reaching and Teaching Children Who Hurt: Strategies for Your Classroom (2008): Book that aims to provide educators of all grades with a number of practical classroom-based strategies to support students exposed to trauma Trauma-Sensitive Schools: Learning Communities Transforming Children's Lives, K-5 (2015): Book aiming to provide kindergarten to grade 5 educators with clear explanations of current research and practical, creative ideas to help students who have experienced trauma	School professionals

Source	Training Program/Materials		Other Resources	
	<i>Overview</i>	<i>Target Audience</i>	<i>Overview</i>	<i>Target Audience</i>
University of California, San Francisco (United States) ^j	Healthy Environments and Response to Trauma in Schools (HEARTS) Program Training: Aims to review complex trauma and trauma-sensitive practices for teachers, administrators, paraprofessionals, and school mental health staff **	School professionals	HEARTS Program: Multi-level school-based prevention and intervention programs aiming to promote school success by decreasing trauma-related difficulties and increasing healthy functioning in students who have experienced trauma	Children and youth, caregivers, school professionals
Trauma and Learning Policy Initiative: A Collaboration of Massachusetts Advocates for Children and Harvard Law School (United States) ^k	None	N/A	Volume 1: Helping Traumatized Children Learn (2005): A report summarizing the research about the impact of trauma children's learning, behaviour and relationships in school. The report also introduces the Flexible Framework, a tool organized according to six core operational functions of schools that can help any school create a trauma sensitive learning environment for all children Volume 2: Creating and Advocating for Trauma-Sensitive Schools (2013): A guide to a process for creating trauma-sensitive schools and a policy agenda to provide the support schools need to achieve this goal	Primarily school professionals, but also the general public (i.e., parents, students, and other advocates)
Wisconsin Department of Public Instruction (United States) ^l	Trauma-Sensitive Schools Learning Modules (2013): increase awareness about the prevalence and impact of childhood trauma (including maltreatment, as well as other traumas such as natural disasters), and steps to create a trauma-sensitive school environment	School professionals	Links to a variety of resources to help schools support students affected by trauma, such as: a list of strategies and resources to create a trauma-sensitive school environment, and checklists for schools to assess their progress in adopting trauma-sensitive practices	School professionals

Note. * This curriculum does not focus on child maltreatment directly, but maltreatment-related topics are discussed throughout the training given the emphasis on child welfare; ** Training materials are not currently available to the public.

Web links:

- <http://www.casey.org/endless-dreams/>
- http://www.commit2kids.ca/app/en/be_committed_to_kids
- <http://www.lesley.edu/center/special-education/trauma-and-learning/>
- <http://dpi.wi.gov/sspw/mental-health/trauma/e-resources>
- <http://www.children.gov.on.ca/htdocs/English/topics/childrensaidd/reportingabuse/index.aspx>

- f. <https://education.alberta.ca/trauma-informed-practice/what-is-trauma-informed-practice/>
- g. <http://www.nctsn.org/products/child-welfare-trauma-training-toolkit-2008>
- h. <http://www.nctsnet.org/resources/audiences/school-personnel/trauma-toolkit>
- i. <http://www.nctsnet.org/resources/audiences/school-personnel>
- j. http://coe.ucsf.edu/coe/spotlight/ucsf_hearts.html
- k. <http://traumasensitiveschools.org>
- l. <http://dpi.wi.gov/sspw/mental-health/trauma>

Appendix J

Background and Training Information (Study 2)

(Only Prior to the Training)

Please answer the following questions by clicking or entering the answer that seems most appropriate for you.

1. What is your sex?
☐ Male
☐ Female
☐ You don't have an option that applies to me. I identify as: _____
2. What is your date of birth (DD/MM/YYYY)? ____/____/_____
3. What grade(s) do you currently teach on a regular basis? (Please select all that apply)
☐ Kindergarten
☐ Grade 1
☐ Grade 2
☐ Grade 3
☐ Grade 4
☐ Grade 5
☐ Grade 6
☐ Grade 7
☐ Grade 8
4. Please indicate your employee status:
☐ Permanent full-time
☐ Permanent part-time
☐ Long-term occasional (LTO) full-time
☐ Long-term occasional (LTO) part-time
☐ Occasional
☐ Other: _____
5. How long have you held your current position? Years: _____, Months: _____
6. How long have you been working in education? Years: _____, Months: _____
7. Not considering your current position as a teacher, do you have any experience working with children who have a history of abuse and/or neglect (i.e., child maltreatment)?
☐ Yes
☐ No

(If yes to #7) Please describe your experience working with children who have a history of abuse and/or neglect.

For all the questions that follow, **child maltreatment** (i.e., child abuse or child neglect) is defined as act or series of acts, or failure to act, by a parent or other caregiver that results in harm, potential for harm, or threat of harm to a child.

8. Have you ever received any training about *child maltreatment reporting*?

☐ Yes

☐ No

(If yes to #1)

a. Please describe the training you have received.

b. Approximately how many hours of training have you received? _____

c. Do you believe your training adequately addressed *child maltreatment reporting*?

☐ Yes

☐ No

(If no to #1c) What do you believe your training was lacking in terms of assisting you in *child maltreatment reporting*?

9. Have you ever received any other training about *child maltreatment topics other than reporting*?

☐ Yes

☐ No

(If yes to #2)

a. Please describe the training you have received.

b. Approximately how many hours of training have you received? _____

c. Do you believe your training adequately addressed *child maltreatment topics other than reporting*?

☐ Yes

☐ No

(If no to #2c) What do you believe your training was lacking in terms of assisting you in *child maltreatment topics other than reporting*?

10. Do you believe any of your professional development training continues to help you deal with issues related to child maltreatment?

☐ Yes

☐ No

11. Please rate at what level you believe your training to date has prepared you to deal with issues related to child maltreatment.

Inadequate

1

2

Somewhat adequate

3

4

Adequate

5

Appendix K

Training Module Feedback Forms (Study 2)

Module 1 Feedback Form

Date: _____

Please take a few minutes to complete the following evaluation form.

