School absenteeism in Canada: The moderating role of student-teacher relationship quality on students' mental health and school attendance behaviour across ADHD status

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Abstract

School absenteeism is a growing issue linked to adverse academic, behavioural, health, and social outcomes. However, little is known about the scope, causes, and correlates of school absenteeism in Canada as well as among students living with attention-deficit/hyperactivity disorder (ADHD). To address some of the literature gaps, using a cross-sectional research design, the present study examined the associations between students' mental health symptoms, student-teacher relationship quality (STRQ), and rate of absence from school in a two-week period across ADHD status. Parents/guardians of children in Junior Kindergarten to Grade 8 attending a school in Canada completed questionnaires assessing their child's school attendance behaviour, mental health symptomatology (externalizing and internalizing behaviours), and relationship quality with their teacher. Data were analyzed using descriptive statistics, bivariate correlations, independent samples t-tests, and moderated regressions (with STRQ as the moderator, externalizing and internalizing behaviours as separate predictor variables, rate of absence as the outcome variable, and parental education, child age, and child gender as covariates). All analyses were separately conducted for the ADHD (n = 101) and non-ADHD (n = 124) groups. Analyses revealed that students with ADHD experienced significantly more externalizing and internalizing behaviours and significantly poorer STRQ than students without ADHD. Students without ADHD were observed to miss more school than students with ADHD, but this was not a significant difference. Across the four moderated regression models, STRQ moderated the relationship between internalizing behaviours and rate of absence for students without ADHD. Specifically, higher levels of internalizing behaviours among students without ADHD were correlated with higher rates of school absences when STRQ was low. Among the three covariates added in the moderated regression models, parental education had a direct effect on rate of absence from school in each model. Practical implications and directions for future research are suggested. The present study contributes to the growing Canadian literature base on school absenteeism and underscores the potential role of supportive student-teacher relationships. Findings from the present study may support educators and clinicians in implementing tailored strategies to improve student well-being and school attendance behaviour.

Keywords: ADHD, children, mental health, school absenteeism, student-teacher relationships

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List of Abbreviations and Acronyms

ADHD: attention-deficit/hyperactivity disorder

ASD: autism spectrum disorder

COVID-19: coronavirus disease 2019

CD: conduct disorder

IEP: individual education plan

IPP: individual program plan

MTSS: multi-tiered systems of support

ODD: oppositional defiant disorder

Ohio Scales: Ohio Youth Problem, Functioning, and Satisfaction Scales

PSS: Problem Severity Subscale

QSAP: Questionnaire for School Attendance Problems

SAP: school attendance problem

SES: socioeconomic status

SRS: School Relationships Scale

STRQ: student-teacher relationship quality

Introduction

Children and adolescents around many parts of the world spend a significant amount of their childhood and adolescence in school, where they are expected to acquire knowledge pertaining to several topics and gain critical thinking, literacy, mathematics, and reasoning skills. In addition to the formal academic curriculum that students are expected to learn and is explicitly taught, the school environment plays an important role in implicitly teaching certain attitudes, beliefs, norms, and values, often via classroom rules and social interactions, that contribute toward students' psychosocial development and understanding of their world. Thus, the variety and depth of learning experiences that children and adolescents could acquire from regularly attending school renders the school environment an influential setting for children and adolescents' long-term educational attainment, civic engagement, and behavioural and socioemotional development (Ansari et al., 2020a; Kearney et al., 2021; Roeser et al., 2000). Importantly, the positive consequences of attending school extend beyond academic achievement. Previous research has found regular school attendance to be a powerful social determinant associated with good physical and mental health outcomes across the lifespan (Allison et al., 2019).

However, not all children and adolescents regularly attend school. While occasional absence from school for justified reasons (e.g., appointments, athletics, illness, religious holidays, etc.) is typical and expected among all students, absence from school becomes problematic when it is frequent, has no justified reason as agreed upon by both parents/guardians and school administrators, and has potentially detrimental consequences to the student (Kearney, 2003). *Problematic absenteeism* is a growing issue affecting both elementary and secondary students in many parts of the world (Fredriksson et al., 2023; Kearney & Childs, 2023) and is increasingly being studied by researchers across a range of academic and professional disciplines such as education, medicine, psychology, and sociology (Smith et al., 2022). In contrast, *nonproblematic absenteeism* refers to any absence from school for a justified reason – as agreed upon by both parents/guardians and school administrators – that can be compensated for through homeschooling, make-up assignments, or online education (Heyne et al., 2019; Kearney, 2003). Although nonproblematic absences are typically viewed as nondetrimental to students' learning outcomes, some research suggests that any level of absence from school for any given reason is associated with poor academic achievement among both elementary and secondary students

(Hancock et al., 2013). Interestingly, however, Hancock and colleagues (2013) found that unauthorized absences were more strongly associated with low achievement scores than authorized absences, thereby providing some evidence of the differential academic outcomes of the two broad types of absences. Overall, the detrimental impacts of *school absenteeism*, especially *chronic absenteeism*, defined as missing at least 10% of the school year for any reason (Allison et al., 2019; Krause et al., 2025; Whitley et al., 2025), are well-documented and extend beyond academic achievement; school absenteeism is associated with a range of negative short- and long-term outcomes including school dropout (Cabus & De Witte, 2015), impaired socioemotional functioning (Ansari & Gottfried, 2021; Ansari & Pianta, 2019; Gottfried, 2014) and executive functioning (Fuhs et al., 2018), poor mental and physical health outcomes (Allison et al., 2019), health risk behaviours (Eaton et al., 2008), substance use (Gakh et al., 2020), and unemployment (Attwood & Croll, 2015).

