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Standing on the forefront of school mental health: Building upon capacity in teacher candidates through mental health literacy and trauma-and-violence-informed-care

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Graduate Program in Education
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Abstract

Early identification and access to appropriate supports can improve the trajectory of childhood mental illnesses. Schools and educators have consistently been identified as having a significant role in both mental health promotion efforts as well as the identification of emerging mental health concerns amongst students. Equipping teachers for this role through professional development related to mental health literacy (MHL) is essential in ensuring their success. Closely tied to mental health is a sense of safety, and children who feel unsafe at school may have greater difficulty regulating their emotions and behaviour and be less available for learning. Utilizing a trauma-and-violence-informed-care (TVIC) framework within the education system may help schools provide safe places for all students, including those exposed to trauma, structural violence and experiencing mental health concerns. Initial teacher education offers a natural opportunity to prepare future educators with the knowledge, skills and self-efficacy needed to create learning environments that are safe, equitable and meet the needs of all students, including those with mental health concerns and/or the experience of trauma and violence. A mandatory, online mental health literacy course was utilized to provide instruction in MHL and TVIC to Bachelor of Education students (n=287) at a large Canadian university. Pre and post-test measures were used to capture knowledge gains with respect to mental health literacy, attitudes towards TVIC and self-efficacy for utilizing inclusive teaching practices. Multivariate analysis of variance (MANOVA) revealed a significant effect of time across measures, indicating that knowledge gains were made. There was no significant effect of previous learning on the measures of interest, which suggests that knowledge gains were made regardless of participants' previous mental health knowledge. These findings highlight the importance of including these topics within initial teacher education. Implications for policy and practice are discussed.

Keywords: Mental health literacy, trauma-and-violence-informed-care, teacher education, school mental health, professional development

Lay Summary

The majority of mental illnesses first emerge in childhood and adolescence. Further impacting mental health concerns amongst children and youth is experiencing trauma and or/violence. A number of barriers within the current mental healthcare system make it difficult for the majority of children experiencing mental health concerns to access treatment. Schools and educators have consistently been identified as having a significant role in promoting the mental health of students and identifying and supporting students who may be at risk for developing a mental health concern and/or who have been exposed to trauma. Equipping teachers with knowledge about mental health and the impact of exposure to trauma and violence, as well as the skills required to support students with these experiences is necessary to ensure success. The present study evaluates the knowledge and belief outcomes of an online mental health literacy course for pre-service teachers in the second year of the Bachelor of Education program at a large, central Canadian university. The course features interactive and diverse learning modalities in order to provide pre-service teachers with instruction in mental health literacy and trauma-and-violence-informed-care. Measures were obtained at the start of the course and again after its completion in order to determine whether there were any changes in pre-service teachers' knowledge on the topics of interest. The results indicate that knowledge gains were made in pre-service teachers' mental health literacy, attitudes towards trauma-and-violence-informed-care, and their beliefs about their ability (self-efficacy) to effectively teach students with mental health concerns. Furthermore, results indicate that knowledge gains were made regardless of pre-service teachers' prior knowledge about mental health. These findings highlight the importance of including mental health literacy and trauma-and-violence-informed-care as topics within initial teacher education. The implications these findings have for students, teachers as well as educational policy and practice are discussed.

Acknowledgments

As I come to the end of this phase of my learning and this chapter of my life it becomes necessary to take pause and reflect on the countless experiences, opportunities and people that have made this possible.

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Chapter 1

Background Synopsis

Childhood and adolescence are formative years, and health promoting initiatives during this time are critical in reducing health inequities and improving mental health into adulthood (Langford et al., 2015). Proactive prevention and promotion efforts have become particularly important for mental health given the high rates of mental health concerns present amongst children and adolescents (Erskine et al., 2015; Mental Health Commission of Canada, 2012). The Canadian Coalition for Children and Youth Mental Health (Brown, 2011) has identified mental health as one of the primary issues faced by children today, and suicide is among the leading causes of death in 15 to 24-year-old Canadian youth (Canadian Mental Health Association, 2014). In addition to the tragic cost in life, mental illness also has a substantial monetary cost and is estimated to cost the Canadian economy a staggering \$51 billion dollars every year (Smetanin et al., 2011).

Fortunately, research on childhood mental health suggests that through early diagnosis and access to appropriate intervention, up to 70% of childhood mental illnesses could be resolved (Leitch, 2007). This would improve life outcomes (Langford et al., 2015; Mantoura, 2014) and reduce the financial burden of mental illness on society (Climie, 2015; Leitch, 2007). Research has also consistently identified the imperative role educators and schools play in promoting students' mental health, acting as a first point of contact in recognizing mental health concerns amongst children and youth (Canadian Mental Health Association, 2014; Farmer, Burns, Phillips, Angelo & Costello, 2003; Hymel, Low, Starosta, Gill & Schonert-Reichl, 2018; Levine Brown, Phillip, Weston & Rodger, 2019; Roberts & Grimes, 2011; Reinke, Herman & Newcomer, 2016; Rodger et al., 2014; Whitley, Smith & Valliancourt, 2013). For teachers to be

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successful in the promotion of mental health, and the identification of mental health challenges, they must obtain the appropriate attitudes, skills and knowledge through quality professional development opportunities (Hymel et al., 2018; Levine Brown, Phillip, Rodger & Weston, 2017; Levine Brown, Phillip, Weston and Rodger, 2019; Whitley, Smith & Valliancourt, 2013).

Given the relationship between exposure to trauma and the development of mental health concerns (Felitti et al., 1998; Putnam, 2009; Romano, Babchisin, Marquis & Frechette, 2015), it is imperative that teachers also receive education in trauma-and-violence-informed-care (TVIC). There is little evidence that this is occurring, and educators have indicated that they feel ill prepared for their roles at the forefront of school mental health (Levine Brown, Phillip, Rodger & Weston, 2017; Rodger et al., 2014; Rothi, Leavey & Best, 2007). They have expressed a lack of confidence, available information and appropriate training as salient barriers to effectively filling this role (Alisic, Bus, Dulack, Pennings & Splinter, 2012; Reinke, Stormont, Herman & Puri, 2011; Rodger et al., 2014; Walter, Gouze & Lim, 2006).

Despite extensive evidence demonstrating the importance of facilitating educators and schools in supporting and promoting student mental health (Koller & Bertel, 2006; Robert & Grimes, 2011; Whitley, Smith & Valliancourt, 2013), training in this area is often not occurring many teacher candidates (Levine Brown, Phillip, Weston & Rodger, 2019). In order to support the learning needs of students and teachers, it is critical that schools recognize and understand the impact that students' personal experiences have on their learning (NCTSN, 2017). Educators would be better equipped to support student needs if they received quality, evidence-based information about supporting and promoting student mental health proactively as part of their teacher education (Levine Brown, Phillip, Rodger & Weston, 2017; Koller & Bertell, 2006;

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Whitley, Smith & Valliancourt, 2013), and build an awareness of TVIC practices (Alisic et al., 2012; Hobbs, Paulsen & Thomas, 2019).

This dissertation explores the effectiveness of an online mental health literacy course in increasing the mental health literacy, self-efficacy, well-being, and attitudes towards TVIC in teacher candidates at a large Faculty of Education in a central Canadian province.

Chapter 2

Theoretical Background and Context

A number of theoretical frameworks are important to consider when conceptualizing the present study. These orientations contextualize the study, guided the development of the mental health literacy course, and shaped the research questions exploring its effectiveness. The following section outlines these theoretical considerations, which include; the Dual Continuum Model of Mental Illness and Health (Keyes, 2002); the social determinants of health; Trauma Theory (Herman, 1992); and Relational Cultural Theory (Jordan & Hartling, 2002).

Mental Health as a Continuum

To effectively and accurately delve into this area, it is first necessary to ground this exploration within a relevant theoretical framework, which must include a clear understanding of what mental health is. The World Health Organization's (2004) definition of mental health will be used to ground this understanding. WHO defines mental health as "a state of wellbeing in which the individual realizes his or her own capabilities, and can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community". Mental health and mental illness are further understood through the dual continuum model, which posits that mental health is not simply the absence of mental illness, nor the presence of wellbeing (Keyes, 2002; WHO, 2001). Rather, Keyes (2002) frames mental health as a continuum, comprised of three levels: flourishing, moderate, and languishing mental health. Individuals with flourishing mental health will display more positive levels of functioning in their everyday lives, whereas languishing mental health can be characterized with less optimal functioning, less interest, and less satisfaction in life (Keyes, 2002).

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According to this model, an individual's experience of mental health and mental illness is not a static state or condition, but rather exists on a continuum and is dynamic (Keyes, 2010; Mantoura, 2014), shifting to various points on that continuum throughout one's life. Furthermore, in Keyes's model, the constructs of mental health and mental illness exist on separate continuums (Health & Welfare Canada, 1988, as cited by Keyes, 2010). This means that an individual may have a mental illness, but also high levels of mental health (Keyes, 2010; Mantoura, 2014), perhaps achieved through effective symptom management and support.



Figure 1. Dual continuum model of mental illness and health (Keyes, 2010).

Conversely, someone may not have a mental illness, but still experience low levels of mental health (Keyes, 2010). This may be the case for an individual who does not have a diagnosable condition, but experiences dissatisfaction with their career, interpersonal relationships, and so on.

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The dual continuum model provides an effective way to conceptualize mental health and illness and highlights the importance of prevention and promotion efforts. The debilitating impact of mental illness has been identified as a global health issue, with a burden of disease surpassing that of cancer and cardiovascular disease (WHO, 2008). The majority of mental health initiatives are focused on the improving treatment of those experiencing mental illness, while the focus placed on research and prevention efforts is low relative to the burden of disease (Saxena, Thornicroft, Knapp, & Whiteford, 2007). Researchers have proposed utilizing a population health framework to shift how mental health issues are addressed and studied. This unique approach to mental health aims to reduce the prevalence and distribution of mental illness, explore the determinants of mental health, create and implement policies that promote mental health, and address mental health inequities at a population level (Mantoura, 2014).

Social Determinants of Health

There are numerous factors that influence an individual's mental health. Some of these factors promote mental health, whereas others predispose an individual to mental illness. These social determinants of health include fixed characteristics (not adaptable) such as sex, race, age, sexual orientation, and migrant status; as well as modifiable influencers, such as individual, family, community and environmental factors (Mantoura, 2014).

The unequal distribution of social determinants of health contributes to mental health inequalities, and poorer mental health outcomes (Mantoura, 2014). This is a complex and cyclical relationship, wherein individuals with greater social and health inequalities are more likely to develop a mental illness (social causation), and individuals with mental illness are more likely to experience social and health inequalities as their socio-economic positioning is reduced (social selection) (Mantoura, 2014). This cyclical phenomenon becomes increasingly evident

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when reviewing the relevant literature. Lipman and Boyle (2008) found that children living in low-income households are three times more likely to develop a mental health problem than their peers not living in poverty. Fergusson and Woodward (2002) determined that children and youth living with mental health problems are more likely to experience poorer academic and vocational attainment in comparison to peers, consequently maintaining their low socio-economic position and further perpetuating the cycle.

It is interesting to note that externalizing behaviors have been shown to be more prevalent in children from low socio-economic status (SES) households, in comparison to internalizing behaviors such as anxiety and depression (Lipman & Boyle, 2008). Similarly, the effects of exposure to trauma often manifest in the classroom as externalizing concerns, such as inattention, hyperactivity, oppositional behavior, conduct concerns, and disinhibited social engagement (Brunzell, Waters & Stokes, 2015). This evidence reinforces the concept of the intersectionality between mental health and the social determinants of health. It is important that educators are taught to use a social-justice framework to better understand the behaviours and capabilities of their students (Atkins & Rodger, 2016), and to help them more fully appreciate barriers that hinder students' engagement in learning.

A population level approach to mental health, policy and intervention can more adequately address the disparities across social and health determinants than can a non-population level approach (Mantoura, 2014). High prevalence rates of childhood exposures to trauma (Chartier, Walker, & Naimark, 2010; Felitti et al., 1998) highlight the importance of responding to trauma as a public health issue. Given the long-term impact of mental illness, and early exposure to trauma, it is imperative that supporting children's mental health be a major focus and priority in public mental health policy development (Waddell et al., 2007).

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Promoting mental health at a population level, as opposed to placing the focus on treatment of individuals, has numerous benefits. These include decreasing the prevalence of mental illnesses, increasing population levels of flourishing mental health, and ensuring that all individuals (both those with and without mental illnesses) experience the benefits of positive mental health (Keyes, 2010; Mantoura, 2014). Decline in an individual's mental health from flourishing to moderate increases their risk of developing future mental illnesses, emphasizing the need to promote and protect positive mental health (Keyes, 2010).

The notion of mental illness prevention and mental health promotion is particularly relevant to children and youth, with research illustrating that the long-term benefits of early health promotion and illness prevention on health later in life are significant (Langford et al., 2015; Waddell, McEwan, Peters, Hua & Garland, 2005). These efforts reduce the duration of untreated illness and improve treatment outcomes (Collins et al., 2011), as well as help reduce costly health service utilization in adulthood (Leitch, 2007).

Schools have been recognized as having a key role to play in promoting mental health efforts that bolster the educational, emotional, and social outcomes for all students, not just those experiencing mental health challenges, and/or trauma (Mantoura, 2014). By improving the educational and emotional well-being of all students from a young age, we may increase the likelihood of better health outcomes and fewer inequalities later in life (Langford et al., 2015; Mantoura, 2014). The relationship between mental illness and trauma highlight the importance of quickly and effectively supporting children exposed to trauma in order to mitigate harmful long-term impacts.

Trauma Theory

The creation of trauma-informed systems of care is ineffectual without a comprehensive, theoretical foundation within which to ground it in. Judith Herman's Trauma Theory, as outlined in her ground-breaking book, *Trauma and Recovery* (1992), provides such a theory. Herman's work challenged the prevailing view at the time of trauma and its aftereffects as the fault of the survivor, and as evidence of an inherent weakness or defectiveness (Zaleski, Johnson & Klein, 2016). Rather, Herman's theory claimed that psychological trauma itself, as well as survivor outcomes, were influenced by the society that the trauma occurred in (Herman, 1992). Her theory was developed through extensive work with survivors of diverse forms of trauma and violence, from military and political, to sexual and interpersonal. Herman's work was instrumental in highlighting the similarity amongst these, perhaps seemingly different forms of traumatic experiences (Herman, 1992; Zaleski, Johnson & Klein, 2016).

Herman's trauma theory (1992) has several crucial tenets that comprise it, the first being the concept of terror as a reaction to experiencing trauma and violence. She asserts that terror is the body's natural reaction in attempting to cope with an experience wherein all other survival reactions (e.g., escape, resistance) have proven ineffective. The experience of terror often continues even after the actual threat has dissipated. This principle was critical in illustrating that the symptoms of exposure to trauma are the result of an individual's inability to protect themselves against trauma, as opposed to hopelessness (Herman, 1992). According to Herman, the body will attempt to reconcile the experience of trauma in three ways; hyperarousal; intrusion and constriction. Hyperarousal involves a state of high alert, heightened startle responses and can often manifest as emotional irritability and lability (Herman, 1992). Intrusion consists of reliving the traumatic events, often with the same vividness and emotional acuity. Lastly, the concept of

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constriction entails avoidance as an attempt to cope (Herman, 1992). Herman's concept of terror is central to her trauma theory and its components have been directly linked to research in neuroscience, specifically the nervous system's reaction to trauma (Zaleski, Johnson & Klein, 2016).

The reactions described are extremely distressing for those who have experienced trauma and can significantly impair functioning across life domains and require specific and purposeful support and treatment to effectively address. Herman's model of recovery (1992) is also structured in three parts; safety; remembrance and mourning; and reconnection. It is within several of these components wherein the education system, particularly teachers, can be seen as having a critical role in supporting students exposed to trauma. This model exemplifies a strengths-based, capacity-building approach in its focus on re-establishing an individual's sense of power and control over their life, and connection to both themselves, as well as those around them (Zaleski, Johnson & Klein, 2016). Furthermore, the healing relationship is seen as an integral aspect of the model and is a central focus of both the model (Herman, 1992), as well as this research. While Herman was referring to the therapeutic relationship between the survivor of trauma and their clinician, the present research would attest that the relationship students have with their teachers can also be healing. In the context of this research the teacher-student relationship is not seen as a replacement to a therapeutic relationship with a trained clinician, but rather an additional source of support and strength for children. Evidence has consistently shown the importance of at least one stable, caring, and supportive adult relationship in order to help mitigate the harmful effects of trauma (National Scientific Council on the Developing Child, 2015). Supportive relationships alongside adaptive skill building and positive experiences are

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what constitute resiliency (National Scientific Council on the Developing Child 2015), all of which can be fostered within the student-teacher relationship.

Herman further asserts that the processing of trauma can begin only when an individual has established feelings of safety and the ability to self-regulate (1992). It is believed that supporting students in establishing a sense of safety and building the capacity to self-regulate is well within educators' roles and competency. Furthermore, creating a learning environment that fosters a sense of safety for students, while simultaneously helping them build invaluable self-regulation skills to manage stress is beneficial for all students, not just those exposed to trauma and violence.

After an individual has the capacity to regulate their physiological and psychological experiences, with a regained sense of safety they are able to reconnect and engage with the world (Herman, 1992; Zaleski, Johnson & Klein, 2016). Trauma theory sees the therapist as having a central role in supporting this exploration process through healthy relational interactions with their clients (Herman, 1992). While therapeutic treatment delivered by trained clinicians for children exposed to trauma is imperative, the therapeutic impact of other caring adults in children's lives, including teachers, is often undervalued (Dobson & Perry, 2010).

Connections with attentive and attuned caregivers, and re-establishing predictable routines are important parts of the healing process for children exposed to trauma (Dobson & Perry, 2010). It is through the support of a trusting relationship with a caring adult that the child can develop the confidence and sense of safety to begin to re-navigate and reengage with their world. Within the school setting this may include supporting and encouraging students to participate in learning, social and extracurricular activities. These activities are typical for teachers and commonly employed to benefit students. However, outlining why such activities are

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so critical in helping students exposed to trauma rebuild their sense of empowerment, and connection with the world around them is an important part of creating a trauma-and-violence informed school environment.

The Importance of Relationships

Teachers have repeatedly been identified as crucial figures in school based mental health promotion (Canadian Mental Health Association, 2014; Koller & Bertel, 2006; Robert & Grimes, 2011; Whitley, Smith & Valliancourt, 2013). This is largely due to the length of time they spend with students (Kirby & Keon, 2006), and the nature of the relationships they build with their students on a daily basis (Rodger et al., 2014). For this reason, the teacher-student relationship is viewed as a central tenet to this research and can be more fully understood from the lens of Relational Cultural Theory (RCT). Relational cultural theory emphasizes the importance of relationships and connection, purporting that human growth occurs through authentic connection (Jordan & Hartling, 2002).

To develop and maintain growth fostering relationships, mutual empathy and empowerment must exist between both parties (Miller, 1988). The outcomes of connection through growth fostering relationships include allowing the individual to change, open up, transform and grow (Jordan & Hartling, 2002). This becomes particularly relevant in educational settings wherein students are continuously expected to develop and grow, shifting their ideas and understanding as they progress through their academic careers, while also navigating the formation of their own identity (Tucker, Smith-Addock & Trepal, 2011). According to RCT, connection with a caring adult (such as a teacher) is imperative to successful growth and development in childhood (Spence, Jordan & Sazama, 2004).

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The importance of authentic connection through growth fostering relationships may be of particular importance when looking at vulnerable and marginalized children and youth, such as those already experiencing mental illness, those at risk of developing mental health concerns, and those who have experienced trauma and/or violence. On a socio-cultural level, disconnection is inflicted on marginalized groups (such as those with mental illness) through shame and isolation, which is detrimental given that connection is a necessity to healing and growth (Jordan &Hartling, 2002). Teachers who face significant stress at work may also be less able to empathetically engage with and empower their students, impacting this authentic connection (Koenig, Rodger &Specht, 2017), and potentially contributing to feelings of isolation for both parties.

Challenges in Defining Teaching as a Profession

Professions are often characterized by the knowledge and expertise they possess (Saks, 2012). This becomes particularly relevant when considering the complex, multi-faceted role that teachers play in their students' lives as both educators and caregivers. This dual role instills in them a deepened knowledge and understanding of their students' needs. However, through the "institutionalisation of expertise" (Saks, 2012), larger governing bodies often control the knowledge and outcomes of the teaching profession (Hibbert, 2015). More specifically in Ontario, the profession of teachers is governed by the Ontario College of Teachers, which is influenced by the Ministry of Education. The downplaying of inherent knowledge and expertise that this results in likely contributes to the confusion and uncertainty teachers experience in navigating boundaries and their role in supporting student mental health (Ott, Hibbert, Rodger &Leschied, 2017; Rodger et al., 2014). Professionalization is as a socio-political process, influenced by the power and interests of the larger society (Saks, 2012). This system however is

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not always responsive to the needs of society. This can be seen in the education sector wherein the needs of both students and teachers are not adequately being met by the larger system (Ott, Hibbert, Rodger & Leschied, 2017).

Devaluing the expertise teachers possess as caregivers undermines their autonomy and competence as professionals. The importance of autonomy and competency are well explained by Self-determination Theory (SDT) which asserts that all individuals have a set of basic psychological needs that must be met to achieve a sense of wellbeing (Deci & Ryan, 2008). These include: the need for autonomy, competence, and relatedness. Self-determination theory maintains that these needs transcend cultural boundaries and are universal to all people, predicting psychological wellbeing across cultures (Deci & Ryan, 2008).

In the context of the present study, SDT can be used to frame the experience of educators when their need for autonomy, competence, and relatedness in the workplace goes unmet through restrictive policies, mandates, and burdening workloads that devalue innate expertise (Ott, Hibbert, Rodger & Leschied, 2017). Ott and colleagues (2017) challenge current practices, arguing that schools cannot promote the mental health of students if they do not promote the mental health of teachers. Given the current state of mental health for Canadian children and youth, these promotion efforts are of vital importance.

The Mental Health of Canadian Children and Youth

The majority of psychiatric illnesses emerge between 14 to 25 years of age (Kutcher & Venn, 2008), thus the importance of taking a “life-course approach” towards mental health and illness has been identified as critical for research in this area (Collins et al., 2011). When exploring mental health and illness over the course of the lifespan, schools offer a natural, efficient and cost-effective means of reaching children and adolescents for mental health

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promotion and intervention (Farmer et al., 2003; Kirby & Keon, 2006; Kutcher, Ven & Szumilas, 2009; Langford et al., 2016; Power, Cleary & Fitzpatrick, 2008; Schonert-Reichl & Hymel, 2007; Weston, Anderson-Butcher & Burke, 2008). School based mental health is a broad topic that encompasses various aspects of both mental health concerns prevalent in schools and school based mental health interventions. This study utilizes Weist's and Paternite's (2006) definition of school mental health which

“Involves partnerships between schools and community health/mental health organizations, as guided by families and youth; builds on existing school programs, services and strategies; focuses on all students, both general and special education; includes a full array of programs, services, and strategies-mental health education and promotion through intensive intervention; emphasizes schools as locus of engagement for school-based, school-linked, and community-based work.”

