Student Engagement: The Role of Interpersonal Trauma and Polyvictimization

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A thesis submitted in partial fulfillment of the requirements for the Master of Arts degree in Education

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Abstract

School disengagement is associated with many negative consequences including substance use, delinquency, and dropping out. Understanding school disengagement can help provide targeted prevention and intervention strategies for students at risk. Currently, the impact of interpersonal trauma and polyvictimization on student engagement is not fully understood. To address this gap in the literature, data was obtained from 15402 clinically-referred children/youth (4 to 18-years-old) across the Province of Ontario using the interRAI Child and Youth Mental Health Assessment. Findings revealed that school engagement problems were predicted by physical, sexual, and emotional abuse; neglect; witnessing domestic violence; and polyvictimization. However, there was no significant difference in risk of school disengagement between children and youth exposed to one interpersonal trauma and those who experienced polyvictimization. Implications for school professionals and trauma-informed school initiatives are discussed.

Keywords: Interpersonal trauma; Polyvictimization; School engagement; interRAI ChYMH; Witnessing domestic violence; Physical abuse; Sexual abuse; Emotional abuse; Neglect
Summary for Lay Audience

When children and youth are disengaged from school it impacts their academic performance, motivation to attend school, behaviour in the classroom, and is also associated with many adverse outcomes later in life, such as delinquency. Understanding the underlying factors contributing to school disengagement can help school staff effectively prevent and intervene when students are at risk of becoming disengaged as well as mitigate adverse outcomes for students who experience disengagement. The relationship between exposure to trauma and school disengagement is yet to be fully understood in the literature. Specifically, more information is needed on school disengagement and the impact of traumas which are interpersonal in nature (i.e., physical, sexual, and emotional abuse; neglect; and witnessing domestic violence) and exposure to multiple interpersonal traumas, known as polyvictimization. To address this gap in the literature, the present study examined interpersonal trauma and polyvictimization as predictors of school disengagement. Findings revealed that exposure to interpersonal trauma and polyvictimization predicted school disengagement problems. However, there was no significant difference in risk of school disengagement between those who were polyvictimized and those exposed to only one interpersonal trauma. These findings emphasize the importance of focusing on interpersonal trauma exposure as a risk factor for school disengagement and provide particular benefit to school staff trying to understand student’s behaviour and reduce disengagement from a trauma-informed perspective.
Acknowledgements

I would like to express my sincerest gratitude to my supervisor, Dr. Shannon Stewart, for her unrelenting support and dedicated involvement in every step of the research process. Her expertise and unwavering guidance has been instrumental over the past two years as I established my research ideas and set this project in motion. I would also like to extend my gratitude to Dr. Stewart for all the opportunities I have been given through the interRAI laboratory to further my research skillset, which has helped me to grow academically and brought my work to a higher level. I would also like to sincerely thank Dr. Jacqueline Specht for agreeing to be a member of my advisory committee and for her insightful feedback throughout each stage of the writing process. I am gratefully indebted to her invaluable insight and helpful advice on this thesis. In addition, I would like to thank Dr. Natalia Lapshina for providing her exceptional analytic expertise. Whenever I had questions about regarding analytics, she provided me with guidance and practical suggestions. For this, I am extremely grateful.

This thesis would not be possible without the participation of the children, youth and their families, along with the service providers within mental health agencies across the Province of Ontario. I gratefully acknowledge these individuals for their contribution to this research.

Finally, I would like to acknowledge my partner, friends, and family for their unwavering emotional support and continuous encouragement throughout my academic journey. I am appreciative of their profound belief in my work and for standing by my side throughout this process.
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Introduction

Children who have experienced interpersonal trauma are at risk for many serious negative outcomes. Interpersonal traumas involve one person intending to cause harm to another (e.g., forms of maltreatment such as abuse and neglect), whereas non-interpersonal traumas do not involve a malicious perpetrator (e.g., illness, accidents, and natural disasters; Lilly et al., 2011). Interpersonal traumas have consistently been shown to have a more pronounced impact on mental health outcomes, such as symptoms of traumatic stress (Alisic et al., 2014; Forbes et al., 2011; Gustafsson et al., 2009; McLaughlin et al., 2013). However, the literature in this area has often examined the outcomes associated with various traumas individually rather than cumulatively, such as the adverse outcomes associated with childhood sexual abuse (Kendall-Tackett et al., 1993; Paolucci et al., 2001), childhood physical abuse (Springer et al., 2007; Thompson et al., 2004), or witnessing domestic violence (Fantuzzo & Mohr, 1999; Kolbo et al., 1996). This literature fails to capture the potential impact of cumulative interpersonal trauma exposure on adverse outcomes and may be overestimating the impact of a single victimization on such outcomes (Finkelhor et al., 2007; Turner et al., 2010).

Over the past two decades, researchers of childhood trauma have increased their focus on the examination of the effects of polyvictimization, or multiple instances of exposure to interpersonal trauma, and found a strong association with the number of victimizations in childhood and adverse outcomes (Finkelhor et al., 2007; Ford & Delker, 2018; Gustafsson et al., 2009; Nooner et al., 2012; Stewart, Toohey et al., 2020; Turner et al., 2010; Vranceanu et al., 2007). For example, children and youth who have experienced polyvictimization are more likely to have attachment difficulties; lack informal support; experience interpersonal conflict; and engage in substance use and harm to self or others as compared to those who have not
experienced multiple victimizations (Stewart, Lapshina et al., 2021). Polyvictimization places children and youth at high risk for psychiatric impairment (Ford et al., 2010), including internalizing and externalizing difficulties, post-traumatic stress, addiction, and suicidality (Adams et al., 2016; Charak et al., 2019). Furthermore, polyvictimization has been linked to youth justice involvement (Kerig & Modrowski, 2018) and high risk of delinquency (Ford et al., 2010). This high risk for delinquency among this population is present even when symptoms of post-traumatic stress, depression, or substance use are not clinically significant (Ford et al., 2010). In addition, polyvictimized youth show severe problems in emotion dysregulation (Charak et al., 2019), as well as being related to dissociation and emotional numbing (Kerig & Modrowski, 2018).

However, the relationship between interpersonal traumas, polyvictimization, and school-related outcomes, such as the way students engage in their learning and interact in the classroom, is poorly understood. The childhood trauma literature as it relates to school-related outcomes often focuses on exposure to one specific type of trauma and student outcome, thus hindering understanding and limiting utility for school personnel (Perfect et al., 2016). Examining various types of interpersonal trauma exposure and polyvictimization in the context of the school setting may provide insight into specific areas that school personnel could focus their interventions, such as through the implementation of trauma-informed school initiatives, to ensure that the adverse outcomes associated with school disengagement are mitigated. The current study reviews the literature on the prevalence of interpersonal trauma and polyvictimization in students, as well as what is known about impact of such exposures on student’s engagement in the school system. The literature on school disengagement and the adverse outcomes associated with being disengaged in school is also explored. The present study addresses gaps in the literature by
comprehensively examining the relationship between five interpersonal traumas (i.e., sexual, emotional, and physical abuse; witnessing domestic violence; and neglect), polyvictimization, and school disengagement. Furthermore, the importance of understanding the relationship between interpersonal trauma and polyvictimization on student’s engagement in school system is highlighted through exploring how such information can benefit school-based trauma-informed initiatives.

The Prevalence of Trauma, Interpersonal Trauma, and Polyvictimization in Schools

The extent and magnitude to which interpersonal trauma and polyvictimization impacts both the students and the broader school system as a whole is somewhat unclear, as identifying interpersonal trauma exposure rates in children who are school-aged has proven challenging. The literature examining the prevalence of students presenting with trauma varies based on the study location, the demographic characteristics of the population being studied, how trauma is defined (e.g., studies including both interpersonal and non-interpersonal trauma), and the individual providing information about traumatic event exposure (e.g., parent or child; Gonzalez et al., 2016; Perfect et al., 2016). However, large-scale, nationally representative samples suggest approximately two-thirds of children and youth will be exposed to at least one traumatic event or victimization (whether interpersonal or non-interpersonal) by age 17, indicating that, in general, trauma exposure of any kind impacts a significant majority of school-aged children (Copeland et al., 2007; Finkelhor et al., 2009; McLaughlin et al., 2013).

Specifically related to interpersonal trauma exposure, Saunders & Adams (2014) noted that interpersonal traumas were prevalent in their nationally representative sample of American children and youth. Depending on the definition of the interpersonal trauma, 8-12% had experienced sexual abuse, 9-19% had experienced physical abuse, and 10% had witnessed
domestic violence. Furthermore, in a sample of treatment-seeking children and youth who were assessed at select mental health agencies in Ontario, Canada, the prevalence of sexual abuse was about 10%, physical abuse 19%, emotional abuse 28%, witnessing domestic violence 29%, and emotional and physical neglect at 12% and 9%, respectively (Stewart, Toohey, et al., 2020). Additionally, the prevalence of interpersonal trauma exposure was higher in females than males, with 50% of females experiencing interpersonal trauma compared to 43% of males (Stewart, Toohey et al., 2020).

Polyvictimization is also prevalent in many school-aged child and youth populations. Though many studies do not examine cumulative exposure to interpersonal trauma in isolation, many identify the prevalence of cumulative exposure to both interpersonal and non-interpersonal traumas. For example, Woodbridge et al. (2016) screened middle school students for exposure to interpersonal and non-interpersonal traumatic experiences and traumatic stress in a large, urban school district in Northern California with a high proportion of immigrant and low-income families. The entire sample of middle school students reported an average exposure of more than three traumatic events. A smaller subset of 13.5% of students who had reported elevated traumatic stress symptoms had, on average, experienced more than 6 traumatic events. Furthermore, a nationally representative sample of American youth indicated that more than 22% of children and youth have experienced four or more different kinds of victimizations in the past year (Finkelhor et al., 2007). Another nationally represented sample indicated that the prevalence rate of children and youth who have experienced cumulative exposure to interpersonal and non-interpersonal traumas was 20–48%, depending on the number of traumas types measured (Saunders & Adams, 2014).
The prevalence of polyvictimization in clinically-referred samples varies greatly depending on the type of clinical population being sampled, as well as how the study measures polyvictimization. For example, 61.7% of adolescents recruited from the Spanish child welfare system and the juvenile justice system met the criteria for polyvictimization, as defined by eight or more different kinds of victimizations (Suárez-Soto et al., 2019). Lifetime polyvictimization in a sample of youth in clinical settings (i.e., community-based organizations, hospitals, and universities providing youth mental health services) was 48.6% (Adams et al., 2016). In a sample recruited from a child psychiatry outpatient clinic, a subgroup consisting of 8% of the sample was identified as polyvictimized, and this group had experienced on average 4.5 out of 7 possible victimizations studied (Ford et al., 2011). Recently, Stewart, Toohey et al. (2020) examined the prevalence of polyvictimization in a sample of both inpatient and outpatient mental health treatment-seeking children and youth. The prevalence of polyvictimization in their sample, as defined by experiencing two or more of these interpersonal traumas, was 29%. The interpersonal trauma associated with the highest prevalence of polyvictimization was physical and emotional neglect, with about 98% and 93% of these individuals experiencing two or more types of interpersonal traumas, respectively. Therefore, there is clear evidence that a substantial number of children and youth have been exposed to multiple traumatic events, including interpersonal traumas, and may subsequently be presenting in the school system with symptoms stemming from those experiences. Given the high rate of exposure to trauma in school-aged populations, it is imperative that schools understand the relationship between such exposures and school disengagement.