Although the mechanisms underlying how high rates of school absenteeism impact and interfere with students' long-term behavioural, educational, health, and psychosocial outcomes are complex and multifaceted, so too are the reasons behind why some students are frequently absent from school. Indeed, a large body of literature has identified several potential risk factors for school absenteeism at the individual, family, and school level (Gottfried & Gee, 2017; Gubbels et al., 2019; Ingul et al., 2019; Stempel et al., 2017). In recent years, researchers have identified students living with mental health difficulties (e.g., internalizing and/or externalizing behaviours) or disorders (e.g., anxiety, depression) as being at heightened risk for experiencing high rates of school absenteeism (John et al., 2022; Krause et al., 2025; Lawrence et al., 2019; Rogers et al., 2024). Furthermore, there is a growing body of literature demonstrating that children and adolescents with neurodevelopmental conditions such as attention-deficit/hyperactivity disorder (ADHD) or presenting with ADHD symptoms are more likely to be absent from school relative to their peers without ADHD (Fleming et al., 2017; Kent et al., 2011; May et al., 2021; Niemi et al., 2022). Research in the area of ADHD and school absenteeism is a burgeoning field; however, the scope, causes, and correlates of school absenteeism among children and adolescents with and without ADHD, as well as any differences between the two groups and the underlying mechanisms driving these differences, remain unclear.

When examining the risk factors for school absenteeism, it is essential to also explore potential protective factors that may prevent school absenteeism as well as mitigate some of the

detrimental short- and long-term impacts associated with school absenteeism. Researchers across a range of academic and professional disciplines have identified several protective factors in various domains of students' lives; one of the more prominent protective factors that has emerged in the literature, however, is the student-teacher relationship (Davis & Dupper, 2004; Gershenson, 2016; Hendron & Kearney, 2016; Wang & Holcombe, 2010). Indeed, there is a growing body of research from the fields of education and developmental psychology demonstrating that high quality student-teacher relationships – marked by low levels of conflict and dependency and high levels of closeness (Birch & Ladd, 1997) – are integral to students' academic achievement, psychosocial development, school engagement, and well-being (García-Moya, 2020; Hamre & Pianta, 2001; Pianta & Stuhlman, 2004; Sabol & Pianta, 2012), and may indirectly contribute toward improved school attendance behaviour in children and adolescents. Conversely, low quality student-teacher relationships – marked by high levels of conflict and dependency and low levels of closeness (Birch & Ladd, 1997) – are associated with poor academic and behavioural outcomes among children and adolescents (Hamre & Pianta, 2001) and school dropout among secondary students (Contreras et al., 2022; Davis & Dupper, 2004). Mounting evidence suggests that low quality student-teacher relationships are more prevalent among certain populations of students, including those with ADHD or displaying symptoms of ADHD (Ewe, 2019; MacLean et al., 2023). Importantly, limited research has been devoted toward understanding whether high quality student-teacher relationships mitigate some of the negative academic and developmental outcomes frequently observed in children and adolescents with ADHD or presenting with ADHD symptoms.

Importantly, relative to other high-income countries in Asia, Europe, and North America, the scope, causes, and correlates of school absenteeism in Canada have been sparsely investigated (Whitley et al., 2025). While the Pan-Canadian Assessment Program (administered by the Council of Ministers of Education, Canada) and the Programme for International Student Assessment (administered by the Organization for Economic Co-Operation and Development) provide national sources of data on the academic performance and school attendance rates of Grade 8 or 15-year-old students, these reports are limited in that they only report on data from one cohort of students and include a narrow definition of school absenteeism (Whitley et al., 2025). School attendance data collected at the provincial level or by Canadian school boards or districts, however, provide more detailed information on the rates of school absenteeism among

their students; yet, these data are not often publicly available and reflect varying definitions of school absenteeism (Whitley et al., 2025). As such, within the Canadian literature base and educational systems, the rate of school absenteeism, as well as the reasons for missing school, remain unclear.

In light of this literature, the goals of the present study are: (1) to determine the rate at which and the reasons why students with and without ADHD miss school in a two-week period; (2) to examine whether students' internalizing and/or externalizing behaviours are associated with their rate of absence from school, and whether this relationship differs between students with and without ADHD; and (3) to investigate whether student-teacher relationship quality (STRQ) moderates the relationship between students' internalizing and/or externalizing behaviours and their rate of absence from school among students with and without ADHD. While the detrimental impacts of high rates of school absenteeism among children and adolescents are well-documented, there is a lack of research dedicated to understanding the scope, causes, and correlates of school absenteeism as a whole in Canada. Additionally, there is a paucity of published research exploring whether STRQ could function as a protective factor against the risks conferred by high rates of school absenteeism among students experiencing poor mental health (i.e., internalizing and/or externalizing behaviours). It is hoped that findings from the present study will provide insight into some of the factors that impact and influence school attendance behaviour within the Canadian educational system, highlight any differences between students with and without ADHD, and support researchers, educators, and clinicians in implementing strategies to increase school attendance behaviour.