1. Indicate to what extent you believe each of the module objectives were achieved:

At the end of this module, my understanding has improved regarding:

	Not Achieved At All			Fully Achieved	
a. The definition of child maltreatment	1	2	3	4	5
b. The different types of child maltreatment	1	2	3	4	5
c. How often child maltreatment happens	1	2	3	4	5

2. Rate the following:

	Strongly Disagree			Strongly Agree	
a. Activities/presentations were effective in delivering the information.	1	2	3	4	5
b. I will be able to apply what I learned in the module in my classroom.	1	2	3	4	5

3. What changes would you suggest to improve the module?

Thank you for completing this confidential evaluation questionnaire!

Module 2 Feedback Form

Date: _____

Please take a few minutes to complete the following evaluation form.

1. Indicate to what extent you believe each of the module objectives were achieved:

At the end of this module, my understanding, confidence, and abilities have improved regarding:

	Not Achieved At All			Fully Achieved	
a. Signs that a child may be experiencing maltreatment	1	2	3	4	5
b. Reporting suspicions of child maltreatment	1	2	3	4	5
c. How to respond to disclosures of child maltreatment	1	2	3	4	5

2. Rate the following:

	Strongly Disagree			Strongly Agree	
a. Activities/presentations were effective in delivering the information.	1	2	3	4	5
b. I will be able to apply what I learned in the module in my classroom.	1	2	3	4	5

3. What changes would you suggest to improve the module?

Thank you for completing this confidential evaluation questionnaire!

Module 3 Feedback Form

Date: _____

Please take a few minutes to complete the following evaluation form.

1. Indicate to what extent you believe each of the module objectives were achieved:

At the end of this module, my understanding has improved regarding:

	Not Achieved At All			Fully Achieved	
a. How children of different ages react to child maltreatment	1	2	3	4	5
The impact of child maltreatment on:					
b. Brain development	1	2	3	4	5
c. Classroom behaviour	1	2	3	4	5
d. Relationships with others (e.g., peers, teachers)	1	2	3	4	5
e. Academic performance	1	2	3	4	5

2. Rate the following:

	Strongly Disagree			Strongly Agree	
a. Activities/presentations were effective in delivering the information.	1	2	3	4	5
b. I will be able to apply what I learned in the module in my classroom.	1	2	3	4	5

3. What changes would you suggest to improve the module?

Thank you for completing this confidential evaluation questionnaire!

Module 4 Feedback Form

Date: _____

Please take a few minutes to complete the following evaluation form.

1. Indicate to what extent you believe each of the module objectives were achieved:

At the end of this module, my understanding, confidence, and abilities have improved regarding:

	Not Achieved At All			Fully Achieved	
a. Strategies for directly supporting children who have experienced maltreatment	1	2	3	4	5
b. Other trauma-sensitive classroom strategies (i.e., general classroom strategies that benefit all children, including when maltreatment or other trauma histories may not be known)	1	2	3	4	5

2. Rate the following:

	Strongly Disagree			Strongly Agree	
a. Activities/presentations were effective in delivering the information.	1	2	3	4	5
b. I will be able to apply what I learned in the module in my classroom.	1	2	3	4	5

3. What changes would you suggest to improve the module?

Thank you for completing this confidential evaluation questionnaire!

Module 5 Feedback Form

Date: _____

Please take a few minutes to complete the following evaluation form.

1. Indicate to what extent you believe each of the module objectives were achieved:

At the end of this module, my understanding, confidence, and abilities have improved regarding:

	Not Achieved At All			Fully Achieved	
a. How working with maltreated children can affect teachers' well-being	1	2	3	4	5
b. How teachers can support themselves so they are more able to assist their students, including those with maltreatment histories (i.e., self-care)	1	2	3	4	5

2. Rate the following:

	Strongly Disagree			Strongly Agree	
a. Activities/presentations were effective in delivering the information.	1	2	3	4	5
b. I will be able to apply what I learned in the module.	1	2	3	4	5

3. What changes would you suggest to improve the module?

Thank you for completing this confidential evaluation questionnaire!

Module 6 Feedback Form

Date: _____

Please take a few minutes to complete the following evaluation form.

1. Indicate to what extent you believe each of the module objectives were achieved:

At the end of this module, my awareness has improved regarding:

	Not Achieved At All			Fully Achieved	
a. Characteristics of trauma-sensitive school environments	1	2	3	4	5
b. Steps to work toward a trauma-sensitive school environment	1	2	3	4	5

2. Rate the following:

	Strongly Disagree			Strongly Agree	
a. Activities/presentations were effective in delivering the information.	1	2	3	4	5
b. I will be able to apply what I learned in the module.	1	2	3	4	5

3. What changes would you suggest to improve the module?

Thank you for completing this confidential evaluation questionnaire!

Module 7 Feedback Form

Date: _____

Please take a few minutes to complete the following evaluation form.

1. Indicate to what extent you believe each of the module objectives were achieved:

	Not Achieved At All			Fully Achieved	
a. To apply content covered in the training to a case vignette	1	2	3	4	5
b. To review take-home messages from the overall training program	1	2	3	4	5

2. Rate the following:

	Strongly Disagree			Strongly Agree	
a. Activities/presentations were effective in delivering the information.	1	2	3	4	5

3. What changes would you suggest to improve the module?

Thank you for completing this confidential evaluation questionnaire!

Appendix L

Training Program Feedback Form (Study 2)

Date: _____

Please take a few minutes to complete the following evaluation form.

1. Indicate to what extent you believe the training objectives were achieved:

At the end of this training program, I am:

	Not Achieved At All			Fully Achieved	
a. More aware of the impact of maltreatment on the development and behaviour of children	1	2	3	4	5
b. More knowledgeable about how and when to intervene in a maltreatment-sensitive manner	1	2	3	4	5
c. More confident in my capacity to support children who have experienced maltreatment	1	2	3	4	5
d. More confident in my capacity to detect and report child maltreatment	1	2	3	4	5

2. Rate the following:

	Strongly Disagree			Strongly Agree	
a. Activities/presentations were effective in delivering the information.	1	2	3	4	5
b. An appropriate amount of material was covered during the training.	1	2	3	4	5
c. I will be able to apply what I learned in this training program in my classroom.	1	2	3	4	5
d. I am interesting in obtaining additional information about children who have experienced abuse and/or neglect.	1	2	3	4	5
e. This training will make a difference in the way I perform my teaching responsibilities.	1	2	3	4	5

3. Rank the modules in order of which you found the most helpful for your job (i.e., 1 = most helpful; 7 = least helpful):

- ___ Module 1: Introduction to Child Maltreatment
- ___ Module 2: Identifying & Reporting Child Maltreatment
- ___ Module 3: How Does Maltreatment Impact a Child's Functioning at School?
- ___ Module 4: Trauma-Sensitive Classroom Strategies
- ___ Module 5: Enhancing Teacher Well-Being
- ___ Module 6: Trauma-Sensitive School Environments
- ___ Module 7: Case Culmination Activity and Conclusions

4. Respond to the following:

- a. What did you find the most helpful about the training program?