**School Disengagement**
The impact of interpersonal trauma exposure and polyvictimization on students’ engagement in the school system is yet to be fully understood. When students are engaged in school, they have active school participation, strong emotional ties to teachers, classmates, and academics, and are invested in school activities (Fredricks et al., 2004). School engagement is a multidimensional construct which Fredricks and colleagues (2004) identifies as having 3 underlying dimensions: behavioural, emotional, and cognitive. Behavioural engagement requires student involvement and participation in their education (Fredricks et al., 2004), whereas behavioural disengagement involves noncompliance, disruptive, or negative behaviour; lateness or absenteeism; and nonparticipation in the classroom (Fredricks et al., 2004; Trowler, 2010).

The emotional dimension of school engagement addresses “liking school, belongingness, interests, and general enthusiasm for learning” (Archambault et al., 2009). Students can express emotional disengagement by negative emotional reactions to teachers, other students, their schoolwork, and school itself, as well as an unwillingness to do schoolwork (Fredricks et al., 2004). Finally, students who are cognitively engaged in school show investment in their learning (Trowler, 2010), such as the ability to engage in meaningful learning strategies and develop learning goals (Archambault et al., 2009). Therefore, cognitive disengagement can be expressed through a student’s overall academic performance such as a failure to meet assignment requirements, late, rushed, or absent assignments, and a lack of motivation to overcome challenges in their schoolwork (Trowler, 2010).

School disengagement is a multidimensional construct in which students may show disengagement through either one, two, or all of the aforementioned dimensions. There are also variations in the presentations of the different dimensions of engagement, suggesting that school disengagement can vary in intensity and duration over time (Fredricks et al., 2004). Therefore,
there is a possibility that school disengagement may evolve over time either in a positive
direction towards school engagement, or continue on a trajectory of school disengagement
(Fredricks et al., 2004). Nevertheless, school disengagement is a dynamic process which tends to
accumulate over time and may eventually result in early school leaving, which is often seen as
the final phase in the long process of disengagement from school (Rumberger & Rotermund,

**Negative Consequences of School Disengagement**

Understanding the factors underlying school disengagement should be of upmost concern
due to the negative consequences associated with school disengagement in the literature. Few
studies looking at adverse outcomes of disengagement examine school disengagement
comprehensively, as many utilize a few specific indicators of school disengagement such as
solely examining academic achievement, grade retention, disciplinary referrals, or poor
attendance. Many of these studies are longitudinal in nature and allow for discernment of a
developmental sequence of risk regarding school disengagement and adverse outcomes. For
example, Borowsky and colleagues (2002) found that a history of grade retention in a sample of
adolescents was a powerful risk factor for violence-related behaviours and substance use over the
next year. Notably, school connectedness and a high grade point average were found to be a
protective factors against the development of such violence involvement (Borowsky et al., 2002).
School misbehaviour in grade seven and nine increased the likelihood of involvement in
delinquent behaviour outside of school one year later (Weerman et al., 2007). In a sample of
boys identified as aggressive, O’Donnell and colleagues (1995) found that low levels school
bonding and poor academic achievement at 12 and 13 years of age predicted involvement in
serious delinquent behaviour and substance use one year later.
The association between school disengagement and adverse outcomes later in life is further maintained when the follow-up period is extended past one year. For example, Bond et al. (2007) found that poor school connectedness at age 13 and 14 years increased the likelihood of depressive symptoms, smoking and drinking regularly, and drug use at 16 years of age. Poor school connectedness also decreased the likelihood of these students completing high school (Bond et al., 2007). Henry (2010) found that academic achievement was an important factor in the development of drug use, such that poor academic achievement in grade six was associated with an increased risk of drug use during later adolescence. Additionally, poor academic achievement and problem behaviours in grade six were predictive of gang involvement in grade eight (Dishion et al., 2005). Farrington (1989) found that school failure predicted aggression at 12-14-years-old. However, in aggressive children, Herrenkohl et al. (2003) found that school bonding at age 15 was able to reduce the probability of later violence at age 18.

In a broader examination of the negative consequences of school disengagement, Henry et al. (2012) utilized a longitudinal approach by evaluating five risk indicators of school disengagement in grade eight and nine and compared them to outcomes in middle adolescence, late adolescence, and early adulthood. The risk indicators of school disengagement included: being nonproficient on standardized test scores in one or more subject, not attending class more than 20% of school days, failing in one or more core subject area, suspension from school one or more times, and finally, grade retention. Students with more risk indicators of school disengagement in grade eight and nine had an increased likelihood of dropping out of high school, indicating that school disengagement is a robust predictor of later high school dropout. Furthermore, school disengagement was associated with several measures of serious delinquency and problematic substance use, including serious violent crime, official arrest/police contact, and
problematic drug use, starting in middle adolescence and continuing into early adulthood. School dropout was found to mediate the relationship between earlier school disengagement and the outcomes in early adulthood, suggesting that school dropout, as predicted by school disengagement, affects problem behaviours in early adulthood.

**Interpersonal Trauma and School Disengagement**

Understanding the relationship between interpersonal trauma and school disengagement is important for schools preparing to support students who are experiencing difficulties engaging in school and attempting to mitigate these aforementioned adverse consequences of school disengagement. Despite a growing body of literature on school engagement, no study has explicitly examined the relationship between exposure to various interpersonal traumas, polyvictimization, and school disengagement. There is, however, literature which specifically examines the relationship between certain traumas which happen to be interpersonal in nature (e.g., abuse, neglect, and witnessing domestic violence) and outcomes which are aspects of school engagement (e.g., academic functioning, school disciplinary referrals, grade retention, and attendance). Taken together, these studies outlined below create a promising, but incomplete, picture of the role of interpersonal trauma on student’s engagement in the school system.

**Academic Performance**

There is a strong relationship in the literature between interpersonal traumatic event exposure and the academic performance, one of the elements of school disengagement. Children and youth where were maltreated (i.e., experienced physical, sexual, or emotional abuse, neglect, or “other) were more likely to score one standard deviation or more below the average on standardized tests of cognitive and academic achievement (Crozier & Barth, 2005). Furthermore, child maltreatment, as defined by witnessing domestic violence, physical abuse, emotional
abuse, sexual abuse, and/or neglect, was associated with lower IQ and worse performance on math and reading achievement measures compared to controls (De Bellis et al., 2013). Similarly, De Bellis et al. (2009) found that children who have been neglected performed worse than controls on measures of IQ, math, and reading. Abused and neglected children had significantly lower grades and standardized test scores in math and reading/English as well, with those who had been neglected showing the lowest level of academic achievement among the sample of maltreated children (Eckenrode et al., 1993). Interestingly, Fantuzzo et al. (2011) found that child neglect, but not physical abuse, was associated with poor academic achievement outcomes in second grade students. Similarly, neglected school-aged children showed more pervasive deficits in academic performance compared to physically abused children (Eckenrode et al., 1993; Kurtz et al., 1993; Wodarski et al., 1990) and sexually abused children (Eckenrode et al., 1993). Furthermore, exposure to violence, including witnessing domestic violence, is related to a lower grade point average (Hurt et al., 2001; Mathews et al., 2009), lower performance on standardized tests (Mathews et al., 2009; Thompson & Massat, 2005), and lower IQ and reading ability (Delaney-Black et al., 2002).

**Disciplinary Practices**

In addition to academic functioning, various interpersonal trauma exposures are related to other forms of school disengagement, such as disciplinary practices. Children who have been maltreated, as defined by experiencing the interpersonal traumas of physical abuse, sexual abuse, or neglect, have more discipline referrals and suspensions than their non-maltreated peers, with physically abused children showing the greatest prevalence of these issues (Eckenrode et al., 1993). Lansford et al. (2002) found that adolescents who had been physically maltreated were twice as likely to be suspended from school than those who had not been physically maltreated.
Similarly, Kurtz and colleagues (1993) found that physically abused children had significantly more behaviour problems in the classroom than non-maltreated and neglected children. However, neglected children still demonstrate significant disciplinary problems, with second grade students who experienced neglect being 88% more likely to be suspended from school than their non-neglected peers (Fantuzzo et al., 2011).

**Grade Retention, Attendance, and Other Forms of School Disengagement**

Maltreated children have higher rates of grade retention (Eckenrode et al., 1993; Shonk & Cicchetti, 2001; Wodarski et al., 1990). For example, abused and/or neglected children are 2.5 times more likely to repeat a grade than their non-maltreated peers (Eckenrode et al., 1993). Maltreatment in children is also associated with problematic school attendance (Fantuzzo et al., 2011; Lansford et al., 2002; Shonk & Cicchetti, 2001; Wodarski et al., 1990). Specifically, for girls who have been sexually abused, the most common problem reported by parents and teachers is academic difficulties, such as receiving remedial services and grade retention (Daignault & Hebert, 2009). High exposure to witnessing violence, including domestic violence, is another interpersonal trauma also associated with school-related outcomes such as poor school attendance (Hurt et al., 2001; Mathews et al., 2009). Toddlers’ exposure to domestic violence in the home is associated with increased levels school disengagement (e.g., negative feelings towards school, dislike towards teacher) in middle school (Schnurr & Lohman, 2013). In summary, there are a variety of interpersonal traumas associated with various indicators of school disengagement which can have a negative impact on both the student’s academic experience and the school system as a whole.

**Polyvictimization and School Disengagement**
An understanding of which children exposed to interpersonal traumas are at the greatest risk of negative outcomes is important when addressing school-related needs and implementing school-based mental health programs. An individual’s response to trauma is determined by several factors, including their personal characteristics (e.g., age, developmental stage, coping abilities, the role of prior trauma), the nature of the traumatic experience (e.g., frequency, severity, and duration of the trauma), and their environment (e.g., the ability of the home, school, and community to foster a safe environment and promote adaptive coping skills; Harvey, 1996). For example, prolonged exposure to chronic, repetitive interpersonal traumas early in life results in an increased likelihood that the individual will experience significant negative effects on their psychological functioning, as opposed to shorter exposure to interpersonal trauma which occurs later in life (van der Kolk et al., 2005).