Theoretical Framework

Attachment Theory

Grounded in research on the mother-infant relationship and stemming from the theoretical formulations and empirical findings of John Bowlby and Mary Ainsworth (Bretherton, 1992), *attachment theory* is a psychological and evolutionary framework concerning the short- and long-term impacts of the early bond between a primary caregiver and an infant. Bowlby (1969) conceptualized *attachment* as the emotional bond that develops between a primary caregiver (also referred to as the *attachment figure*) and child during the early years of life. Beyond their biological function in promoting survival and providing protection, *attachment bonds* are foundational for development throughout the lifespan (Garcia-Moya, 2020). As well,

Bowlby (1973) proposed that an infant's relationship with their primary caregiver influences and impacts the development of their internal working models (i.e., mental representations of the self, others, and interpersonal relationships; Garcia-Moya, 2020); specifically, whether one is valued and loved, whether others are reliable, responsive, sensitive, and caring, and whether relationships are positive, safe, and secure (Bretherton, 1992; Cassidy & Shaver, 2016; Garcia-Moya, 2020). Importantly, young children use internal working models to predict the primary caregiver's likely behaviour and plan their own responses (Bretherton, 1992). Ainsworth and colleagues (1978) further contributed to attachment theory with Ainsworth's development of the Strange Situation laboratory procedure to identify and differentiate between infants who displayed a secure attachment style (i.e., sensitive and loving responses from caregiver), insecure-avoidant attachment style (i.e., insensitive and rejective responses from caregiver), or insecure-ambivalent/resistant attachment (i.e., insensitive and inconsistent responses from caregiver) (Benoit, 2004). Main and Solomon (1986; 1990) later discovered a fourth category: disorganized attachment (i.e., atypical responses from caregiver) (Benoit, 2004). Of note, an infant's willingness to explore the world and relationships within it is often contingent on the attachment style that develops during the first year of life (Belsky & Cassidy, 1994). Specifically, infants who have a secure attachment style are likely to have confidence in their attachment figure acting as a *secure base* from which they can safely explore the world as well as a *safe haven* that they can return to seek comfort, protection, and support during times of distress (Cassidy et al., 2013; Bowlby, 1988; Levy et al., 2010). Taken together, attachment theory posits that a positive relationship between a child and their caregiver(s), marked by warmth, sensitivity, and consistent responsiveness from their caregiver(s), promotes feelings of emotional safety and security in the child which may, in turn, support them in safely exploring their environment (Roorda et al., 2011).

In the last 35 years, scholars have applied the tenets of attachment theory to other human relationships; of relevance to the present study, attachment theory has guided a substantial amount of research on student-teacher relationships (Pianta & Steinberg, 1992; Hamre & Pianta, 2001; Sabol & Pianta, 2012). Importantly, when taking an attachment perspective on student-teacher relationships, researchers do not consider students to have an attachment bond with their teachers, nor do they consider teachers to be attachment figures for students (Verschueren & Koomen, 2012). Ainsworth (1989) described the attachment bond as an *affectional bond*, "a

relatively long-enduring tie in which the partner is important as a unique individual and is interchangeable with none other" (p. 711). Unlike the parent-child relationship, the student-teacher relationship is temporary and non-exclusive; students change teachers every school year and share their teacher with several of their peers in the classroom (Verschueren & Koomen, 2012). Furthermore, the emotional investment of parents or primary caregivers in their relationship with their children greatly exceeds that of teachers (Hamilton & Howes, 1992). Similarly, parents' and teachers' roles and responsibilities differ; while teachers may engage in some caregiving behaviours, their primary role is that of an instructor. In contrast, parents' primary role is that of a caregiver (Hamilton & Howes, 1992; Kesner, 2000).

Nevertheless, research has found that some students may direct attachment behaviours toward their teachers (Howes & Ritchie, 1999). As well, teachers may provide a secure base and safe haven thereby allowing students to effectively learn in the classroom environment (Pianta et al., 1997). Some empirical studies have further found similarities between the quality of parent-child and student-teacher relationships (Howes & Ritchie, 1999; Koomen & Hoeksma, 2003). Accordingly, students may not have an attachment bond with their teacher, but teachers can be regarded as temporary attachment figures (Zajac & Kobak, 2006) and the student-teacher relationship itself may include an "attachment component" (Cassidy, 2008, p. 14) and "fulfill some of the functions of an attachment relationship" (Bergin & Bergin, 2009, p. 152). Verschueren and Koomen (2012) postulated that younger or more vulnerable children (e.g., have a relatively limited capacity for self-regulation, a sensitive attachment system, and require additional adult caregiving support) may regard their teacher as an attachment figure of heightened importance. Thus, using attachment theory as a theoretical framework, the present study endeavours to understand the importance and impact of the student-teacher relationship, particularly as a moderator between students' mental health symptomatology and school attendance behaviour.

Internalizing-Externalizing Transdiagnostic Factor Model of Mental Health

A growing body of research suggests that mental health symptoms, particularly those associated with mental disorders such as mood disorders, anxiety disorders, substance-related and addictive disorders, and disruptive, impulse-control, and conduct disorders, may be best understood using a dimensional versus a categorical approach (Dalgleish et al., 2020; Eaton et al., 2015; Krueger & Eaton, 2015). Indeed, empirical research findings indicate that several