- b. What did you find the least helpful about the training program?

- c. What are the three most important things you learned in this training that you believe will change your practice regarding child maltreatment?

1.

2.

3.

- d. What would you like to learn more about moving forward?

- e. What changes would you suggest to improve the training program overall?

- f. Beyond the specified objectives, did this training program meet any of your other professional training needs? If yes, please explain.

g. Do you have any additional thoughts that you would like to share?

Thank you for completing this confidential evaluation questionnaire! Your feedback will be used to improve the training program for future training sessions.

If you have any questions or would like to share any additional feedback, please contact:

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Appendix M

Educators and Child Abuse Questionnaire (Study 2)

(Prior to and Following the Training)

Please indicate your response using the following scale for each of the items below.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	2	3	4	5

Subscale 1: Competence in identifying and assessing various child maltreatment types (5 items)

1. I am aware of the signs of child neglect
2. I am aware of the signs of child physical abuse
3. I am aware of the signs of child sexual abuse
4. I am aware of the signs of child emotional abuse
5. I am aware of the signs of children's exposure to domestic violence

Subscale 2: Competence in reporting procedures (6 items)

6. I am aware of my school's procedures for child maltreatment reporting
7. I feel the current school administration would support me if I made a child abuse report
8. If I make a report of child abuse, and it is not founded, the family can sue me (**reverse**)
9. I would be less likely to report suspected maltreatment if I know other professionals at my school are involved with the child or family (e.g. daycare staff, after school program staff) (**reverse**)
10. I would be less likely to report suspected maltreatment if I know the child or family has had prior involvement with the Children's Aid Society (**reverse**)
11. I should be allowed to tell the child or family that I needed to phone a Children's Aid Society (CAS)

Subscale 3: Attitudes toward teachers' role related to child maltreatment (6 items)

12. Teachers have an important role in detecting suspected child maltreatment
13. Teachers have an important role in supporting children "at risk"
14. As an educator, I should have an obligation to report child abuse in the province of Ontario
15. Teachers have an important role in monitoring children for suspected child maltreatment
16. Teachers have an important role in supporting the academic achievement of maltreated children
17. Teachers have an important role in supporting the social-emotional functioning of maltreated children

Subscale 4: Attitudes toward teacher role expectations (3 items)

18. Teachers don't have the time to attend to all of the needs of children (**reverse**)
19. Teachers are "not social workers" and shouldn't be dealing with other "non-academic" issues (**reverse**)
20. The expectations placed on a teacher today are too high (**reverse**)

Subscale 5: Attitudes toward outside role involvement (6 items)

- 21. All parents have the right to discipline their children in whatever manner they see fit
(reverse)
- 22. Teachers should not be mandated to report child abuse **(reverse)**
- 23. I am open to working collaboratively with other agencies and professionals dedicated to the welfare and well being of children
- 24. Outside of the school setting, I would report suspected signs of child maltreatment
- 25. Outside of the school setting, I would report signs of child maltreatment if I were certain it had occurred
- 26. I am supportive of the role of the Children's Aid Society

Total Scale: Beliefs and attitudes toward child maltreatment (26 items)

(Kenny, 2000a; King, 2011)

Appendix N

Perceived Barriers and Supports in Child Maltreatment Reporting (Study 2)

(Prior to and Following the Training)

1. Using the following scale, please indicate how much you agree with each of the barriers to reporting suspected child maltreatment (i.e., child abuse and neglect) for teachers:

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	2	3	4	5

- a. Concern about making things more difficult or worse for the child
- b. Worry about how to interact with the child or family after making a report
- c. Worry about damaging the parent-teacher or child-teacher relationship
- d. Knowing the family is in regular contact with the school
- e. Fear of being wrong about my maltreatment concerns
- f. A lack of confidence in knowing the signs of maltreatment
- g. The lack of a visible sign or mark of child abuse
- h. Fear of retribution from the parent or family
- i. Worry about having to go to court (e.g., testifying in court)
- j. Belief that involvement with the Children's Aid Society will only make things worse for the child and family
- k. Not receiving support from school administration
- l. A lack of knowledge of the reporting policies at your school
- m. A lack of confidence in knowing how to make a report
- n. The extra time and work that will be required
- o. Having a preference for other non-CAS intervention methods to be tried first
- p. Knowing the family is already "being monitored" or observed by the school
- q. Knowing that other agencies or professionals are involved with the family
- r. Other: _____

2. Using the following scale, please indicate how much you agree with each of the supports that help teachers to report suspected child maltreatment:

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	2	3	4	5

- a. Knowledge of the reporting policies at your school
- b. Receiving support from school administration
- c. Receiving support from school colleagues
- d. Belief that involvement with a Children's Aid Society will help the child and family
- e. The need to fulfill a legal obligation to report
- f. Having longstanding concerns about the child or family
- g. Confidence in knowing how to make a report
- h. The need to fulfill a moral obligation to report

- i. Knowing you do not have “to be certain” in order to report suspected maltreatment
- j. Confidence in knowing the signs of maltreatment
- k. Your wish to help the child or family
- l. Knowing the family has had previous involvement in a Children’s Aid Society
- m. Other: _____

(King, 2011)

Appendix O

Recognition of Child Maltreatment Test (Study 2)

(Prior to and Following the Training)

Vignette #1: Six-year-old Stephanie enters your classroom with a long and linear bruise on her upper arm and back of her thigh. She tells you that she fell down on the sidewalk over the weekend. You recall noticing similar bruises on her upper arms on at least one other occasion. When you confront the mother about Stephanie's current injury, she tells you Stephanie fell on the sidewalk and comments on her clumsiness.