Specifically related to school disengagement, there is evidence that this cumulative exposure to interpersonal trauma, or polyvictimization, increases children and youth’s risk of experiencing negative school-related outcomes, such as becoming disengaged from school. Exposure to four or more adverse childhood experiences, of which most included interpersonal traumas such as abuse, neglect, and exposure to domestic violence, is associated with increased risk of learning and behaviour problems (Burke et al., 2011). For example, in children who were found to have learning/behaviour problems, 3% had no adverse childhood experiences compared to an astounding 51.2% who had four or more adverse childhood experiences (Burke et al., 2011). Children who have experienced heightened levels of adverse family experiences, including the interpersonal trauma of exposure to domestic violence, were more likely to have a mental health diagnosis, which further led to higher levels of school disengagement, increased likelihood of grade retention, and placement in special education services (Porche et al., 2016).
In addition, experiencing a greater number of maltreatment types (e.g., witnessing domestic violence, physical, sexual, or emotional abuse and/or neglect) was inversely associated with academic performance in math and reading (De Bellis et al., 2013).

**Trauma-Informed Schools**

Understanding the impact of interpersonal trauma exposure and polyvictimization in the school system is critical given recent and growing interest towards the implementation of trauma-informed approaches in the schools. This movement stems from an increase in awareness of the aforementioned prevalence of trauma exposure in students, as well as a growing understanding of the need to recognize the pervasive impact of this exposure on children’s ability to function optimally within the school system (Overstreet & Chafouleas, 2016). Schools have been identified as an opportune resource which can provide safe and inclusive spaces for all students (Rodger et al., 2020), as well as offer preventative and intervention efforts for those struggling with the adverse effects of trauma exposure (Chafouleas et al., 2016; Chafouleas et al., 2019; Kataoka et al., 2018; Reinbergs & Fefer, 2018; Wiest-Stevenson & Lee, 2016). In schools, a trauma-informed approach encourages educators and school mental health professionals to be aware of different forms of trauma and their impact on development, learning, and behavior (Gubi et al., 2019). By implementing a trauma-informed approach, the school-related outcomes associated with interpersonal trauma exposure may be subsequently alleviated. The goal of trauma-informed schools is not to single out children showing signs of trauma exposure, although important, but rather to have an understanding of how various types of trauma exposure may present in the school system and assume a high prevalence of such exposure, thus treating the whole system and fostering resilience among all students (Parker et al., 2020).
As the development and implementation of these trauma-informed approaches is growing in popularity, there is a need for comprehensive, easily-accessible literature which investigates the impact of trauma on behaviour in the school system. Schools should be familiar with the literature on the impact of trauma on students when implementing a trauma-informed approach (Parker et al., 2020). This is outlined in a framework for the delivery of a trauma-informed approach in schools developed by Chafouleas et al. (2016) using the recommendations regarding a trauma-informed approach from the Substance Abuse and Mental Health Services Administration (SAMHSA, 2014). When implementing a trauma-informed initiative for school-based service delivery, it is recommended that schools follow the key assumptions of the trauma-informed approach, otherwise referred to as the four R’s (SAMHSA, 2014). These include a) realizing the impact of trauma on people’s experiences and behaviour, b) recognizing how trauma may manifest, c) responding to the trauma appropriately and throughout the entire system, including all tiers of service delivery, and finally d) resisting re-traumatization (SAMHSA, 2014). Furthermore, Rodger and colleagues (2020) outlined the principles of trauma-and-violence-informed-care in schools, which includes understanding trauma, violence, and its impact on student’s lives and behaviour. Therefore, in order to effectively realize the impact of trauma, recognize how it manifests, and respond to the needs of children through trauma-informed interventions, school staff and mental health professionals need to have information and research available to them regarding the various school-related outcomes associated with trauma exposure as they present in students.

**Current Study**

As there has been a growing need for educators to be knowledgeable about the impact of trauma on students and for schools to be trauma-informed, so is the need for research examining
trauma and its relationship to school disengagement. The existing literature may be limited in its application in the school setting as many studies only examine a narrow aspect of trauma in addition to a narrow examination of school-related outcomes (Perfect et al., 2016). Furthermore, some studies include ages of individuals not school-aged, thus limiting the utility for school personnel (Perfect et al., 2016). Therefore, more research is needed to examine the impact of trauma as it directly relates to its presentation in the school system (Perfect et al., 2016). There is currently a gap in the literature in which there is no comprehensive examination on the impact of various types of interpersonal traumas and cumulative exposure to those traumas, or polyvictimization, on school disengagement.

The current study aims to be a resource for schools implementing trauma-informed school initiatives by examining the prevalence of five interpersonal traumas, polyvictimization, and school disengagement among children and youth referred for mental health services. The relationships between each interpersonal trauma, polyvictimization, and school disengagement will be examined through binary logistic regression analyses. Specifically, the interpersonal traumas of physical abuse, sexual abuse, witnessing domestic violence, emotional abuse, and neglect and their associations with the presence or absence of school disengagement will be analyzed. The presence of school disengagement will be examined using the School Disengagement Scale (described in greater detail in the methods) which includes items covering increased lateness or absenteeism, poor productivity or disruptiveness at school, conflict with school staff, current removal from school due to disruptive behavior, strong persistent dissatisfaction with school, current refusal to attend school, expresses intent to quit school, and poor overall academic performance.
Based on the extant literature on the negative outcomes associated with both interpersonal trauma exposure and polyvictimization, it was hypothesized that children and youth who experienced interpersonal trauma and polyvictimization would be at a greater risk of school disengagement as compared to those who experienced no interpersonal trauma exposure and no polyvictimization. Furthermore, polyvictimization was hypothesized to put children at greater risk of being disengaged from school compared to those who experienced only one interpersonal trauma. This hypothesis is supported by previous research showing that cumulative effects of interpersonal trauma exposure are negatively related to school-related outcomes (Burke et al., 2011; De Bellis et al., 2013; Porche et al., 2016). Additionally, the interpersonal trauma of neglect is hypothesized to have the greatest impact on school disengagement when compared to sexual, emotional, and physical abuse, and witnessing domestic violence. This hypothesis is supported by previous findings which indicate that neglect appears to most consistently in the literature have a pervasive impact on many school-related outcomes compared to other forms of interpersonal trauma (Eckenrode et al., 1993; Fantuzzo et al., 2011; Kurtz et al., 1993; Wodarski et al., 1990) and that polyvictimization is most prevalent among children and youth who have experienced neglect (Stewart, Toohey, et al., 2020).

**Methods**

**Participants**

The participants included 15402 school-aged children and youth receiving services from mental health agencies across the Province of Ontario, Canada. Consistent with previous studies of interpersonal trauma and polyvictimization (Stewart, Lapshina et al., 2021) and school disengagement (Klassen et al., 2021), the age categories of 4 to 7-years-old, 8 to 11-years-old, and 12 to 18-years-old were used along with the sex categories of male and female. The average
age of students was 12.3 years (SD = 3.6) and 56.2% of the sample identified their sex as male (n = 8651) and 43.8% as female (n = 6751). Mental health agencies included in the study used the *interRAI Child and Youth Mental Health Assessment* (ChYMH; Stewart et al., 2015). Most, but not all, provincial mental health agencies in Ontario use the interRAI ChYMH assessment as part of standard of care (the ChYMH is described in greater detail below). The sample included clinically-referred children and youth from kindergarten until the end of high school (between the ages of 4 and 18 years). Similarly to previous studies of school disengagement by Klassen & Stewart (2022), all participants did not have a suspected or identified developmental disability. Assessing individuals with developmental disabilities requires a different instrument and is beyond the scope of the current study. Analyses which result in outputs of less than five participants were not reported to protect the identity of those with unique profiles. Therefore, individuals who identified their sex as neither male or female were excluded from the analysis for confidentiality purposes due to the small sample size of these individuals (n = 33).

**Procedure and Ethical Considerations**

Data were collected from February 2012 to December 2019 using interRAI ChYMH assessments obtained from over 50 participating mental health service agencies across the Province of Ontario. Assessments were completed at intake into clinical services by trained assessors such as nurses, social workers, psychologists, and child and youth workers. Using a semi-structured interview format, information was obtained from multiple sources including conversations with the child or youth, family members/guardians, teachers, and other members of the individual’s support services team. In addition, information was incorporated from direct observations of the child or youth as well as clinical documents such as medical records, report cards, academic assessments, and other relevant documents to provide comprehensive
information of the child or youth from a number of areas. Completed interRAI ChYMH assessments were given a randomly generated case record number to protect the identity of the child or youth. The de-identified data were then stored on a secure web-based software where only authorized individuals may access them. Western University’s Research Ethics Board (REB #106415) provided approval for the analysis of the data investigated in this study. All analyses were performed using SPSS version 25.0 software (IBM Corp., Armonk, NY, USA). It is also important to note that data from time periods during the COVID-19 pandemic was not included in this study due to the variability and changes regarding school closures and online school during this time.

**Measures**

*interRAI ChYMH*

The interRAI ChYMH is a standardized assessment tool designed for clinical use in community-based or inpatient/residential service settings. The assessment utilizes approximately 400 items divided into 22 sub-sections to evaluate areas of functioning, risk, needs, and resilience in children and youth aged 4 to 18-years-old. It provides a comprehensive summary of many areas of the child or youth’s life including psychological, social, behavioural, environmental, and medical needs. The interRAI ChYMH includes scales and algorithms embedded within the instrument to provide information on symptom intensity in a variety of areas and promote evidence-informed clinical decision making. Across the interRAI suite of instruments, rigorous reliability and validity studies have shown robust psychometric properties for these scales and algorithms, especially in child and youth populations (e.g., Hirdes et al., 2020; Lau et al., 2019; Lau et al., 2018; Stewart & Babcock, 2020; Stewart, Babcock et al., 2020; Stewart, Celebre et al., 2020; Stewart, Celebre et al., 2021; Stewart & Hamza, 2017; Stewart,
Morris, et al., 2019; Stewart, Poss et al., 2019). The interRAI website (www.interrai.org) provides more information regarding the interRAI suite of instruments including the interRAI ChYMH.