mental disorders conceptualized as categorical entities by official classification systems, such as the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* and the *International Classification of Diseases, Tenth Edition*, are, in fact, manifestations of relatively few core, stable, underlying dimensions, or transdiagnostic latent factors: internalizing and externalizing (Eaton et al., 2015; Krueger & Eaton, 2015). Importantly, traditional classifications systems employing dichotomous diagnoses often fail to differentiate between undiagnosed individuals with no psychopathology and undiagnosed individuals with significantly impairing but subthreshold psychopathology, thereby losing important clinical variation (Eaton et al., 2015). However, Markon and colleagues (2011) demonstrated that the severity of mental health symptoms, rather than the presence of a formal mental diagnosis, is critical in predicting impairment and outcomes, such that subthreshold levels of internalizing and externalizing symptoms have been linked to outcomes comparable to those observed above diagnostic thresholds. Relevant to the present study, mounting evidence suggests that children and adolescents exhibiting internalizing and/or externalizing problems are at an increased risk for poor economic and social outcomes (Vergunst et al., 2023), maladaptive functioning (Arslan et al., 2021), and criminal behaviour (Commisso et al., 2024). Notably, some recent studies have applied the internalizing-externalizing transdiagnostic factor model of mental health in their investigations of school absenteeism (Krause et al., 2025; Rogers et al., 2024). Given that mental health symptoms are best conceptualized dimensionally and children and adolescents presenting with mental health problems along the internalizing-externalizing transdiagnostic factor model are at an increased risk for experiencing long-term negative effects, it follows that child and adolescent mental health should be studied dimensionally in the context of school attendance behaviour.

Background Literature

School Absenteeism

Definitional Issues in the Field

School absenteeism is a multifactorial and heterogeneous issue (Smith et al., 2022) with a range of individual, parental, familial, and environmental factors implicated in its etiology and presentation (Melvin et al., 2019). Accordingly, school absenteeism has received considerable attention from scholars in the fields of education, medicine, psychology, public health, and sociology (Smith et al., 2022). While such efforts to understand the scope, causes, correlates, and

short- and long-term impacts of school absenteeism from diverse, interdisciplinary perspectives are necessary and contribute to a rich literature base from which to create interventions, these very efforts have resulted in considerable variation in the use and definition of key terminology related to school absenteeism (Kearney, 2003). Specifically, a lack of consensus surrounds the conceptualization of school absenteeism as varying academic perspectives have proposed their own definition and measurement of school absenteeism (Kearney et al., 2019a). Evidently, such disparities in the wider literature base pose challenges not only in our understanding of school absenteeism, but also in making cross-study comparisons as well as developing evidence-informed guidelines outlining assessment and treatment.

Importantly, scholars in the fields of education and developmental psychology have acknowledged the existing lack of consensus surrounding the conceptualization and operational definition of school absenteeism (Heyne et al., 2019; Kearney, 2021; Kearney et al., 2026; Smith et al., 2022). Recognizing how this lack of consensus could interfere with national or global dissemination and implementation of evidence-informed prevention and intervention strategies, Kearney and colleagues (2019a and 2019b) proposed combining the major contemporary categorical and dimensional approaches to conceptualizing school absenteeism into one overarching framework that could be used and adapted by educators, clinicians, and researchers across disciplines. While research into the utility of this framework is in its infancy, such a framework appears promising in promoting collaboration – along with integration of knowledge about school absenteeism – across varying disciplines and advancing the field using standardized language.

Categorical Approaches. Categorical approaches to conceptualizing school absenteeism encompass categorical dichotomies as well as categorically distinct terms that define and differentiate different types of absences. Notable dichotomies that have been observed in the literature include excused-unexcused (Henderson & Fantuzzo, 2023) and authorized-unauthorized (Hancock et al., 2017), the former of each dichotomy typically referring to those absences that are considered to be justified and communicated to the school by the student's parents/guardians. Another well-known dichotomy is nonproblematic-problematic (Kearney, 2003; Kearney, 2008), whereby nonproblematic absences are those that occur for justified reasons as agreed upon by both parents/guardians and school administrators, are considered temporary, and do not involve detriment to the student.

Additionally, several categorically distinct terms have been created and previously used to describe the reason behind a student's absence (Heyne et al., 2019). Of note, the operational definition of many of these terms have been inconsistently and, at times, incorrectly used, reflecting varying perspectives of the discipline or academic using the term (Heyne et al., 2019). Thus, in an effort to bring about consistency in the field, Heyne and colleagues (2019) identified and defined four main categories of *school attendance problems* (SAPs) (i.e., school refusal, truancy, school withdrawal, and school exclusion), each of which differs in their etiology and presentation. Importantly, SAPs have gained some traction in recent literature and have been extensively and comprehensively studied to understand why some students are absent from school, identify and assess students who are at risk of experiencing chronic absenteeism, and create evidence-based treatments that can prevent or remediate chronic absenteeism (Heyne et al., 2019).

Categorical approaches are often adopted by scholars to conceptualize school absenteeism because of their "administrative practicality and simplicity" (Kearney et al., 2019a, p. 5). Indeed, categorical approaches are widely used in many school-based policies and research frameworks in the field of school absenteeism (Kearney et al., 2019a). However, categorical approaches often lose considerable heterogeneity and variability; this is especially true for students whose reason(s) for absence are not aptly captured by one of the SAPs.

Dimensional Approaches. Dimensional approaches attempt to more holistically capture the heterogeneity and variability of the issue of school absenteeism. One simplistic approach involves viewing school attendance behaviour as a whole on a spectrum "from full presence to full absence" (Kearney et al., 2019a, p. 6). Other dimensional approaches involve measuring school absenteeism in terms of severity (Skedgell & Kearney, 2018) or identifying the risk or contextual factors for school absenteeism at the individual, parental, familial, peer, school, and community level (Fornander & Kearney, 2019; Fornander & Kearney, 2020; Melvin et al., 2019).