Vignette #2: Jason is a 9-year-old male in your class. One morning, you notice that he has a burn on the inside of his hand. When asked about the injury, Jason reports that he burned himself by grabbing a hot pan when cooking his dinner last night. Upon further discussion, he reports that his mother is never home because she is either at work or gambling with her friends. Jason informs you that there is always food in the house, but he is usually alone at home.

Vignette #3: Patrick and Rhonda are parents of Charlie, who is an 11-year old male in your class. During the few meetings you've had with Patrick and Rhonda, you've noticed that Rhonda is extremely critical of Patrick and Charlie. Charlie is excelling in school and has many friends. Rhonda recently yelled at Charlie for not doing his homework and told him he'd never amount to anything if he didn't do his homework.

Vignette #4: James is a 41-year-old parent for an 11-year-old female in your class. When you are talking to him about helping his daughter with school work at home, he reports to you that he is worried he will not be able to pay his rent, and because this has happened before, he may get evicted. James reports if he gets evicted, he has nowhere he can go and no place that his two children can stay until he finds another place to live.

Vignette #5: Theresa is a 10-year-old female in your class. During a parent-teacher meeting, you tell her mother Lisa that Theresa is very timid and hardly participates in class. You also report that you are concerned about her mood. In response, Lisa tells you that she feels Theresa and her father, Martin, are "too close" and she is uncomfortable with their relationship. She reports that Martin is extremely protective of his daughter and does not allow her to play with the other children. Lisa also reports that she overheard Theresa say that her father shouldn't put his hand "there" one morning in her room with the door closed.

Vignette #6: Twelve-year-old Shauna enters your classroom with multiple scratches on her shoulder. You inquire about the scratches on her arm. She reports she was having an argument with her mother, and as she turned to walk out of the room, her mother grabbed her by the shoulder and "accidentally" scratched her. Her mother apologetically recounted the same story.

Vignette #7: You have been speaking with the Parkers regularly for 4 months due to their son's frequent temper tantrums in class. The parents often make derogatory comments about their son, as well as his younger brother. They call them names (e.g., idiot, stupid) and blame them for the

problems of the family. When you point out the children's positive traits, Mr. and Mrs. Parker act genuinely surprised or are highly skeptical.

Vignette #8: Joan, a mother of a 7-year old boy in your class, tells you that she is concerned about her husband's actions. She and her husband also have a 2 ½-year-old daughter, and she is concerned that her husband will frequently shower with her daughter. She says that her daughter loves to shower with her father and hears the child playing in the tub as the father showers.

Answer Key for Case Vignettes: V1 = Reportable; V2 = Reportable; V3 = Not reportable; V4 = Not reportable; V5 = Reportable; V6 = Reportable; V7 = Reportable; V8 = Not reportable.

Please answer the two questions that follow as honestly as possible for each case vignette.

(Note. Participants will be prompted with these two questions after reading one vignette, before moving on to the next one).

1. From the information provided, how likely are you to suspect child maltreatment?

1	2	3	4	5	6	7
Highly Unlikely			Neutral			Highly Likely

Please explain your answer:

2. Regardless of your answer to the previous question, how likely are you to make a report?

1	2	3	4	5	6	7
Highly Unlikely			Neutral			Highly Likely

Please explain your answer:

(Alvarez et al., 2010; Donohue et al., 2015)

Appendix P

Knowledge of Child Maltreatment Effects (Study 2)

(Prior to and Following the Training)

1. **Child abuse** is defined as any form of physical, emotional, and/or sexual mistreatment that causes injury or emotional damage to a child.

For children that you have known or suspected to have experienced **child abuse**, how do you think the abuse affected their:

- a. Learning?

- b. Behaviour?

2. **Child neglect** is the failure of a parent or caregiver to provide a child with the conditions that are essential for their physical and emotional development and well-being. This includes failure to provide basic needs, such as food and shelter, and emotional needs, such as caregiver warmth and attention.

For children that you have known or suspected to have experienced **child neglect**, how do you think the abuse affected their:

- a. Learning?

- b. Behaviour?

(Martin et al., 2010)

Appendix Q

Knowledge of the Trauma-Sensitive Strategies (Study 2)

(Prior to and Following the Training)

1. What can teachers do in the classroom to support children who have experienced child abuse and/or neglect?

Appendix R

Interview Guide for Post-Training Interviews (Study 2)

(Following the training only)

Name: _____ ID: _____
Date: _____ Time: _____

Introduction & Guidelines

First, I would like to thank you again for agreeing to meet with me.

Today I will be asking you some questions to explore your experience with the training you recently attended, including how you believe it has influenced your knowledge, work behaviour, and relationships at work. This interview will also explore what you need to be able to continue effectively applying what you learned during the training. The discussion should last about 45 minutes to 1 hour.

I'd like to start by briefly reviewing a few important guidelines to keep in mind for today's interview:

- Please feel comfortable to say what you think and feel. I am here to gather information and opinions, positive or negative, and your responses today will remain anonymous. However, I also wish to remind you that, as detailed in the consent form, you can leave the discussion at any time and you can refrain from answering certain questions.
- At times, I may try to summarize your responses to ensure that I correctly understand your opinions and comments.
- I will be audio-recording our discussion so I can remember what we talked about. However, this will not be shared with anyone outside of our research team. Any identifying information recorded during the discussion will also be removed so your responses remain anonymous.

Do you have any questions before we start the interview?

Perceived Change in Knowledge

1. Since participating in the child maltreatment training, how has your knowledge changed in relation to:
 - a. The different types (and signs of) maltreatment?
 - b. What to do with suspicions/disclosures of maltreatment (e.g., how to respond, reporting procedures)?
 - c. How maltreatment impacts a child's functioning at school?
 - d. Classroom strategies to support children with maltreatment histories?

- e. How working with maltreated children can affect teachers' well-being (e.g., burn out) and what you can do about it?
 - f. Elements of a trauma-sensitive school?
2. What would you like to learn more about moving forward?