**Interpersonal Trauma and Polyvictimization**

Similar to previously published articles (e.g., Stewart, Lapshina et al., 2021), items from the interRAI ChYMH were used to identify exposure to five types of interpersonal trauma. These include physical abuse, sexual abuse, witnessing domestic violence, emotional abuse, and neglect. Physical abuse was determined by any experience resulting in non-accidental injury, physical confinement, or excessive physical discipline. Sexual abuse pertained to any form of exposure of genitals, sexual assault, sexual touching or coercion. Witnessing domestic violence involved the child or youth being exposed to or having knowledge of verbal threats or physical actions toward another family member. Emotional abuse referred to pervasive hostility which invalidated self-esteem, identity, or emotional needs of the child or youth. These first four types of interpersonal trauma were taken from four items on the interRAI ChYMH which can be coded from zero to five (0 – never, 1 – more than 1 year ago, 2 – 31 days to 1 year ago, 3 – 8 to 30 days ago, 4 – 4 to 7 days ago, and 5 – present within the last 3 days). These responses were further categorized into two groups with scores of either zero or one, with zero indicating no prevalence of the traumatic life event and one indicating exposure ranging from within the last three days to more than one year ago.

Neglect was addressed through three items on the interRAI ChYMH which indicate that there has been a severe failure to provide the basic physical, emotional, and safety needs of the child or youth. Physical neglect referred to the failure to meet the physical needs of the child or youth. Emotional neglect indicates that a failure to provide nurturance, warmth, love, or affection
has occurred. Finally, safety neglect was determined by a failure to meet the safety needs of the child or youth. These items were combined into one score to represent if a history of any type of neglect had occurred at any point in the child or youth’s lifetime (indicated by a one) or if no neglect of any kind was present at any point in the child or youth’s history (indicated by a zero).

Responses to the five types of interpersonal trauma were combined to indicate the presence of polyvictimization. Each child/youth received a score to determine how many interpersonal trauma types were experienced by the individual, ranging from zero to five (0 – *no trauma*, 5 – *all 5 types of trauma are present*). For the present study, this score was further dichotomized into three categories: a zero indicating no interpersonal trauma was experienced, one indicating that one interpersonal trauma type was experienced, and two indicating that two or more interpersonal trauma types were experienced. The present study classified the last category, exposure to two or more types of interpersonal trauma, as polyvictimization. This categorization aligns with previous work by Stewart and colleagues (2021), which previously indicated that any exposure to two or more types of interpersonal trauma is considered polyvictimization. Notably, this variable therefore indicates the presence of polyvictimization by the cumulative presence of interpersonal traumas but does not differentiate by the severity or chronic nature of the abuse.

**School Disengagement**

School disengagement was assessed using the *School Disengagement Scale* (SDeS) which is embedded within the interRAI ChYMH (Stewart et al., 2016). This scale demonstrates strong internal consistency and construct validity (Stewart et al., 2016) and evaluates student disengagement utilizing eight items: increased lateness or absenteeism, poor productivity or disruptiveness at school, conflict with school staff, current removal from school due to disruptive
behaviour, strong persistent dissatisfaction with school, current refusal to attend school, expresses intent to quit school, and poor overall academic performance. Each item is scored by assessors as being present or not present (1 = yes, 0 = no) and added together to create a score ranging from zero to eight. In alignment with previous work by Klassen and Stewart (2022) and Klassen and colleagues (2021), scores of zero to one indicate the student is engaged in school, whereas scores of two to eight indicate heightened risk of disengagement.

Analytic Strategy

First, preliminary analyses were conducted to investigate the prevalence of each type of interpersonal traumatic event, school disengagement, and polyvictimization by total samples, age, and sex. Next, chi-square tests of independence were conducted to investigate the association between polyvictimization and school disengagement, as well as each interpersonal trauma and school disengagement. Then, a multivariate binary logistic regression was conducted to predict school disengagement from polyvictimization while controlling for sex and age differences. Finally, multivariate binary logistic regression analyses were conducted to predict school disengagement using each of the five interpersonal traumas separately as a predictor variable, totalling five models. Sex and age were included as predictors in each of the five models to control for these variables in the analyses. Bonferroni adjustments were conducted to adjust for any potential type one errors.

Results

Preliminary Analyses

In the present study, the most prevalent interpersonal trauma was witnessing domestic violence (28.4%, n = 4380), followed by emotional abuse (27.7%, n = 4262), then physical abuse (18.7%, n = 2873), neglect (17.9%, n = 2749), and sexual abuse (10.6%, n = 1634). Females had
a higher prevalence of all interpersonal trauma types compared to males. The greatest difference between the sexes was observed with sexual abuse, with 17.8% (n = 1205) of females experiencing sexual abuse compared to 5% (n = 429) of males. For all five interpersonal traumas, children aged 4 to 7-years-old experienced the lowest prevalence of exposure compared to 8 to 11 and 12 to 18-year-olds, whereas youth 12 to 18-years-old experienced the highest prevalence of exposure compared to the other age groups.

Most children and youth did not meet the criteria for polyvictimization, with 52.7% experiencing no interpersonal trauma (n = 8118) and 18.6% experiencing one type of interpersonal trauma (n = 2865). The remaining 28.7% of children and youth met the criteria for polyvictimization (n = 4419), with 11.5% experiencing two types of interpersonal trauma (n = 1777), 9.1% experiencing three types of interpersonal trauma (n = 1394), 6.1% with four interpersonal trauma types (n = 943) and 2% with all five types of interpersonal trauma (n = 305). More males (56%, n = 4844) had no interpersonal trauma exposure compared to females (48.5% n = 3274), whereas females had a higher prevalence of experiencing one, two, three, four, and five types of interpersonal trauma. Those in the youngest age group (4 to 7-years-old) experienced the highest prevalence of no interpersonal trauma exposure (63.5%, n = 1128) compared to the other age groups, whereas those in the oldest age group (12 to 18-years-old) had the highest prevalence of experiencing one type of trauma as well as polyvictimization (two or more types of trauma) compared to the other age groups.

Almost half of the children and youth examined (46.4%, n = 7063) met the cut off for risk of school disengagement. Furthermore, more males (52.4%, n = 4479) than females (38.8%, n = 2584) met the criteria. The age group with the highest prevalence of risk of school disengagement was 8 to 11-year-olds (47.8%, n = 2145), followed by 12 to 18-year-olds (46.6%,
Only 41% \((n = 726)\) of 4 to 7-year-olds were at risk for school disengagement. Refer to Table 1 and 2 for a complete summary of the frequency distributions, categorized by sex (Table 1) and age (Table 2), for all the variables included in the present analyses.

**Table 1**

*Frequencies of Interpersonal Trauma, Polyvictimization, and School Disengagement for the Male Sex, Female Sex, and the Total Children and Youth Samples*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Male</th>
<th>Female</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n)</td>
<td>(%)</td>
<td>(n)</td>
</tr>
<tr>
<td>Interpersonal trauma</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual abuse</td>
<td>429</td>
<td>5.0</td>
<td>1205</td>
</tr>
<tr>
<td>Physical abuse</td>
<td>1532</td>
<td>17.7</td>
<td>1341</td>
</tr>
<tr>
<td>Emotional abuse</td>
<td>2117</td>
<td>24.5</td>
<td>2145</td>
</tr>
<tr>
<td>Witness domestic violence</td>
<td>2415</td>
<td>27.9</td>
<td>1965</td>
</tr>
<tr>
<td>Neglect</td>
<td>1495</td>
<td>17.3</td>
<td>1254</td>
</tr>
<tr>
<td>Polyvictimization</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No trauma</td>
<td>4844</td>
<td>56.0</td>
<td>3274</td>
</tr>
<tr>
<td>One type of trauma</td>
<td>1597</td>
<td>18.5</td>
<td>1268</td>
</tr>
<tr>
<td>Two types of trauma</td>
<td>898</td>
<td>10.4</td>
<td>879</td>
</tr>
<tr>
<td>Three types of trauma</td>
<td>743</td>
<td>8.6</td>
<td>651</td>
</tr>
<tr>
<td>Four types of trauma</td>
<td>479</td>
<td>5.5</td>
<td>464</td>
</tr>
<tr>
<td>Five types of trauma</td>
<td>90</td>
<td>1.0</td>
<td>215</td>
</tr>
<tr>
<td>School disengagement</td>
<td>4479</td>
<td>52.4</td>
<td>2584</td>
</tr>
</tbody>
</table>
Table 2

Frequencies of Interpersonal Trauma, Polyvictimization, and School Disengagement for Children and Youth Ages 4-7, 8-11, and 12-18

<table>
<thead>
<tr>
<th>Variable</th>
<th>4 to 7 Years</th>
<th></th>
<th>8 to 11 years</th>
<th></th>
<th>12 to 18 years</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Interpersonal trauma</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual abuse</td>
<td>61</td>
<td>3.4</td>
<td>287</td>
<td>6.4</td>
<td>1286</td>
<td>14.1</td>
</tr>
<tr>
<td>Physical abuse</td>
<td>168</td>
<td>9.5</td>
<td>686</td>
<td>15.2</td>
<td>2019</td>
<td>22.1</td>
</tr>
<tr>
<td>Emotional abuse</td>
<td>279</td>
<td>15.7</td>
<td>1032</td>
<td>22.9</td>
<td>2951</td>
<td>32.4</td>
</tr>
<tr>
<td>Witness domestic violence</td>
<td>475</td>
<td>26.7</td>
<td>1359</td>
<td>30.2</td>
<td>2546</td>
<td>27.9</td>
</tr>
<tr>
<td>Neglect</td>
<td>297</td>
<td>16.7</td>
<td>772</td>
<td>17.1</td>
<td>1680</td>
<td>18.4</td>
</tr>
<tr>
<td>Polyvictimization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No trauma</td>
<td>1128</td>
<td>63.5</td>
<td>2549</td>
<td>56.6</td>
<td>4441</td>
<td>48.7</td>
</tr>
<tr>
<td>One type of trauma</td>
<td>291</td>
<td>16.4</td>
<td>833</td>
<td>18.5</td>
<td>1741</td>
<td>19.1</td>
</tr>
<tr>
<td>Two types of trauma</td>
<td>172</td>
<td>9.7</td>
<td>445</td>
<td>9.9</td>
<td>1160</td>
<td>12.7</td>
</tr>
<tr>
<td>Three types of trauma</td>
<td>108</td>
<td>6.1</td>
<td>349</td>
<td>7.8</td>
<td>937</td>
<td>10.3</td>
</tr>
<tr>
<td>Four types of trauma</td>
<td>69</td>
<td>3.9</td>
<td>269</td>
<td>6.0</td>
<td>605</td>
<td>6.6</td>
</tr>
<tr>
<td>Five types of trauma</td>
<td>9</td>
<td>0.5</td>
<td>58</td>
<td>1.3</td>
<td>238</td>
<td>2.6</td>
</tr>
<tr>
<td>School disengagement</td>
<td>726</td>
<td>41.8</td>
<td>2145</td>
<td>47.8</td>
<td>4192</td>
<td>46.6</td>
</tr>
</tbody>
</table>

Bivariate Analyses

A chi-square test of independence was conducted to investigate if polyvictimization was associated with heightened risk of school disengagement among children and youth. Findings
revealed that children and youth who experienced one type of interpersonal trauma as well as those who were polyvictimized (two or more types of interpersonal trauma) were significantly more likely to be at risk for school disengagement than those with no interpersonal trauma exposure ($\chi^2(2) = 121.587, p < .001$) with small effects (Cramer’s $V = .089$). As seen in Table 3, there was no significant difference in risk of school disengagement between children and youth who had experienced one interpersonal trauma and those who had experienced polyvictimization. Notably, 42.2% of children/youth with no interpersonal trauma exposure were at risk for school disengagement, whereas 51.9% and 50.6% of children/youth with exposure to one interpersonal trauma type or have experienced polyvictimization are at risk for school disengagement, respectively. This is evidence to suggest any interpersonal trauma exposure significantly increases the likelihood of school disengagement, regardless of the presence of polyvictimization.