School Attendance Problems

As mentioned earlier, Heyne and colleagues (2019) developed a categorical conceptualization of problematic absenteeism, whereby SAPs are categorized into four types: (a) school refusal; (b) truancy; (c) school withdrawal; and (d) school exclusion (Heyne et al., 2019). *School refusal* refers to cases marked by severe difficulty attending school or absence from school due in large part to emotional distress (e.g., anxiety, depression, fear) (Berg et al., 1969;

Berg, 2002). Importantly, parents/guardians of children presenting with school refusal are aware of their child's absence from school and make reasonable efforts to improve their child's school attendance behaviour. As well, students categorized in the school refusal category do not present with severe antisocial behaviour (e.g., conduct disorders) (Berg et al., 1969; Berg, 2002). Of note, the term *emotionally based school avoidance* was recently introduced to describe children and adolescents who are frequently absent from school or struggle to consistently attend school due to emotional distress (Halligan & Cryer, 2022). This change in language signaled a shift in perspective, from viewing absence from school as a choice made by the student (e.g., *"the student refused to attend school"*), to viewing absence from school as a result of unmet mental health needs (Rae, 2020).

Truancy is described as the intentional or deliberate act of missing part or all of a school day (e.g., skipping classes, leaving school early or arriving to school late, missing entire school days) without a valid or legitimate reason (Egger et al., 2003; Gentle-Genitty et al., 2017). Typically, students engage in truant behaviours in the absence of parental permission or knowledge and/or authorization from medical practitioners or school administrators, as well as for reasons not typically associated with emotional distress (Egger et al., 2003; Gentle-Genitty et al., 2017). *School withdrawal* refers to cases whereby parents/guardians withdraw their child from the school environment or make limited efforts in promoting their child's attendance for family- and/or school-based reasons (Kearney, 2004). Family-based reasons include caring for a sick family member, providing company or comfort to parents/guardians with anxiety, looking after younger siblings, and doing housework or paid work to contribute to household income (Kearney, 2004). School-based reasons include protection from real or perceived threats at school (e.g., bullying) and hiding something undesirable from school administration (e.g., incomplete homework, malnutrition, maltreatment, mental disorder, etc.) (Kearney, 2004). Heyne and colleagues (2019) suggested that parents/guardians may also withdraw their child from school if they do not support or perceive the importance of education. Finally, *school exclusion* refers to cases whereby school administrators ask students to stay at home for a short or extended period of time (Heyne et al., 2019). Essentially, a student's absence from school stems from school-based decisions, such as the use of disciplinary measures (e.g., suspension), an inability or unwillingness to accommodate students' special needs, or a need to satisfy school-based performance requirements (Heyne et al., 2019).

Regardless of the SAP category that characterizes the reason(s) for a student's absence(s), any amount of school absence can lead to poor academic and socioemotional outcomes (Ansari & Gottfried, 2021) as well as predict future absences (Ansari & Pianta, 2019). Accordingly, the present study will adopt a dimensional conceptualization of school absenteeism, whereby the total amount of absence from school, whether problematic or nonproblematic, will be viewed as a salient indicator of school attendance behaviour that could inform prevention and intervention efforts.

Risk Factors Associated with School Absenteeism

The extant literature demonstrates that school absenteeism occurs for a myriad of biopsychosocial reasons, including (but not limited to) challenged school relationships, child and/or family health issues, learning difficulties, lack of interest in school curriculum, marginalization, bullying, and/or victimization, socioeconomic disadvantage, and more (Heyne et al., 2019). While researchers and clinicians can unequivocally characterize the type of absence for some students, the issue of school absenteeism – particularly that which is chronic or problematic – is even more pronounced and complicated among children and adolescents identified as at risk for school absenteeism and SAPs. Indeed, a broad range of proximal and distal individual, parental, familial, peer, school, and environmental risk factors have been found to be associated with and predict school absenteeism and SAPs (Gubbels et al., 2019; Melvin et al., 2019). In an effort to organize the risk factors implicated in school absenteeism and SAPs to inform prevention and intervention efforts, Melvin and colleagues (2019) developed the Kids and Teens at School (KiTeS) framework for school attendance and absence, an application of Bronfenbrenner's (1993) bioecological systems model which itself seeks to explain how human development is shaped by ongoing interactions between an individual and their environment. The KiTeS framework views students as embedded in a hierarchy of systems that interact to shape school attendance behaviour (Melvin et al., 2019). Similar to the bioecological systems model, the KiTeS framework describes the relationships, processes, and factors within the microsystem, mesosystem, exosystem, macrosystem, and chronosystem, as well as the interactions between each system, that influence school attendance behaviour (Melvin et al., 2019). Biopsychosocial factors commonly investigated and associated with school absenteeism and SAPs – and detailed in the KiTeS framework – are described below.

Individual-level characteristics such as age, gender, and race and ethnicity have been found to be associated with school absenteeism and SAPs. With regards to age, some research suggests that rates of absenteeism are typically high in Kindergarten and the early elementary years, stable and low in middle elementary grades, and rise sharply in middle and secondary school (Ansari & Gottfried, 2021; Balfanz & Byrnes, 2012). Interestingly, the reasons for absence appear to vary by grade; for example, some research demonstrates that truancy is more prevalent among older-aged students (Maynard et al., 2018). In relation to gender, research findings are mixed and frequently differ depending on the type of SAP investigated. For example, Skedgell and Kearney (2018) identified female gender as a relevant risk factor for problematic absenteeism more broadly, particularly in the context of lower academic achievement and older age; Havik and colleagues (2015a) found small associations between female gender and school refusal and male gender and truancy; and Vaughn and colleagues (2013) found no gender differences in their sample reporting moderate-to-high levels of truancy. Lastly, with regards to race and ethnicity, research suggests that students belonging to specific visible or ethnic minority groups (e.g., African American, Indigenous American, Native Hawaiian or other Pacific Islander, Latino, Multiracial) are more likely to experience school absenteeism than their White counterparts (Lee et al., 2023; Skedgell and Kearney, 2018; U.S. Department of Education, 2016).