School mental health has been described as the “next frontier” of health education in schools (Froese-Germain & Riel 2012; Kutcher, Ven & Szumilas, 2009). Schools offer a prime environment in which to foster health promoting behaviours (Canadian Mental Health Association, 2014; Hoagwood et al, 2007; Langford et al., 2015; Roberts & Grimes, 2011); identify students living with, or at risk of developing a mental illness (Kutcher et al., 2009; Leitch, 2007; Meldrum, Venn & Kutcher, 2009; Whitley, Smith & Valliancourt, 2013); and support students who have been exposed to trauma and violence (Rolfnes & Idsoe, 2011). In fact, some research has indicated that certain mental illnesses, such as depression, are more often identified in schools than in general healthcare settings (Moor et al., 2007). This is perhaps less surprising when one considers the high prevalence of mental health concerns present in children and youth. Mental illnesses have been identified as one of the most common and impairing

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issues faced by young people (Lawrence et al., 2019; Meldrum, Venn & Kutcher, 2009; Wadell, Sheperd, Schwartz & Barican, 2014), with an estimated 15-30% of Canadian children experiencing mental health challenges at any given time (Meldrum, Venn & Kutcher 2009; Mental Health Commission of Canada, 2012). This number is predicted to increase to 50% by the year 2020 (Leitch, 2007; Mental Health Commission of Canada, 2012). These shocking prevalence rates are not unique to Canada, and mental illness has been highlighted as the leading cause of childhood disability worldwide (Erskine et al., 2015).

Despite the substantial prevalence rate of mental health concerns amongst children and youth, numerous systemic and situational barriers impact their ability to receive adequate care and treatment (Reid & Brown, 2008; Sterling, Weisner, Hinman & Parthasarathy, 2010). In a recent Ontario study, only 25.6% of children and 33.7% of youth with an identified mental health disorder had contact with a mental health provider (Georgiades et al., 2019). Furthermore, the authors found that the most common setting for mental health related service contacts for children and youth was school (Georgiades et al., 2019), demonstrating the significant role schools play in bridging treatment gaps for children and youth. The salient barriers impacting access to mental health treatment for children and youth is particularly worrying given that mental health concerns are both so prevalent (Kutcher et al., 2009; Mental Health Commission of Canada, 2012) and impactful, affecting numerous life outcomes (Canadian Council on Learning, 2010; McLeod, Uemura & Rohrman, 2012; Owens, Stevenson, Hadwin & Norgate, 2012).

Childhood Exposure to Trauma & Violence & the Role of Schools

Exposure to trauma and violence has a strong connection to the development of mental health concerns and illnesses for many people. Trauma is defined as a distressing experience that evokes intense feelings of fear, horror, and helplessness; these experiences elicit an intense

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emotional response for those involved that can include long-term reactions including unpredictable emotions, flashbacks, strained relationships, and physical symptoms (American Psychological Association, nd.). This can be further broken down by the type of trauma, which includes simple trauma, defined as a brief, or one-time occurrence, and complex trauma, defined as trauma that is longer in duration and involving multiple incidents (Brunzell, Waters & Stokes, 2015). With exposure to complex trauma resulting in longer sustaining concerns than simple (van der Kolk, 2003).

Violence too can be further broken down and understood by its forms or types, and peace researcher, Johan Galtung (1969), has classified the various forms that violence can take. Structural violence refers to injustices built into the social system, and results in certain groups experiencing more privilege than others on the basis of categories, such as gender, socio-economic status, religion and ethnicity. The attitudes, beliefs, and feelings of superiority or inferiority based on these categories that are instilled from a young age are known as cultural violence, and often provide justification for structural violence. Lastly, direct violence refers to violence that can be physically perceived, such as physical, sexual, or verbal assault, murder, and war. Direct violence is rooted in cultural and structural violence, and further reinforces these forms of violence, creating a cyclical effect.

Adverse childhood experiences include traumatic events such as physical, sexual, or emotional abuse; living with someone with mental illness, or substance abuse problems; parental divorce and/or separation; parental incarceration; living in poverty; witnessing domestic or community violence; as well as experiencing racial and/ethnic prejudice (Bethell, Newacheck, Hawes & Halfon, 2014). Alongside the harmful effects of exposure to these incidents, of equal concern is the widespread occurrence. In their landmark study, Felitti and colleagues (1998)

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revealed the staggering prevalence rate of exposure to adverse childhood events (ACEs) with over half of their large sample (n=9,508) endorsing experiencing one or more ACEs. In Canada similar rates were found using data from the Ontario Health Survey, revealing that 72% of the sample of adults over the age of 15 (n=9,953) reported experiencing at least one adverse childhood experience, with 37% experiencing two or more (Chartier, Walker, & Naimark, 2010). Chartier and colleagues (2010) results further suggested that childhood abuse in particular had a unique adverse impact on adult health outcomes. Given that in Ontario alone, 125,281 child welfare investigations were conducted in 2013, and that 78% of these investigations were conducted due to reports of maltreatment (abuse and neglect) (Fallon et al., 2015) this finding is particularly concerning. Other studies have revealed that rates of traumatic exposure in childhood is over 50% in the general population (Copeland, Keeler, Angold & Costello, 2007). While some children exposed to trauma will quickly recover from the experience (Ko et al., 2008), estimates indicate that between 10% to 30% will go on to develop chronic psychological concerns (Kramer & Landolt, 2011). Recognition of the startling rates of exposure to traumatic experiences has resulted in a shift in the understanding of exposure to childhood trauma, framing it as a salient public health issue.

It is important to note that exposure to adverse experiences does not happen in isolation to the individual, but rather occurs within the context of the larger community and culture. Indeed, there is a disproportionately high exposure to ACEs for children living in poorer families and communities, where household stressors such as domestic violence, food insecurity, housing instability and inadequate educational opportunities may be higher (Ellis & Dietz, 2017). While this is perhaps not surprising, it does highlight the importance of looking at these challenges through a social justice and equity lens, acknowledging the influence that social determinants of

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health and the larger community and social context that children live in have on their risk of exposure to adverse experiences. Similarly, a lack of resources in vulnerable and/or trauma-affected communities often means that schools and teachers may provide the only interventions that these children received (Brunzell, Stokes & Waters, 2018).

Models such as the Building Community Resilience Model (BCR) (Ellis & Dietz, 2017) highlight that children can become resilient when they are living in homes and communities with resilient adults. The BCR further acknowledges the critical importance of strengthening health and community systems in order to “improve the fabric of the communities where our most vulnerable children live, learn and play” (Ellis & Dietz, 2017). Taking an “upstream approach” through coordinating and aligning resources and empowering the adults in children’s lives to act as a buffer for children against toxic stressors in the community are key components of the BCR model. Resources that contribute to the overall health and resiliency of a community include both an individual’s informal social supports, as well as formal service systems, including child welfare, corrections and justice, healthcare and schools (Ungar, 2011).

Despite the substantial prevalence rates of children exposed to trauma, the majority will not receive mental health services and indeed are often not even known to be traumatized (Perry, 2009). Schools act as central access points for many children and families and are thus in a position to contribute to reduce health inequities and barriers to support. Through better equipping educators with the knowledge necessary to support students exposed to adverse experiences outcomes for children can be improved, whilst community resilience is strengthened.

The Impact of Trauma on Development. The effects of trauma are pervasive and encompassing in nature, and this may be particularly true of childhood trauma which alters both

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the neurological and psychosocial development of children (Putnam, 2009). Exposure to trauma can result in delays in the maturation of various brain structures and impacting children's physiological and neuroendocrinological responses, and their ability to organize their cognition and regulate their emotions and behavior (van der Kolk, 2003). These shifts in normal brain development pose a host of challenges for trauma and violence exposed children when it comes to learning, including, decreased cognitive abilities, impairments in memory, attention and language, as well as impacting the child's ability to successfully form relationships with peers and teachers (van der Kolk, 2003). Even when exposure to a traumatic and/or violent event does not result in symptoms and behaviours that meet a level of clinical impairment, it can still have significant impact on the developmental trajectory for that child across all areas of functioning, including social/emotional, physical/health, and cognitive/learning (NCTSN, 2017). Furthermore, the effects of trauma, such as resulting behavioural challenges, can be particularly detrimental when they are misunderstood (Hobbs, Paulsen & Thomas, 2019).

Signs that a child has been exposed to trauma often differ depending on the age and developmental stage of the child at the time of exposure. For younger, pre-school aged children, exposure to trauma may present as separation anxiety; regression in developmental milestones; lack of developmental progress; re-creating the traumatic event (often through play); changes in behaviour and emotionality; reactions that are out of proportion to situations; increased anxiety and preoccupation with the safety of self and others; development of new fears; and worry about the recurrence of traumatic event (NCTSN, 2008). As children transition into the middle school years, exposure to trauma may continue to manifest as anxiety, worry and somatic complaints, and may also include changes in behaviour, such as: decreased attention; increased activity level; irritability; anger outbursts; under or over reacting to environment stimuli; withdrawal; increased

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absence from school; hyperarousal; avoidance behaviours and emotional numbing surrounding the event (NCTSN, 2008). For adolescents in high school signs of exposure to trauma may include increases in impulsivity and risk-taking behaviours; discomfort with feelings; substance abuse; difficulty trusting others; preoccupation, or repetitive comments/thoughts about death and dying; re-experiencing the trauma; and increased difficulty with authority, redirection and/or criticism, in addition to the signs mentioned previously (NCTSN, 2008). Consideration of a child's developmental level is important when implementing educational and classroom supports (NCTSN, 2017).

Exposure to traumatic and violent events and experiences as a child is associated with serious negative outcomes, both immediately, as well as detrimental effects that persist across the lifespan (Felitti et al., 1998; Putnam, 2009; Romano, Babchisin, Marquis & Frechette, 2015). Concerns such as mental illness, suicidality, substance abuse, and major physical health problems such as heart disease, obesity, cancer, diabetes, autoimmune diseases, teenage pregnancy, sexual risk-taking behaviour, and sexually transmitted infections have all been linked to exposure to trauma during childhood (Briggs et al., 2012; Felitti et al., 1998; Mulvihill, 2005; Putnam, 2009). These harmful outcomes impact numerous domains of functioning and impede learning (Ko et al., 2008; van der Kolk, 2003). It is important to note that children's reactions to trauma and violence are influenced by the child's own experiences, which may be further influenced by culture and developmental factors (NCTSN, 2008). Furthermore, while some children who have been exposed to trauma and violence show signs within the first several weeks after exposure, others may return to their baseline state quickly (NCTSN, 2008). However, children who do not display emotional concerns following exposure to trauma and violence may still experience emotional distress which may continue or worsen over time

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(NCTSN, 2008). Thus, it is important to promptly address childhood exposure to trauma and violence, regardless of the apparent level of severity of the reaction, particularly given the high occurrence of exposure to traumatic experiences.

While learning is one of the domains that can be most greatly impacted in children who've experienced trauma, it can also be a front-line service in the identification, and early intervention of children experiencing the adverse effects of exposure to trauma. Schools are one of the most consistent and predictable institutions for children (Brunzell, Waters & Stokes, 2015; Cicchetti & Toth, 1997; Hobbs, Paulsen & Thomas, 2019), which may be of particular importance for children experiencing instability in their lives (Berridge, 2012). A safe, predictable environment with structured rules, routines and boundaries have been identified as important factors in supporting children recovering from trauma (van der Kolk, 2003); such an environment can be cultivated in the classroom. Schools can further play a part in both preventing adverse childhood experiences when possible, as well as providing support for children and families coping with the aftereffects of traumatic events (Walker & Walsh, 2015).

A number of initiatives have been implemented to support trauma affected students at school, however these programs place the focus on therapeutic treatment by mental health professionals (Cognitive Behavioural Intervention for Trauma in Schools; Jaycox, 2003), or involve having teachers trained to deliver the interventions (Support for Students Exposed to Trauma; Jaycox et al., 2009; The School Resilience Program; Wolmer et al., 2016), and do not place a focus on better equipping educators to support trauma exposed students at the pre-service level. A large systematic review by Yohannan and Carlson (2018) revealed that the majority of school-based interventions for children and youth exposed to trauma focused on war-and-terror related traumas (e.g., school shootings) or natural disaster-related traumas. While these are

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inarguably important areas of focus, there is less research on the role of schools in supporting children exposed to other prevalent forms of trauma and violence, including other forms of direct violence (e.g., abuse), as well as structural violence (e.g., poverty, racism). Furthermore, the authors highlight the importance of more research focusing on supporting students from diverse backgrounds, including First Nations students and lesbian, gay, bisexual, transgender, two-spirited, queer/questioning (LGBT2Q) students exposed to trauma. This lends further support to the importance of taking a more broad-based approach when it comes to the role schools play in supporting students exposed to trauma and violence. One that equips educators to create learning environments that are safe for all students, including those exposed to trauma and/or violence, regardless of the form it takes.

To effectively meet their goal of promoting students' education and attainment, schools must acknowledge that students' success within these domains is integrally tied to their mental wellness (NCTSN, 2017). The nature of teachers' roles, including the close proximity and regular contact they have with their students, place them in an ideal role to quickly identify children who may have experienced and/or are experiencing an aversive event (Baum, Rotter, Reidler, & Brom, 2009; Walker & Walsh, 2015) and/or mental health concern (Meldrum, Venn & Kutcher, 2009; Whitley, Smith & Valliancourt, 2013) and provide support to these students (Wolmer et al., 2016). In fact, the relationship teachers have with their students can promote healing and recovery in and of itself (Brunzell, Waters & Stokes, 2015). However, in order to effectively do this, educators must have confidence and self-efficacy in their knowledge and abilities within this domain.

Teacher Confidence & Efficacy. Teacher self-efficacy, or teachers' beliefs about their capabilities (Zee & Koomen, 2016), has been identified as an important construct positively

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influencing a number of domains. For students, teacher self-efficacy is linked with improved academic outcomes, better adjustment to academic pressure, and increased motivation. With respect to educators, self-efficacy positively relates to higher tolerance towards challenging students, job satisfaction, job commitment, personal accomplishment, and psychological well-being. It also acts as a protective factor contributing to resilience, which safeguards against burnout and attrition (Beltman, Mansfield & Price, 2011; Zee & Koomen, 2016). Additionally, teachers' perceived efficacy can influence the classroom atmosphere they create for their students (Zee & Koomen, 2016), as well as their thoughts on engaging in various teaching tasks to improve student learning (Bandura, 1997, as cited by Sharman, Loreman & Forlin, 2011).

Teacher Self-Efficacy and Inclusion. In addition to influencing their thoughts about educational practices, teachers' self-efficacy also impacts their own behaviour (Gibson & Dembo, 1984). More specifically, teachers with high self-efficacy were more effective at using teaching strategies to support students struggling academically (Gibson & Dembo, 1984). Thus, teacher self-efficacy is thought to play a central role in educators' ability to effectively teach in an inclusive classroom (Zee & Koomen, 2016). Given the emphasis placed on inclusive educational practices across several developed countries, including Canada, (Sharma, Loreman & Forlin, 2011), teacher self-efficacy becomes particularly relevant when exploring the inclusion of students with diverse needs in the classroom.

Teachers' views towards inclusive education are influenced by their perception of their own ability to effectively incorporate inclusive educational practices in the classroom. Research demonstrates that a teacher's confidence is the single best predictor of their likelihood to implement inclusive practices in the classroom (Sharma, Moore & Sonawane, 2009). While there

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are numerous benefits to inclusive practice, it also can pose significant challenges for educators (Sharma, Loreman & Forlin, 2011).

Despite being mandated to provide inclusive education, Canadian educators are working within a larger context wherein the educational practices and services being utilized often reflect a philosophy other than inclusion (Sokal & Katz, 2015). Furthermore, the structure of many teacher education programs in Canada can pose challenges when it comes to preparing teachers with inclusive educational practices.

Provincial standards have been created for pre-service teacher education related to inclusion and many programs require between 30 to 60 instructional hours to be focused on diversity education. However as Sokal and Katz (2015) identify, the courses and subject areas that fall within this domain are broad in nature (e.g., First Nation education, second-language learners, issues related to poverty, etc.) and the choice of which courses to take is up to the discretion of the individual teacher candidate. While the subjects listed above are unquestionably important areas of focus, this current framework means that not all teacher candidates will receive training related to working with students with exceptionalities. This becomes problematic given that the majority of children with exceptionalities, including those with mental health concerns, will spend a considerable amount of time in the regular classroom setting (Atkins & Rodger, 2016; Rothi, Leavey & Best). Likewise, educators have a high probability of working with children who have experienced trauma (Brunzell, Stokes & Waters, 2016), with some studies showing upwards of 89% of teachers having endorsed directly working with one or more children who had been exposed to traumatic experiences/events (Alisic et al., 2012). It is thus imperative that teachers be adequately supported at the pre-service level so that they have the

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necessary skills to create an inclusive school environment that meets the needs of all students (Andrews, McCabe & Wideman-Johnston, 2014; Koller & Bertell, 2006).

Teacher Confidence in Promoting Student Mental Health and Supporting Students Exposed to Trauma. Inclusive education supports social and academic outcomes for all students; however, for this to be delivered successfully teachers must be confident and competent in teaching students with diverse needs (Specht, 2012). Teachers' close and frequent proximity to children places them in an ideal role to form meaningful connections and close relationships with their students. While this connection with a caring adult is essential to children's learning and development (Spence, Jordan & Sazama, 2004; Tucker, Smith-Addock & Trepal, 2011), it also means that teachers are well placed to first notice changes and concerns in their students (Levine Brown, Phillip, Weston & Rodger, 2019; Meldrum, Venn & Kutcher, 2009; Reinke, Herman & Newcomer, 2016; Whitley, Smith & Valliancourt, 2013). As a result of this educators are frequently expected to take a role at the forefront of school mental health (Fairbanks et al., 2008; Franklin et al., 2012). However, this is often not a role they are being adequately prepared for (Levine Brown, Phillip, Weston & Rodger, 2019; Oberle & Schonert-Reichl, 2016). A lack of confidence, skills (Andrews, McCabe & Wideman-Johnston, 2014; Rodger et al., 2014; Roth et al., 2008; Walter, Gouze & Lim, 2006); role uncertainty (Phillip & Kelly, 2014); and the pressures of balancing multiple roles (Graham, Phelps, Maddison & Fitzgerald, 2011; Mazzer & Rickwood, 2015) have all been identified as challenges.

Further impacting teachers' ability to meet student needs are growing class sizes and variability in funding and school-resources (Gray, Wilcox & Nordstokke, 2017). Such factors make it increasingly difficult for educators to notice emerging concerns in students, whether these are social-emotional concerns, language needs or learning difficulties.

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Educators have identified a lack of training as a salient barrier impeding their confidence in effectively promoting the mental health of their students (Andrews, McCabe & Wideman-Johnston, 2014; Canadian Teachers' Federation, 2012; Graham, Phelps, Maddison & Fitzgerald, 2011; Mazzer & Rickwood, 2015; Rothi et al., 2008; Reinke, Stormont, Herman & Puri, 2011) and supporting students exposed to trauma (Alisic et al., 2012) including a lack of training. In fact, one study reported that 87% of educators agreed that a lack of training in addressing the mental health challenges of children in their school was a barrier to effectively providing these services (Canadian Teachers' Federation, 2012). In another study, only 42% of teachers felt that their confidence in understanding mental health problems was "fairly adequate", and only 2% felt their confidence was "adequate" (Gowers, Thomas & Deeley, 2004). In yet another study by Reinke and colleagues (2011), only 34% of the teachers in their sample felt that they had the skills necessary to support students with mental health concerns.

With respect to supporting students who have experienced trauma, educators have endorsed a similar lack of confidence, preparedness, and uncertainty about their role (Alisic, 2012; Alisic et al., 2012; Hobbs, Paulsen & Thomas, 2019). Educators have expressed doubt in the parameters of their role when it comes to supporting students exposed to trauma; difficulty balancing the individual needs of the child with the needs of the class; uncertainty about how to talk about trauma, concern of focusing too much on the trauma; a lack of knowledge and skills within this domain; as well as not knowing where to refer students (Alisic, 2012). In addition to the front-line challenges associated with supporting trauma exposed students, the emotional toll of this work was also identified as a salient challenge for educators (Alisic, 2012). This included not only difficulty in avoiding becoming overly emotionally involved with their students, but for some teachers also resulted in triggering memories of their own traumatic experiences (Alisic,

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2012). Indicating that while teachers are able to identify the challenges that childhood exposure to trauma brings to their role, they do not feel prepared to cope with these challenges (Alisic, 2012). The lack of training and preparation educators are provided with when it comes to supporting students experiencing mental health concerns, and/or students who have been exposed to trauma speaks to an unmet need for competence in their workplace and represents an important area of focus. Furthermore, this lack of training in preparing teachers to support students with mental health concerns and/or those who have experienced trauma is contrary to the growing emphasis on creating trauma-informed schools (Levine Brown, Phillip, Weston & Rodger, 2019).

In recent research, teachers have identified a need for the following: more education in recognizing and understanding mental health concerns in children, better strategies for managing externalizing behaviours in students, better training and preparation for working with families, and more education in effective general classroom management (Canadian Teachers' Federation, 2012; Mazzer & Rickwood, 2015; Reinke, Stormont, Herman & Puri, 2011; Whitley, Smith & Valliancourt, 2013). Increased training in trauma informed practices has also been identified by both educators and researchers as an important area of professional development (Alsinic et al., 2012; Ko et al., 2008). This includes training that provides them with an understanding of the impact that trauma can have on young people and their learnings, as well as concrete skills that enable them to support the needs of these students (Hobbes, Paulsen & Thomas, 2019).

Given the central role teachers take in schools, there is often an expectation that they notice when children are experiencing potential health concerns and respond in helpful ways. A sense of competence, autonomy and relatedness are also essential for one's wellbeing (Deci & Ryan, 2008). Thus, if teachers are expected to accurately notice and effectively respond to

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students' mental health concerns, it is imperative that they be provided with access to high quality professional learning that prepares them to succeed in this role.

Mental Health Education for Teachers

Research indicates that even the most passionate and intelligent teachers will struggle to succeed in their role if they are inadequately prepared and supported, particularly when it comes to working with children who require more intensive teaching and support (Darling-Hammond, 2000). Despite being identified as front-line support for promoting positive student mental health, research has consistently demonstrated that teachers feel ill-prepared to fulfil this role of promoting the mental health of their students (Andrews, McCabe & Wideman-Johnston, 2014; Froese-Germain & Riel, 2012; Gowers, Thomas & Deeley, 2008; Graham, Phelps, Maddison & Fitzgerald, 2011; Mazzer & Rickwood, 2015; Rothi et al., 2008; Weston, Anderson-Butcher & Burke, 2008; Whitley, Smith & Valliancourt, 2012). Upon closer examination of current teacher education, these findings are not surprising. In a large environmental scan of 213 Bachelor of Education (B.E.d.) courses across 66 post-secondary institutions in Canada, Rodger and colleagues (2014) revealed that only two courses met the four pre-determined criteria required to qualify as a course in mental health literacy. The study's criteria included: having a course description and title that clearly indicated the course was about mental health, having a focus within the syllabus on building relationships, and having a focus within the syllabus on strategies for supporting students with mental health issues. Similar shortfalls have been found in trauma informed teaching education for teachers (Alisic et al., 2012).

The deficits in mental health education for teachers is illustrated by the lack of comprehensive mental health literacy courses available to teacher candidates. In one study of UK teachers, the majority of educators (n=291) identified that they received little to no training on

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recognizing student mental health concerns, responding to and referring appropriately as part of their teacher education (Gowers, Thomas & Deeley, 2004). Of those who received subsequent mental training following their formal teacher education, many found it inadequate (Gowers, Thomas & Deeley, 2004). With respect to trauma informed teaching practices, Alisic and colleagues (2012) revealed that while the majority of their sample had directly worked with children who had experienced trauma, only 9% had received any training within the last three years that they identified as helpful in supporting these students.