Table 3

*Pearson Chi-square Analyses of School Disengagement and Polyvictimization*

<table>
<thead>
<tr>
<th>Variable</th>
<th>No trauma exposure</th>
<th>One trauma exposure</th>
<th>Polyvictimization</th>
<th>$\chi^2$</th>
<th>$p$</th>
<th>Cramer’s $V$</th>
</tr>
</thead>
<tbody>
<tr>
<td>School disengagement</td>
<td></td>
<td></td>
<td></td>
<td>121.587</td>
<td>&lt;.001</td>
<td>0.089</td>
</tr>
<tr>
<td>No</td>
<td>57.8$^a$</td>
<td>48.1$^b$</td>
<td>49.4$^b$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>42.2$^a$</td>
<td>51.9$^b$</td>
<td>50.6$^b$</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Each superscript denotes a category whose column proportions do not differ significantly from each other at the .05 level after using the Bonferroni adjustment.
Next, chi-square tests of independence were performed to investigate if each of the five types of interpersonal traumas (sexual abuse, physical abuse, emotional abuse, witnessing domestic violence, and neglect) were associated with heightened risk of school disengagement among children and youth. Findings revealed that all of the interpersonal traumas examined were each significantly associated with risk of school disengagement. However, small effect sizes were observed for each interpersonal trauma, as indicated by Cramer’s $V$. Specifically, children and youth who experienced sexual abuse ($\chi^2(1) = 4.727, p = .030; \text{Cramer’s } V = .018$) were significantly more likely to be at risk for school disengagement (49.0%) than those who did not experience sexual abuse (46.1%). Further, children and youth who experienced physical abuse ($\chi^2(1) = 51.200, p < .001; \text{Cramer’s } V = .058$) were found to be significantly more likely to be at risk of school disengagement (52.5%) than those who were not physically abused (45.0%). Emotional abuse was found to be significantly related to risk of school disengagement in children and youth ($\chi^2(1) = 46.407, p < .001; \text{Cramer’s } V = .055$) as well as witnessing domestic violence ($\chi^2(1) = 81.840, p < .001; \text{Cramer’s } V = .073$; Emotional abuse: 50.9%; Witnessing domestic violence: 52.2%) compared to those who did not experience these interpersonal traumas (Emotional abuse: 44.7%; Witnessing domestic violence: 44.1%). Lastly, findings revealed that children and youth who experienced neglect ($\chi^2(1) = 32.954, p < .001; \text{Cramer’s } V = .047$) were more likely to be at risk for school disengagement (51.4%) than those who were not neglected (45.3%).

**Multivariate Analyses**

**Polyvictimization**

Multivariate binary logistic regression analysis was used to predict school disengagement using polyvictimization, sex, and age as predictors. Age was separated into three groups: 4-7, 8-
11, and 12-18 years of age. Experiencing polyvictimization, the male sex, and the youngest age group was used as the reference group in the analysis. The full model provided a significantly better fit to the data than the constant-only model, indicating that the predictors, when taken together, reliably distinguish between those who experience risk of school disengagement and those who do not ($\chi^2=463.360$, $df = 5$, $p < .001$). The model fit was good as evidenced by non-statistically significant Hosmer-Lemeshow test ($\chi^2=3.324$, $df = 8$, $p = .912$). The full model correctly classified 57.7% of cases.

Results indicated that the three predictors in the model, biologically female sex, age, and the presence of interpersonal trauma exposure significantly predicted risk of school disengagement. Controlling for sex and polyvictimization, compared to children aged 4-7 years, 8 to 11-year-old children were more likely in odds to be at risk of school disengagement ($OR = 1.256$, 95% CI: 1.121, 1.407), which corresponded to a 25.6% increase in probability. Likewise, youth aged 12 to 18-years-old were more likely in odds to experience school disengagement ($OR = 1.332$, 95% CI: 1.197, 1.482), which corresponded to a 33.2% increase in probability. Furthermore, controlling for age and polyvictimization, females were less likely than males in odds to be at risk of school disengagement ($OR = 0.540$, 95% CI: 0.504, 0.577), which corresponded to a 46% decrease in probability. Controlling for sex and age, students who have one type of interpersonal trauma did not differ from those with polyvictimization experiences ($OR = 1.024$, 95% CI: 0.930, 1.127), which corresponded to a 2.4% difference in probability. Students who have no interpersonal trauma exposure were less likely in odds to be at risk for school disengagement compared to polyvictimized children ($OR = 0.679$, 95% CI: 0.679, 0.732). Specifically, those with no interpersonal trauma had a 32.1% decreased probability of school
disengagement compared to polyvictimized children and youth. See Table 4 for regression coefficients, Wald statistics, odds ratios, and 95% confidence intervals.

**Table 4**

*Regression Analysis: School Disengagement as a Function of Polyvictimization, Sex, and Age*

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B</th>
<th>Wald chi-square</th>
<th>Odds ratio</th>
<th>95% C.I.</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyvictimization</td>
<td>141.697</td>
<td>&lt;.001</td>
<td>0.679</td>
<td>0.629, 0.732</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>No interpersonal trauma exposure*</td>
<td>-0.387</td>
<td>100.389</td>
<td>1.024</td>
<td>0.930, 1.127</td>
<td>.633</td>
</tr>
<tr>
<td>Exposure to one interpersonal trauma*</td>
<td>0.023</td>
<td>0.228</td>
<td>1.256</td>
<td>1.121, 1.407</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Sex*</td>
<td>-0.617</td>
<td>320.938</td>
<td>0.540</td>
<td>0.504, 0.577</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Age</td>
<td>27.613</td>
<td></td>
<td></td>
<td></td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Age 8-11*</td>
<td>0.228</td>
<td>15.471</td>
<td>1.256</td>
<td>1.121, 1.407</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Age 12-18*</td>
<td>0.287</td>
<td>27.573</td>
<td>1.332</td>
<td>1.197, 1.482</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

*Note.* C.I. – confidence interval.

*a* In reference to polyvictimized individuals (two or more interpersonal traumas).

*b* In reference to the male sex.

*c* In reference to age 4 to 7-years-old.

**Interpersonal Trauma**

Next, five binary logistic regression analyses were conducted to predict school disengagement using one of the five interpersonal traumas (sexual abuse, physical abuse, emotional abuse, witnessing domestic violence, and neglect) separately in each model along with sex and age as predictors. For each of the five models, age was again categorized into three
groups (4-7, 8-11, 12-18) and the youngest group was used as a reference in the analyses, as well as male sex was used as a reference group. Consistently across all interpersonal traumas, females were less likely in odds to be disengaged compared to males, and youth in the oldest age group were more likely in odds to be disengaged compared to the youngest age group.

**Sexual Abuse.** A binary logistic regression analysis was used to predict the presence/absence of risk of school disengagement from sexual abuse, sex, and age. The full model provided a significantly better fit to the data than the constant-only model, indicating that the predictors, when taken together, reliably distinguish between those who experience school disengagement and those that do not ($\chi^2=348.943$, $df=4$, $p < .001$). The model fit was good and correctly classified 56.7% of the cases, as evidenced by non-statistically significant Hosmer-Lemeshow test ($\chi^2=2.332$, $df=6$, $p = .887$). Results indicated that the predictors in the model, female sex, age, and sexual abuse, significantly predicted risk of school disengagement. Controlling for sex and age, compared to children and youth who were not sexually abused, children who were sexually abused are more likely in odds to be at risk of school disengagement ($OR = 1.338$, 95% CI: 1.1201, 1.490), which corresponded to a 33.8% increase in probability. See Table 5 for regression coefficients, Wald statistics, odds ratios, and 95% confidence intervals.

**Physical Abuse.** Next, a binary logistic regression was employed to predict the presence/absence of school disengagement from sex, age, and physical abuse. The full model provided a significantly better fit for the data than the intercept-only model, indicating that when the predictor variables were considered together, they reliably distinguished those who experienced risk of disengagement from school and those who do not ($\chi^2=371.140$, $df=4$, $p < .001$). Furthermore, the model fit was good, as evidenced by non-statistically significant Hosmer-
Lemeshow test ($\chi^2 = 1.030, df = 5, p = .960$). The full model correctly classified 56.8% of cases. The predictors in the model, female sex, age, and physical abuse, significantly predicted risk of school disengagement. This model demonstrates that after controlling for sex and age, students with a history of physical abuse are more likely in odds to be at risk of school disengagement ($OR = 1.352, 95\% CI: 1.244, 1.470$) compared to children and youth who were not physically abused, which corresponded to a 35.2% increase in probability. See Table 5 for regression coefficients, Wald statistics, odds ratios, and 95% confidence intervals.

**Emotional Abuse.** The model with emotional abuse, sex, and age provided a significantly better fit for the data than the intercept-only model, indicating that when the predictor variables are considered together, they reliably distinguish between those who are engaged in school and those who are at risk for disengagement ($\chi^2 = 379.521, df = 4, p < .001$). The model fit was good, as evidenced by non-statistically significant Hosmer-Lemeshow test ($\chi^2 = 3.832, df = 6, p = .699$). The full model correctly classified 56.8% of cases. The predictors in the model, female sex, age, and a history of emotional abuse, significantly predicted risk of school disengagement. Controlling for sex and age, students with a history of emotional abuse were more likely in odds to be at risk of school disengagement ($OR = 1.329, 95\% CI: 1.236, 1.430$), which corresponded to a 32.9% increase in probability. See Table 5 for regression coefficients, Wald statistics, odds ratios, and 95% confidence intervals.