Perceived Change in Relationships

3. How have your relationships with the following individuals changed since participating in the training?
 - a. With your students
 - b. With caregivers (e.g., biological parents, foster parents)
 - c. With other school staff (e.g., social workers, administration)
 - d. With child welfare staff (e.g., case workers)

Perceived Change in Work Practice

4. What are you doing differently in your classroom/at school since participating in the training?
5. What are you doing differently in terms of detecting and reporting maltreatment concerns since participating in the training?
6. What challenges have you faced in trying to apply what you learned in this training?
7. What do you need in order to continue implementing what you learned in this training?
8. Do you have any additional thoughts you'd like to share?

Work Relationships

9. How would you describe the current relationship between *school staff* and *child welfare practitioners* in supporting children who have experienced maltreatment at your school?
10. What do you need from *child welfare practitioners* to feel guided and supported in your work with children who have experienced maltreatment?
11. How would you describe the current relationship between teachers and *social workers* in supporting children who have experienced maltreatment at your school?
12. What do you need from *social workers* to feel guided and supported in your work with children who have experienced maltreatment?
13. How would you describe the current relationship between *other school staff* (e.g., *administration, vice-principals, principals*) in supporting children who have experienced maltreatment at your school?
14. What do you need from *other school staff* (e.g., *administration, vice-principals, principals*) to feel guided and supported in your work with children who have experienced maltreatment?
15. How would you describe the current relationship between *caregivers* (e.g., *biological parents, foster parents*) in supporting children who have experienced maltreatment at your school?
16. What do you need from *caregivers* to support your work with children who have experienced maltreatment?

Conclusion

Thank you again for your time and participation. Your answers will be incredibly useful to us. Is there anything else you would like to add? Do you have any questions or comments you would like to ask before we finish the interview?

Appendix S

Child Maltreatment Reporting Behaviour (Study 2)

(Prior to and Following the Training)

1. As a teacher, have you ever made a report of child maltreatment to a child welfare agency (i.e., Children's Aid Society or Direction de la Protection de la Jeunesse)

☐ Yes

☐ No

(If yes to #1)

How many reports of child maltreatment have you made to the Children's Aid Society in your role as teacher? _____

2. How many reports have you been a part of (i.e. reported to administration or a social worker, who then reported)? _____

3. Have there ever been times when you thought a child might have experienced maltreatment but you did not report your concerns?

☐ Yes

☐ No

(If yes to #3)

What impacted your decision not to report?

Appendix T

Ethics Approval (Study 2)

File Number: H09-16-07

Date (mm/dd/yyyy): 05/12/2017



Université d'Ottawa
Bureau d'éthique et d'intégrité de la recherche

University of Ottawa
Office of Research Ethics and Integrity

Certificate of Ethics Approval**Health Sciences and Science REB****Principal Investigator / Supervisor / Co-investigator(s) / Student(s)**

<u>First Name</u>	<u>Last Name</u>	<u>Affiliation</u>	<u>Role</u>
Elisa	Romano	Social Sciences / Psychology	Supervisor
Kelly	Weegar	Social Sciences / Psychology	Student Researcher

File Number: H09-16-07**Type of Project:** PhD Thesis**Title:** Developing and Evaluating a Child Maltreatment Training Program for Elementary School Teachers**Approval Date (mm/dd/yyyy)**

05/12/2017

Expiry Date (mm/dd/yyyy)

05/11/2018

Special Conditions / Comments:

This certificate takes into account the following modifications:

- 1) Recruitment is done through teacher organizations and in classes at the Faculty of Education of the University of Ottawa. School Boards will no longer be solicited.
- 2) Financial support has been received from the Children's Aid Society of Ottawa and compensation (a \$25 Amazon gift card) will be given for each type of activity.
- 3) No activity will be conducted during working hours.

Appendix U

Recruitment Poster for Teachers (Study 2)

The role of teachers in the lives of traumatized children cannot be underestimated.

Unfortunately, child abuse and neglect (maltreatment) experiences are relatively common. Schools are important communities for children who have experienced maltreatment because school staff can help all children succeed with the proper knowledge and resources, despite any hardships a child may have endured.

Do you wish you knew more about how to support children who have experienced harm outside of school, such as abuse and neglect? If so, you may be eligible to participate in a training and research study being conducted at the University of Ottawa. Specifically, we are seeking elementary school teachers who have 2 or more years of experience, and who are able to understand and communicate in English.

What does participation involve?

- **Attend free training for teachers about child maltreatment on Saturday, December 2nd from 9 AM – 4 PM (with a 1-hour break, food/drinks provided).** This training will explore topics such as the signs of maltreatment, reporting procedures, the impact of maltreatment on the development and behaviour of children, and how to intervene with children in a maltreatment-sensitive manner. This training will also address the well-being of teachers (e.g., signs of burn out, self-care strategies).
- **Anonymously provide feedback regarding the training, and complete brief pre- and post-training measures online. You may also be invited anonymously provide feedback in a phone interview. Incentives available (up to a maximum of \$75 in gift cards depending on your level of involvement).**

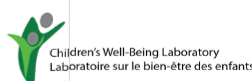
Interested?

- Contact Kelly Weegar (Ph. D. Student).

Questions?

- Contact Kelly Weegar (Ph. D. Student) or Dr. Elisa Romano (Supervisor).

Please note that this project has received ethics approval from the University of Ottawa.



Appendix V

Consent Form for Training and Evaluation Research (Study 2)



uOttawa

Faculté des sciences sociales
Faculty of Social SciencesÉcole de psychologie
School of Psychology

Title of the Study: Developing and Evaluating a Child Maltreatment Training Program for Elementary School Teachers

Principal Researcher: Kelly Weegar, B.A. (Hons.), Ph.D. Candidate, Clinical Psychology, University of Ottawa; Telephone: 613-562-5800

Project Supervisor: Dr. Elisa Romano, Professor, Clinical Psychology, University of Ottawa; Telephone: 613-562-5800

You have been invited to participate in this research study because you have agreed to attend a new training program for elementary school teachers about child abuse and neglect (i.e., maltreatment). As such, the purpose of this information and consent form is to provide you with sufficient information to ensure that you understand the nature of this study and its requirements. Before agreeing to take part in this research, we ask that you carefully review this consent form.