Similar findings have also been demonstrated in Canadian professional development for teachers. In a study with educators in South-Western Ontario, Andrews and colleagues (2014) that of their sample (n=75) only 1.3% felt prepared after their B.Ed. felt qualified to cope with student mental health concerns. Only 5.3% of the sample had a mandatory course on student mental health within their B.Ed. program and 72% of the educators had not taken any additional courses in mental health after graduating. Likewise, in a larger, nationwide study of Canadian teachers, two-thirds of the sample (n=3900) had never received any professional development aimed at enhancing their ability to support student mental health (Canadian Teachers' Federation, 2011). Interestingly, those with more experience teaching were more likely to receive professional development in promoting and protecting student mental health than their less-seasoned colleagues (Canadian Teachers' Federation, 2011). Thus, it appears that current teacher educational practices are creating a worrying dichotomy, wherein our least experienced teachers are provided with the least amount of knowledge and support needed to succeed at one of the most fundamental aspects of their job, that is, supporting the emotional and social needs of their students. Given the existing evidence demonstrating a correlation between long-term success and healthy social-emotional development in childhood, (Weston, Anderson-Butcher

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&Burke, 2008) this dichotomy ultimately disadvantages both students and teachers, compromising the overall health of our school system.

It is therefore worrying that, with respect to their students' mental health, teachers have repeatedly identified insufficient training as an issue (Canadian Teachers' Federation, 2011; Reinke et al., 2011; Rodger et al., 2014; Walter, Gouze & Lim, 2006). It's also important to note that mental health promotion is a new addition to what typically has constituted teachers' roles. Current teacher education practices are not sufficiently equipping teachers to successfully meet the mental health needs of students that society is not meeting (Canadian Teachers' Federation, 2011; Gowers, Thomas & Deeley, 2004; Rodger et al., 2014). Fortunately, while teachers have endorsed a lack of preparation and training in mental health literacy and trauma-and-violence-informed teaching practices, they encouragingly have also expressed a desire to learn more (Alisic et al., 2012; Gowers, Thomas & Deeley, 2004; Rodger et al., 2014), and have endorsed believing that they have a role in supporting children's mental health needs (Reinke, Stormont, Herman & Puri, 2011). Indeed, the recommendation to provide instruction on mental health has been made by the Ontario College of Teachers in their Program Accreditation Guidelines (Ontario College of Teachers, 2017) and has been in the guide since 2013 (Ontario College of Teachers, 2013). While a large-scale review in 2014 showed little being offered in the way of mental health literacy courses in Canada (Rodger, Hibbert & Leschied 2014).

The lack of training in mental health at the teacher education level can be traced back to the limited and vague mental health competency standards at the policy level across many Canadian provinces and U.S. states (Levine Brown, Phillip, Weston & Rodger, 2019). Results revealed that the limited number of mental health-related standards that did exist often provided unspecific, general guidance for teachers regarding the mental health of their students. Unclear

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guidelines mean that it is often up to individual teacher education programs and faculties to determine how to implement standards. Within the review, only two Canadian provinces were found to provide credential-type specific mental health standards for teachers. The authors note that emerging efforts in this area have shown promise. A review of social and emotional learning (SEL) promoting courses was completed by Schonert-Reichl and colleagues (2017) and revealed a number of courses in teacher education programs in the U.S. as well as three teacher preparation programs that place an emphasis on supporting teacher candidates to support diverse learners. The mental health literacy course (Atkins & Roger, 2016) being explored in more depth within the present study is highlighted as another example of the opportunities for and the importance of furthering research in this area, despite a lack of policy to fuel the efforts (Levine Brown, Phillip, Weston & Rodger, 2019).

A Curriculum Framework. To be successful in the promotion of mental health and the identification of mental health challenges, teachers must obtain the appropriate attitudes, skills and knowledge needed to effectively integrate all students into the classroom (Whitley, Smith & Valliancourt, 2013). Teachers need to be able to provide effective and appropriate support to students with mental health concerns and identify students at risk of developing such concerns (Weston, Anderson-Butcher & Burke, 2008). Unfortunately, many mental health courses and training opportunities tend to promote a reactive approach to mental health, with focus on students who have already been diagnosed with various disorders, as opposed to a more proactive approach that emphasizes practices promoting the mental health of all students (Koller & Bertel, 2006; Rodger et al., 2014). It is essential that mental health education for teachers broaden its focus to include information and strategies aimed at promoting mental health, intervening and making appropriate referrals for students with existing mental health concerns,

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taking care of their own mental health, and promoting mental health at a system level to ensure that schools are healthy places for everyone.

To meet the challenge of effective teacher training for the modern classroom, Weston and colleagues (2008) have proposed a curriculum framework across six domains of knowledge and skills to include in pre-service and in-service professional education. This framework includes focusing on the following: key policies and laws, provision of learning supports, collection and use of data, communication and relationship building, engagement in multiple systems, and a focus on professional growth and wellbeing. The framework was developed in accordance with three underlying values which include: ensuring that teaching practices are culturally relevant, strengths-based and child centred; emphasize the importance of family and community partnerships; and focus on a “whole child” perspective (Weston, Anderson-Butcher & Burke, 2008). In developing a comprehensive set of competencies, Weston and colleagues aim to ensure that mental health curricula for teachers can be developed, tested and refined in accordance with a standard that could be universal across teacher education programs, and better build educators’ capacity for mental health promotion, recognizing that within the larger society, the mental health needs of children and adolescents are too often going unmet.

The effective adoption of trauma-and-violence informed practices requires educators being explicitly prepared through receiving quality education. Uncertainty about the scope of their role in supporting trauma exposed children; balancing diverse student needs; coping with emotional burden, and the need for more education and training have been identified in educators’ reflections of working with traumatized students (Alisic, 2012). Knowledge about how to best support children who have experienced trauma; resources and information pertaining to trauma; and guidance on when and how to refer to mental health professionals are all critical

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components to include in teacher professional development (Alisic et al., 2012). Additional skills to foster include an ability to recognize the signs of trauma exposure in students; where to refer children experiencing said concerns, and self-care practices to care for themselves while supporting these students (Alisic et al. 2012).

Toward an Education-Relevant Definition of Mental Health Literacy. Any educational efforts aimed at increasing teachers' knowledge and ability in promoting and supporting the mental health of their students will be amiss without an education-relevant definition of mental health literacy (MHL). This dissertation uses the definition of MHL created by the Canadian School Mental Health Literacy Roundtable (2012) as defining it as "the knowledge, skills, and beliefs that help school personnel: create conditions for effective school mental health service delivery; reduce stigma; promote positive mental health in the classroom; identify risk factors and signs of mental health and substance use problems; prevent mental health and substance use problems; and help students along the pathway to care" (SMHSA Consortium, 2012, p. 4). This definition places an emphasis and value on the role of schools in fostering students' wellbeing. Furthermore, it is reflective of the dynamic and shifting understanding of not only what mental health and illness are, but how best to understand and define these concepts within various fields and service sectors. In order to adequately meet the needs of children and youth, mental health literacy needs to be effectively embedded within education. Many of the definitions of MHL currently guiding policies and practices are heavily grounded in the healthcare system, which is not adequately meeting the mental health needs of our children and youth (Canadian Psychiatric Association, 2012; Reid & Brown, 2008; Sterling, Weisner, Hinman & Parthasarathy, 2010).

It is imperative to make the contextual distinction between MHL in an educational setting versus a clinical setting for several reasons. The first reason is that only a small proportion of

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students experiencing mental health challenges receive a clinical diagnosis (Atkins & Rodger, 2016). Thus, it is important within school based mental health to move away from language that focuses on pathology, and shift towards a definition of MHL that focuses on promotion and prevention efforts for all students (Rodger et al., 2014). In order to effectively do this, it is necessary to have a framework for MHL that is not rooted in a focus on disorders. Secondly, teachers have a unique role in promoting and supporting the mental health of their students, distinctive from that of mental health professionals (Rodger et al., 2014; Rothi et al., 2008). It is therefore important that the definition of MHL used in the educational context make this distinction clear in order to avoid the issues with uncertainty and role confusion that teachers have endorsed experiencing when it comes to supporting their students' mental health (Rodger et al., 2014).

Trauma-and-Violence-Informed-Care

Trauma and violence often have long-term impacts on the individuals exposed, and further harm can be caused when systems and service providers do not have an understanding of the complex impact of trauma on the life of the individual, or when these systems themselves cause harm (Ponic, Varcoe & Smutylo, 2016). Trauma-informed-care/practices (TIC/TIP) refers to a service delivery model that incorporates an understanding of the biological, psychological and social impacts of exposure to trauma and ACEs, with the goal of mitigating these effects as opposed to exacerbating them (Baker, Brown, Wilcox, Overstreet & Arora, 2015; Harris & Fallot, 2001; Jennings, 2007; Substance Abuse and Mental Health Services Administration [SAMHSA], 2014). TVIC is seen as an important and necessary extension of TIC/TIP. A key distinction between TIC/TIP and TVIC is that TVIC focuses on both interpersonal forms of violence (e.g., child maltreatment, intimate partner violence, exposure to intimate partner violence etc.) and

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structural violence, or the policies, procedures and systems that are actively violent and cause harm (Wathen & Varcoe, 2019).

TVIC works to reduce harm by creating safe environments and care encounters with individuals who have and/or are still experiencing violence – including structural and systemic violence - and trauma (EQUIP Healthcare, 2017). It is implemented through organizational policies and service provider-level practices that are based on knowledge of the impacts of trauma and violence, how social conditions and determinants influence health; and is delivered using a person-centred, strengths-based approach (Wathen & Varcoe, 2019).

Components of Effective Trauma-and-Violence-Informed-Care. TVIC helps to shift the focus from “what is wrong with this person?” to “what’s happened to this person?” (Ponic, Varcoe & Smutylo, 2016), in an effort to minimize or eliminate judgement and blame and instead emphasize understanding and compassion. TVIC recognizes the intersecting impact that both interpersonal and structural violence on a person’s life (Elliot, Bjelajac, Fallot, Markoff & Reed, 2005) and through this important shift views experiences of trauma and violence as existing both in an individual’s psychological state (Williams, 2008) as well as social circumstance (EQUIP Healthcare, 2017). Through this recognition and acknowledgement, the responsibility can then shift to the organization to address services and policies to improve access to care as opposed to the person seeking services being required to adapt to the organization in order to get services (Wathen & Varcoe, 2019).

Wathen and Varcoe (2019) highlight several key concepts within the TVIC model, at the forefront of which is trauma. Within TVIC practices, trauma is recognized as both a reaction to and the experience of a distressing and threatening event, or series of events (Covington, 2008) and is a central component of the model. In using a TVIC lens responses to trauma and violence,

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such as mental health concerns and substance abuse, are viewed as expected responses to extreme stress and threat (Wathen & Varcoe, 2019). Cultural safety is seen as another integral component of TVIC. TVIC recognizes the interplay between systemic and organization structures and discrimination, including the neurobiological impact of discrimination. Lastly, TVIC highlights the role that health inequities have on wellness. Within TVIC these inequities are seen as avoidable, modifiable and unjust (Whitehead & Dahlgren, 2006) and it is believed that at a population level the largest health gains can be made by helping those that are the most impacted by these inequities (Wathen & Varcoe, 2019).

In addition to reframing many of the traditional conceptions within care and service sectors, TVIC can also be viewed as a call to action at staff working within organizations. Their knowledge and skill are viewed as key to addressing structural/organizational level policies and practices that may serve to further harm clients (EQUIP Healthcare, 2017). In order to effectively work with children who have experienced trauma and violence, it is important that educators have an understanding of the neurodevelopmental impact of trauma and violence so that they are able to utilize teaching strategies that address these underdeveloped functions, prior to teaching in ways that require higher cognitive functioning (Brunzell, Waters & Stokes, 2015). To effectively support students exposed to trauma and violence, classrooms should be structured in a way that promotes students' capacity to build and develop self-regulation strategies, communicate their feelings, and experience an atmosphere of unconditional positive regard (Brunzell, Waters & Stokes, 2015).

A teacher's ability to value their students, despite any behavioral or emotional concerns that might be present, is important in creating the safe, welcoming relationship necessary to help students who have experienced trauma regulate their emotions and behaviour (Brunzell, Waters

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&Stokes, 2015). However, this can pose as a challenging task for educators, as trauma-affected students may act in ways that are not conducive to easily building this strong rapport (Brunzell, Waters &Stokes, 2015; Putnam, 2009; Streeck-Fischer & van de Kolk, 2000; van der Kolk, 2003). Attachment principles can offer a useful way of helping to frame the importance of this relationship, educating teachers on the power of this connection and providing them with strategies to manage challenging interactions with students in a way that maintains unconditional positive regard, and models effective self-regulatory behaviours (Brunzell, Waters &Stokes, 2015). Not recognizing that externalizing behaviours and emotional dysregulation are often symptoms of experiences of trauma often results in educators and schools using punitive, disciplinary responses, that can further exacerbate the behavioural and emotional challenges (NCTSN, 2017). Zero-tolerance disciplinary practices, such as suspension and expulsion actually pose the risk of increasing students' likelihood of school-dropout, involvement with the justice system, and decrease feelings of safety for students impacted by trauma (NCTSN, 2017). Providing teachers with education on attachment-based principles enables them to engage in consistent, warm, and proactive interactions with their students that foster safe opportunities for students to participate and learn (Brunzell, Waters &Stokes, 2015). The use of restorative justice practices balanced with appropriate disciplinary measures allows for a more effective approach to the resolution of conflict (NCTSN, 2017).

TVIC practices are seen as an important and necessary extension of trauma-informed-practices, as TVIC explicitly highlights the impacts of violence as a form of trauma, as well as to the ways in which structural and systemic policies and practices can cause harm (Ponic, Varcoe, Smutyo, 2016).

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A Model for Trauma-and-Violence-Informed-Care. To aid in the implementation of TVIC, The EQUIP Project (EQUIP Healthcare, 2017) provides guidelines for health and social service organizations to implement TVIC and was adapted to fit within the school setting. The TVIC principles from EQUIP are based on the principles and strategies developed by Ponc and colleagues (2016).

TVIC begins by first and foremost building awareness and understanding of trauma and violence amongst service providers (EQUIP Healthcare, 2017). This includes education around the prevalence of exposure to trauma and violence; the impact on development and functioning; information on possible coping mechanisms; understanding the intersectionality of trauma and violence with other conditions of peoples' lives, such as poverty; as well as the connection between trauma, violence and mental health concerns (EQUIP Healthcare, 2017). Indeed, many children experiencing trauma and violence display similar behaviours to children presenting with other mental health concerns, such as attention deficit hyperactivity disorder (ADHD), thus it is crucial that educators are prepared to recognize the possibility of trauma exposure to ensure that the child receives the appropriate supports (NCTSN, 2008).

A second guiding principle of EQUIP's TVIC model is an emphasis on fostering a sense of safety and trust for all service users, regardless of their trauma and violence history. This is achieved through creating a welcoming environment, using safe, informed language, collaborative decision-making, and modifying the physical space of the organization to increase the comfort of users (EQUIP Healthcare, 2017; Ponc, Varcoe & Smuty, 2016). Creating and fostering opportunities for collaboration between service users and providers is another core principal of the TVIC model used within the present study. This includes providing choices to

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services users, communicating openly, and engaging in active listening that privileges the experience and voice of the service user (Ponic, Varcoe & Smutyo, 2016).

The fourth principle entails utilizing a strengths-based approach that places a focus on building upon the person's capacity (EQUIP Healthcare, 2017; Ponic, Varcoe & Smutyo, 2016). This includes providing options that are tailored to meet individual needs, involving staff and service-users, and teaching skills for recognizing triggers, and calming and centering techniques that are developmentally appropriate (EQUIP Healthcare, 2017).

In addition to building capacity and promoting wellness in the service user, another critical tenet of the EQUIP TVIC guidelines (2017) involves the organization supporting staff health and wellbeing to safeguard against the harmful effects of vicarious trauma. This is accomplished by providing staff with education and resources around vicarious trauma, strategies and pathways for seeking support (e.g., Employment Assistant Programs), and workplace supports that promote and foster self-care practices (e.g., opportunities to dialogue and debrief). This acknowledgement of the critical importance of promoting wellness among providers is imperative for all organizations adopting a TVIC model, including the educational system, which has a duty to protect its employees by adequately preparing them to understand and cope with the challenges that may arise in their job.

Building on Capacity in Teacher Candidates. When it comes to strengthening teacher education practices, research has identified several benefits to targeting teacher candidates, as opposed to their more seasoned colleagues. In comparison to experienced teachers, B.Ed. students lack fixedness in their educational practices, which makes them more open to incorporating mental health services into their future role (Bostock, Kitt & Kitt, 2011). Indeed, research has demonstrated that experienced teachers are less likely to agree that they are in an

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ideal position to notice early mental illness warning signs in students (Bostock, Kitt &Kitt, 2011). Existing evidence suggests that teacher candidates have a positive view towards incorporating mental health services into their role, even before receiving any mental health specific training (Bostock, Kitt &Kitt, 2011). Furthermore, they are not yet settled into their own professional practice, and thus may be more likely to consult and collaborate with non-teacher colleagues and support staff (Bostock, Kitt &Kitt, 2011). It is important to also consider that the finding that more experienced teachers may appear less open to incorporating mental health supports in their role could be due to a deeper understanding of the complexities of the classroom reality, and thus less enthusiasm for adopting new practices.

Given the salient barriers teachers have identified as obstacles to supporting the mental health of their students, there is an overwhelming need to better prepare teachers with the knowledge, skills and confidence to build their capacity as positive mental health promoters. Teacher candidates' willingness to learn about and incorporate mental health promotion into their roles (Bostock, Kitt &Kitt, 2011; Gowers, Thomas &Deeley, 2004; Rodger et al., 2014) bodes well for the likelihood of teacher candidates implementing mental health knowledge, promotion and prevention efforts into their teaching practice. Therefore, teacher education programs provide an ideal setting in which education about child and youth mental health (Levine Brown, Phillip, Rodger &Weston, 2017) and trauma informed teaching practices (Ko et al., 2008) could be significantly impactful.

Efforts to better equip teacher candidates with the knowledge they need to support student mental health are amiss if considerations of the larger educational system within which they work are not made. Teachers work in systems that often place numerous and competing demands on them. This not only impacts their ability to promote the wellbeing of their students,

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but also impacts their own wellbeing. In addition to providing teachers with high-quality professional education about mental health, systemic changes are also necessary to ensure that teacher's own wellbeing is addressed, in order for them to be available to support the wellbeing of their students.

Teacher Wellbeing

The majority of literature in school mental health is focused on the mental health of students. While this is inarguably an important area to continue to explore, it often results in the mental health of teachers being overlooked and understudied (Marko, 2015; Koenig, Rodger, &Specht, 2017). In a large-scale review of school based mental health (SBMH) policies in Canada, Ott and colleagues (2017) found only two references to teacher wellness, and within the teacher education curricula in Canada, there was little mention of teacher mental health and wellness (Rodger et al., 2014). Once again, this demonstrates the needs of a profession not being fully addressed by the larger system that governs it. The high rates of teacher stress (Jamieson, 2006; Marko, 2015; Rodger et al., 2014), burnout (Fernet, Guay, Senecal &Austin, 2012; Koenig, Rodger, &Specht, 2017), and attrition (Ingersoll &May, 2012; Ingersoll, Merrill &Stuckey, 2014), as well as lack of support and resources in coping with their own mental health concerns (Koller, 2004; Koller &Bertel, 2006), are not addressed in current SBMH policies and practices.

Wellbeing can be defined as “open, engaged and healthy functioning” (Ryan &Deci, 2011). This construct is of vital importance to consider, as teacher stress negatively impacts both educator and student outcomes (Arens &Morin, 2016; Duckworth, Quin &Seligman, 2009; Oberle &Schonert-Reicl, 2016). As previously noted, the teacher/student relationship is considered paramount in meaningfully connecting with students, promoting empowerment, and

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fostering growth and development (Jordan &Hartling, 2002; Koenig, Rodger &Specht, 2017; Spence, Jordan &Sazama, 2004). This connection can be significantly compromised when a teacher is experiencing high levels of stress (Koenig, Rodger, &Specht, 2017), or is exposed to secondary trauma (Alisic, 2012).

When considering wellbeing, it is also pertinent to explore the concept of resiliency, or “the ability to cope and grow through adversity, a set of skills that can be learned in response to stress” (Ott, Hibert, Rodger &Leschied, 2017). Delving into teacher resiliency allows us to gain a better understanding of how and when teachers are able to not only meet the challenges faced in their workplace, but thrive in spite of these challenges (Beltman, Mansfield &Price, 2012). Given the high rates of professional stress and attrition (Fernet, Guay, Senecal &Austin, 2012; Jamieson, 2006; Ingersoll &May, 2012; Ingersoll, Merrill &Stuckey, 2014; Koenig, Rodger, &Specht, 2017; Marko, 2015; Rodger et al., 2014), teacher wellbeing and resilience are crucial constructs to consider and explore.

To better meet the needs of both teachers and students, it is imperative that a focus on self-care be addressed at the pre-service level. This would better equip teachers to promote their own wellbeing and resilience, as well as the wellbeing and resilience of their students (Ott, Hibert, Rodger &Leschied, 2017), and guard against burnout, compassion fatigue (Koenig, Rodger, &Specht, 2017), and vicarious trauma (Alisic, 2012). Yet, educators have endorsed that, in addition to lacking the skills and knowledge to identify and support the mental health concerns of their students, they also feel ill prepared to manage their own mental health (Koller &Bertell, 2006). The importance of including a focus on one’s own mental health has been identified by researchers as a critical aspect of teacher education (Koller &Bertell, 2006). This was acknowledged by the inclusion of a competency focusing on personal wellness in Weston and

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colleagues' (2008) proposed teacher education curricular framework, outlined in the previous section. The inclusion of this competency reinforces to future teachers the importance of self-care and self-awareness and will also hopefully mitigate professional risks (Atkins & Rodger, 2016; Beltman, Mansfield & Price, 2012; Koller & Bertell, 2006) and shift SBMH policies to focus on developing resilience in students and teachers (Ott, Hibbert, Rodger & Leschied, 2017). It is unrealistic to expect teachers to authentically engage with their students and foster meaningful relationships that allow them to better meet students' diverse needs if they are not well attuned to their own needs. The current project puts forward the premise that pre-service education programs should be promoting wellbeing and resilience in their graduates, thereby enabling them to bolster the wellbeing of their future students and contribute to mentally healthier schools.

Research Problem

Mental health concerns have been identified as one of the leading challenges faced today by Canadian children and adolescents (Brown, 2011; Meldrum, Venn & Kutcher, 2009), and early promotion and prevention efforts are crucial to improving outcomes for children experiencing mental health concerns (Climie, 2015; Langford et al., 2015; Leitch, 2007; Mantoura, 2014). Schools and educators have been consistently identified as important partners in mental health promotion efforts, as well as the early identification of emergent mental health concerns in children and adolescents (Canadian Mental Health Association, 2014; Levine Brown, Phillip, Weston & Rodger, 2019; Mazzer & Rickwood, 2014; Roberts & Grimes, 2011; Rodger et al., 2014; Whitley, Smith & Valliancourt, 2013). Furthermore, they are in an ideal position to be able to help counteract the barriers children and youth often face in accessing

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adequate mental health treatment (Canadian Psychiatric Association, 2012; Hymel et al., 2018; Reid & Brown, 2008; Sterling, Weisner, Hinman & Parthasarathy, 2010).

Given the high rates of children exposed to adverse experiences, including trauma and violence (Chartier, Walker, & Naimark, 2010; Fallon et al., 2015) and the correlation between exposure to traumatic events and mental illness (Felitti et al., 1998; Mulvihill, 2005; Putnam, 2009; Romano, Babchisin, Marquis & Frechette, 2015), TVIC is another critical area of focus for schools and educators. However, to successfully stand on the forefront of school mental health, teachers need to be more aptly prepared to support and promote the social and emotional development of their students. Thus, demonstrating the need to adequately prepare teachers before they enter the field through providing them with quality, evidence-based information about supporting and promoting student mental health, and utilizing TVIC practices (Alisic, 2012; Levine Brown, Phillip, Rodger & Weston 2017; Koller & Bertell, 2006; Whitley, Smith & Valliancourt, 2013).