**Witnessing Domestic Violence.** The full model provided a significantly better fit to the data than the constant-only model, indicated that the predictors (sex, age, and witnessing domestic violence) reliably distinguish between those engaged in school and those who are at risk for disengagement ($\chi^2 = 408.578, df = 4, p < .001$). The model fit was good, as evidenced by non-statistically significant Hosmer-Lemeshow test ($\chi^2 = 5.338, df = 6, p = .501$). The full model
correctly classified 57.1% of cases. Age, the female sex, and the presence of domestic violence significantly predicted risk of school disengagement. Students who have witnessed domestic violence were more likely in odds to be at risk for school disengagement compared to those who have not \((OR = 1.407, 95\% \text{ CI: } 1.310, 1.511)\). Specifically, those who have witnessed domestic violence had a 40.7% increased probability of school disengagement compared to those who have not witnessed such violence. See Table 5 for regression coefficients, Wald statistics, odds ratios, and 95% confidence intervals.

**Neglect.** Lastly, a binary logistic regression was employed to predict the presence/absence of school disengagement from sex, age, and neglect. The full model provided a significantly better fit for the data than the intercept-only model, indicating that when the predictor variables were considered together, they reliably distinguished those who were at risk for school disengagement and those who were not \((\chi^2 = 356.850, df = 4, p < .001)\). Furthermore, the model fit was good, as evidenced by non-statistically significant Hosmer-Lemeshow test \((\chi^2 = 5.487, df = 7, p = .601)\). The full model correctly classified 56.8% of cases. The predictors in the model, female sex, age, and neglect, significantly predicted risk of school disengagement. Students who have been neglected were more likely in odds to be at risk for school disengagement compared to those who have not \((OR = 1.295, 95\% \text{ CI: } 1.191, 1.409)\). Specifically, those who have been neglected had a 29.5% increased probability of school disengagement compared to those who have not been neglected. See Table 5 for regression coefficients, Wald statistics, odds ratios, and 95% confidence intervals.
Table 5

*Regression Analyses: School Disengagement as a Function of Each Interpersonal Trauma, Sex, and Age*

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B</th>
<th>Wald chi-square</th>
<th>Odds ratio</th>
<th>95% C.I.</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sexual abuse</td>
<td>0.291</td>
<td>28.144</td>
<td>1.338</td>
<td>1.201, 1.490</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Sex</td>
<td>-0.624</td>
<td>320.445</td>
<td>0.536</td>
<td>0.536, 0.501</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td>33.237</td>
<td></td>
<td></td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Age 8-11</td>
<td>0.244</td>
<td>17.904</td>
<td>1.276</td>
<td>1.140, 1.429</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Age 12-18</td>
<td>0.313</td>
<td>33.122</td>
<td>1.367</td>
<td>1.229, 1.521</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Physical abuse</td>
<td>0.302</td>
<td>50.215</td>
<td>1.352</td>
<td>1.244, 1.470</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Sex</td>
<td>-0.592</td>
<td>299.768</td>
<td>0.553</td>
<td>0.517, 0.592</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td>30.048</td>
<td></td>
<td></td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Age 8-11</td>
<td>0.234</td>
<td>16.466</td>
<td>1.264</td>
<td>1.129, 1.415</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Age 12-18</td>
<td>0.298</td>
<td>29.972</td>
<td>1.347</td>
<td>1.211, 1.499</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Emotional abuse</td>
<td>0.285</td>
<td>58.591</td>
<td>1.329</td>
<td>1.236, 1.430</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Sex</td>
<td>-0.606</td>
<td>312.260</td>
<td>0.546</td>
<td>0.510, 0.583</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td>28.899</td>
<td></td>
<td></td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Age 8-11</td>
<td>0.232</td>
<td>16.155</td>
<td>1.261</td>
<td>1.126, 1.412</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Age 12-18</td>
<td>0.293</td>
<td>28.855</td>
<td>1.340</td>
<td>1.204, 1.491</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Witnessing domestic violence</td>
<td>0.341</td>
<td>87.531</td>
<td>1.407</td>
<td>1.310, 1.511</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Sex</td>
<td>-0.598</td>
<td>304.673</td>
<td>0.550</td>
<td>0.514, 0.588</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td>39.098</td>
<td></td>
<td></td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Age 8-11</td>
<td>0.242</td>
<td>17.622</td>
<td>1.274</td>
<td>1.138, 1.427</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Age 12-18</td>
<td>0.336</td>
<td>38.247</td>
<td>1.399</td>
<td>1.258, 1.556</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Neglect</td>
<td>0.259</td>
<td>36.229</td>
<td>1.295</td>
<td>1.191, 1.409</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Sex</td>
<td>-0.593</td>
<td>300.992</td>
<td>0.553</td>
<td>0.517, 0.591</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Age</td>
<td>38.072</td>
<td>&lt;.001</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>--------</td>
<td>-------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 8-11&lt;sup&gt;c&lt;/sup&gt;</td>
<td>0.251</td>
<td>18.928</td>
<td>1.285</td>
<td>1.148, 1.439</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Age 12-18&lt;sup&gt;c&lt;/sup&gt;</td>
<td>0.333</td>
<td>37.681</td>
<td>1.395</td>
<td>1.254, 1.551</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

*Note.* C.I. – confidence interval.

<sup>a</sup> In reference to those with the absence of that interpersonal trauma.

<sup>b</sup> In reference to the male sex.

<sup>c</sup> In reference to age 4 to 7-years-old.

**Discussion**

School engagement is a multidimensional construct which can involve behavioural, emotional, and cognitive engagement in the classroom (Fredricks et al., 2004). When students are disengaged from school, they are at risk for many negative outcomes including substance use, delinquency, and early school leaving (Bond et al., 2007, Borowsky et al., 2002, Dishion et al., 2005, Henry et al., 2012, O’Donnell et al., 1995, Weerman et al., 2007). It is important to have an understanding of the risk factors that promote negative school engagement in order to provide appropriate supports and interventions to students which can mitigate these negative outcomes. There is a body of literature which suggests that various interpersonal traumas are related to school disengagement, as measured by academic functioning (e.g., De Bellis et al., 2013), disciplinary practices (e.g., Fantuzzo et al., 2011), and negative feelings towards school (e.g., Schnurr & Lahman, 2013), for example. There is also evidence to suggest that polyvictimization increases the risk of negative school-related outcomes (Burke et al., 2011; De Bellis et al., 2013, Porche et al., 2016). Despite knowing that these relationships exist between interpersonal trauma, polyvictimization, and school disengagement, limited research specifies these relationships or examines the cumulative influence of interpersonal trauma (i.e., polyvictimization) on school disengagement. The present study addresses this gap in the
literature by examining polyvictimization and various interpersonal traumas as predictors of school disengagement.

The current study also adds to the existing literature by providing prevalence rates of interpersonal trauma exposure and polyvictimization among clinically-referred children and youth aged 4 to 18-years. Overall, the frequency of witnessing domestic violence was 28.4%, emotional abuse 27.7%, physical abuse 18.7%, neglect 17.9%, and sexual abuse 10.6%. Furthermore, 28.7% of children and youth were polyvictimized, and an additional 18.6% had experienced one type of interpersonal trauma. The prevalence of polyvictimization in the present study aligns with the broad range reported in other clinically-referred samples, in which prevalence ranges from 8% to 61.7% (Adams et al., 2016; Ford et al., 2011; Stewart, Toohey, et al., 2020; Suárez-Soto et al., 2019). This broad range is likely due to the different clinical populations being studied, such as youth-justice samples or outpatient psychiatry samples, as well as different operationalizations of polyvictimization. However, the rates of interpersonal trauma in the present study are generally higher than studies which utilize nationally representative samples (Saunders & Adams, 2014). It is likely that these differences are due to the populations being studied. Given that the present sample included clinically-referred children and youth, it should be noted that mental health service urgency is higher among those who have experienced interpersonal trauma (Marshall et al., 2020), and therefore these individuals may be overrepresented in the current sample.

For each multivariate model and controlling for other predictors in the model, sex and age were found to be consistent predictors of school disengagement. Specifically, the male sex and older age significantly increased the probability of school disengagement. This finding is consistent with previous research that suggests older students and males typically report lower
levels of school engagement (Wang & Eccles, 2012). This decline in school engagement with age may be due to the change in the nature of the environment as students transition through the school system. In middle school and high school, classes may be larger, more departmentalized, and have less opportunities for participation than primary school. This may result in fewer opportunities to develop strong, positive relationships with school staff, to feel competent at their school work, and to participate in extracurricular activities (Eccles et al., 1993). If students lack opportunities to feel competent in their academics and stay connected with their school, then their own motivation to be engaged in their learning, identify with their school, and comply with school staff may decline (Wang & Eccles, 2012). Furthermore, previous research indicates that females tend to outperform their male peers in a number of academic areas (Collins et al., 2000), have higher levels of identification with school and classroom participation (Voelkl, 1997), are more likely to effectively plan and manage their schoolwork, and persist in trying to understand a problem even when it is difficult or challenging (Martin, 2004). Males tend to have more suspensions (Ainley & Lonsdale, 2000), and are more likely to self-sabotage (i.e., partaking in activities which reduce the change of success at school such as putting off doing an assignment or wasting time when they are meant to be studying; Martin, 2004). These differences in levels of school engagement observed between males and females may be due to the gender socialization process (Eccles, 2007). Females may be expected to display behaviours related to school engagement, whereas males may not believe it is socially acceptable to be highly engaged in school (Bembenutty, 2007). These gender biases and beliefs may be a reason why females are more engaged in school than males.