Other individual-level characteristics such as mental and/or physical health, learning disabilities, intellectual or developmental disabilities, and neurodevelopmental conditions have been found to be associated with school absenteeism and SAPs. Specifically, research demonstrates that students with poor mental and/or physical health (e.g., acute or chronic illnesses, sleep difficulties, mental health symptoms or disorders, etc.) are more likely to experience school absenteeism (Allison et al., 2019; Egger et al., 2003; Ingul et al., 2012; Hysing et al., 2015; Lim et al., 2019; McShane et al., 2001; Moonie et al., 2008). As well, empirical evidence suggests that students living with specific learning disabilities, intellectual or developmental disabilities, and neurodevelopmental conditions are at higher risk of experiencing school absenteeism and SAPs (Black & Zablotsky, 2018; Redmond & Hosp, 2008; Stromberg et al., 2022).

Parental and family-level factors have also been found to influence school attendance behaviour. Parental and family-level factors such as low socioeconomic status, limited economic

resources (Balkis et al., 2016; Ingul et al., 2012; Morrissey et al., 2014), family separation (McShane et al., 2001), lack of parental engagement and involvement in their child's schooling (Maynard et al., 2012), parental psychopathology (McShane et al., 2001), parental overprotection, and unhealthy family functioning (Ingul et al., 2019) have been found to be associated with school absenteeism and SAPs. As well, there is some research to suggest that parental education is associated with school absenteeism. For example, Henry (2007) found parental education to be a salient predictor of truancy among students in eighth and tenth grades; and Balkis and colleagues (2016) found that students with college-educated parents were less likely to be absent from school or present with SAPs. Additionally, a recent meta-analysis by Marlow and Rehman (2021) found that negative family processes such as conflict, maltreatment, low supervision, and harsh punishment are associated with school absenteeism and high school dropout.

Finally, school-level factors, consisting of social, academic, and environmental components, have also demonstrated strong associations with school absenteeism and SAPs. With regards to social components, research suggests that poor relationships with peers, peer victimization, bullying, and social exclusion are risk factors for school absenteeism and SAPs, particularly school refusal and truancy (Dake et al., 2003; Egger et al., 2003; Havik et al., 2015b). Another relevant social element is the student-teacher relationship; specifically, some research suggests that poor student-teacher relationships, marked by a perceived lack of support from teachers, low attachment to teachers, and high conflict with teachers, are associated with school absenteeism and SAPs (Ingul et al., 2019). In relation to academic components, substantial research suggests that students with low academic achievement scores and special education needs are more likely to be absent from school or present with SAPs (Havik et al., 2015a; Henry, 2007; Maynard et al., 2012; Morrissey et al., 2014; Vaughn et al., 2013). Lastly, with regards to environmental components, research suggests that a positive school climate (e.g., perceived sense of safety and inclusion at school, connections with broader school community) is associated with low rates of school absenteeism and SAPs (Cohen et al., 2009; McNeely et al., 2002). Other environmental components, including elements of the classroom setting, school type, and organizational structure, have further been identified as factors impacting students' school attendance behaviour (Gottfried et al., 2019; Lenhoff & Pogodzinski, 2018).

Importantly, there is substantial research to suggest that a combination of risk factors – specifically, the interaction of risk factors across multiple contexts – may better explain the development and maintenance of school absenteeism and SAPs above and beyond any single risk factor or risk context (Klan et al., 2024; Gottfried & Gee, 2017; Hancock et al., 2018; Ingul et al., 2012; Skedgell & Kearney, 2018). As well, at-risk populations may differ in the number and severity of risks they are exposed to, thereby leading to differential rates of and reasons for absence. As previously mentioned, school absenteeism is a complicated issue, whereby frequently absent students grouped in the same SAP category often exhibit considerable heterogeneity in relation to etiology and presentation. Notably, frequently absent students are not a homogenous group; rather, each frequently absent student presents with a unique risk profile relating to a range of factors (Maynard et al., 2012). Furthermore, SAPs may be thought of as a "*canary in the coal mine*, sending a signal that children may be facing challenges at school, at home, or in the community long before other issues are noted" (Kearney et al., 2023, as cited in Whitley et al., 2025, p. 5). Thus, when students face multiple, intersecting biopsychosocial challenges (e.g., mental health issues, family stressors, socioeconomic adversity, poor school relationships), their absence from school should be interpreted as a symptom of broader underlying challenges, rather than a standalone behavioural issue or juvenile defiance. Moreover, school absenteeism as a whole must be approached with an intervention grounded in an understanding of the unique challenges that led to absenteeism, as well as the risk contexts in which these challenges are situated (Melvin et al., 2019).

Children and Adolescents with ADHD

Attention-Deficit/Hyperactivity Disorder (ADHD) is a common neurodevelopmental condition among children and adolescents. A recent meta-analysis of 41 studies conducted across 27 countries estimated the global prevalence of ADHD among children and adolescents to be 3.4% (Polanczyk et al., 2015). In Canada, the prevalence and incidence of ADHD among children and adolescents vary depending on age group, gender, and location (Espinet et al., 2022); however, the overall prevalence of ADHD among children and adolescents aged four to seventeen is estimated to be 8.6% (Morkem et al., 2020). Of note, in Canada, the prevalence of ADHD is approximately twice as high among boys compared to girls; estimates for boys range from 3.7% (Brault et al., 2012) to 13.3% (Gadermann et al., 2022), while estimates for girls

range from 1.5% (Brault et al., 2012) to 7% (Morkem et al., 2020). There is some research to suggest that this gender gap persists into adulthood (Morkem et al., 2020; Yallop et al., 2015).