If mental health promotion efforts are to be successful, they must instill in educators the attitudes, knowledge and skills necessary to participate in these promotion efforts through quality educational opportunities (Levine Brown, Phillip, Rodger & Weston, 2017; Whitley, Smith & Valliancourt, 2013). Unfortunately, many mental health courses and training opportunities for educators adopt a reactive approach to mental health, as opposed to a proactive approach, that emphasizes mental health promotion for all students (Koller & Bertel, 2006; Rodger et al., 2014). Mental health education for teachers requires a broadened focus, that includes both information and strategies aimed at promoting mental health and wellness for all students, as well as steps for intervening for mental health concerns. This includes providing effective and appropriate support to students with mental health concerns, and students at risk of developing

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such concerns (Weston, Anderson-Butcher & Burke, 2008). It also involves understanding various mental health concerns and how these may manifest in the classroom in order to assure that appropriate referrals are made (Soles, Bloom, Health & Karagiannakis, 2008).

Incorporating TVIC practices into teaching is crucial in ensuring that all students, including those with mental health concerns and those who have been exposed to trauma and/or violence feel safe and supported at school. In order to implement this model of care, educators must receive foundational information about the impacts of trauma and violence on the lives of their students. This includes understanding the pervasive nature of multiple forms of trauma and violence, such as structural violence and historical trauma, and considering how these often less perceptible forms impact their students' lives. Effective TVIC within the educational context also means providing teachers with the knowledge to recognize classroom behaviours that may be indicative of exposure to trauma and/or violence in a student. Lastly it equips them with the skills necessary to create an environment that is safe for all students, regardless of their trauma history.

Present Study

The present study aims to add to this critical area of research by utilizing a program evaluation framework to explore the knowledge outcomes of teacher candidates enrolled in a mandatory, online mental health literacy course at a large, central Canadian university.

To be successful in mental health promotion efforts, educators must develop an understanding of contextual risk factors for the development of mental illnesses and mental health concerns, and the skills needed to support children exposed to said risk factors. Thus, the inclusion of TVIC is an additional component of the Mental Health Literacy (MHL) course. Teacher self-efficacy for incorporating inclusive practices, as well as teachers' wellbeing are

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believed to be integral components to the development of their mental health literacy and thus will also be measured. Participants' mental health literacy, attitudes towards trauma informed care, self-efficacy for inclusive practices and wellbeing were assessed before and after teacher candidate participated the 12-week MHL course.

Consideration of the contextual lives of teachers is also of critical importance within the present research. Too often school-based mental health initiatives, policies and practices fail to take into account some of the individuals within the educational system that are most impacted by them-teachers (Ott et al., 2017; Rodger et al., 2014). If school-based mental health initiatives are going to be successful teachers must be recognized as critical members and contributors to these larger discussions and decisions. It is thus essential then that their needs are understood and advocated for at a systems level so that their own wellness, as well as their efforts to support students, are supported by the system within which they work.

The overall effect of the course on these measures of interest was explored, as well as the relationships between the constructs being measured. Lastly, the impact of participants' prior mental health learning on their knowledge gains within the course was analyzed.

Positioning the Research: History and Development of the Course.

The present study aims to explore the effectiveness of increased professional development for teacher candidates related to mental health literacy and TVIC. With the desired outcome being to contribute to safer, healthier schools for all. However, it is important to note that this line of research is born out of a larger, systemic issue; the lack of an appropriate, adequately funded mental health strategy in Canada. The dearth of appropriate mental health resources and the significant barriers associated with accessing the resources that are available poses a substantial challenge to our society. This is particularly impactful for children and youth

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who experience even greater barriers in accessing mental health care (Canadian Psychiatric Association, 2012; Reid & Brown, 2008; Sterling, Weisner, Hinman & Parthasarathy, 2010). The low service reach for children with mental health disorders means that in Ontario only 26% to 34% of children with a parent identified mental health disorder had contact with a mental health care provider (Waddell et al., 2019). As a result of this, schools are consistently being viewed as a solution to this broader, societal issue, and teachers are expected to stand on the forefront of school mental health doing their best to promote the mental wellbeing of their students, amongst competing educational priorities. Despite the growing number of expectations and initiatives placed on educators, professional development days allocated to teachers have been reduced by the Ministry of Education.

It is important to further note that the institution under study has a history of responding to this systemic gap by implementing a course that focuses on mental health literacy preparation for teacher candidates. This course has since been expanded to incorporate a trauma-and-violence-informed care model, which will be the focus of the present study. So, while this research aims to engage teacher candidates in quality education on mental health literacy and TVIC, it acknowledges that the efforts to do so are directly as a result of existing health inequities that limits access to affordable and timely mental health services for many individuals, children and families in Canada, and indeed, globally.

Chapter 3

Methodology

Taking an equity-oriented approach to supporting all children in school is integral to creating strong and resilient communities. Preparing a new generation of teachers with the skills and confidence needed to support the mental health and wellbeing of their students using a social-justice and equity-oriented approach is considered central to this.

To investigate the utility and effectiveness of an online MHL course delivered to preservice teachers this study employs a program evaluation approach. The inclusion of a trauma informed curriculum content is a new addition to the MHL course, and its impact on teacher candidate's knowledge in this area is a critical component of the program evaluation.

The twelve-week mandatory Mental Health Literacy course is mandatory for preservice teachers in the B.Ed. program. Data from the MHL Course was collected in the academic year between 2018 to 2019 for the purpose of analysis and evaluation.

Research Questions

The following research questions were developed in order to more fully explore the impact of participating in a mental health course, that incorporates a focus on trauma-and-violence-informed-care (TVIC):

- Can an online mental health course for preservice education teachers impact mental health literacy, self-efficacy and wellbeing?
- Can TVIC instruction shift teacher candidates' attitudes towards trauma and violence informed care?
- Are self-efficacy, wellbeing and mental health literacy related to attitudes towards trauma and violence informed care? If so, how?

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- Does teacher candidates' prior learning about mental health impact their knowledge gains in the MHL course across domains measured?

Employing a Program Evaluation Framework. In order to explore and evaluate the effectiveness of the Mental Health Literacy course, including the most recent addition of the TVIC curriculum, a program evaluation design was utilized. Program evaluation involves systematically reporting and explaining the process and outcomes of a specific intervention (Spector, 2015). This form of evaluation helps to determine whether a project/program met its intended goals and objectives, and what factors contributed to the observed degree of change (Spector, 2015). Program, or impact evaluation is part of a larger goal of moving towards evidence-based policy making, with a shift in focus from what was inputted into a program, to instead exploring outcomes and results (Gertler, Martinez, Premand, Rawling & Vermeersch, 2016).

Within the present study, a program evaluation method was utilized as a way to document the outcomes of the MHL course and evaluate its effectiveness. Additionally, it was used as a means to obtain evidence that could be used to help shift and create policies and practices within the education system.

Program evaluation includes both formative and summative evaluation. The former focuses on learning outcomes, whereas the latter looks at ways in which to improve the program (Spector, 2015). Within the present study, summative evaluation will be utilized to examine the effectiveness of the MHL course in targeting the specified outcome variables. Formative evaluation was employed in the form of feedback from participants of the course. While this feedback will be utilized to improve upon future iterations of the course, the evaluation of this feedback was not part of the scope of the present study.

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Monitoring and evaluating outcomes are an essential component of evidence-based policy making (Gertler et al., 2016). It is through this monitoring and evaluation process that areas of strength, and potential areas of growth can be identified in order to continue to hone programs. Indeed, the present iteration of the course, and more specifically the inclusion of TVIC content, was born out of an identified need to improve and expand upon previous iterations of the course and was based on past evaluations.

Course Development and Design. The course content emphasizes strengths-based, culturally relevant teaching practices, partnerships with families and communities and a “whole-child” perspective (Weston, Anderson-Butcher & Burke, 2008). The curriculum framework and values outlined by Weston and colleagues are in line with several core tenets that were critical when developing the MHL course, including a focus on building relationships and utilizing the strength of relationships between teachers and students to promote resilience and create a positive learning environment for all. An emphasis is placed on supporting teacher candidates’ competencies in creating a learning environment that promotes well-being, supports children to thrive, and develop skills and resiliency using a culturally aware framework.

Furthermore, the course is based on a definition of mental health literacy that is relevant to an educational, as opposed to clinical context, focusing on a non-diagnostic approach to educating teacher candidates about mental health. Instead the course places an emphasis on empowering teacher candidates to promote positive mental health for all students through the utilization of evidence-based, school-based health and mental health promotion and prevention efforts. This is cultivated through helping teacher candidates develop an awareness of what changes in their students’ mental health might look like in the classroom setting, instead of focusing on diagnostic criteria and symptoms. This is further consolidated by introducing

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educators to early intervention practices for children and youth who are in need of mental health support.

Given the salient relationship between exposure to trauma and violence and the development of mental health concerns, trauma-informed-care is seen as an integral component of teacher education. A section on trauma and violence informed teaching was added to the MHL course to address this crucial area and is seen as an integral component. This section accounts for approximately 25% of the course content.

Lastly, teacher wellbeing is seen as an essential element of school mental health efforts. Teachers cannot effectively foster meaningful relationships with students and promote mental health in their classroom if they themselves are experiencing languishing mental health. Thus, the MHL course also places a focus on self-awareness, self-care, and encouraging educators to develop a supportive community of practice in an effort to minimize professional attrition and promote more optimal mental health for all members of the school community (Atkins &Rodger, 2016; Beltman, Mansfield &Price, 2012; Koller &Bertell, 2006). The harmful impacts of vicarious trauma and burnout are well-documented amongst those in caring professions, such as teachers (Alisic, 2012; Koenig, Rodger, &Specht, 2017). The implementation of TVIC practices includes taking into account vicarious trauma by purposefully addressing the wellbeing and self-care of service providers (Ponic, Varcoe, Smutyo, 2016). Thus, it was considered vital to incorporate information about vicarious trauma into the course curriculum as part of the TVIC curriculum in order to prepare teacher candidates with the knowledge necessary to recognize the signs of vicarious trauma in themselves and/or colleagues, and the skills needed to respond appropriately. Part of the aim in doing this was to work towards removing the shame that is often associated with openly admitting to struggle in one's workplace. Therefore, the importance of

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reaching out to one's support network, including friends, family, and colleagues, as well as engaging in meaningful self-care activities are highlighted during this segment of the course.

Course Format. The Mental Health literacy course is purposefully structured in a way that encourages engagement and collaboration and utilizes multiple modalities of learning throughout the 12 units. Course activities include an interactive case study component that assigns a fictional student profile to participants to follow throughout the duration of the course. In order to mirror an authentic student/teacher relationship, as the teacher candidates progress through the course they learn new information about their student each week, similar to what would be seen in a classroom setting as the strength of the student/teacher relationship grows and develops over the course of the school year. Throughout the duration of the course each case study student experiences emerging mental health concerns, such as anxiety, low-mood, traumatic stress, body-image concerns, and externalizing behaviours. These concerns are further impacted by environmental factors in the case study students' lives. This includes interpersonal violence, and/or structural violence, living in out of home care, refugee status, family income, and experiencing bullying and/or violence based on gender or sexuality. In order to further illustrate the intersectionality in students' lives, case study profiles were comprised of male and female students of various ethnic and religious backgrounds.

Participants were further encouraged to consider the perspectives of students with diverse experiences through engaging in a "trauma walk-through" of a school they have been placed at. This activity was adapted from use in healthcare settings as a way for staff to better understand from client perspectives what it is like to be in their service setting (EQUIP Healthcare, 2017). Within the present iteration of the walk-through, participants were asked to picture themselves walking through the halls, using the washrooms, being in the offices, classrooms, and yards of a

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school practicum site, and imagine how a student might experience this setting (e.g., is it noisy, crowded, do people welcome them etc.). They were also provided with specific strategies to create physical classroom spaces that are beneficial for all students, including those exposed to trauma (Australian Childhood Foundation, 2010).

Lastly, in order to provide participants with more concrete experience in utilizing the skills taught, they were required to complete two assignments where they filmed themselves having a conversation with their case study student. During this brief video participants were requested to demonstrate skills outlined in the Aligned and Integrated Model (AIM) (School Mental Health ASSIST, nd.). This model is routinely used throughout Ontario schools, and includes many skills that align with TVIC and UDL, such as including and partnering with students, preventing and/or reducing risk factors, and supporting students through accommodations and modifications.

In order to promote an atmosphere of community and collegiality, teacher candidates participate in discussion forums, bringing forth their expertise and experience to share with their fellow colleagues. It was estimated that it should take teacher candidates approximately 2 hours per week to work through the module content for that week, and completing the respective activities (e.g., discussion forum posts, weekly quizzes).

Each module contains information pertinent to that week's topic presented in multi-modal formats, to further encourage engagement with the online platform. Module content was comprised of video presentations, assigned readings, exercises, links to external resources and videos, and an update of the case study feature. A variety of interactive modalities were used to gauge and evaluate teacher candidates' understanding of and engagement with course materials.

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Context of the Course. The Mental Health Literacy course exists within the B.Ed. program at a large central Canadian university's Faculty of Education. The B.Ed. program at this institution is a two-year, four term program and has between 340 to 380 graduates per year. Over the course of their time in the program, teacher candidates will take between 18 to 25 courses depending on their teaching specialization and participate in four practicum placements, as well as two alternative field placements. This translates to a total of 27 weeks spent in class, 20 weeks spent on in-school practicums, and 7 weeks spent on alternative field placements during their two-year degree.

As a part of their required coursework, teacher candidates take a number of courses on teaching practices and pedagogy, as well as courses that touch upon issues of inclusion, equity in education, and student development and well-being. Given that the Mental Health Literacy course is a part of this larger system, it is important to recognize and acknowledge other courses that participants are taking wherein they might be learning similar content. In the first year of the program all teacher candidates are required to take a course about the social foundations of learning. This touches upon issues of oppression, marginalization and equity in education for diverse learners. All B.Ed. students are also required to take a course on special education and inclusion, that focuses on how to support diverse learners with various exceptionalities. A course that focuses on creating a supportive and inclusive learning environment is also compulsory. Lastly, within their first year a course on students' social emotional development and learning is offered. This course touches upon mental health promotion, how to respond to students experiencing mental health challenges, trauma informed practices, as well as violence prevention strategies. Of note, this is an elective course and is thus not taken by all teacher candidates within the faculty.

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In the second year of the B.Ed. program all students except those enrolled in the Psychology cohort (this will be explained more fully, below) are required to take the MHL course, as well as course that focuses on creating safe classroom and school environments for all learners. In the latter teacher candidates learn about forms of violence within the school setting, domestic violence, the warning signs of child abuse, as well as whole school approaches to violence prevention. An elective course on equity and social justice within the education system is also offered to second year students. Within the course teacher candidates learn about issues of inequity, supporting diverse learners within the classroom setting, structural educational policies and practices are also examined, as well as issues of oppression. This elective is only available to students in the Intermediate/Senior teaching stream, and as it is not compulsory, and thus will not be taken by all students within that stream.

Throughout their two years in the program, teacher candidates are also going on practicum placements which further supplements their learning through hands on experience with students in classroom, as well as alternative settings. Knowledge gained through these experiences must then also be considered and acknowledged when exploring the learning gains of the MHL course.

It is evident that during their time in the B.Ed. program the participants in the present study have been exposed to a wide assortment of information around effective teaching practices, issues of equity and oppression within the educational system, child development, as well as ways in which to support diverse learners in the classroom. This includes inclusive education for students with a wide range of identified exceptionalities, and so there will certainly be redundancy (much of which is planned) with the MHL course. The implications of these

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additional learning experiences, and how they may relate to the findings in the present study will be more fully explored in the discussion.

Measures

The following measures were utilized to evaluate the effectiveness of the MHL course in meeting the learning objectives. All measures, with the exception of demographic information, were completed before starting the course and after completing the course.

Mental Health Literacy. An educationally relevant conceptualization of mental health literacy is imperative in order to allow it to be effectively embedded into current educational policies and practices. In order to fit into the educational sector, MHL for educators must be reflective of the unique role teachers have in promoting student wellness (Rodger et al., 2014; Rothi et al., 2008). The Mental Health Literacy Questionnaire (MHLQ) is a 45-item measure currently in development that explores teachers' knowledge, skills, and leadership with respect to mental health literacy and promotion (Weston, Rodger & Johnson, in process). In initial analyses (Hatcher, 2018) it has demonstrated excellent internal reliability on each of its individual subscales as indicated below.

The MHLQ uses a 5-point Likert scale, with 5 being the highest endorsement of an item. The MHLQ contains four subscales with items measuring knowledge, skills and leadership. The first scale Teaching and Leading a Mentally Healthy Classroom contains items that capture teachers' ability to create and promote mentally healthy classroom and school environments for students ($\alpha = .94$; e.g., "I can create a classroom environment that is supportive of students with behavioural or emotional problems"). Expectancies is the second scale and is comprised of items that measure teachers' expectations with respect to their role in supporting students with social/emotional concerns ($\alpha = .96$; e.g., "I will be working with children who have multiple

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adverse childhood experiences”). The third scale Professional Relational Skills is made up of items that explore teachers’ ability to build relationships with other members of the school team and community, and their confidence in managing conflict ($\alpha = .88$; e.g., “I know how to build relationships with students”). The last scale, Role Clarity, looks at teachers’ understanding and view of what their role entails with respect to promoting the mental health of their students ($\alpha = .92$; e.g., “I have a responsibility to meet the needs of students with mental illnesses”). As a result, the MHLQ produces four subscale scores, and one full-scale score which is calculated by summing the scores of each of the four subscales and taking the average of this sum. Averaged scores can range from 1 to 5 with the latter representing the highest possible score on the measure, indicating the respondent has a high level of mental health literacy as measured through their knowledge, skills, and leadership. Within the present sample scores ranged from 2.70 to 5.00 at time one, and 3.00 to 5.00 at time two on the full-scale MHLQ (see Table 2 for range of scores for all subscales).

Self-efficacy. Teachers' self-efficacy, their beliefs about their capabilities, has been shown to be a critical component influencing their likelihood and success in promoting inclusive educational practices (Zee & Koomen, 2016). Teacher's confidence has been shown to be the strongest predictor of educators' likelihood to implement inclusive educational practices with their students (Sharma, Moore & Sonawane, 2009). Given that the majority of children with mental health concerns will spend a large portion of time in a regular classroom (Atkins & Rodger, 2016; Rothi, Leavey & Best, 2008), teacher self-efficacy for inclusive practice is seen as a fundamental construct to measure.

The Teacher Efficacy for Inclusive Practice (TEIP) Scale is an 18-item measure that was developed with a large, diverse sample and has demonstrated strong reliability as measured by

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Cronbach's alpha ($\alpha = .89$; Sharma, Loreman & Forlin, 2011). The TEIP uses the term "children with disabilities" in the questions to capture who the inclusive practices are to be used with (e.g., "I am confident in my ability to get parents involved in the school activities of their children with disabilities"). In order to more accurately capture participants' self-efficacy for implementing inclusive practices for children with mental health concerns, or illnesses, the term "disability" was replaced with "mental health concerns or disorders" on the relevant items (e.g., "I am confident in my ability to get parents involved in the school activities of their children with mental health concerns or disorders"). Terminology was changed on five questions within the overall measure.

The TEIP explores three components of teacher self-efficacy with respect to implementing inclusive practices using a 6-point Likert scale (Sharma, Loreman & Forlin, 2012). The first component, Efficacy for Collaboration, is comprised of items that measure teachers' confidence in collaborating with other members of the school team, families and other professionals to help support students with emotional and behavioural challenges ($\alpha = .85$; e.g., "I can make parents feel comfortable coming to school"). Efficacy for Inclusive Instruction is also captured on the TEIP as a subscale and includes items that explore teachers' confidence and ability in using an array of instructional approaches and assessment measures to best teach and gauge students' ability and understanding ($\alpha = .93$; e.g., "I am confident in designing learning tasks so that the individual needs of students with mental health concerns or disorders are accommodated"). Lastly, Efficacy in Managing Behaviours is the final construct on the TEIP, items in this domain measure teachers' ability and confidence in effectively managing and preventing disruptive student behaviour ($\alpha = .85$; e.g., "I am able to calm a student who is disruptive or noisy").

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Scores on the three subscales were summed and averaged to obtain an overall full-scale score. Averaged scores on the TEIP can range from 1 to 6, with a high score being indicative of a higher level of self-efficacy for utilizing inclusive teaching practices. Participants' scores within the present sample ranged from 3.17 to 5.67 at time 1, and 3.50 to 6.00 at time 2. Scores in the present study at both time one and time two on TEIP subscales were found to be slightly lower, with a slightly larger range than what was found in other studies using the TEIP with teacher candidate candidates (Specht & Metsala, 2018).

Trauma-informed Attitudes. Educators' attitudes towards adopting trauma informed practices will be measured using the Attitudes Related to Trauma Informed Care Scale (ARTIC; Baker, Brown, Wilcox, Overstreet & Arora, 2015). The ARTIC measures have been created for human service, healthcare settings and educational settings. The version used in the present study, the ARTIC-35-Education (herein referred to as the ARTIC), is a 35-item scale that measures attitudes within an educational setting to trauma informed care and includes modified language to fit the school context. The scale demonstrates excellent internal reliability overall as measured by the total Cronbach's alpha ($\alpha = .91$), as well as on individual subscales, as reported below. On the measure participant's answers endorse either a trauma-informed care favourable attitude, or a trauma-informed care unfavourable attitude on a 7-point Likert scale. The scale uses reverse coding throughout, so depending on the item, ratings closer to a 1 or 7 indicate a more favourable attitude towards trauma-informed care. The ARTIC includes five subscales the first, Underlying Causes of Behaviour and Symptoms, looks at how educators make sense of and understand challenging behaviours their students might display ($\alpha = .78$; e.g., "Students' learning and behaviour problems are rooted in their behavioural or mental health condition/Students' learning and behaviour problems are rooted in their history of difficult life events"). The second

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subscale, Responses to Problem Behaviour and Symptoms, is comprised of items that emphasize the importance of flexibility, kindness and safety in fostering change, as opposed to rules and consequences ($\alpha = .76$; e.g., “Students need to experience real life consequences in order to function in the real world/ Students need to experience healing in relationships in order to function in the real world”). The On-the-Job Behaviour subscale endorses items that promote empathy in staff behaviour as opposed to control ($\alpha = .72$; e.g., “If students say or do disrespectful things to me, it makes me look like a fool in front of others/ If students say or do disrespectful things to me, it doesn’t reflect badly on me”). The Self-Efficacy at Work subscale contains items that reflect either educators’ feelings of being able to handle the demands of their work, or feeling ill-equipped to handle said demands ($\alpha = .79$; e.g., “I don’t have what it takes to help my students/ I have what it takes to help my students”). Lastly, the Reactions to Work subscale incorporates items that reflect educators’ reactions to vicarious trauma ($\alpha = .71$; e.g., “It’s best not to tell others if I have strong feelings about the work because they will think I am not cut out for this job/ It’s best if I talk with others about my strong feelings about the work so I don’t have to hold it alone”).

Scores are obtained for each subscale and are averaged to obtain a full-scale score. Participants can obtain a range of scores from 1 to 7, wherein a higher score indicates more positive attitudes towards trauma-informed care. Within the present study participants’ scores ranged from 2.17 to 6.94 at baseline, and 2.03 to 6.91 at the post-test.

Of note, while the ARTIC was adapted to fit an educational setting, to the best of our knowledge this is the first time it is being used with teacher candidates. Thus, comparisons cannot be made between the scores of participants in the present study and the range of scores of other samples.