Tasks to be completed:

The research study that you have been invited to participate in is being conducted by Ms. Kelly Weegar, a doctoral student in clinical psychology, under the direct supervision of Dr. Elisa Romano from the Children's Well-Being Lab at the School of Psychology, University of Ottawa. The aim of this research is to evaluate a new training program for elementary school teachers about child maltreatment. Should you decide to participate, you will be asked to complete the following components:

- (1) Participate in the training program: Individuals who consent to participate will be asked to attend child maltreatment training held over two sessions in the evening or one full-day session (for a total of 6 hours). Participants who cannot attend the training will still be asked to complete pre-and post-training questionnaires (see below).
- (2) Questionnaire: This will take approximately 30 minutes to complete, and can be completed electronically. Participants will complete the same questionnaire prior to the training session, as well as approximately 1 month afterwards. The questions will ask about your background and training, working relationship needs, attitudes toward

Pièce 3002 / Room 3002
3^e étage / 3rd floor
136 Jean Jacques Lussier
Ottawa ON K1N 6N5

various child maltreatment topics, and work practices related to child maltreatment.

- (3) Feedback forms: These forms will take approximately 15-20 minutes to complete in total, and will be completed during the training session. The questions will ask about your experiences during the training, what you found the most/least helpful, and what you might recommend to improve the program.
- (4) Phone interview: About 1 month after you have participated in the training program, you *may* also be asked to complete an interview by phone with the principal researcher. The interview will take about 45-60 minutes, and it will gather information about the impact of training on your knowledge and attitudes, relationships, and classroom practices. The phone interview will be audio taped and then transcribed.

Rights and responsibilities:

We would appreciate your honesty when responding to the questions in all components of this research study. You are free to refuse to participate or to withdraw from the study at any time without providing an explanation and without penalty. However, given the anonymous nature of the feedback forms and questionnaires, any data submitted for these components prior to withdrawing will be included in the study because we and the system (www.qualtrics.com) will not be able to retrace your individual data (i.e., your name or other identifying information will not be collected on the feedback forms and questionnaires).

Anonymity and confidentiality:

Please note you will be exposing your identity to others who are participating in the same training session. Otherwise, your answers are strictly confidential and no one will be informed of your answers. For the feedback forms, your name or any other personally identifying information will not be collected. Although some identifying information will need to be collected to arrange the phone interview, this information will not be shared with anyone from your place of employment, and none of this information will be recorded during the interview. For the questionnaires, please note that the system (www.qualtrics.com) is a U.S. web-survey company that is subject to U.S. laws (i.e., the U.S. Patriot Act), which allows authorities to access the records of all Internet service providers. However, for this study, you will be asked to establish your own unique 6-character code before you begin the questionnaire to allow us to track your responses pre- and post-training, while ensuring your data remains completely anonymous. In order to further minimize the risk of security breaches and to help ensure your confidentiality while completing the questionnaires online, we recommend that you use standard safety measures such as signing out of your account, closing your browser, and locking your screen or device when you are no longer using it/when you have completed the questionnaire.

Only research team members (i.e., Dr. Romano, Ms. Weegar, and student research assistants) will have access to the data, which will be kept for 10 years on a password-protected computer in Dr. Romano's laboratory. Some participants' responses may be presented verbatim during presentations of results; however, if this were to happen, any potentially identifying features would not be included as we did not collect this type of information from you. Any quotes will also likely be abbreviated to facilitate the reading of the results.

Risks and benefits:

Participation in this study is not expected to involve any risks; however, the benefits of this research are significant. If future training on child maltreatment for elementary school teachers is going to effectively meet the content and delivery needs of its participants, it is imperative that we evaluate and improve such training. As such, information gathered in this research study will be used to modify the training program that you will be participating in, as well as advocate for improved training about child maltreatment at all levels of training for school staff (e.g., pre- and in-service training). For you individually, participating in this study is likely to prompt you to reflect upon the topic and the training you will receive, which you may find enriching and beneficial. For instance, you may be prompted to reflect upon your knowledge, attitudes, and/or experiences when supporting children who may be having difficulties with learning, relationships, and/or behaviour at school as a result of maltreatment.

Compensation:

Should you decide to participate in the online questionnaires, you will receive a \$25 Amazon online gift card each time you participate. If you begin one of the questionnaires and choose not to respond to some of the questions or decide to stop participating after you start, you will still be compensated. However, if you skip one of these questionnaires altogether, you will not receive any compensation for the missed questionnaire. Should you decide to participate in the phone interview, you will receive an additional \$25 Amazon online gift card at the beginning of the interview. If you choose not to respond to some of the questions during the interview or decide to stop once you have started, you will still be compensated because you will receive this at the beginning of the interview. However, you will not be compensated if you miss the interview and it cannot be rescheduled.

The name and contact information that you provide at the beginning of the questionnaire and/or phone interview is collected for the purposes sending you the Amazon gift card, and will not be linked to your questionnaire and/or interview data. Your name and contact information will be kept confidential and then destroyed once the online gift card has been received.

Data storage and use:

Data from this study are being collected as part of a research project that is part of Ms. Weegar's doctoral thesis. Data will be used for research purposes only, such as for psychology conferences, presentations to community members (e.g., at the school board) or publication in scientific journals; however, dissemination of this research will not include any personally identifying information. Your data will be stored electronically on a password-protected computer in Dr. Romano's laboratory. Data from this study will be kept for 10 years, after which point they will be deleted. Only Dr. Romano and Ms. Weegar will have access to the data.

Additional information:

If you are currently employed as a teacher: please note that this project is being conducted independently of school boards in Ottawa and surrounding areas. Therefore, your participation is completely voluntary and you are not obligated to participate. Whether or not you decide to participate will have no impact on your current employment.

Should you have any questions or require additional information, please contact the Protocol Officer for Ethics in Research, Office of Research Ethics and Integrity, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 154, Ottawa, ON, K1N 6N5; Tel.: (613) 562-5387; E-mail: ethics@uottawa.ca. Any questions about the current study may be addressed to Ms. Kelly Weegar or the project supervisor (Dr. Elisa Romano).

Informed consent:

By signing and returning this form to the researcher, you are agreeing to participate in the proposed training and research project, as well as to having the phone session audio recorded should you decide to participate in the post-training interview. There are two copies of this consent form, one of which is yours to keep for your personal records.