ADHD is marked by "a persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning or development" (American Psychiatric Association [APA], 2013, p. 59) whereby individuals present with either combined presentation (i.e., presence of both inattention and hyperactive/impulsive symptoms), predominantly inattentive presentation (i.e., presence of only inattention symptoms), or predominantly hyperactive/impulsive presentation (i.e., presence of only hyperactive/impulsive symptoms). Inattention is characterized by difficulties with maintaining focus, listening to others when spoken to directly, following through on instructions or finishing tasks, and being organized, as well as a reluctance to engage in tasks that require mental effort, forgetfulness in daily activities, and losing personal items (APA, 2013). Hyperactivity/impulsivity is characterized by difficulties with staying still (i.e., fidgeting when seated, unable to or uncomfortable with sitting for an extended period of time, unable to engage in leisure activities quietly, waiting in line), as well as running or climbing during inappropriate times, talking excessively, interrupting conversations or speaking before it is their turn to speak, and intruding on others' things or personal space (APA, 2013). To receive a diagnosis of ADHD, symptoms must be present prior to the age of twelve years and in two or more environments (e.g., home and school) (APA, 2013). As well, symptoms of ADHD must interfere with or reduce the quality of daily functioning (APA, 2013).

ADHD in the School Environment

A diagnosis of ADHD can have profoundly negative and far-reaching impacts in the school environment (Loe & Feldman, 2007). A growing body of research suggests that ADHD symptoms often present and are exacerbated in the school environment due in large part to classroom expectations and conflict in relationships (Gwernan-Jones et al., 2016). Indeed, previous research has found that certain aspects of the classroom environment (e.g., exhibit sustained attention to class work and instruction and remain still for long periods) contribute to learning difficulties for students with ADHD (Ewe, 2019; Rogers et al., 2015b). As well, children and adolescents with ADHD often experience challenges related to emotion regulation and executive functioning (McAuley et al., 2014; Tosto et al., 2015) which may indirectly contribute to and exacerbate learning difficulties in the classroom (Tosto et al., 2015). Many students with ADHD often perform below their skill level and report poor achievement scores (Barry et al.,

2002; Langberg et al., 2011; Massetti et al., 2008). In the classroom environment, students with ADHD are often less engaged and demonstrate short attentive states during classroom teaching (Vile Junod et al., 2006; Rapport et al., 2009), avoid working collaboratively with their classmates (Zentall & Beike, 2012), display off-task behaviour (Kofler et al., 2008), approach their class work with less persistence (Carlson et al., 2002), and report less enjoyment in their academic work (Carlson et al., 2002). Interestingly, research has identified distinct academic outcomes associated with inattention symptoms compared to hyperactive/impulsive symptoms. For example, in their systematic review of 30 studies, Tosto and colleagues (2015) found that inattention symptoms were more negatively associated with mathematical ability than hyperactive/impulsive symptoms. Pingault and colleagues (2011) further found that inattention symptoms were strongly associated with poor long-term academic outcomes.

As mentioned earlier, research in the area of school absenteeism among children and adolescents with ADHD is limited but slowly growing. Kent and colleagues (2010) found that adolescent males with ADHD were significantly more likely to be absent from school and drop out of high school compared to adolescent males without ADHD. Classi and colleagues (2012) found that children and adolescents with comorbid ADHD and depression, anxiety, or phobia were significantly more likely to miss school compared to children and adolescents with ADHD-only. Black and Zablotsky (2018) further found that children and adolescents with ADHD were more likely to be absent from school than their counterparts without ADHD, and this association remained after controlling for demographics and co-occurring physical health conditions. Moreover, May and colleagues (2020) found that children presenting with symptoms of ADHD had poorer school attendance behaviour marked by unexcused absences compared to children without ADHD symptoms. Finally, Niemi and colleagues (2022) found that adolescents with ADHD exhibited a higher rate of absence from school and displayed significantly more symptoms of agoraphobia and/or panic compared to their neurotypical peers. Taken together, findings from this small literature base suggest that both elementary and secondary students with a diagnosis of ADHD or presenting with ADHD symptoms, particularly those with comorbidities, are more likely to experience school absenteeism than their neurotypical peers.

The academic challenges faced by students with ADHD are associated with significant economic, health, and social problems across the lifespan (Currie & Stabile, 2006; Harpin, 2005; Pelham et al., 2007). When compounded by the adverse long-term effects of school absenteeism,

these challenges underscore the importance of investigating the factors that may influence the onset and progression of school absenteeism among children and adolescents with ADHD.

The Student-Teacher Relationship

Within the attachment perspective, scholars have consistently emphasized the *affective quality* as central to their conceptualization and evaluation of student-teacher relationships. Specifically, three relationship dimensions have been proposed and defined to assess the affective quality of student-teacher relationships: *closeness*, *conflict*, and *dependency* (Birch & Ladd, 1997; Hamre & Pianta, 2001). Importantly, the aforementioned relational constructs have been predominantly investigated using the teacher-reported Student-Teacher Relationships Scale (Pianta & Nimetz, 2001), which itself was originally developed from an attachment perspective.