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Teacher Wellbeing. Integral to student wellbeing is the wellbeing of teachers, which have consistently been shown to be connected (Arens & Morin, 2016; Duckworth, Quin & Seligman, 2009; Oberle & Schonert-Reicl, 2016). The present study uses The Teacher Wellbeing Scale (TWBS; Collie, 2015) in order to evaluate this important construct. The TWBS is a 16-item measure that assesses how educator's work-related experiences across three domains of their job influence their wellbeing, resulting in three factors. The scale was developed with a large sample of Canadian teachers and has been shown to have good reliability as measured by Cronbach's alpha on each of the individual subscales outlined below (Collie et al., 2015). Items are rated on a 7-point Likert scale indicating the degree to which they positively or negatively contribute to the individual's wellbeing. The first subscale is Workload Wellbeing, which allows respondents to rate how various components of their workload contribute to their wellbeing ($\alpha = .85$; e.g., "Work I complete outside of school hours for teaching"). The second subscale, Organizational Wellbeing, contains items that capture teacher's perceptions around their workplace organization, including workplace culture and administration and leadership and how these contribute to their wellbeing ($\alpha = .84$; e.g., "Support offered by school leadership"). Lastly, the Student Interaction Wellbeing subscale is comprised of items that speak to educator's relationships with their students, including perceptions of behaviour and motivation ($\alpha = .82$; e.g., Relations with students in my class). The TWBS produces three subscale scores, which are then summed and average to obtain a full-scale score. Participants can obtain scores from 1 to 7 on the TWBS, with a higher score indicating a higher level of wellbeing on the domains captured. Within the present sample, scores on the full-scale TEIP score ranged from 3.69 to 7.00 at the pre-test and from 3.69 to 7.00 on the post-test as well. Subtest scores while within the

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range of what was found by the scale developers (Collie et al., 2015) demonstrated a slightly higher mean score across all three subscales within the present sample.

Given that Collie and colleagues (2015) sample was comprised of educators that are already working within their field, it stands to reason that their overall wellbeing scores on the domains measured might be slightly lower than the teacher candidates in the present study given differences in workload, expectations etc. between in-service teachers and teacher candidates. .

Demographic information. To gain a more fulsome understanding of the background of teacher candidates in the course, participants were asked to answer a number of demographic questions as part of the online questionnaire. These questions include basic background information (i.e., sex), as well as information more specific to their education. This included questions about the age range of students they will be teaching (primary/junior; junior/intermediate; secondary), as well any further specialization they are pursuing within their BE.d. degree (e.g., urban education, international education). Participants were also asked to indicate their previous degree area and the level of said degree (e.g., bachelors, masters, doctoral). Lastly, participants were asked to indicate whether they had previously learned about mental health and mental illness prior to this course, and if so to indicate the context in which this learning took place (e.g., university course, one-day training etc.).

Procedure

In order to evaluate the effectiveness of the Mental Health Literacy course in meeting its learning objectives, all students enrolled in the course during the 2018/2019 academic year received an email from the teacher education office one week prior to the start of the course. This contained a link to the letter of information and consent and the pre-test survey. One reminder email was sent following the initial invitation. Participants had until the night before the start

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date of the course to complete the pre-test, and one week after the end of the course to complete the post-test. Participating in the program evaluation was entirely voluntary. Marks for participating in the pre and post-test were given to help encourage participation and accounted for 10% of the total assessment value in the course., However the results of both the pre and post-test measures did not impact participants' grades.

Ethical Considerations. This study was approved by the university's Research Ethics Board (see Appendix A). Informed consent was obtained from all students who agreed to participate in the program evaluation of the course. Participants were asked to use their university username or email address while completing pre and post-test measures in order to be able to provide participation marks. The researchers were blinded as to whether or not students had consented to participate in the program evaluation until final marks were submitted. Furthermore, students were informed that their decision to participate in the program evaluation would not impact their grade in the course and would be unknown to the instructor and teaching assistants. Once participation marks had been assigned and course grades were in, data was anonymized prior to analysis. All anonymized data will be kept securely by the research team for seven years in accordance with the Non-Medical Research Ethics Board's policy.

Analyses

Sample demographics were obtained (see Table 1). Overall scale and subscale scores were calculated for all measures on the pre and post-test. For the ARTIC, items were reverse coded as directed and an overall scale score, as well as subscale scores were calculated for time 1 and 2. The means and standard deviations of all of the measures were also calculated and can be found in Table 2. Cronbach's alpha was calculated to determine internal consistency and reliability on the overall scale and subscales for all measures. Bivariate correlations were

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utilized to explore the relationships between the variables of interest, the results of which can be found in Table 3.

In order to determine the overall effect of the course on the measures of interest (ARTIC, TEIP, MHLQ, TWBS), differences between pre-and post-test scores were analyzed using a multivariate analysis of variance (MANOVA) to explore what, if any changes occurred between the time one and time two measures with respect to pre-services teachers' mental health literacy, self-efficacy for inclusive practice, attitudes towards TVIC, and wellbeing. Separate MANOVAs were then utilized to explore these measures individually to further determine the impact of course participation on the measures of interest.

Participants' previous learning about mental health was explored to determine its impact on participants learning as part of the MANOVAs. In order to assess this, participants were coded into one of three groups based on their answers on the demographic portion of the questionnaire pertaining to their previous learning about mental health/illness and the context in which said learning took place. Participants were categorized as falling into one of three previous learning groups (PLG); 1) no previous learning (None); 2) formal, university-based learning, or 3) other (one-day training/certificate program).

Chapter 4

Results

Participants

Participants in this study were second-year preservice teachers enrolled in the B.Ed. program in the 2018/2019 academic year at the Faculty of Education. This is a two-year program, and thus participants were in their final year of study. This is a mandatory course for all second-year preservice teachers, with the exception of approximately 60 students with a psychology major enrolled in a specialized 'Psychology in Schools' cohort program. Sample demographics are presented in Table 1. Of note, participants were informed that they were not required to complete this portion of the online survey and a small subset of the sample (14%) chose not to complete this section.

The sample size was N=318 participants, and N=287 of the students that were enrolled in the course completed both pre and post-test measures. The participants were predominantly female (64%). The majority of the sample are specializing in teaching primary grades (36%) or senior grades (32%), with a smaller group preparing to teach students in the junior (7%) and intermediate grades (11%).

Within the B.Ed. program teacher candidates have the option to specialize in a specific area of education. Twenty-two percent of the present sample were in the International Education cohort; 18% Early Education; 16% Urban Education; 19% French; and 13% were specializing in the STEM (science, technology, engineering, math) cohort. 83% of the sample reported to have previously obtained an undergraduate degree and 3% of the sample had obtained a master's degree. Previous degrees were in a variety of disciplines (see Table), however of note, only 3% (n=9) of the sample had obtained an undergraduate degree in psychology (as stated above, most

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psychology majors were in a specialized cohort, Psychology in the Schools, and therefore exempt from this course).

Sixty-two percent of the sample indicated that they had previously learned about mental health and illness prior to their enrollment in this course. Of this group, 39% had learned about mental health and illness through a university course. 22% of the sample had previously learned about mental health and illness through other settings and means, such as certificate courses (e.g., ASSIST, Mental Health First Aid) and less formal sources, such as social media, journal articles, seminars, high school classes, independent research, and training as part of a job or volunteer role.

Table 1. *Sample Demographics*

Measure	N	%
Gender		
Female	183	64
Male	61	21
Prefer not to say	4	1
Missing	39	14
Bachelor of Education Program		
Primary	103	36
Junior	21	7
Intermediate	31	11
Senior	93	32
Missing	39	14
Cohort		
International Education	63	22
Early Childhood Education	52	18
Urban Education	45	16
French	54	19
STEM	33	12
Missing	40	14
Previous Degree Obtained		
Undergraduate	237	83
Masters	8	3

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Other	3	1
Missing	39	14
Previous Degree Subject		
Science (biology, chemistry, physics, mathematics)	33	12
Psychology	9	3
Child and Family Studies	14	5
Health Sciences (kinesiology, nursing, medicine)	17	6
Social Sciences	30	11
Arts and Humanities	93	32
Religion/Divinity	5	2
Other	47	16
Missing	39	14
Previous Learning about Mental Health		
None	71	25
University Based Course	113	39
Other (training, certificate, personal experience)	64	22
Missing	39	14

Scales. To account for missing data subscale and total scale scores were not calculated for any participants who were missing more than 20% of the items on that particular scale or subscale.

Mental Health Literacy Questionnaire. A reliability analysis completed using Cronbach's alpha revealed excellent internal reliability on the overall T1 MHLQ (45 items; $\alpha = .94$). The MHLQ subscales also demonstrated good reliability at T1; Teaching and Leading a Mentally Healthy Classroom (24 items; $\alpha = .92$); Expectancies (5 items; $\alpha = .94$); Professional Relational Skills reliability (9 items; $\alpha = .87$); and Role Clarity (4 items; $\alpha = .89$). At time two the overall T2 MHLQ again demonstrated good reliability ($\alpha = .83$). The internal reliability on individual subscales at T2 was also shown to remain consistently strong; Teaching and Leading a Mentally Healthy Classroom ($\alpha = .94$); Expectancies ($\alpha = .96$); Professional Relational Skills

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reliability ($\alpha = .88$); Role Clarity ($\alpha = .95$). This is consistent with what was found in the original analyses of the scale (Hatcher, 2018).

Teacher Efficacy for Inclusive Practice Scale. Reliability of the TEIP scale was determined using Cronbach's alpha. Analyses revealed good internal reliability on the overall T1 TEIP (18 items; $\alpha = .88$). Good internal reliability was also demonstrated on all three of the T1 subscales; Efficacy in Collaboration (6 items; $\alpha = .76$); Efficacy in Inclusive Instruction (6 items; $\alpha = .73$); and Efficacy in Managing Behaviours (6 items; $\alpha = .76$). Reliability coefficients at T1 are slightly lower than what the scale developers reported (Sharma, Loreman & Forlin, 2015) Excellent internal reliability was shown again at the post-test on the overall T2 TEIP ($\alpha = .91$), as well as on the individual subscales; Efficacy in Collaboration ($\alpha = .82$); Efficacy in Inclusive Instruction ($\alpha = .81$), and Efficacy in Managing Behaviours ($\alpha = .83$). Reliability coefficients at T2 are consistent with the findings from the scale developers.

Attitudes Related to Trauma Informed Care Scale. Cronbach's alpha was used to determine the reliability of the ARTIC. This revealed excellent reliability for the full-scale T1 ARTIC score. A reliability analysis using Cronbach's alpha demonstrated excellent internal reliability on the (35 items; $\alpha = .92$). Reliability analyses at the subscale level demonstrated good reliability on the majority of T1 ARTIC subscales; Underlying Causes (7 items; $\alpha = .71$); Responses to Problem Behaviour and Symptoms (7 items; $\alpha = .72$); Self-Efficacy at work (7 items; $\alpha = .78$); Reactions to Work (7 items; $\alpha = .73$), with the exception of the On the Job Behaviours subscale, which demonstrated slightly less robust reliability on its own (7 items; $\alpha = .68$). Excellent reliability was revealed again at time two on the overall T2 ARTIC score ($\alpha = .94$). Good reliability was also shown on all T2 ARTIC subscales; Underlying Causes ($\alpha = .76$); Responses to Problem Behaviour and Symptoms ($\alpha = .79$); Self-Efficacy at work ($\alpha = .87$);

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Reactions to Work (7 items; $\alpha = .84$); and On the Job Behaviours ($\alpha = .74$). Reliability coefficients are consistent at T1 and T2 to findings from the scale developers (Baker et al., 2015) and indeed slightly higher on all of the subscales at T2 than what the developers reported.

Teacher Wellbeing Scale. A reliability analysis completed using Cronbach's alpha reveals excellent internal consistency for the T1 TWBS full-scale (16 items; $\alpha = .92$). Excellent internal reliability at the individual subscale level was demonstrated for two of the TEIP subscales at T1; Workload Well-being (6 items; $\alpha = .80$); and Organizational Well-being (6 items; $\alpha = .82$). The reliability for the Student Interaction Well-being subscale at T1 was found to be slightly less robust (6 items; $\alpha = .67$). Excellent internal consistency was found at time two for the overall T2 TWBS ($\alpha = .92$). Good reliability was also demonstrated for the T2 Workload Well-being ($\alpha = .82$) and Organizational Well-being subscales ($\alpha = .83$). Less robust internal consistency was again demonstrated for the Student Interaction Wellbeing subscale ($\alpha = .64$). This is consistent with Collie and colleagues' findings (2015), with the exception of the reliability for the T1 Student Interaction Well-being subscale, which is lower than what the scale developers found.

Comparison of T1 and T2 Scores. Means and standard deviations were calculated for all of measures and subscales at T1 and T2 (see Table 2).

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Table 2. Mean Item Scores and Standard Deviations of Study Measures for Time 1 and Time 2

Variable	<u>Time 1</u>					<u>Time 2</u>				
	n	M	SD	Min	Max	n	M	SD	Min	Max
TEIP										
Total TEIP Score	248	4.35	.47	3.17	5.67	272	5.00	.44	3.50	6.00
Efficacy for Inclusive Practice	248	4.74	.48	3.33	5.83	272	5.20	.46	3.67	6.00
Efficacy for Collaboration	248	4.27	.61	2.33	5.67	272	4.99	.53	3.50	6.00
Efficacy for Managing Behaviour	248	4.02	.56	2.33	5.50	272	4.82	.55	3.17	6.00
TWBS										
Total TWBS Score	248	5.45	.78	3.69	7.00	272	5.49	.76	3.69	7.00
Workload Wellbeing	248	5.40	.84	3.17	7.00	272	5.48	.81	3.50	7.00
Organizational Wellbeing	248	5.40	.85	3.33	7.00	271	5.48	.81	3.50	7.00
Student Interaction Wellbeing	248	5.57	.79	3.50	7.00	272	5.51	.77	3.50	7.00
MHLQ										
Total MHLQ Score	248	4.10	.40	2.70	5.00	271	4.53	.34	3.00	5.00
Teaching and Leading a Mentally Healthy Classroom	247	3.81	.52	2.12	5.00	271	4.42	.41	2.96	5.00
Role Clarity	248	4.84	.36	3.00	5.00	272	4.90	.32	2.75	5.00
Expectancies	248	4.58	.53	3.00	5.00	272	4.69	.50	3.00	5.00
Professional Relational Skills	246	4.25	.51	2.33	5.00	271	4.55	.41	2.22	5.00
ARTIC										
Total ARTIC Score	248	5.46	.66	2.17	6.94	272	5.80	.77	2.03	6.91
Underlying Causes	248	5.31	.77	2.86	7.00	272	5.71	.77	3.00	7.00
Responses	248	5.27	.84	2.29	7.00	272	5.73	.89	1.86	7.00
On the Job Behaviour	248	5.42	.78	2.00	7.00	271	5.64	.86	1.71	7.00
Self-Efficacy	248	5.87	.85	1.43	7.00	272	6.03	.93	1.29	7.00
Reactions	246	5.44	.89	2.00	7.00	271	5.86	.96	1.86	7.00

Notes. TEIP= Teacher Efficacy for Inclusive Practice Scale, 6-point Likert scale; TWBS= Teacher Wellbeing Scale, 7-point Likert scale; MHLQ= Mental Health Literacy Questionnaire, 5-point Likert scale; ARTIC= Attitudes Related to Trauma Informed Care Scale, 7-point Likert scale.

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Relationships Between Measures. Bivariate correlations were calculated in order to explore the relationships between the variables of interest at Time 1 and are presented in Table 3. Results demonstrate significant correlations between all of the measures explored. A strong, positive correlation was found between participants' T1 MHLQ scores and their T1 TEIP scores, $r(246) = .73, p < .005$. There was a moderate positive correlation between participants' T1 MHLQ scores and their T1 TWBS scores, $r(246) = .45, p < .005$. Participants' T1 TEIP scores were found to be significantly correlated with their T1 TWBS scores, $r(246) = .46, p < .005$. While statistically significant positive correlations were demonstrated for participants' T1 ARTIC scores and a number of the variables including T1 MHLQ scores, $r(246) = .28, p < .005$, T1 TEIP scores $r(246) = .25, p < .005$ and T1 TWBS, $r(246) = .30, p < .005$, it was noted that they had a smaller association than the correlations amongst other variables, which may indicate that the ARTIC is not as closely related as are other measures within the study. The implications of this will be explored in more depth in the discussion.

Table 3. *Bivariate Correlations at Time 1 Between ARTIC, MHLQ, TEIP and TWBS Total Scale Scores*

Measure	1	2	3	4
1. ARTIC_T1	--			
2. MHLQ_T1	.28**	--		
3. TEIP_T1	.25**	.73**	--	
4. TWBS_T1	.30**	.45**	.45**	--

Notes. N= 248. ** significant at the $p < .01$ level

Bivariate correlations were used to more fully explore the relationship between the TEIP and ARTIC at Time 1, results are displayed in Table 4. Significant, positive associations were found between several of the TEIP and ARTIC subscales, including Efficacy for Inclusive Instruction (TEIP) and the Self-Efficacy, $r(248) = .38, p < .01$; Reactions to Work, $r(248) = .28,$

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$p < .01$; and the Responses to Problem Behaviour and Symptoms $r(248) = .14$, $p < .05$, subscales on the ARTIC. However, all were found to be small associations, with the exception of TEIP-II and ARTIC-SE which was a moderate association.

Small to moderate positive associations were found between the Efficacy for Collaboration subscale (TEIP) and the Self-Efficacy subscale, $r(248) = .31$, $p < .01$ and Reactions to Work subscale, $r(248) = .24$, $p < .01$ on the ARTIC. Lastly, a moderate positive association was found between the Efficacy for Managing Behaviours subscale on the TEIP, and the Self-Efficacy subscale on the ARTIC, $r(248) = .33$, $p < .01$. These findings indicate that, with the exception of the Self-Efficacy subscale on the ARTIC, the other subscales are not strongly associated with efficacy for engaging in inclusive educational practices, collaborating, or in managing behaviour.

Table 4. *Bivariate Correlations at Time 1 Between TEIP and ARTIC Subscale Scores*

Measure	1	2	3	4	5	6	7	8
1. TEIP-II	-							
2. TEIP-COL	.63**	-						
3. TEIP-MB	.62**	.57**	-					
4. ARTIC-UC	.19**	.16*	.05	-				
5. ARTIC-OJB	.09	.11	.02	.56**	-			
6. ARTIC-SE	.38**	.31**	.33**	.43**	.47**	-		
7. ARTIC-REA	.28**	.24**	.12	.56*	.57**	.69**	-	
8. ARTIC-RES	.14*	.12	-.01	.65**	.65**	.37**	.54**	-

Notes. N=248 participants. **significant at the $p < .01$ level *significant at the $p < .05$ level. TEIP-T= Teacher Efficacy for Inclusive Practice Scale-Full; TEIP-II= Inclusive Instruction; TEIP-COL= Efficacy for Collaboration; TEIP-MB= Efficacy for Managing Behaviour; ARTIC-T=Attitudes Related to Trauma Informed Care-Full; ARTIC-UC= Underlying Causes; to Problem Behaviour and Symptoms; ARTIC-OJB= On the Job Behaviour; ARTIC-SE= Self-Efficacy at Work; ARTIC-REA=Reactions to Work; ARTIC-RES= Responses to Problem Behaviour and Symptoms

To further investigate the relationship between the MHLQ and the ARTIC, bivariate correlations with Time 1 scores were used, results are presented in Table 5. The results of which revealed a

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significant positive correlation between the MHLQ-TL subscale and the ARTIC-SE subscale $r(248) = .30, p < .01$, which constitutes a moderate association. A small, positive association was found between the MHLQ-TL subscale and the ARTIC- REA subscale, $r(248) = .20, p < .05$. Significant, moderate associations were found between the Role Clarity subscale on the MHLQ, and the ARTIC Reactions to Work subscale, $r(248) = .30, p < .01$, and the Responses to Problem Behaviour subscale, $r(248) = .37, p < .01$. Small, positive associations were found between the Role Clarity subscale and the Underlying Causes and On the Job Behaviour subscales on the ARTIC, $r(248) = .26, p < .01$ and $r(248) = .15, p < .05$ respectively. The Expectancies subscale on the MHLQ showed small, positive associations with the majority of the ARTIC subscales, including Underlying Causes, $r(248) = .15, p < .05$; On the Job Behaviour, $r(248) = .18, p < .01$; Reactions to Work, $r(248) = .22, p < .01$; and Responses to Problem Behaviour and Symptoms subscale, $r(248) = .26, p < .01$. Lastly, the Professional Relational Skills subscale on the MHLQ was found to significantly correlate positively with the SE subscale on the ARTIC with a moderate association, $r(248) = .41, p < .01$, and with the Reactions to Work subscale, with a small association, $r(248) = .22, p < .01$. Results indicate that the majority of aspects of MHL as measured by the MHLQ are not well associated with the ARTIC.

Table 5. *Bivariate Correlations at Time 1 Between MHLQ and ARTIC Subscale Scores*

Measure	1	2	3	4	5	6	7	8	9
1. MHLQ-TL	-								
2. MHLQ-RC	.19**	-							
3. MHLQ-EX	.19**	.44**	-						
4. MHLQ-PR	.66**	.05	.17**	-					
5. ARTIC-UC	.15	.26**	.15*	.12	-				
6. ARTIC- OJB	.07	.15*	.18**	.12	.56**	-			
7. ARTIC-SE	.30**	.08	.11	.41**	.43**	.47**	-		
8. ARTIC-REA	.20*	.30**	.22**	.22**	.56**	.57**	.69**	-	
9. ARTIC-RES	.12	.37**	.26**	.12	.65**	.65**	.37**	.54**	-

Note. N=248 participants. **significant at the $p < .01$ level *significant at the $p < .05$ level.

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MHLQ-TL= Teaching and Leading a Mentally Healthy Classroom; MHLQ-RC= Role Clarity; MHLQ-EX= Expectancies; MHLQ-PR = Professional Relational Skills; ARTIC-UC= Underlying Causes; ARTIC-OJB= On the Job Behaviour; ARTIC-SE= Self-Efficacy at Work; ARTIC-REA=Reactions to Work; ARTIC-RES= Responses to Problem Behaviour and Symptoms

Bivariate correlations were used to explore the relationship between the TWBS and the ARTIC at Time 1, see Table 6 for results. The Workload Wellbeing subscale of the TWBS was found to have a moderate, positive association with the Self-Efficacy subscale of the ARTIC, $r(248) = .43, p < .01$, as was the Organizational Wellbeing subscale, $r(248) = .47, p < .01$, and the Student Interaction Wellbeing subscale, $r(248) = .42, p < .01$. The WW subscale was positively correlated with the UC subscale of the ARTIC, $r(248) = .14, p < .01$, and the REA subscale, $r(248) = .27, p < .01$. Both of these associations were small. The OW subscale of the TEIP was positively correlated with the ARTIC OJB subscale, $r(248) = .13, p < .05$ and the REA subscale, $r(248) = .29, p < .01$, both of which were small associations. Lastly, a moderate association was found between the SIW subscale and the REA subscale on the ARTIC, $r(248) = .30, p < .01$. Small, positive associations were found between the SIW subscale and the UC subscale on the ARTIC, $r(248) = .20, p < .01$; the OJB subscale, $r(248) = .18, p < .01$, and the RES subscale, $r(248) = .17, p < .01$. Again, these results indicate that with the exception of self-efficacy in supporting students exposed to trauma and/or violence, many of the other ARTIC subscales were not strongly associated with the components of teacher wellbeing explored.