As predicted, all five interpersonal traumatic life events examined were predictive of greater risk of school disengagement, compared to those who had not experienced such trauma.
More specifically, witnessing domestic violence was the interpersonal trauma associated with the greatest likelihood in odds of risk of school disengagement. Exposure to such violence increased the probability that the child or youth would be disengaged from school by 40.7%. This is in contrast with the initial hypothesis suggesting that neglect would be the interpersonal trauma associated with the greatest risk of school disengagement. This hypothesis was supported by previous literature indicating the pervasive negative impact of neglect on many school-related outcomes for children and youth (e.g., Hildyard & Wolfe, 2002). However, upon examination of the literature, witnessing domestic violence in childhood may have been overlooked as a potentially pervasive influence on school engagement when compared to other interpersonal traumas such as neglect and physical, emotional, and sexual abuse. Though the relationship between witnessing domestic violence and negative school-related outcomes is expected based on previous research on childhood exposure to many forms of community and family violence (Delaney-Black et al., 2002; Hurt et al., 2001; Mathews et al., 2009; Schnurr & Lohman, 2013; Thompson & Massat, 2005), many studies have failed to examine the unique impact of witnessing domestic violence on school disengagement, as well as investigating its impact when compared to other interpersonal traumas. For example, witnessing domestic violence may not be included as a variable in literature on the impact of abuse and neglect on school-related outcomes (e.g., Eckenrode et al., 1993; Fantuzzo et al., 2011), or, if it is included, may be combined with other measures of abuse and neglect into one variable and thus the impact on school outcomes is not studied separately (e.g., De Bellis et al., 2013). Therefore, the impact of witnessing domestic violence on school disengagement compared to other forms of interpersonal trauma has yet to be fully realized in the literature.
Witnessing domestic violence may have been overlooked as an important variable on school-related outcomes when compared to other measures of abuse and neglect because it does not involve any actions directed at the child, or any direct physical harm to the child. This is not the case, however, as children rely on their parents to provide a predictable and safe environment, and exposure to stressors such as domestic violence may prevent such an environment from being fostered, thus negatively influencing developmental outcomes (De Young et al., 2011). Particularly for young children, exposure to domestic violence impacts children’s verbal (Huth-Bocks et al., 2001; Ybarra et al., 2007) and cognitive abilities such as attention (Towe-Goodman et al., 2011), and has been linked to externalizing (Georgsson et al., 2011; Schnurr & Lohman, 2013; Towe-Goodman et al., 2011) and internalizing problems (Georgsson et al., 2011; Schnurr & Lohman, 2013; Ybarra et al., 2007), as well as difficulties with peer relationships (Georgsson et al., 2011). Graham-Bermann & Levendosky (1997) found that preschool children exposed to parental violence had more behaviour and adjustment problems, were more aggressive with their peers, had more negative emotional expression such as sadness, depression, worry and frustration, and had more difficulty with social interaction compared to their peers. These children were also more likely to express their anger and frustration through aggression such as hitting, biting, or slapping others (Graham-Bermann & Levendosky, 1997).

Deficits in emotional competence and ineffective coping strategies may be contributing to the relationship between violence in the home and school disengagement. Katz and colleagues (2007) found that children exposed to domestic violence at 5-years-old had low levels of emotional awareness and high levels of emotional dysregulation, and this lack of emotional competence mediated the relationship between witnessing domestic violence and later
internalizing and externalizing problems, friendship closeness, social problems, and negative peer interactions at 11-years-old. This negative impact of witnessing domestic violence on children’s emotional development may hinder their ability to use adequate coping strategies in order to manage their emotions in response to a stressful or threatening situation (Katz et al., 2007). Furthermore, certain coping strategies employed by children and youth exposed to domestic violence in the home may have a negative translation into the school environment. For example, children exposed to domestic violence experience decreased levels of anxiety when they use distancing and avoidant coping strategies in response to this violence, such as attempting to distance themselves from the conflict or involving themselves in a self-soothing or self-distracting activity (O’Brien et al., 1995). Though this strategy is effective and adaptive when the child is exposed to violence in the home, applying these withdrawal coping strategies to other areas of their life, such as stressful situations at school, may facilitate the disengagement process. Furthermore, in the same way that physically abused children are more likely to learn violent methods for resolving conflict (Dodge et al., 1994), children who witness domestic violence may imitate the violence they see at home, which may contribute to certain aspects of school disengagement, such as school removal due to disruptive behavior or conflict with school staff.

Furthermore, it was hypothesized that neglect would be the interpersonal trauma with the greatest risk of school disengagement, but instead it was the least, with neglected children and youth having a 29.5% increase in probability of risk of school disengagement compared to those who had not been neglected. Neglect has significant effects on children’s short-term and long-term cognitive, socioemotional, and behavioural development, especially if it occurs in early childhood (Hildyard & Wolfe, 2002). It has been hypothesized that neglect has such a pervasive
impact on children’s development because it is usually of chronic nature and involves a failure to provide for the child’s basic needs (Hildyard & Wolfe, 2002). When children’s basic needs are not provided, they may lack the developmental competencies needed for early school success (Fantuzzo et al., 2011). Though the findings in the present study are in line with the extant literature regarding the negative impacts of neglect on school-related outcomes, they do contrast studies which suggest that neglect has a more pervasive adverse association than other forms of interpersonal trauma. Specifically, the extant literature suggests a more pervasive impact of neglect on cognitive development, as measured by academic achievement, than other forms of abuse (Eckenrode et al., 1993, Fantuzzo et al., 2011; Hildyard & Wolfe, 2002; Wodarski et al., 1990). However, these studies only compare outcomes to a limited number of other interpersonal traumas. For example, none of the aforementioned studies compare neglected children and youth to those who witnessed domestic violence.

When examining other factors related to the impact of neglect on school disengagement besides academic achievement, the pervasive impact of neglect becomes less prominent. Though neglected children are more likely to have behavioral problems than their nonmaltreated peers, such as discipline referrals and suspensions (Eckenrode et al., 1993; Fantuzzo et al., 2001), physically abused children had more of these issues compared to neglected children (Eckenrode et al., 1993). Similarly, when examining the presentation of neglect in school-aged children, Kurtz and colleagues (1993) found that neglected children had more academic failure than those who were physically abused, but physically abused children had more problem behaviours. In addition, physical abuse and sexual abuse during preschool predicted elevated externalizing behavior and aggression relative to other subtypes of maltreatment, including neglect (Manly et al., 2001). Even though neglected children still showed higher levels of externalizing behavior
when compared to nonmaltreated children, a distinctive feature of the neglected group was elevated internalizing symptomology and withdrawn behavior in social interactions (Manly et al., 2001). Therefore, both abused and neglected children demonstrate elevated behavior problems; however, abused children stand out in regards to their aggressive and problematic behaviours, whereas neglected children are more likely to present with problems which are internalizing in nature (Hildyard & Wolfe, 2002). These findings may represent different mechanisms by which interpersonal trauma interacts with school disengagement. Differences in presentation may buffer some neglected children from being disengaged from school due to a lack of deficits beyond academic performance, such as failing to have conflict with school staff or being disruptive at school. Therefore, despite experiencing many pervasive adversities and negative developmental impacts, neglected children may not experience certain outcomes which contribute to disengagement from school to the same extent as other traumatized children and youth.

With respect to polyvictimization, although previous studies indicate children and youth who experience polyvictimization are more likely to have many adverse outcomes (e.g., attachment difficulties, lack of informal support, interpersonal conflict, substance use, and harm to self and others) compared to those who have not experienced multiple interpersonal traumas (Stewart, Lapshina et al., 2021), the present study did not find a significant difference in risk of school disengagement for those who have been polyvictimized compared to those who had experienced one interpersonal trauma. Specifically, children and youth exposed to no interpersonal trauma had a 32.1% decrease in probability of being at risk for school disengagement compared to those who were polyvictimized, whereas the difference in risk between those who were exposed to one interpersonal trauma and those who were
polyvictimized was not significant. This is in contrast to emerging literature suggesting that cumulative exposure to interpersonal trauma is positively associated with increased risk of learning and behavior problems as exposure increases (Burke et al., 2011), and negatively associated with academic achievement (De Bellis et al., 2013). One potential explanation for this finding is that perhaps there was an underreporting of interpersonal trauma in the sample, which resulted in an inaccurate representation of children and youth presenting with polyvictimization. Furthermore, this study’s inability to discern the duration of exposure to multiple interpersonal traumas may have impacted the results, considering that isolated traumatic incidents may have a different impact on behavior than chronic maltreatment (Van der Kolk, 2003). These findings may also be indicative of resilience among these children and youth. Though there are many adverse outcomes associated with polyvictimization, this field of research is still in its infancy. Therefore, no study to date has examined the impact of polyvictimization on school disengagement as a whole construct. Though previous studies have shown adverse impacts of cumulative exposure to interpersonal trauma on school-related outcomes (e.g., academic achievement; De Bellis et al., 2013), these studies fail to capture the entire construct of school disengagement. These children, despite experiencing more adverse outcomes than those who have not been polyvictimized, are still as engaged in school as those with only one interpersonal trauma exposure.

**Clinical Implications**

Keeping students engaged in the school system is important not only for their immediate school success, but also overall success later in life. The present study examined five types of interpersonal trauma (i.e., sexual, emotional, and physical abuse, neglect, and witnessing domestic violence) and polyvictimization as predictors of risk of school disengagement in order
to explore which areas of concern should inform targeted prevention and intervention strategies, thus fostering student success and resilience. Schools have been identified as an optimal location to promote student emotional and physical safety though trauma-informed preventative and intervention efforts in order to mitigate adverse outcomes for students (Chafouleas et al., 2016; Chafouleas et al., 2019; Kataoka et al., 2018; Reinbergs & Fefer, 2018; Rodger et al., 2020; Wiest-Stevenson & Lee, 2016). The growing movement towards a trauma-informed school delivery system calls for school staff and school mental health professionals to be equipped to recognize and provide responses informed by an understanding of how trauma impacts student’s lives and how it shapes behaviour (Parker et al., 2020; Plumb et al., 2016; Rodger et al., 2020; SAMHSA, 2014). The current study’s examination of the relationship between interpersonal trauma, polyvictimization, and school disengagement helps to fulfill this growing need for schools to be knowledgeable about the impact of trauma exposure on student behaviour in order to be trauma-informed.

Trauma-informed initiatives promote healthy, caring and supportive relationships among school staff, school mental health professionals, and students. These relationships can benefit traumatized children and youth by increasing resilience, executive functioning, self-regulation, general health, and interpersonal competence (Parker et al., 2020). Further, trauma-informed practices have been shown to have a positive impact on students’ psychosocial and academic functioning (Hoover et al., 2018) as well as reduce suspensions and disciplinary infractions (von der Embse et al., 2019), indicating that they can work to increase school engagement for traumatized children and youth. In order to implement these practices, schools should have a comprehensive understanding of different forms of trauma that exist as well as their impact on development, learning, and behaviour (Gubi et al., 2019). Schools would also benefit from
instruction in effective, trauma-sensitive practices; encouraging personal self-care and awareness; and amplifying student, family, and community engagement in the school system (Parker et al., 2020). However, variation may exist across schools in terms of the needs of the school, available resources, and the capacity of the school to implement change (Kataoka et al., 2018). Therefore, some schools may implement a whole-school approach, others may implement more targeted trauma prevention programs, and still others may create trauma-informed crisis teams (Kataoka et al., 2018).