☐

Yes, I agree to participate in all training and research study components.

Name – please print

Signature

Date

Researcher's signature

Date

Appendix W

Fidelity Checklist (Study 2)

Session Date: _____

Session Time: _____

Observer: _____

Location: _____

Facilitators: _____

For each training content area below, please circle + or – to indicate if it was completed during the training session. Use the notes column to comment on how the content was received (e.g., positive as well as constructive remarks), and if there were any adaptations made that section of the training material.

Training Content	Score		Notes
Training Introduction			
- Slide 2: Key messages	+	-	
- Slide 3: Training “rules”	+	-	
- Slide 4: Training goals	+	-	
- Slide 5: Overview of modules	+	-	
- Slide 6: Agenda	+	-	
- Slide 7: Case vignette	+	-	
- Slide 8: Case video “Zoey”	+	-	
Section score:	_____		
Time to complete:	_____		

Training Content	Score		Notes
Module 1 – Introduction to Child Maltreatment			
- Slide 10: Module 1 objectives	+	-	
- Slide 11: Key definitions	+	-	
- Slide 12: Maltreatment characteristics	+	-	
- Slide 13: Ecological model	+	-	
- Slide 14: Questions	+	-	
- Slide 15: Types of maltreatment (1)	+	-	
- Slide 16: Types of maltreatment (2)	+	-	
- Slide 17: Types of maltreatment (3)	+	-	
- Slide 18: Rates of maltreatment (1)	+	-	
- Slide 19: Rates of maltreatment (2)	+	-	
- Slide 20: “Tip of the iceberg”	+	-	
- Module 1 evaluation	+	-	
Section score:	_____		
Time to complete:	_____		

Module comments, suggestions, or feedback:

Training Content	Score		Notes
Module 2 – Identifying & Reporting Child Maltreatment			
- Slide 23 – Module 2 objectives	+	-	
- Slide 24 – Barriers to reporting	+	-	
- Slide 25 – Who reports the most?	+	-	
- Slide 26 – Teacher’s testimonial	+	-	
- Slide 27 – Signs of child maltreatment (1)	+	-	
- Slide 28 – Signs of child maltreatment (2)	+	-	
- Slide 29 – Signs of child maltreatment (3)	+	-	
- Slide 30 – Case examples	+	-	
- Slide 31 – Take-home messages	+	-	
- Slide 32 – Duty to report (1)	+	-	
- Slide 33 – Duty to report (2)	+	-	
- Slide 34 – Duty to report (3)	+	-	
- Slide 35 – Duty to report (4)	+	-	
- Slide 36 – What happens when you call	+	-	
- Slide 37 – Video summary	+	-	
- Slide 38 – Shifting paradigms	+	-	
- Slide 39 – Ottawa statistics (1)	+	-	
- Slide 40 – Ottawa statistics (2)	+	-	
- Slide 41 – Ottawa statistics (3)	+	-	
- Slide 42 – How to respond to disclosures	+	-	

Training Content	Score		Notes
Module 2 – Identifying & Reporting Child Maltreatment			
- Slide 43 – Support after the report (1)	+	-	
- Slide 43 – Support after the report (2)	+	-	
- Slide 45 – Barriers to reporting revisited	+	-	
- Module 2 evaluation	+	-	
Section score:	_____		
Time to complete:	_____		

Module comments, suggestions or feedback:

Training Content	Score		Notes
Module 3 – How Does Maltreatment Impact Children’s Functioning at School?			
- Slide 43 – Module 3 objectives	+	-	
- Slide 49 – Overview of the impact	+	-	
- Slide 50 – Developmental stage	+	-	
- Slide 51 – Key developmental processes (1)	+	-	
- Slide 52 – Key developmental processes (2)	+	-	
- Slide 53 – Key developmental processes (3)	+	-	
- Slide 54 – Experience grows the brain	+	-	
- Slide 55 – Brain development video	+	-	
- Slide 56 – Impact on brain development	+	-	
- Slide 57 – Brain image comparison	+	-	
- Slide 58 – Exercise for trauma reminders	+	-	
- Slide 59 – Trauma reminders/triggers	+	-	
- Slide 60 – Overwhelming emotion	+	-	
- Slide 61 – Emotion & behaviour	+	-	
- Slide 62 – Psychological disorders	+	-	
- Slide 63 – Trauma & ADHD overlap	+	-	
- Slide 64 – Impact on relationships (1)	+	-	
- Slide 65 – Impact on relationships (2)	+	-	
- Slide 66 – Impact on relationships (3)	+	-	
- Slide 67 – Impact on relationships (4)	+	-	

Training Content	Score		Notes
Module 3 – How Does Maltreatment Impact Children’s Functioning at School?			
- Slide 68 – Academic performance	+	-	
- Slide 69 – Group exercise (1)	+	-	
- Slide 70 – Group exercise (2)	+	-	
- Module 3 evaluation	+	-	
Section score:	_____		
Time to complete:	_____		

Module comments, suggestions or feedback:

Training Content	Score		Notes
Module 4 – Trauma-Sensitive Classroom Strategies			
- Slide 73 – Module 4 objectives	+	-	
- Slide 74 – What do you already know?	+	-	
- Slide 75 – Relationship-based approach	+	-	
- Slide 76 – Relationship-based practices	+	-	
- Slide 77 – Understanding the child	+	-	
- Slide 78 – Managing your own reactions	+	-	
- Slide 79 – Structure & consistency	+	-	
- Slide 80 – Time in, not time out	+	-	
- Slide 81 – Consequences, not punishment	+	-	
- Slide 82 – Acknowledge positive behaviour	+	-	
- Slide 83 – Support parents/caregivers	+	-	
- Slide 84 – Maintaining your role	+	-	
- Slide 85 – Challenging incidents (1)	+	-	
- Slide 86 – Challenging incidents (2)	+	-	
- Slide 87 – Case example 1	+	-	
- Slide 88 – Case example 1 answers	+	-	
- Slide 89 – Case example 2	+	-	
- Module 4 evaluation	+	-	
Section score:	_____		
Time to complete:	_____		

Module comments, suggestions or feedback:

Training Content	Score		Notes
Module 5 – Enhancing Teacher Well-Being			
- Slide 92 – Module 5 objectives	+	-	
- Slide 93 – Impact of teaching	+	-	
- Slide 94 – Impact of helping children	+	-	
- Slide 95 – What are the warning signs?	+	-	
- Slide 96 – Possible warning signs	+	-	
- Slide 97 – Secondary traumatic stress	+	-	
- Slide 98 – What does self-care look like?	+	-	
- Slide 99 – How do you engage in self-care?	+	-	
- Module 5 evaluation	+	-	
Section score:	_____		
Time to complete:	_____		

Module comments, suggestions or feedback:

Training Content	Score		Notes
Module 6 – Trauma-Sensitive School Environments			
- Slide 102 – Module 6 objectives	+	-	
- Slide 103 – Overview	+	-	
- Slide 104 – Video example	+	-	
- Slide 105 – Steps toward trauma sensitivity	+	-	
- Slide 106 – Group discussion	+	-	
- Module 6 evaluation	+	-	
Section score:	_____		
Time to complete:	_____		

Module comments, suggestions or feedback:

Training Content	Score		Notes
Module 7 – Case Culmination Activity & Conclusions			
- Slide 109 – Module 7 objectives	+	-	
- Slide 110 – Case video “Zoey”	+	-	
- Slide 111 – Group activity	+	-	
- Slide 112 – Take-home messages	+	-	
- Slide 113 – Key messages revisited	+	-	
- Module 7 evaluation	+	-	
Section score:			
Time to complete:			

Module comments, suggestions or feedback:

Overall training evaluation complete: Yes No

Total content score: _____

Total time to complete: _____

Overall comments, suggestions or feedback:

Appendix X

Coding Scheme for Teachers' Responses for Maltreatment-Related Effects (Study 2)

Categories	Example subcategories	Example quotes
Academic/learning difficulties	Cognitive difficulties, delays in academic skills (e.g., literacy, numeracy), incomplete schoolwork, memory problems	"I suspect that child abuse would negatively affect a students learning. It would make it hard for them to [...] to complete assignments, or to take risks in class" "Abuse makes it very difficult to learn, because their emotional needs aren't met. Educational needs cannot be met until emotional/social needs are met" "A decline in students' academic achievement and results"
Externalizing behaviours	Aggression, attention-related difficulties (e.g., distracted), disruptive, hyperactive	"Some children may have anger, outbursts, rage, and get in trouble at school by breaking common rules" "More aggressive hands-on behaviour resembling what they've experienced" "Focusing so much on what is going on at home they are not focused and present in the classroom"
Internalizing behaviours	Anxious, avoidant, depressed, low motivation, low self-esteem, withdrawn	"Lack of self-esteem with little confidence to apply themselves in the classroom" "Reserved or completely shut down" "They might be more likely to sit quietly and avoid participating in opportunities"
Interpersonal difficulties	Difficulties with attachment, mistrust of others, relationship problems (e.g., with peers, teachers)	"The child may not trust adults in a school setting" "Too easily attached (unhealthily) to others" "Negative impact on the child's ability to create meaningful and trusting relationships"
Physical well-being and development	Brain development, sleep deprivation, somatic symptoms (e.g., pain, stomachaches)	"Underdevelopment of the brain" "Frequent physical complaints, (i.e. stomachaches, headaches)"
Self-harm behaviours	Self-injury	"Self-harm" "Self-destructive behaviour"

Sexual behaviours	Unusual sexual knowledge, developmentally inappropriate sexual behaviour	“Sophisticated sexual knowledge” “Age-inappropriate sexual knowledge or play”
Negative effects ^a	--	--
Unknown effects ^b	--	--

Notes. ^a. This category was created to include teachers who affirmed negative effects, but did not describe them further; ^b. This category was created to include teachers who indicated that they did not know how abuse or neglect impacted their students.

Appendix Y

Coding Scheme for Teachers' Responses for Trauma-Sensitive Strategies (Study 2)

Categories	Example subcategories	Example quotes
Academic accommodations	Providing extra time for schoolwork completion, reducing the workload, tailoring schoolwork to suit the student's needs	"Provide opportunities to display learning in different ways" "Provide extra-time to complete assignments" "Be flexible and understanding in terms of completion of work"
Classroom environment	Creating a safe and supportive classroom climate, establishing routines, removing potential triggers	"Ensure the classroom environment is calm and a safe space" "Providing a structured day with visual reminders to allow the students to anticipate what is coming" "Avoiding triggering topics in classroom discussions"
Continuing professional development	Consulting with experts, seeking additional training	"Speak with experts, learn, do research on trauma and child maltreatment" "Inform yourself about signs of abuse of neglect"
Emotion regulation	Encouraging the expression of feelings, teaching emotion regulation skills (e.g., deep breathing), validating feelings	"Explicitly teach calming strategies to deal with challenging emotions like spaghetti toes or deep belly breathing" "Letting them know their feelings are valid" "Facilitate journaling or other means of emotion expression and release"
Monitoring and responding to child safety & well-being	Collaborating with staff or other professionals, referring students and their families to other supports when needed, reporting suspicions of maltreatment, watching for signs of maltreatment	"Watch their body language to determine unusual reactions to everyday events" "Record or document any inconsistencies and red flags" "Collaborate with the child welfare agency to review concerns and get feedback" "Connect them to outreach programs or programs within the school to help (e.g., breakfast/lunch/food programs)"

Relationship-focused strategies	Addressing misbehaviour in ways that repair and maintain relationships (e.g., time in, not time out), building safe and secure relationships with students, encouraging positive relationships with others, focusing on strengths and positives	“Making sure they understand that you are always there for them. No matter what happens, how they act, what they say, they can always come back to you and you will always be there supporting them.” “Make them feel accomplished and important. Make their successes stand out. Find something they are good at and foster that.” “Supporting them by helping them to find strong social connections with peers to confide in.”
Self-care	Maintaining self-care, monitoring well-being, regulating own emotions	“Maintaining a calm tone at all times” “Model positive behaviour regulation”
Unknown strategies ^a	--	--

Note. ^a This category was created to include teachers who indicated that they did not know any trauma-sensitive strategies.