Table 6. *Bivariate Correlations at Time 1 Between TWBS and ARTIC Subscale Scores*

Measure	1	2	3	4	5	6	7	8
1. TWBS-WW	-							
2. TWBS-OW	.86**	-						
3. TWBS-SIW	.78**	.79**	-					
4. ARTIC-UC	.14*	.12	.20**	-				
5. ARTIC- OJB	.09	.13*	.18**	.56*	-			
6. ARTIC-SE	.43**	.47**	.42**	.43**	.47**	-		
7. ARTIC-REA	.27**	.29**	.30**	.56*	.57**	.69**	-	
8. ARTIC- RES	.09	.09	.17**	.65**	.65**	.37**	.54**	-

Note. N=248 participants. **significant at the $p < .01$ level *significant at the $p < .05$ level. TWBS-WW= Workload Wellbeing; TWBS-OW=Organizational Wellbeing; TWBS-SIW= Student Interaction Wellbeing; ARTIC-UC= Underlying Causes; ARTIC-OJB= On the Job Behaviour; ARTIC-SE= Self-Efficacy at Work; ARTIC-REA=Reactions to Work; ARTIC-RES= Responses to Problem Behaviour and Symptoms

Effect of Time and Previous Learning. In order to determine whether participants' previous learning about mental health impacted their scores on post-test measures, a repeated measures MANOVA was run with two independent variables-time and previous learning about mental health-and four dependent variables-ARTIC scores, MHLQ scores, TEIP scores and TWBS scores.

The test of the canonical variable indicated that there was no statistically significant interaction effect for previous learning and time, $F(8, 458) = 1.70$, $p = .095$, Wilks' $\Lambda = .943$, $\eta^2 = .029$. The multivariate effect of time was significant, $F(4, 229) = 146.49$, $p < .0001$, Wilks' $\Lambda = .281$, $\eta^2 = .719$.

Univariate analyses suggested a statistically significant difference in scores across all measures over time, with the exception of TWBS scores.

The main effect of previous learning (PLG) on the canonical variable was not statistically significant, $F(8, 458) = 1.37$, $p = .210$, Wilks' $\Lambda = .954$, $\eta^2 = .023$. Univariate analyses showed no differences in scores across measures based on prior learning about mental health/illness. The simple main effect on MHLQ, $F(1, 232) = 3.34$, $p < .05$, is noted, but did not stand up in post hoc analysis. Multivariate and univariate analyses are presented in Tables 7 and 8.

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Table 7. *Multivariate Analyses for Total Scores of TEIP, MHLQ, ARTIC and TWBS by TIME and PLG*

Variables		Partial η^2
Time	F (4, 229) = 146.49, p<.001	.719
PLG	F (8, 458) =1.37, p=.210,	.023
Time by PLG Interaction	F (8, 458) = 1.70, p = .095	.029

Table 8. *Univariate Analyses for Total Scores of TEIP, MHLQ, ARTIC and TWBS by Time and PLG*

TEIP, MHLQ, ARTIC, TWBS by Time

Variable		Partial η^2
TEIP	F (1, 232) =494.56, p < .001	.681
MHLQ	F (1, 232) = 290.13 p < .001	.556
ARTIC	F (1, 232) = 98.3, p < .001	.298
TWBS	F (1, 232) =1.31, p = .253	.006

TEIP, MHLQ, ARTIC, TWBS by PLG

Variable		Partial η^2
TEIP	F (2, 232) = 1.15, p = .138	.010
MHLQ	F (2, 232) = 3.34, p<.037	.028
ARTIC	F (2, 232) = 1.6, p= .205	.014
TWBS	F (2, 232) = .53, p = .589	.005

ARTIC. The impact of participants' previous learning on their attitudes towards trauma and violence informed care (ARTIC) at T1 and T2 was more fully explored using a two-way repeated measures MANOVA.

The canonical variable, all 5 subscales of the ARTIC, revealed a non-significant interaction effect for previous learning and time, $F(10, 450) = 1.49, p = .137, Wilks' \Lambda = .937, \eta^2 = .032$. Results revealed a significant main effect for time across the canonical variable, $F(5, 225) = 30.58, p < .0005, Wilks' \Lambda = .595, \eta^2 = .405$. A significant main effect of previous learning about mental health was also detected, $F(10, 450) = 1.94, p = .039, Wilks' \Lambda = .919, \eta^2 = .041$.

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Post-hoc tests were performed with Bonferonni correction to explore pairwise differences and showed a statistically significant interaction effect on the ARTIC Self-Efficacy subscale for time and previous learning about mental health, $F(2, 229) = 3.07, p = .048, \eta^2 = .026$, but not for the other ARTIC subscales. Pairwise comparisons revealed that Self-Efficacy scores was .30 (95% CI [-.005-.594]) higher for participants who had formal, university based previous learning about mental health as opposed to those who had participated in “other” mental health learning (e.g., a one-time training, certificate program etc.), however this difference approached but did not achieve statistical significance [$F(2, 220) = 3.07, p = .057$]. Details are reported in Tables 9 and 10.

MHLQ. Participants’ prior learning experiences on their T1 and T2 MHLQ scores was explored using a two-way repeated measures MANOVA. The canonical variable consisting of the four subscales of the MHLQ revealed the interaction of prior learning and time approached significance, $F(8, 454) = 1.96, p = .051, \text{Wilks' } \Lambda = .935, \eta^2 = .033$. Significant multivariate main effects were found for both time, $F(4, 227) = 84.97, p = .0005, \text{Wilks' } \Lambda = .400, \eta^2 = .600$ and prior learning, $F(8, 454) = 2.06, p = .039, \text{Wilks' } \Lambda = .931, \eta^2 = .035$. Univariate analyses revealed a significant effect of time across all MHLQ subscales (see Tables 9 and 10).

In order to investigate comparisons, post-hoc tests were performed using Bonferonni corrections. Inspection of the data revealed that while a significant interaction was detected for time by prior learning and the Teaching and Leading a Mentally Healthy Classroom subscale on the MHLQ, $F(2, 223) = 4.230, p = .015, \eta^2 = .036$, this effect was not robust.

TEIP. Teacher self-efficacy as measured by the TEIP was explored as a function of participants’ prior mental health learning using a two-way repeated measures MANOVA.

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Analysis of the canonical variable revealed no significant interaction between previous group learning and time on TEIP scores, $F(6, 462) = .93$, $p = .476$, Wilks' $\Lambda = .976$, $\eta^2 = .012$. Results demonstrated a significant multivariate main effect of time across all TEIP subscales, $F(3, 231) = 173.89$, $p = .0005$, Wilks' $\Lambda = .307$, $\eta^2 = .693$. Univariate analyses revealed a statistically significant difference over time across all TEIP subscales (see Table 8). No significant main effect was found for previous learning and T1 and T2 TEIP scores, $F(6, 462) = .94$, $p = .469$, Wilks' $\Lambda = .976$, $\eta^2 = .012$. Results are presented in Tables 9 and 10.

TWBS. The impact of previous learning about mental health on participants T1 and T2 TWBS scores was explored using a two-way repeated measures MANOVA.

Analysis using the canonical variable revealed a non-significant interaction for prior learning and TWBS scores, $F(6, 460) = .95$, $p = .078$, Wilks' $\Lambda = .952$, $\eta^2 = .024$. A significant multivariate main effect of time was found, $F(3, 230) = 6.34$, $p = .005$, Wilks' $\Lambda = .924$, $\eta^2 = .076$ across the overall TWBS scores, while no significant main effect was found for prior learning, $F(6, 460) = 1.91$, $p = .078$, Wilks' $\Lambda = .952$, $\eta^2 = .024$. The effect of time was found to be significant for Workplace Wellbeing Scale, (WW), but not for the Organizational Wellbeing (OW) or Student Interaction Wellbeing (SIW) subscales on the TWBS (see Tables 9 and 10).

Table 9. Multivariate Analyses for Subscales of the ARTIC, MHLQ, TEIP, and TWBS by TIME

Variables		Partial η^2
ARTIC	$F(5, 225) = 30.58$, $p < .001$.405
MHLQ	$F(4, 227) = 84.97$, $p < .001$.693
TEIP	$F(3, 231) = 173.89$, $p < .001$.600
TWBS	$F(3, 230) = 6.34$, $p < .001$.076

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Table 10. Univariate Analyses for Subscales of the TEIP, MHLQ, ARTIC, and TWBS by Time

Attitudes Related to Trauma and Violence Informed Care			
Variable			Partial η^2
UC	F (1,229) =90.98,	p<.001	.284
RES	F (1,229) = 92.99,	p<.001	.289
OJB	F (1,229) =33.57,	p<.001	.128
SE	F (1, 229) = 14.59,	p<.001	.060
REA	F (1,229) = 72.17,	p<.001	.240
Mental Health Literacy Questionnaire			
Variable			Partial η^2
TL	F (1,230) =335.99,	p<.001	.594
RC	F (1, 230) = 6.50,	p<.05	.027
EX	F (1, 230) =9.83,	p<.005	.041
PR	F (1, 230) = 97.42,	p<.001	.298
Teacher Efficacy for Inclusive Practice			
Variable			Partial η^2
II	F (1, 233) = 239.10,	p < .001	.506
COL	F (1, 233) = 319.36,	p < .001	.578
MB	F (1, 233) = 457.14,	p < .001	.662
Teacher Wellbeing Scale			
Variable			Partial η^2
WW	F (1,232) = 6.14,	p<.05	.026
OW	F (1, 232) = 3.17,	p=.077	.013
SIW	F (1,232) = .405,	p=.525	.002

Chapter 5

Discussion

The present study aimed to explore the overall effectiveness of a mandatory, online mental health literacy course on teacher candidates' mental health literacy (MHL), self-efficacy for engaging in inclusive teaching practices, and well-being. Given the salient relationship between exposure to trauma and/or violence and the development of mental health challenges, content on TVIC was an added component to this iteration of the course. Over a twelve-week period, participants received the course content through an online learning platform, which utilized multiple modalities to present the curriculum in engaging ways.

The results demonstrate that instruction in mental health literacy through a mandatory course within a teacher education program resulted in significant gains in mental health literacy, as well as in self-efficacy in teaching students who are experiencing mental health concerns. Furthermore, results indicate that targeted instruction on TVIC resulted in significant changes in participants' attitudes towards TVIC. A more in-depth exploration of results and the implications are provided

Relationships Between Constructs. One of the goals of this study was to more fully understand the relationships between the diverse, but seemingly connected constructs of mental health literacy, self-efficacy in teaching students with mental health concerns, teacher wellbeing, and attitudes towards trauma and violence informed care. As anticipated, the results revealed that a number of the measures were correlated with each other.

Teacher efficacy for implementing inclusive practices for students with mental health concerns and mental health literacy were found to have a strong, positive relationship. The MHLQ captures the knowledge, attitudes, and skills educators have in understanding mental health literacy, and engaging in practices that promote mental wellbeing in the school setting.

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The TEIP scale, however, focuses more closely on the behaviours associated with effectively including diverse learners in the classroom. Thus, the former is believed to be more reflective of the knowledge of mental health literacy, and attitudes towards incorporating it into the school setting. Whereas the latter is felt to be more reflective of the skills and confidence necessary to actually implement educational practices that support and include all students, including those with mental health concerns.

This finding is in line with the literature, which has consistently demonstrated a relationship between teacher self-efficacy and inclusive practice (Sharma, Moore & Sonawane, 2009; Specht, 2012; Zee & Koomen, 2016). Given that educators have endorsed feeling ill-prepared to support the mental health needs of their students (Rodger et al., 2014; Rothi et al., 2008; Walter, Gouze & Lim, 2006) the relationship between self-efficacy and mental health literacy becomes all the more pertinent. Highlighting the importance of providing teachers with foundational knowledge about mental health literacy to promote shifts in attitudes, and perceived skills in order to improve self-efficacy and confidence in actually supporting students with mental health concerns.

A relationship of moderate strength was found between teacher wellbeing and mental health literacy. While this relationship was less salient than the relationship between mental health literacy and teacher self-efficacy, it is felt to be of importance and believed to be reflective of some of the challenges within the profession of teaching. A high level of occupational stress and emotional labour exists within the teaching profession (McCallum, Price, Graham & Morrison, 2017), the harmful impacts of which have been well documented for both students (Arens & Morin, 2016; Duckworth, Quin & Seligman, 2009; Koenig, Rodger, & Specht, 2017) Oberle & Schonert-Reicl, 2016) and educators themselves (Fernet, Guay, Senecal & Austin,

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2012; Ingersoll & May, 2012; Ingersoll, Merrill & Stuckey, 2014; Jamieson, 2006; Koenig, Rodger, & Specht, 2017; Koller, 2004; Koller & Bertel, 2006; Marko, 2015; Rodger et al., 2014).

A central tenet of the Mental Health Literacy course is the belief that in order to support and promote the wellbeing of their students, educators themselves must be well and engaging in practices that support their own mental health and wellbeing. Thus, it stands to reason that a relationship would exist between teachers' own perceptions of their wellness, and their knowledge, skills, and leadership with respect to mental health literacy and mental health promotion. It is possible of course that the nature of this relationship will change as teachers enter the work field and remains an important factor to consider.

A moderate association between teacher wellbeing and efficacy for engaging in inclusive educational practices was also found. This indicates that the way teachers feel about various aspects of their job, and how said aspects contribute (or don't contribute) to their sense of wellbeing is related to their confidence in utilizing inclusive educational practices. This is consistent with findings in the literature that have documented the connection between higher levels of self-efficacy, and wellbeing (Sharma, Moore & Sonawane, 2009; Zee & Koomen, 2016). Indeed, self-efficacy is also closely connected with teacher effectiveness (Zee & Koomen, 2016), and teachers who feel more effective in their role are expected in turn to have higher levels of wellbeing and satisfaction. This provides compelling evidence as to the importance of including a focus on educator wellbeing into initial teacher education as a means of not only guarding against burnout and attrition, but also in ensuring more effective teaching practices.

A small association was found between mental health literacy and attitudes towards TVIC. This was a somewhat unexpected finding, as it was anticipated that these two constructs would be more closely related. When explored more in depth at the subscale level, small to

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moderate associations were seen between several of the subtests on the ARTIC and MHLQ at Time 1.

These less robust associations illustrate that while exposure to trauma and violence are unquestionably linked with one's mental health, mental health literacy and attitudes towards TVIC are not so closely linked in the present study. More specifically, results of the present study show that it cannot be assumed that by providing teachers with mental health literacy education they will adopt trauma-and-violence-informed attitudes and teaching practices. Rather, what the present study illustrates is the need to explicitly incorporate instruction on TVIC into preservice teacher education, in conjunction with mental health literacy.

Small associations were also found between participants' ARTIC scores and their scores on the TEIP and TWBS. At the subscale level, small to moderate associations were found between several, but not all, of the TEIP and ARTIC subscales. A moderate association was found most consistently between the TEIP subscales, and the Self-Efficacy subscale of the ARTIC, which would be expected given that said subscales are all measuring self-efficacy in some form. However, less substantial associations, or non-significant associations were found on all other TEIP/ARTIC subscale correlations.

Small to moderate correlations were found between the TWBS and ARTIC subscales at Time 1. Once again, the most robust associations (moderate level) were found between all three of the TWBS subscales and the Self-Efficacy subscale on the ARTIC. This indicates that while, overall the relationship between teacher wellbeing and attitudes towards TVIC appear to be loosely associated, self-efficacy for engaging in TVIC is more strongly associated with teacher's perceived wellbeing across the domains measured. This stands to reason, as it would be anticipated that teachers who are more confident in implementing TVIC practices, may

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experience a higher level of wellbeing in relation to their workload, organization, and in the interactions, they have with students.

While significant, positive correlations were found between the ARTIC and the other variables of interest, these were found to be small to moderate in size. Again, this provides evidence for the fact that attitudes towards TVIC are a unique construct that are not innately learned simply through instruction in other seemingly related domains (e.g., inclusive practices for students with mental health challenges). This lends support to the proposition that TVIC needs to be purposefully and explicitly included as a critical component of initial teacher education.

Knowledge Gains Over Time. Results indicated that significant gains were made across the targeted variables, with significant differences being seen between participants' pre-and post-test scores in measures of mental health literacy, self-efficacy in teaching students experiencing mental health challenges, attitudes towards TVIC, and their wellbeing.

Scores on all measures increased from Time one to Time two, indicating that learning did take place through participation in the course. It is important to note that during the period in which they are enrolled in the course, teacher candidates are enrolled in a number of different courses, several of which also touch upon student mental health and exposure to trauma. Thus, changes in scores cannot be attributed solely to enrollment in the mental health literacy course and may be influenced by participation in these other courses.

Closer inspection of the content of these courses demonstrated that there is indeed overlapping content with the present course (e.g., equity in education, supporting diverse learners, the impact of trauma, student mental health and inclusive practices). However, the majority of the courses with overlapping content are only offered in the first year of the B.Ed.

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program, not in the second year when participants were enrolled in the MHL course. Of the two courses with overlapping content that are offered in the second year of the program, only one is mandatory, the other is an elective for the students in the psychology cohort.

The mandatory course focuses on creating safe schools. Topics covered include bullying prevention, family violence, impact of family violence on neurodevelopment, reporting responsibilities, media violence, school violence, abuse by educators, gender-based violence, violence prevention programs, the importance of creating safe school environments, and legislation around school safety in Ontario. Issues around historical and structural violence, as well as the social determinants of health and how these impact students are not covered. This course provides teacher candidates with valuable resources when it comes to handling student disclosures around violence, as well as a large number of resources around the specific topics covered (e.g., media literacy resources). However, it does not explicitly instruct teacher candidates on specific skills and strategies to support students exposed to trauma and violence within the classroom. Strategies to support students with mental health concerns are also not covered.

Lastly, while the safe schools course briefly touches upon school's obligations to protect staff whom they have reason to suspect are at risk of domestic violence, no other content related to teacher wellbeing, or vicarious trauma is covered. Thus, while the safe schools course unquestionably provides teacher candidates with valuable information, many aspects of which are also covered in the MHL course, a substantial amount of content pertaining to trauma and violence, mental health, and teacher wellbeing is, and was designed to be, unique to the MHL course.

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While enrolled in the MHL course, participants also engaged in an alternative field experience (AFE), wherein they embark on a three-week placement in an alternative learning setting between the first and second half the MHL course. It is then important to take into consideration this alternative placement as an additional factor that may have influenced knowledge gains between pre and post-test measures.

The majority of AFEs were completed within kindergarten to grade 12 settings in Ontario. Teacher candidates also completed their AFEs at community organizations, private schools, post-secondary schools, daycares, international settings, French First Language schools, health care settings and out of province schools. Within these diverse placements, several of the settings offer services to groups of individuals who may be at higher risk of having experienced mental health concerns and/or having been exposed to trauma and/or violence. These include settings for children and families experiencing crises, educational services/settings for Indigenous peoples, at risk children and youth, underserved children abroad, children with medical conditions and adult education settings, amongst others.

Given the diverse settings and experiences participants had it is not possible to postulate if and how these placements influenced participants' knowledge gains within the MHL course. However, it seems suffice to say that engaging in these alternative placements after having received 6 weeks of instruction on MHL and TVIC would serve to help consolidate this knowledge, and perhaps offer opportunities to apply it in a real setting.

To summarize, the MHL course does not exist in a vacuum, but rather exists within a rich learning environment wherein preservice teachers are being exposed to large amounts of information both in course format, but also practically through placements in schools and other settings. All with the purpose of increasing their knowledge and professional skill set to

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effectively fill their roles, both in terms of pedagogy, but also in supporting student wellbeing. It is believed that the MHL course plays a unique role in supporting teacher candidates to adopt professional practices that promote the mental health of all students and support students who may be at particular risk. However, given the dynamic educational environment participants were in at the time of receiving this course, it would be ill-informed to attribute all knowledge gains solely to the content of the MHL course.

Effect of Time and Incoming Participant Characteristics on Knowledge Gains.

Another goal of the present study was to determine whether participants' previous learning about mental health and illness would impact their knowledge gains on the variables of interest within the course. Overall participants prior learning about mental health had little to no impact on their knowledge gains in the MHL course. A series of two-way repeated measures multiple analysis of variance were conducted in order to explore this. While several interactions were found between previous learning and specific subscales on several of the measures used, including the ARTIC, MHLQ, and TEIP, upon closer inspection using post-hoc analyses, these interactions were not found to be robust. This indicates that participants were able to make knowledge gains in the course, regardless of their prior knowledge about mental health and illness.

Teacher candidates come into the B.Ed. program with a wide assortment of knowledge and experiences when it comes to mental health, illness and the impact of trauma and violence. This finding is seen as a positive as it suggests that all participants, regardless of their prior educational background, personal and/or work experience, are able to benefit from participating in the MHL course.

This lends support to the wide range applicability of this course for teacher candidates from diverse backgrounds. These results indicate that there is no minimum baseline of

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knowledge about mental health literacy and TVIC needed in order to benefit from this learning experience and make gains in knowledge. This has implications for policy decisions, as it provides evidence that this course is beneficial for all teacher candidates and that regardless of their prior learning experiences, they can benefit from being taught this information.

Future Directions

A central goal of the present study was to apply a program evaluation model to identify ways in which the MHL course can be improved for future iterations. Results from the present study revealed that participation in the MHL course resulted in significant gains in mental health literacy, self-efficacy in teaching students who are experiencing mental health concerns, and significant changes in attitudes towards TVIC for teacher candidates. The same gains were not made in self-reports of teacher wellbeing, as assessed by a repeated measures MANOVA which revealed a non-significant effect of time on participants' TWBS scores between pre-and post-test measures. This is believed to have potential implications for future iterations of the course, and thus several possible explanations for this particular finding are explored in more depth.

One possible reason for the non-significant result is the way in which the construct of wellbeing was measured and whether or not this measure (TWBS) best captured the way in which teacher wellbeing was covered within the MHL course. The Teacher Wellbeing Scale is based on Ryan and Deci's (2011, as cited by Collie et al., 2015) definition of general wellbeing, defined as "open, engaged, and healthy functioning" (Collie et al., 2015). However, the TWBS itself is very much targeted towards teacher wellbeing within the context of their specific role requirements (e.g., marking, administrative work, staying late for meetings), relationships and policies within their organization (e.g., relationship with administration, support from leadership,

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school rules), and their interactions with their students (e.g., classroom management, relations with students, student behaviour). Respondents are then requested to indicate how much each component affects their wellbeing as a teacher. While these items are all undoubtedly important areas to explore in relation to their impact on teacher wellbeing, they do focus in large part on different aspects of wellness than what is more explicitly taught within the MHL course. For example, while the work demands of educators are discussed throughout the course, a higher focus is placed on the explicit discussion of stress, burnout, maintaining boundaries between professional and personal life, building resilience, self-care as well as identifying and addressing vicarious trauma. Thus, whilst the items contained within the TWBS unquestionably are factors that contribute to teacher wellbeing, stress, and burnout, this terminology is not used within the measure.

It would be interesting in future iterations of the course to utilize a measure that more directly captured constructs such as teacher stress, burnout, resilience, understanding of self-care, and vicarious trauma in order to determine whether instruction in these areas can shift teacher candidates' knowledge and experience of these domains.

Another possibility that is important to consider is whether the lack of significant findings are in fact representative, in that no changes in wellbeing were gained as part of the MHL course, and speak to a greater issue in professional education for teachers. Within their B.Ed. degree, teacher candidates are required to balance a substantial course load with the demands of practicum placements, as well as their personal lives. All of this is done within the context of an ever-changing educational backdrop, influenced by the political landscape at the time, which in turn can impact employment prospects for future educators. Past research with Canadian teacher candidates has indicated that they do indeed experience high levels of stress

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(Dodds, 2016). This may also be reflective of the unique dual role of preservice teacher candidates, wherein they are simultaneously students and teachers, learners and experts.

This then raises the larger question of how do we more effectively coach and support teacher candidates in walking this middle path between being a learner, while also being a teacher? More explicitly discussing the nature of this dual role within the MHL course, as well as ways to manage the stress associated with it may be an important area of content to add for future iterations of the course. Indeed, an understanding of how to do so effectively could be applied to other professional programs wherein individuals are expected to be both a student and a professional (e.g., medical school, graduate school for psychology, social work, speech and language pathology, occupational therapy, nursing etc.).