When implementing a trauma-informed approach, schools should first evaluate the its current knowledge and awareness of the impact of trauma exposure on students, the school’s current efforts to implement trauma-informed principles and practices, and finally provide workforce training and implementation tools (Kataoka et al., 2018). Unfortunately, studies investigating school staff’s and school mental health professional’s current knowledge and awareness of trauma, as well as preparedness to engaged in trauma-informed practices, indicate that extensive training and professional development may be necessary. Gubi and colleagues (2019) surveyed 82 school psychologists and found that more than 75% rated their education/training in trauma and their confidence in working with traumatized children as none to minimal, and approximately 60% rated their education/training and confidence regarding their knowledge of the impact of trauma on development, learning, and behaviour as none to minimal. Furthermore, teachers also report a lack of training and knowledge on how to support students exposed to trauma and successfully implement trauma-informed practices (Alisic et al., 2012; Anderson et al., 2015; Baweja et al., 2016). For example, Alisic and colleagues (2012) surveyed 765 teachers and found that 9% received training about trauma, despite 89% reporting having worked with a student exposed to trauma. These findings indicate that school staff lack
competence in supporting children with trauma and need further information and training on the impact of trauma on student’s behaviour, as well as trauma-informed practices.

Fortunately, there is a growing body of literature showing the effectiveness of training programs for educators in improving their attitudes and knowledge of trauma-informed approaches. Trauma-informed training programs for schools have shown that just a half-day training can create lasting changes in attitudes and knowledge of trauma-informed practices (Liang et al., 2020; Parker et al., 2020). These trainings involve increasing knowledge of the literature on trauma and its impact; how to recognize the signs of abuse and neglect; education in social-emotional learning (SEL) and resilience (Parker et al., 2020); shifting mindsets regarding student’s behaviour (i.e., seeing behaviour as a function of communication rather than a characteristic of the individual); building empathy; and forming relationships with students in order to support them (Liang et al., 2020). Furthermore, including trauma-informed care in teacher candidate’s bachelor of education program increased their knowledge and attitudes towards trauma experienced by students, thus supporting the inclusion of this topic within teacher candidate’s curriculum (Rodger et al., 2020). Overall, these studies demonstrate the effectiveness of training on individual’s attitudes and knowledge of trauma-informed practices. By providing such training in schools, school staff and school mental health professionals can feel empowered to implement trauma-informed practices in schools, thus creating positive benefits for children and youth.

Beyond training and increasing knowledge of trauma through professional development opportunities and encouraging the use of a trauma-informed lens, there are also more systemic ways of implementing change for teachers in the classroom as well as clinicians in the school system. Reinbergs & Fefer (2018) identified three tiers of increasing intensity regarding service
delivery options for schools looking to increase resiliency, consistency, adaptive coping, connectedness, positive behaviour, and well-being for all students. The first tier involves universal implementation strategies for teachers such as SEL curricula, which emphasizes instruction on emotion identification and regulation, and social problem-solving in the classroom (Durlak et al., 2011). Another example is Positive Behaviour Interventions and Supports (PBIS), which focuses on creating consistent expectations for students and increasing positive teacher-student interactions to promote prosocial behaviours (Sugai & Horner, 2009). Furthermore, *Helping Traumatized Children Learn* outlines an example framework of trauma-informed teaching practice which tries to support the “whole student” by recognizing the frequency and impact of trauma on classroom behaviour, focuses on emotional regulation and relationships instead of punishment, and providing students with emotional safety and consistency (Cole et al., 2005; Cole et al., 2013). The second tier involves more targeted interventions for addressing trauma in schools. One example of a tier two intervention is Cognitive Behavioural Intervention for Trauma in Schools (CBITS), a group cognitive-behavioural therapy program aimed at reducing symptoms of traumatic stress. It also includes parent and teacher education sessions (Hoover et al., 2018; Stein et al., 2003). Though CBITS must be implemented by a trained clinician, there is an adaption of the program which can be implemented by classroom teachers, called Support for Students Exposed to Trauma (SSET; Jaycox et al., 2009). Finally, tier three interventions can be implemented by school mental health professionals or an outside therapist and typically involves individual treatment for trauma. Trauma-Focused Cognitive Behavioural Therapy (TF-CBT) is an example of a tier three intervention which has been shown to be effective at reducing traumatic stress for children and youth (Cohen et al., 2012). Interventions at
any of these tiers of service delivery can help to provide trauma-informed care to students, thus helping to mitigating adverse outcomes.

To our knowledge, this is the first study to examine the impact of witnessing domestic violence on school engagement alongside other interpersonal traumas. Witnessing domestic violence was identified as the interpersonal trauma associated with the greatest risk of school disengagement. This finding has implications for school mental health professionals implementing tier three interventions as it indicates that the impact of exposure to domestic violence is an influential childhood trauma. When these professionals work with a child or youth who has been exposed to domestic violence, its impact on school engagement should not be overlooked. Therefore, in order for trauma-informed schools to have knowledge about how trauma impacts students and subsequently support students, more acknowledgement, understanding, and awareness about exposure to domestic violence and its impact on student behaviour is needed. If underlying contributing factors to student’s behaviour, such as exposure to domestic violence, are not considered or understood, behaviour can be misinterpreted (Lloyd, 2018). As a result of this misinterpretation of behaviour, children and youth exposed to domestic violence may be more likely to be labeled as problematic and excluded from school in comparison to their peers (Lloyd, 2018). Such exclusion may exacerbate the disengagement process if the school does not have a trauma-informed approach which includes awareness of the impacts of domestic violence exposure. Having an awareness and understanding about the impact of exposure to domestic violence on school-related outcomes can help student’s behaviour be more understood and reduce potential further alienation in the school system.

Though the present study has many implications for trauma-informed schools, it is important for practitioners to note that a trauma-informed approach does not assume that
children who are showing signs of disengagement have experienced interpersonal trauma, or that exposure to interpersonal trauma is causing school disengagement. Rather, trauma-informed approaches aim to increase awareness about the impact of trauma on behaviour, learning, and development, including school disengagement. Therefore, the present study provides evidence that interpersonal trauma and polyvictimization may be one explanation to consider when students are experiencing disengagement from school. As Tishelman and colleagues (2010) explain:

[A] child's difficulties at school can be unrelated to trauma, trauma can be a contributing factor, or trauma can account for most of the observed difficulties. Adopting a “trauma lens” can ensure that trauma is considered as a hypothesis when appropriate but should not be used to overshadow other important etiologies for a child's presentation or lead to an overemphasis on trauma as an explanatory variable when other factors are more salient. (pp. 281–282).

Therefore, school staff should consider exposure to interpersonal trauma and polyvictimization as a potential explanation as to why some students are experiencing disengagement from school and subsequently interact with all students using a trauma-informed lens. By using this trauma-informed approach for all students, the underlying contributing factors of disengagement for some students may be addressed. However, it is important to remember that not every child or youth who has been exposed will show signs and symptoms of exposure (Reinbergs & Fefer, 2018). Regardless, adopting a trauma-informed approach may serve to better support all students, especially those who are experiencing disengagement as a result of exposure to interpersonal trauma.

Limitations
Although this study advances the existing literature on the impact of interpersonal trauma and polyvictimization on school disengagement, it is not without its limitations. First, the sample was not random, but rather a convenience sample obtained from children and youth presenting at both inpatient and outpatient mental health agencies across the Province of Ontario. Therefore, generalizability to other populations is limited. It should also be noted that clinical samples may consist of an increased presentation of interpersonal trauma when compared to nonclinical samples. However, there may also be an underrepresentation of interpersonal traumas and polyvictimization in the sample due to under-reporting. Furthermore, due to the cross-sectional nature of this study, causal conclusions cannot be made. Although it is assumed that exposure to interpersonal trauma and polyvictimization occurred prior to school disengagement, it is also possible that children and youth who are disengaged from school may experience interpersonal trauma or polyvictimization as a result of that disengagement. Additionally, the cross-sectional nature of the study presents the possibility of cohort effects in which age-related trends do not reflect developmental trends, but are rather the nature of the cohort studied. Furthermore, the present study categorized interpersonal trauma exposure using a binary approach. Exposure level was reduced into two groups: individuals with no interpersonal trauma exposure, and individuals with exposure which occurred at least once in their life. As a result, nuanced information regarding the frequency, recency, as well as age of onset of the interpersonal trauma was not obtained, and thus examining these variables in relation to school disengagement did not occur. This lack of specificity may have impacted the results, considering that certain levels of exposure (e.g., chronic exposure) may be more detrimental and therefore have a different impact on outcomes than other exposures (e.g., isolated incident).

**Future Directions**
Future research should examine frequency, recency, and duration of the interpersonal trauma as predictors of school disengagement. Knowing when these events occurred and their severity may be important risk factors in predicting school disengagement, and can therefore inform research on when targeted interventions need to be implemented in order to optimize outcomes for students. For example, examining the frequency of exposure to interpersonal trauma will provide further specificity regarding the relationship between polyvictimization and school disengagement. Due to the current limited research on this relationship, further information on the impact of polyvictimization on student’s engagement in school is needed. Furthermore, a longitudinal study which follows students across their entire journey through the education system, as well as beyond high school and into post-graduation endeavours, will promote a further understanding of the developmental trajectory of school disengagement as predicted by interpersonal trauma exposure. This would allow for the trajectories of school disengagement to be more accurately studied, thus enhancing prevention measures and interventions which target school disengagement. Additionally, a longitudinal study will allow for age-related differences to be reliably measured due to the elimination of possible cohort effects.

Conclusions

The present study builds upon previous research indicating an impact of interpersonal trauma exposure on student’s engagement at school. To our knowledge, this is the first study to separately examine sexual, physical, and emotional abuse; neglect; and witnessing domestic violence as predictors of school disengagement. Furthermore, it is the first study to examine the impact of each interpersonal trauma individually as well as polyvictimization on student’s engagement at school using a comprehensive scale measuring eight areas of student
disengagement. Overall, the male sex, older age, each interpersonal trauma, and polyvictimization were consistent predictors of school engagement problems for children and youth. When comparing children and youth’s exposure to each interpersonal trauma, those who witnessed domestic violence experienced the greatest risk of school disengagement. Neglect, despite still significantly increasing children and youth’s risk of school disengagement compared to those who were not neglected, had the lowest probability of school disengagement out of all the interpersonal traumas. There was no significant difference in risk of school disengagement between those who experienced one interpersonal trauma and those who were polyvictimized. Therefore, further research on the relationships between polyvictimization and school disengagement is needed. These findings emphasize the importance of considering interpersonal trauma exposure as a risk factor for school disengagement. Specifically, understanding the impact of interpersonal trauma exposure, including witnessing domestic violence, on student engagement has important implications for trauma-informed schools and provides particular benefit to school staff trying to understand student’s behaviour and mitigate the adverse outcomes associated with disengagement.
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