Lastly, for future iterations of the course it may prove valuable to change the wording on the items in the TEIP scale on both the pre and post-test to capture supporting children who have been exposed to trauma and/or violence. As it stands now, the item wording currently reflects supporting students with mental health concerns (e.g., I am confident in designing learning tasks so that the individual needs of students with mental health concerns or disorders are accommodated).

Rewording the relevant TEIP items to be reflective of students with mental health concerns as well as students who may have been experiences of trauma and/or violence may prove beneficial in obtaining additional information. While the ARTIC includes its own self-efficacy subscale, the TEIP is comprised of a broader array of questions that capture self-efficacy in managing student behaviour, collaborating with members of the school team and larger school community (e.g., parents), as well as engaging in inclusive teaching practices (e.g., gauging student comprehension; designing inclusive learning practices; utilizing different assessment

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strategies etc.). Such data may offer valuable information about teacher candidates' confidence in supporting and including students with experiences trauma and/or violence in the classroom, something that research has indicated is an area in which educators lack confidence (Alisic, 2012; Alisic et al., 2012).

A more comprehensive understanding of educators' comfort and confidence in engaging in inclusive educational practices for students with experience of trauma and/or violence is an important component in better understanding where additional training supports and resources may be best targeted.

Implications to the Field of Education

The importance of initial teacher education: Preparing for the classrooms of tomorrow. Initial teacher education lays the foundation of learning for a 30 year plus career, wherein they will interact with hundreds of children and participate in additional professional development opportunities. It is thus seen as a critical area of importance. With an ever-shifting context that is influenced by political, socio-cultural, environmental and technological changes it is impossible to know exactly what the educational landscape will look like 30 years from now. However, it can be safely assumed that there will continue to be students who require a significant degree of support and who particularly benefit from the caring relationship with their teacher in order to feel safe, supported, and succeed at school. It then becomes important to appreciate and consider the changing social contexts of the lives of children (Collishaw, 2015), in order to design an educational system that can meet their needs.

While it is not possible in a continuously shifting world to predict what the classrooms of the future will look like, or indeed what the role of the teacher may entail, current trends and patterns can provide some insight. Data from the most recent 2014 Ontario Child Health Study

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(OCHS) shows that at any given time between 18 to 22% of the children and youth in Ontario meet the criteria for at least one mental illness (Georgiades et al., 2019a). Furthermore, a comparison in the prevalence rates of childhood mental illnesses between the 1983 OCHS to the 2014 OCHS suggests an increase in the prevalence of attention deficit/hyperactivity disorders amongst boys, and in anxiety and depression in both girls and boys (Comeau et al., 2019).

Within the sample of 2396 children between and youth, ages 14 to 17 years of age, 8.1% endorsed experiencing suicidal ideation, and 4.3% of the sample had attempted suicide within the past 12 months (Georgiades et al., 2019b). Unfortunately, high rates of mental health concerns are not unique to Canadian children and youth. An increase in the prevalence rates of mental illness for children and youth, specifically emotional disorders, have been reported in other high-income countries (Collishaw, 2015). For low-and middle-income countries (LMIC) this population level data is lacking, and represents an important priority in research (Collishaw, 2015).

These heightened rates are concerning and may speak to the increasingly complex global and political contexts within which we find ourselves living. In a large-scale systematic review of child and adolescent mental health trends, Collishaw (2015) puts forth several possible explanations for the increasing prevalence rates. These include: an increase in individual vulnerability, such as medical advances and technology that increase the chances of survival for children born premature and/or with health conditions, and changing trends in personality traits; changes in family life; changes in extrafamilial psychosocial influences, such as bullying, and educational demands; and larger, socioeconomic and cultural influences. These include an increase in health inequalities, and an increase in professional recognition of mental health concerns.

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Though future variations in trends cannot be predicted with exact certainty, there is little evidence of a reduction of the drivers of mental illness. Therefore, there is little reason to believe that a large proportion of children and adolescents won't continue to require mental health supports. Indeed, in addition to changes in the prevalence rates of mental health concerns, data from the 2014 OCHS also revealed an increase from the 1983 survey in the perceived need for professional help for mental disorders as identified by youth, parents and teachers, with the number almost tripling (Comeau et al., 2019). As it currently stands, this gap in service provision is currently being filled by schools, wherein 40 to 50% of children with a parent-identified mental health concern(s) had contact with a mental health professional at their school, in comparison to only 22 to 34% that had contact with a mental health professional in another setting.

This data clearly illustrates the gap in mental health services that Ontario schools are currently filling (Georgiades et al., 2019a), a gap that they are not always adequately supported to fill. These recent findings are consistent with the literature which has continually documented a substantial treatment gap in children's mental health services (Canadian Psychiatric Association, 2012; Reid & Brown, 2008; Sterling, Weisner, Hinman & Parthasarathy, 2010) and the role schools are expected to play in filling this gap (Farmer et al., 2003; Kirby & Keon, 2006; Kutcher, Ven & Szumilas, 2009; Langford et al., 2016; Power, Cleary & Fitzpatrick, 2008; Rowling et al., 2008; Schonert-Reichl & Hymel, 2007; Weston, Anderson-Butcher & Burke, 2008).

This places greater pressure on teachers, with increased expectations and an increasingly broadened role. It is both ineffectual and unjustifiable to knowingly send teachers into a role that they are not adequately prepared for, particularly when one considers the high rates of stress and

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attrition associated with the profession (Jamieson, 2006; Marko, 2015; Ingersoll & May, 2012; Ingersoll, Merrill & Stuckey, 2014; Rodger et al., 2014). Preparation and ongoing support for this role requires considerable training and support (Georgiades et al., 2019a) and is considered to be important in helping teachers to succeed.

Within a constantly changing world, teachers remain a stable, and consistent figure in the lives of many children. While the role of the teacher has changed and expanded over time, the expectation that they be a constant and supportive figure in the lives of children has not changed. The increasingly complex challenges of today's society, and the impact this will have on future generations to come, means that the children of today and the children of tomorrow will be more reliant on their teachers than ever to create and foster a learning environment wherein they can feel safe, supported and experience success.

Trauma-and-Violence-Informed-Care and Universal Design for Learning. In order for students to experience success, feel confident in taking risks in their learning, and have a sense of belonging, they must at a fundamental level feel safe in their school and classroom. The TVIC model recognizes this rudimentary need and utilizes universal precautions to ensure that all service users feel safe, regardless of their experience of trauma and/or violence (Ponic et al., 2016). This means that TVIC recognizes that service providers may not know the history of trauma and/or violence for a particular service user, nor do they need to. Through utilizing TVIC, organizations are able to create a safe environment and experience for all users.

Models that focus on equity-oriented care utilizing TVIC are being increasingly used within healthcare settings, resulting in improved care experiences and interactions between service users and providers (Ford-Gilboe et al., 2018). Similarly, within the educational setting teachers will not know the unique experiences that each of their students brings with them to the

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classroom, nor is it necessary for them to have this knowledge. Based on research it can be conservatively assumed that up to 72% of Canadian children and youth have had adverse experiences (Chartier, Walker, & Naimark, 2010) and will be coming into the school setting carrying this. Through utilizing a TVIC model schools and educators can ensure that they are being mindful of the experiences of all students, creating a school environment wherein all children can feel safe and supported to learn.

A central focus of TVIC within the educational setting is urging educators to create a learning environment that is safe for all students using “universal precautions” that acknowledge that the majority of students may have experience with trauma and/or violence. This fits well with the Universal Design for Learning (UDL) approach. UDL aims to assist educators in creating products and environments in such a way that they are accessible for everyone, irrespective of the age, skill, or situation of the learner (Ontario Ministry of Education, 2005). Similarly to TVIC, classrooms that utilize UDL are designed to meet the needs of all students, such as those who are differently abled, or are from the non-dominant culture, and in doing so creates a learning environment that is “essential for some, but beneficial for all” (Ontario Ministry of Education, 2005). UDL, like TVIC, also places a focus on the safety of students and creating school and classroom environments that emphasize safety for all learners (Ontario Ministry of Education, 2005). At the core of this model is a focus on equity, and a belief that all students have the right to be included in the classroom and engage in learning.

TVIC, UDL and Students with Mental Health Concerns. The universal design for learning’s central message of “essential for some, but beneficial for all” also fits well when supporting students with mental health concerns, in addition to those exposed to trauma and/or violence. Just as educators will not always be privy to a student’s trauma histories, they will also

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not always be aware of a student's past and/or ongoing mental health challenges. Thus, utilizing "universal precautions" fits well for supporting students who may be experiencing mental health concerns. Educators do not need to be aware of a student's specific concerns and/or diagnoses to create a classroom environment that is supportive and inclusive of all students.

Given the close relationship between exposure to trauma and/or violence and the development of mental health concerns (Felitti et al., 1998; Putnam, 2009; Romano, Babchisin, Marquis & Frechette, 2015), it is important for educators to be considering the potential trauma history of students with mental health concerns that they support. Furthermore, mental health concerns in children often manifest behaviourally (McLeod, Uemura & Rohrman, 2012). Thus, an understanding of the impacts of trauma and how this impacts individuals neurologically, and thus emotionally, socially and behaviourally is important. This can provide additional context for a student's behaviour and shift the focus from blame to understanding. Together, the TVIC and UDL framework, in addition to mental health literacy, are seen as important tools for educators in creating a learning environment in which all students can meaningfully participate, including those experiencing mental health concerns and/or with exposure to trauma.

TVIC, UDL and Diverse Students. In addition to supporting students with mental health concerns, and/or a history of exposure to trauma and violence, TVIC and UDL are believed to offer an essential framework for supporting students from diverse backgrounds.

Globalization has meant that the ethnic makeup of many countries has become increasingly diverse. In Canada this diversity has played a large role in shaping our identity as a nation. With 20% of the Canadian population having been born outside of Canada (Statistics Canada, 2011) this diversity can be seen within the makeup of our population on a daily basis. Children who have immigrated to Canada account for 19% of the newcomer population

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(Statistics Canada, 2011), meaning that our classrooms, as well as our country are becoming increasingly diverse.

While it is professed that diversity will be recognized and celebrated within this country, this is unfortunately often not the case. Youth who recently immigrated to Canada have endorsed greater experiences of discrimination, fear of teasing, exclusion, and a lower sense of safety at school in comparison to students who have lived in Canada for longer (Closson, Darwich, Hymel & Waterhouse, 2014). Similarly, Canadian ethnic minority youth have reported more perceived racial discrimination by peers and educators than did ethnic majority youth (Oxman-Martinez et al., 2012).

Equipping educators with the knowledge and skills necessary to utilize TVIC practices can assist them in making their classrooms and schools places where students of all backgrounds feel welcomed and included. Furthermore, the overlap between principals means that TVIC practices fit well with UDL strategies for diverse learners. For example, UDL strategies could be utilized to make learning accessible for a recently immigrated student learning English. Used in conjunction with a TVIC lens that considers possible contextual factors that may impact this student's learning and engagement, such as migratory stress, discrimination, and policies that impact access to services for newcomer families.

TVIC and UDL also offer important insights for working with other diverse students. Indigenous children and youth in Canada experience higher rates of poverty, suicidality, substandard living conditions, abuse, historical trauma, placement in out of home care, psychosocial concerns, racism and discrimination than do non-Indigenous children and youth (Disant, Herbert, Bergeron & Bruneau, 2008; Crooks et al., 2017; FNIGC, 2012; Ning & Wilson, 2012; Tait, Henry & Walker, 2013). The disproportionate rate of health inequities is reflective of

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the longstanding and continued impacts of harmful colonial practices and policies (Crooks, Chiodo, Dunlop, Lapointe & Kerry, 2018; Greenwood & Leeuw, 2012) and structural violence experienced by Indigenous peoples in Canada.

LGBT2Q youth in Canada represent yet another group with underserved health care needs and greater threats to their health and wellbeing (Dysart-Gale, 2010). These youth face higher rates of exposure to homophobic and transphobic comments and verbal, physical and sexual harassment than do heterosexual youth (Taylor & Peter, 2011). In one study 64% reported feeling unsafe at school (Taylor & Peter, 2011). As a result of these higher rates of exposure to violence and discrimination, LGBT2Q youth are at a heightened risk for the development of mental health concerns (Russell et al., 2011).

The unique experiences of both of Indigenous and LGBT2Q youth warrant a system of care at school that takes into account historical and current contextual factors that impact feelings of safety and belonging at school. TVIC offers a framework to support diverse learners in the classroom, by creating an environment that is culturally safe and acknowledges the role that our culture, race, ethnicity, sexuality and religion can have on our experiences, both past and present.

The emphasis that both TVIC and UDL place on equity is essential in ensuring that all students, regardless of their race, religion, sexuality, ability, and/or experiences, feel safe and welcomed at school and are able to meaningfully engage in their learning. Within the MHL course participants learned how to use the TVIC framework to work with diverse learners through the case study component.

For far too many students, classrooms and schools are not a place of safety. A feeling of safety is critical in our ability to be present and actively engage in learning, build meaningful relationships with others, and gain a sense of mastery and success in our skills and abilities.

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According to Katz (2013), UDL is often driven by a desire to make learning accessible for all students, however, she argues that accessibility alone is not enough. Rather, in order to truly experience a sense of belonging and value, all students must be afforded the opportunity to meaningfully participate in learning and interact with others, regardless of factors like ability, socio-economic status and ethnicity (Katz, 2013).

Plumb and colleagues (2016) make a compelling call to democratize trauma-informed care in schools by making it available to all students, and thus ensure that all children, including those exposed to trauma, have equal access to educational opportunities. TVIC aligns well with many of the principals of UDL in providing schools and educators with a framework to democratize care, and create learning environments that are safe, equitable, inclusive and are places where all students belong and can meaningfully participate in learning.

In their recent book, Katz and Lamoreux (2018) introduce a framework for schools that promotes the mental, spiritual and emotional health of students. The authors note that educators have the power to be “change agents” within schools and society at large, by including all students, paying attention to needs, and “responding with an ethic of care”. In providing teacher candidates with information on TVIC practices they can be supported to work effectively as change agents with diverse students and equip them with the skills necessary for their critical roles in the classrooms of today and tomorrow.

Teacher Agency. In discussing teachers as agents of change, the concept of teacher agency becomes important to address. Teacher agency is the concept of agency theorized specifically for the activities of teachers in schools. While teacher agency has been repeatedly identified as important as a means of understanding how teachers might engage in practice and with policy, it is often poorly conceptualized and understood (Priestley, Biesta & Robinson,

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2015). With the focus being on the individual, while neglecting the conditions necessary to achieve agency. It is important then to take an ecological view of agency. Biesta and Tedder (2007) highlight agency as something that is achieved through the engagement of individuals with certain aspects of their environment/context for action. Priestley and colleagues (2015) further conceptualize teacher agency as having being composed of three dimensions (see Figure 2); the iterational (skills, knowledge, beliefs, values); the projective (teachers' aspirations with respect to their work); and the practical-evaluative (conflicting pressures in work, relationships in schools, resources). This particular view of agency expands on the concept through recognizing the relationship between individual efforts, the resources they have available to them and the contextual setting they are operating within.

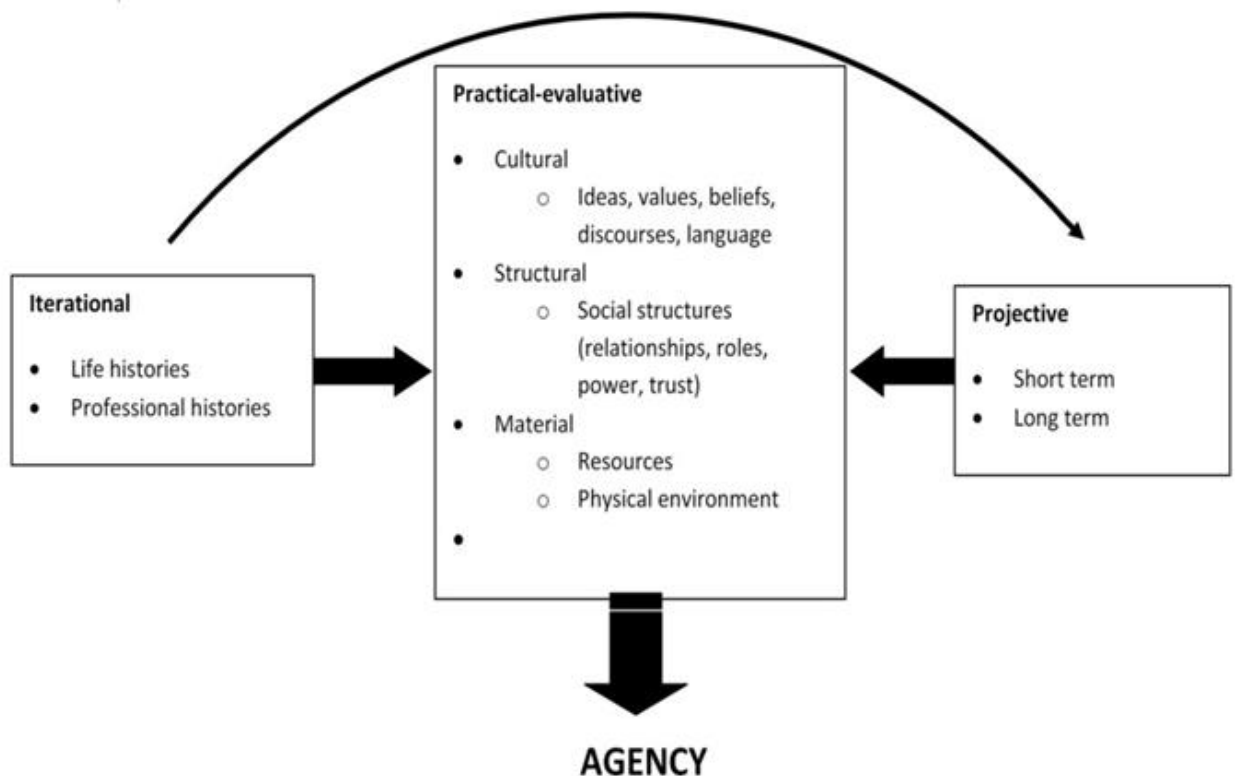


Figure 2. An ecological view of teacher agency (Priestley, Biesta & Robinson, 2015).

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In using an ecological view when considering teacher agency, it becomes clear that consideration of the larger school and educational system becomes important, as opposed to simply focusing on the individual. It is unreasonable to endorse and expect teachers to act as change agents if the conditions for agency are not also addressed at a systems level by understanding the cultural and structural factors that influence agency.

Implications for Teacher Education

Results of the present study have numerous implications for both teacher education practices, student outcomes, as well as the educational system. To foster mental health promotion and create trauma-informed child serving systems, including schools, hospitals and community mental health organizations, it is necessary to have knowledgeable and informed professionals (Ko et al., 2008; Levine Brown, Phillip, Rodger & Weston, 2017; Whitley, Smith & Valliancourt, 2013). However, within the education system the literature has consistently identified that teachers feel ill-prepared and ill-equipped to promote the mental health of their students, identify and support students experiencing mental health concerns (Gowers, Thomas & Deeley, 2008; Levine Brown, Phillip, Rodger & Weston, 2017; Rodger et al., 2014; Roth, Leavey & Best, 2007), and students exposed to trauma (Alisic, 2012; Hobbes, Paulsen & Thomas, 2019).

Preservice teachers are ideally situated for targeted educational efforts, as they are often less fixed on their educational practices; demonstrate positive views towards incorporating mental health related services into their role; and may be more likely to collaborate and consult with non-teacher colleagues and support staff, in comparison to more seasoned teachers (Bostock, Kitt & Kitt, 2011). Through the creation of professional development opportunities covering mental health literacy and TVIC for teacher candidates, educators' desire to learn more

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about mental health and trauma and violence is being addressed, and the gap between what teachers are learning and what they need to know is being decreased.

Preservice teacher education programs in Australia (Walsh, Laskey, McInners & Matthews, 2011) and Scotland (Kearns & Hart, 2017) that have incorporated information on trauma-informed teaching practices into the curriculum have shown positive outcomes. However, larger systemic barriers to implementing a trauma-informed teacher education curriculum on a larger scale, specifically in Australia, have also been identified (Hobbs, Paulsen & Thomas, 2019). In Canada the majority of B.Ed. programs do not offer courses that meet basic criteria to qualify as a mental health literacy course (Rodger et al., 2014), nor is trauma-and-violence-informed teaching being delivered as part of teacher education. This represents a significant gap between what teachers are learning with respect to mental health literacy and what they need to know. Fortunately, educators have identified that they are eager to learn more (Gowers, Thomas & Deeley, 2004; Rodger et al., 2014).

By incorporating high quality mental health literacy and TVIC to teacher education, teacher self-efficacy and confidence can also be increased, both of which have shown numerous positive ramifications for students and teachers. Inclusive educational practices create a learning environment that promotes the success and development of all students. However, in order to deliver effective inclusive education, teachers must have the confidence to teach students with diverse needs (Specht, 2012), including those with mental health concerns and those with experiences of trauma and violence.

Improved teacher education may also help to improve teacher self-efficacy, with significant implications for educators and students. Teacher self-efficacy has been shown to increase educators' tolerance of challenging students; positively influence the classroom

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environment; as well as increase job satisfaction, job commitment, teachers' sense of accomplishment and their overall wellbeing (McCallum, Price, Graham & Morrison, 2017; Zee & Koomen, 2016). Furthermore, teacher self-efficacy has been identified as a protective factor against burnout and attrition and supports teacher effectiveness even when faced with challenging contexts (McCallum, Price, Graham & Morrison, 2017). Given the high occupational stress and emotional labour of the teaching profession (McCallum, Price, Graham & Morrison, 2017), self-efficacy is an important construct to explore in terms of its impact both on teacher effectiveness and wellbeing.

Implications for Students

Impact of Mental Health Concerns on Learning and Development. Children who are healthy achieve more optimal academic outcomes, leading to improved health into adulthood (Langford et al., 2015). The importance placed on academic achievement is reflected in the research and the impact of mental health concerns on students' academic achievement is one of the most highly studied outcomes of mental health challenges (McLeod, Uemura & Rohrman, 2012).

Mental health concerns in children often manifest as behavioural challenges and students' behaviour plays a large role in their academic attainment (McLeod, Uemura & Rohrman, 2012). Students who do not display behavioural challenges and are not disruptive will, perhaps unsurprisingly, be preferred by teachers (Henricsson & Rydell, 2004), and students' work habits often play a significant role in teachers' evaluations of them (Rosenbaum, 2001).

It has been found that 80% of teachers acknowledge that teaching becomes more difficult when there are mental health challenges in their classroom (Gowers, Thomas & Deeley, 2004). In addition to poorer academic outcomes and relationships with teachers, students experiencing

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psychological distress have greater difficulty forming strong relationships with other adults and peers (Meldrum, Venn & Kutcher, 2009), have higher rates of absence from school (Lawrence et al., 2019; Owens, Stevenson, Hadwin & Norgate, 2012), poorer school engagement (Whitley, Smith & Valliancourt, 2013); and are at an increased risk for school dropout (Canadian Council on Learning, 2009; De Ridder et al., 2013).

Amongst mental health challenges in children and adolescents, there is a great deal of heterogeneity and this is also true for responses to mental illness (Perry, 2011). Research has demonstrated that certain mental illnesses are associated with greater levels of academic impairment than others. For example, in a study conducted by McLeod and colleagues (2012), it was demonstrated that attention problems, substance abuse, and delinquency were more closely related to low academic attainment than depression. It is important to note that these outcomes were independent of the academic aptitude of the students, thus demonstrating the significant impact of mental health on academic achievement.

Mental health challenges can have a detrimental impact on more than just student academic outcomes (De Ridder et al., 2013; McLeod, Uemura & Rohrman, 2012; Meldrum, Venn & Kutcher, 2009; Owens, Stevenson, Hadwin & Norgate, 2012). If left untreated, mental illness can have negative long-term impact across a number of domains in life. Including social and emotional wellbeing, as well as career prospects and success (Leitch, 2007; McKewan et al., 2007).

Impact of Exposure to Trauma on Learning and Development. The impact of childhood exposure to trauma on academic functioning is well documented in the literature. The structural, and chemical changes that occur in the brains of trauma exposed children can cause impairments in thinking, reasoning and judgement (De Bellis et al., 1999; Koenen et al., 2003),

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resulting in an increased likelihood of academic impairments; difficulties with self-regulation; and forming healthy relationships (Brunzell, Waters, & Stokes, 2015; Putnam, 2009).

When it comes to structural violence, research has demonstrated that experiencing interpersonal and systemic racism can also result in changes to neurobiological patterns, which in turn can have serious effects on an individual's physical and mental health and wellbeing (Krieger et al. 2011). Children and adolescents who have experienced two or more adverse events are over two times more likely to repeat a grade in school and display lower school engagement than peers without these experiences (Bethell et al., 2014). Furthermore, students who have been exposed to adverse childhood experiences may have lower IQs; poor attendance; higher likelihood of repeating a grade; as well as experience challenges with working memory, language and attention; and display elevated rates of behavioural, emotional and psychosocial concerns (Bücker et al., 2012; NCTSN, 2017; Putnam, 2009; Streeck-Fischer & van de Kolk, 2000). In a Canadian study exploring the long-term impacts of childhood exposure to trauma it was found that 76% of the young people in the sample who had not completed school had experienced one or more types of (Barker, Kerr, Dong, Wood & DeBeck, 2017). Students exposed to trauma are at an increased risk for displaying disruptive behaviours, difficulty regulating emotions, and engaging in reckless and/or aggressive behaviours (Foy & Guagen, 1998; NCTSN, 2017), further impairing their ability to succeed in the school setting and posing significant challenges for the educators supporting these children.

Schools have the opportunity to change children's life courses, whilst simultaneously meeting their own system goals (NCTSN, 2017). If students are expected to flourish at school it is important that those with experiences of trauma and violence, and/or with mental health

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concerns receive purposeful support that emphasizes equity and social justice (Atkins & Rodger, 2016; NCTSN, 2017).

By adequately preparing preservice teachers with the knowledge and skills needed for mental health promotion, including the early recognition of mental health concerns, and the skills needed to recognize, and support students exposed to trauma and violence, damaging effects can be mitigated, and children's life outcomes improved.

Implications for Policy

Policies for Educators. The substantial impact of student mental health issues highlights the importance of schools taking action to combat mental illnesses in its early stages. Within Canada, several school-based mental health (SBMH) knowledge brokers are in operation, creating policies and initiatives aimed at addressing mental health issues in school children (Ott, Hibert, Rodger & Leschied, 2017). These include the Joint Consortium for School Health (JCSH, pan-Canadian), Ontario School Mental Health ASSIST (Ontario), and the Sun Life Chair in Adolescent Mental Health (based in Nova Scotia, and expanded into the Yukon Territory, British Columbia, Alberta, Manitoba and Ontario). Respectively, these three groups advocate for advancing a comprehensive Canadian school health framework; implementing a mental health support team within schools; and adding mental health literacy into the teacher education curriculum (Levine Brown, Phillip, Weston & Rodger, 2019; Ott, Hibert, Rodger & Leschied, 2017).

While it is inarguably important to better address the mental health needs of students (Rodger et al., 2014), research indicates a failure of knowledge brokers to fully consider and hear the voice of educators (Ott, Hibert, Rodger & Leschied, 2017). This oversight has resulted in a clashing of roles between teachers and health authorities, diminished expertise, a blurring

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between the role of healthcare settings and schools, and ultimately an education system that is not adequately meeting the needs of students or teachers (Ott, Hibert, Rodger & Leschied, 2017). Thus, in providing teachers with the knowledge and skills necessary to succeed in their profession, their own needs can be better met by the system within which they work.

Policies for Students. While educational policies can result in a disservice to educators (Ott, Hibert, Rodger & Leschied, 2017), current federal and provincial policies and practices are also not helping children. Provinces and territories have jurisdiction over the design and delivery of social, educational, and health programs, including mental health (Lithwick, 2015, as cited by Waddell, 2019), while the federal government is responsible primarily for funding (Waddell et al., 2019). However, the current structure of children’s mental health services in Canada have been described as an “ineffective patchwork”, marked by ineffective central leadership, policy and a diffusion of responsibility (Waddell et al., 2019). Ultimately resulting in ineffective service reach and delivery (Waddell et al., 2019; Wadell, Sheperd, Schwartz & Barican, 2014).

There has been a longstanding recognition that all children have a right to timely educational, social and health services, as well as the right to freedom from abuse, violence, and equal treatment regardless of gender, race, or cultural background (United Nations, 1989). The stark reality for far too many children in Canada and around the world is that these rights are simply not being upheld or reflected in the policies and practices designed to do so. Preventative efforts, as well as early supports and intervention have been repeatedly identified as critical in improving outcomes for children (Langford et al., 2015; Leitch, 2007; Wadell, Sheperd, Schwartz & Barican, 2014). However, when it comes to mental health, significant barriers to accessing services exist throughout the country (Reid & Brown, 2008; Sterling, Weisner, Hinman

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&Parthasarathy, 2010), the likes of which simply would not be tolerated for physical illnesses and conditions (Waddell, Sheperd, Schwartz & Barican, 2014).

Based on findings from the most recent 2014 Ontario Child Health Survey (OCHS) Waddell and colleagues (2019) have proposed a list of recommendations to both address the high rates of mental health concerns in Canada at a policy level, with a focus on population level prevention and support strategies. These recommendations include reaching all children with mental disorders using innovative service approaches and addressing avoidable childhood adversity. Results of the present study demonstrate that through better equipping teachers with quality instruction in mental health literacy and TVIC the education system can play a role in targeting both of these recommendations. Furthermore, through providing all students, including those with mental health concerns and experiences of trauma and/or violence, with opportunities to participate and meaningfully engage in their learning, schools can also address the right to equitable treatment (United Nations, 1989).

Trauma-and-Violence-Informed-Care Policies. A coordinated full government approach has been identified as critical in addressing the social determinants of health (Marmot et al., 2010). TVIC offers a framework from which to coordinate these governmental policies and practices. With a focus on equity, TVIC can help to ensure that services and supports are responsive and targeted to all children and youth, including those who have experienced trauma, adversity and violence. Creating trauma-and-violence-informed approaches requires shifts in the way systems operate and engage with the individuals they serve (Ponic, Varcoe & Smutylo, 2016). In order for this to occur it becomes necessary to highlight to all stakeholders, across all school and government levels, the importance of creating trauma-informed schools (NCTSN, 2017). Integrating trauma-informed practices into both formal and informal mental health service

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sectors, such as schools, has been identified as a critical step in working towards the creation of trauma-informed systems (Ko et al., 2008). The present research would advocate for extending this to integrate trauma and violence informed practices into service sectors in order to create systems that are responsive to the needs and experiences of all users.

Utilizing a TVIC approach is in line with the World Health Organization's (WHO) policy on Health Promoting Schools (World Health Organization, nd). The policy defines a health promoting school as one that "...constantly strengthens its capacity as a healthy setting for living, learning and working". This is achieved through: engaging all members of the school community in efforts to make the school a healthier place; providing health services and health promoting services around nutrition, physical education, and mental health; implementing policies that honour wellbeing; and working towards improving the health of all members of a school community, including students, staff, families and community members.

Drawing from policies that focus on a preventative approach at a population level, such as the WHO's Health Promoting Schools policy, are more effective in addressing health inequities and social determinants of health (Mantoura, 2014), increasing population levels of flourishing mental health (Keyes, 2010). TVIC offers schools and educators with a useable framework and set of skills from which to create school policies that promote health for all members of a school community and address health inequities.

To foster flourishing mental health, children must be kept safe and protected from avoidable adversities (Wadell, Sheperd, Schwartz & Barican, 2014). Implementing trauma-and-violence-informed approaches across service sectors aids in the creation of a framework that helps to improve efforts to utilize an integrated, multisectoral approach when responding to children and adults seeking services and supports (Ponic, Varcoe & Smutylo, 2016). This in turn

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is believed to result in delivering services that are more purposeful and targeted, and thus can have a greater impact.

The results of this research demonstrate that instruction on mental health literacy and TVIC can result in significant increases in teacher candidates' attitudes towards TVIC and self-efficacy for inclusive practices. This is considered to be a worthwhile return in investment for approximately 5 hours of instruction in TVIC. Through equipping teacher candidates with the knowledge and skills necessary to promote and support the wellbeing of all learners, this research aims to contribute to the body of literature that supports creating systems that are able to meet the standards and recommendations that have been identified at both a national and global level (Waddell et al., 2019; WHO, nd) to be critical in promoting the wellbeing of all children and youth.

Of importance to note, a recent systematic review by Maynard and colleagues (2019) revealed that no studies met the criteria for review and as such the authors concluded that there is a lack of evidence to support a trauma-informed approach in schools. More specifically the authors raise doubts as to whether a trauma-informed framework is resulting in its intended changes and outcomes (Maynard, Farina, Dell & Kelly, 2019). Given the growing support for and uptake of trauma-informed approaches in schools these results may come as surprising and warrant further discussion and exploration. It is first necessary to acknowledge the rigorous inclusion criteria established for the review, which included studies that have: a randomized control trial (RCT), or quasi-experimental design (QED) and are implemented in a K-12 setting. Furthermore, to be included studies had to include at least two out of the three criteria to meet the standard of a trauma-informed approach: workforce development, trauma-focused services, and organizational, environmental practices, and measure a student-level outcome.

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Based on dearth of research that met study criteria, Maynard and colleagues make a call for more high quality, evidence-based research in this area, including research that closely documents what exactly is being implemented in schools when using the term trauma-informed. Given the significant impacts exposure to trauma can have across multiple areas of development for children (Barker et al., 2014; Brunzell, Waters, & Stokes, 2015; Bucker et al., 2012; NCTSN, 2017; Putnam, 2009; Streeck-Fischer & van de Kolk, 2000) it is imperative that interventions, services and supports are carefully considered and scrupulously researched and evaluated to establish effectiveness and ensure safety.

The breadth of requirements as outlined in Maynard and colleague's review is outside of the scope of the present study, which of course would not have met inclusion criteria for the review as it focuses solely on professional development/education, does not take place in a K-12 setting, does not measure a student-level outcome and does not use an RCT or QED. However, the results of the present study lend support to the utility and effectiveness of incorporating high quality professional development on mental health literacy and TVIC into initial teacher education as *one* component of a trauma-informed education system. The present study also highlights the importance of extending trauma-informed-care to trauma-and-violence-informed care, which is not incorporated into Maynard and colleagues systematic review. The extension of trauma-informed-care to trauma-and-violence-informed-care is believed to be an essential approach in creating schools that are safe and equitable for all students.

Implications for School Psychologists

School psychologists represent another key stakeholder within the school community and often play a central role in supporting students with mental health challenges and/or who have experienced trauma and/or violence. While school psychologists serve a multi-faceted role in

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supporting and promoting the mental health of students, insufficient resources means that their services are often significantly stretched. In Canada the recommended ratio of school psychologists to students is 1:1000 (Saklofske et al., 2007). Currently the average ratio sits between 1:2,222 to 1:8000 in Ontario school (Association of Chief Psychologists with Ontario School Boards, 2016). Given the centrality of student mental health to the role of school psychologists and the considerable gap between demands and resources this research is believed to have implications for their profession

Part of the role of school of psychologists involves providing in-service education to teachers and administrators in areas pertinent to student learning and mental health (OPA, 2013). Professional development related to mental health for school staff would likely shift if educators were coming in already having foundational knowledge in mental health literacy and TVIC. If educators were coming to professional development opportunities, related to mental health, having this knowledge the nature of the in-service education could change. School psychologists leading the training could take a more in-depth focus on subjects such as MHL and TVIC and shift the training to identifying and troubleshooting problems of practice, rather than covering more rudimentary information, theories and definitions. This deepens the learning experience for all and moves professional development related to student mental health away from a lecture-style setup and towards a community of practice.

As part of their role school psychologists are also responsible for assisting in the implementation of school-wide intervention programs, such as positive behaviour interventions violence prevention, and crisis intervention (OPA, 2013). Educators equipped with foundational knowledge in mental health literacy and TVIC may be more likely to endorse and implement school-wide interventions aimed at areas such positively targeting challenging student behaviour

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or working with students experiencing a crisis or at risk for perpetrating violence. This in turn could substantially improve the uptake, fidelity, and thus success of school-wide interventions related to mental health and violence prevention.

If educators are better informed and aware of how children with mental health concerns and experiences of trauma and/or violence may present within the classroom, they are increasingly likely to be able to identify these children early (Meldrum, Venn & Kutcher, 2009). This in turn results in supports, such as those offered by a school psychologist as well as other members of the school team, being offered in a timelier manner. The MHL course places a large focus on moving away from looking at diagnostic labels and symptoms, to instead focusing on what specific mental health concerns and experiences of trauma and/or violence actually look like in the classroom behaviourally. Timely intervention is critical in mitigating negative outcomes. Thus, prompt and appropriate referrals to school psychologists, as well as other school and community supports, can be viewed as key step in improving access to appropriate services for children.

Lastly, a central component of a school psychologist's role is providing consultation services related to student learning, behavioural and mental health concerns. This research begs the question of how providing teachers with quality professional education in MHL and TVIC could impact the nature of consultations? Would the referral questions and concerns change if more staff within a school community are viewing social, behavioural and learning challenges through a trauma-and-violence-informed lens or viewing them as possible signs of a mental health concern? If educators felt better prepared and more confident in supporting students with social-emotional concerns in the classroom, it is plausible that the nature and number of referrals (specifically behavioural consultations) could change. This in turn could result in school

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psychologists being able to focus their attention more fully on children and youth with more complex needs who require a higher level of targeted support.

Through equipping educators with MHL and TVIC we can move towards supporting all members of the school team in being more prepared and confident in their role supporting student mental health and students with experience of trauma and/or violence. This has a number of potential implications for multiple members of the larger school community, including school psychologists. It also enables moving towards the creation of a school system that is better able to meet the needs of both students and staff.

Strengths and Limitations

Strengths. A number of studies have previously investigated the impact of mental health literacy/first aid training for educators (Hussein & Vostanis, 2013; Jorm et al., 2010; Kidger et al., 2016; Kutcher et al., 2015; Kutcher, Wei, McLuckie & Bullock, 2013; Miller et al., 2019; Moor et al., 2007; Powers, Weggman, Blackman & Swick, 2014; Viera, Gadelha, Moriyama, Bressan & Bordin, 2014) and students (Kutcher & Wei, 2014; Ojio et al., 2018). Indeed, a large-scale systematic review by Yamaguchi and colleagues (2018) notes an increase in MHL programs for teachers over the past two decades. However, fewer studies were found that focused these efforts on teacher candidates (Armstrong, Price & Crowley, 2015; Atkins & Rodger, 2016; Bostock, Kitt & Kitt, 2011; Carr, Wei, Kutcher & Heffernan, 2018; Whitley & Gooderham, 2016). Of those that have, one focused on the development of a vignette-based measure of MHL with teacher candidates (Whitley & Gooderham, 2016), another on the responses of teacher candidate to case vignettes about young people with mental illness (Armstrong, Price & Crowley, 2015), neither of which intended to provide the participants with curriculum material pertinent to MHL. Carr and colleagues' (2018) study did focus on the

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delivery of a MHL program to teacher candidate, however this was done in the form of a one-day workshop. Thus, by providing MHL instruction in the format of a mandatory, comprehensive, 12-week, course, the design of the present study is felt to be quite unique and an area of strength.

Additionally, a number of the existing MHL professional development opportunities for educators have focused heavily on pathology and equipping educators to identify specific mental illnesses in children (Moor et al., 2007; Kutcher, Wei, McLuckie & Bullock, 2013; Powers et al., 2014; Viera et al., 2014; Whitley & Gooderham, 2016; Yamaguchi et al., 2018), which was not the focus of the MHL course, and indeed is something that it steers away from. Language that is non-psychiatric and more relevant to the educational setting has been identified as preferred by teachers (Rothi, Leavey & Best, 2008). The MHL course focuses instead on equipping educators with the skills and confidence to notice behaviours in the classroom/school that may be indicative of mental health concerns in a student. Again, this was done in an effort to provide teacher candidates with mental health literacy that is relevant to the education system and is less driven by the medical model. Thus, in addition to targeting teacher candidates, the MHL course is felt to be unique in this respect as well.

Encouragingly there has been a growing movement in the implementation of trauma-informed-care practices across a number of different organizations and service sectors (Purtle, 2018). However, to the best of our knowledge this is one of the first times that the impacts of providing teacher candidates with professional education in TVIC is being investigated. Another recent study that looked at trauma education for teacher candidates included a course component on the “Trust-based Relational Intervention” that aims to aid care providers in supporting the wellbeing of children, particularly those who have experienced complex trauma (Stipp, 2019). Other research that has focused on trauma-informed-care for students has been conducted with

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dental students (Raja et al., 2015) and clinical health professional students (Strait & Bolman, 2017).

Much of the of the information on trauma-informed-care for educational settings appears to have been provided as frameworks for schools to use (Australian Childhood Foundation, 2010; Costa, 2017; Perry, 2009; Wolpow et al., 2009), logic models (Plumb, Bush & Kersevich, 2016) and toolkits (NCTSN, 2008). Other more direct forms of professional education in trauma-informed-care have focused on delivery to in-service teachers (Anderson, Blitz & Saastamoinen, 2015; Dorado et al., 2016; McConnico et al., 2016; Parker, Olson & Bunde, 2019; Perry & Daniels, 2016; Vanderburg, 2017), staff at residential treatment settings (Brown, Baker & Wilcox, 2012), child welfare settings (Brown, Baker & Wilcox, 2012; Kenny et al., 2017) and child and adolescent psychiatric settings (Azeem, Aujla, Rammerth, Binsfeld & Jones, 2011; Borckardt et al., 2011). Or has focused on school-based interventions for students exposed to trauma (Jaycox et al., 2009), not the educators supporting them. While these are all unquestionably important areas of research to undertake, it is believed that providing teacher candidates with professional development in both mental health literacy and TVIC represents a critical and understudied area within the field of school mental health and professional education for teachers.

Trauma-informed teaching practices that have been developed largely focus on two important areas; repairing dysregulated stress responses and repairing disrupted attachment styles (Brunzell, Waters & Stokes, 2015; Hobbs, Paulsen & Thomas, 2019). Practices that focus on repairing dysregulated stress responses include strategies that focus on providing students with predictable, consistent routines, classroom management strategies and working with students to enhance their capacity to self-regulate (Hobbs, Paulsen & Thomas, 2019). Teaching practices that

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help to repair disrupted attachment relationships include placing a focus on building positive student-teacher relationships and exhibiting unconditional positive regard for students (Hobbs, Paulsen & Thomas, 2019). The present course incorporates many components from these two identified areas of trauma-informed teaching practices and prepares teacher candidates with the micro skills that are necessary to adopt them, including: welcoming all students into the classroom; highlighting student strengths; creating a safe, predictable classroom routines and environment; and working with students to come up with plans to help them succeed at school.

The emphasis of many professional education opportunities for educators related to trauma often focus solely on trauma, without including important components such as direct, indirect, structural and historical violence. Similarly to MHL, a number of the professional development opportunities for trauma-informed-care are brief, delivered in a workshop format over the course of one to several days. Thus, the creation of a 12-week course on the impact of violence in addition to trauma is believed to be a unique methodological feature of the present study.

An additional strength of the present study is the program evaluation framework it utilized. More often than not when courses are taught at universities it is simply assumed that they are effective in meeting their learning goals and objectives. Rarely are post-secondary courses evaluated in any systematic way, outside of perhaps course evaluations collected by faculties, or directly by instructors. While these can offer a useful way to gain student's perspectives on courses, they don't quantifiably measure learning outcomes.

In utilizing a program evaluation framework to explore the outcomes of the MHL course, the present study challenges the assumption that the course content is satisfactory as is. Instead summative and formative evaluation were actively used in order to improve upon it. This process

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is seen as critical in ensuring that the MHL course is able to offer quality information for teacher candidates in an engaging format, while resulting in significant knowledge gains. Past program evaluations of the MHL course have been instrumental in shaping the continued evolution of content, including adding TVIC to the curriculum. Given the changes in participants' attitudes towards TVIC, this component will remain in future iterations. The results of this program evaluation also highlighted the need to more explicitly focus on additional aspects of teacher wellbeing, particularly with regards to workload and organizational wellbeing. These insights are essential in adapting and improving upon course content and would not have been gained without evaluation of the MHL course.

Lastly, this research represents a new setting and sample for many of the measures that were utilized, including The Teacher Wellbeing Scale (TWBS) and the Attitudes Towards Trauma Informed Care (ARTIC-35), all of which were designed for use with in-service educators (Baker et al., 2015; Collie et al., 2015). The efficacy of these measures within the present sample, as measured by their internal reliability (Cronbach's alpha), indicate their applicability for use in future studies with teacher candidates.

Limitations. A number of limitations existed within the present study that warrant consideration and discussion. A central limitation was the homogeneity of the sample. All participants were second year teacher candidates at a large, Canadian university. This limits the generalizability of the results to other populations and settings.

Overall while there was a high response rate in completion of pre-and post-test measures, 10% of the original sample (N=318) did not complete the post-test survey, and thus their data was not able to be utilized in the analyses. Another challenge within the present study was that of

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missing data. While this was accounted for by establishing a maximum tolerance of no more than 20% of data missing per participant across all items of a subscale, it is a limitation of the study.

As previously noted, participants were receiving other learning experiences as part of their degree concurrently while participating in the present study. While this additional learning through course work and practicum experiences is believed to add to the richness and quality of their education, it does mean that it cannot be inferred that the knowledge gains made are solely due to participation in the MHL course.

Another limitation of the study is the lack of longitudinal data. Participants were tested at two time points during the course of the study, before and after participating in the MHL course. Therefore, it cannot be determined whether the knowledge gains made will be maintained over time, or after the participants transition into their roles as teachers

This research aimed to fill a gap in the understudied area of professional education for teacher candidates in mental health literacy and TVIC. Future research in this area is needed to further investigate the impacts of providing teacher candidates with this information. Follow up data to more fully explore whether knowledge gains are sustained over time is also important.

Conclusion

Society has always understood the importance of preparing future generations with the knowledge and skills needed to succeed in the world. However, it is no longer enough to simply provide children with academic instruction in hopes of adequately preparing them for the challenges of the future. Indeed, it could be argued that this has never been enough.

In an increasingly complex world, it is imperative that *all* children have the opportunity to engage in learning in order to be able to address some the most pressing and complex challenges of our time. However, it becomes exceptionally more difficult for children to

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effectively engage in learning if they are not mentally well and do not feel safe. It thus becomes integral to equip the caring adults in children's lives with the knowledge and skills necessary to promote their mental health and create a sense of safety. For many children, schools and teachers may represent the most common and, in some cases, the only source of support they will receive for coping with mental health concerns and/or exposure to trauma (Brunzell, Stokes & Waters, 2018). By providing teacher candidates with instruction in mental health literacy and trauma-and-violence-informed-care, this research aims to take an upstream approach to supporting some of our most vulnerable children. Through equipping and empowering educators with the knowledge needed to support all students, schools can become central to the creation of strong and resilient communities.

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BUILDING CAPACITY IN TEACHERS THROUGH MENTAL HEALTH LITERACY

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