Closeness refers to "the degree of warmth and open communication that exists between a teacher and a child" (Birch and Ladd, 1997, p. 62) and characterizes affective relationships marked by security (Koomen & Jellesma, 2015) whereby students are "comfortable enough to approach their teachers for support" (Garcia-Moya, 2020, p. 8). Conflict refers to the "discordant interactions and lack of rapport between the teacher and child" (Birch and Ladd, 1997, p. 63); conflictual student-teacher relationships are further characterized by hostility, negativity, resistance, unpleasantness, and unpredictability (Garcia-Moya, 2020; Koomen & Jellesma, 2015). Finally, dependency refers to "possessive and clingy child behaviours that are indicative of an overreliance on the teacher as a source of support" (Birch & Ladd, 1997, p. 63). Birch and Ladd (1997) speculated that children who demonstrate high levels of dependency are less likely to explore their school environment and other social relationships.

Short- and Long-Term Outcomes of the Student-Teacher Relationship

Similar to the parent-child relationship, Verschueren and Koomen (2012) postulated that students who have a favourable relationship with their teacher are likely to use their teacher as a secure base from which to safely explore and a safe haven to return to during times of stress. Accordingly, teachers have the capacity to not only influence academic, behavioural, and social outcomes, but also facilitate and promote child self-efficacy (Hamre & Pianta, 2005; Pianta & Stuhlman, 2004). High quality student-teacher relationships are marked by high levels of closeness and low levels of conflict and dependency; conversely, low quality student-teacher relationships are marked by low levels of closeness and high levels of conflict and dependency (Bird and Ladd, 1997; Hamre & Pianta, 2001). A substantial body of research demonstrates that

the student-teacher relationship plays a foundational role in students' academic and behavioural outcomes and psychosocial development at every educational stage. For example, at the pre-school level, Pianta and colleagues (1997) found that preschool children with positive student-teacher relationships (characterized as secure and relatively free of conflict and dependency) performed better on measures of language and conceptual knowledge two years later. Howes and Ritchie (1999) further found that preschool- and kindergarten-aged children with secure student-teacher relationships played in more complex ways with their peers and were likely to seek comfort from their teacher. At the elementary level, Hamre and Pianta (2001) found that the quality of the student-teacher relationship in kindergarten uniquely predicted academic and behavioural outcomes in the first through eighth grade, such that student-teacher relationships marked by high levels of conflict and dependency in kindergarten were related to poor academic and behavioural outcomes through eighth grade, particularly for boys and students with high levels of behaviour problems in kindergarten, and that these associations remained significant after controlling for behaviour ratings, cognitive ability, ethnicity, and gender. Pianta and colleagues (2008) further found that students in first, third, and fifth grades with emotionally warm and sensitive teachers (characteristic features seen in high quality student-teacher relationships) demonstrated high math and reading achievement scores. Finally, at the secondary level, recent meta-analyses have found that positive student-teacher relationships are associated with school engagement and academic achievement among secondary students (Roorda et al., 2011; 2017). In a systematic review of 46 studies, Quin (2017) further found significant associations between high quality student-teacher relationships and increased rates of psychological engagement, academic grades, and attendance, and decreased rates of disruptive behaviour, suspension, and school drop-out among students between seventh and twelfth grades.

Recent empirical studies (Ansari et al., 2020b; Engels et al., 2021; Longobardi et al., 2020; Martin & Collie, 2019) and systematic reviews (Di Lisio et al., 2025; García-Rodríguez et al., 2023; Lei et al., 2022) have corroborated early research on the short- and long-term impacts of the student-teacher relationship on a range of outcomes. Specifically, high quality student-teacher relationships continue to be associated with academic achievement, emotion regulation, peer acceptance, prosocial behaviour, school engagement, and a reduced likelihood of school drop-out. Notably, in their meta-analytical review of 43 studies, Gubbels and colleagues (2019) identified poor student-teacher relationships to be a risk factor for school absenteeism.

Additionally, research has found links between the student-teacher relationship and other important outcomes not previously studied. Specifically, a growing body of literature demonstrates that the student-teacher relationship is associated with students' mental health. For example, in their meta-analytical review of 57 studies, Lei and colleagues (2016) found a significant negative correlation between high quality student-teacher relationships and externalizing behaviour problems, and a significant positive correlation between low quality student-teacher relationships and externalizing behaviour problems. Furthermore, O'Connor and colleagues (2012) found that preschool children with student-teacher relationships marked by elevated levels of conflict were likely to exhibit externalizing behaviours in fifth grade; likewise, preschool children with student-teacher relationships marked by low levels of closeness were likely to exhibit internalizing behaviours in fifth grade. Building upon O'Connor and colleagues' (2012) study, Miller-Lewis and colleagues (2014) further found that students aged 4-to-6 years with stable/high quality student-teacher relationship trajectories had significantly lower levels of parent- and teacher-rated mental health problems, particularly conduct, hyperactivity, and peer problems, at age six compared to students aged 4-to-6 years with moderate/declining student-teacher relationship trajectories. Additionally, using data from the National Longitudinal Study of Adolescent to Adult Health, Kim (2021) found that, after controlling for unobserved family background factors (e.g., genetics, family environment, school and neighborhood contexts) using sibling fixed-effect models, middle- and high-school students who reported positive student-teacher relationships at Wave 1 also reported significantly lower depression scores 13 years later, suggesting that supportive relationships with teachers during adolescence may robustly influence and protect adult mental health. Finally, while limited research has been conducted on secondary students, Halladay and colleagues (2020) found that, among elementary and secondary students in Ontario, student-teacher relationship quality and teachers' responsiveness to students' emotional concerns were positively associated with intentions to seek mental health help at school. As well, among secondary students, student-teacher relationship quality was positively associated with mental health service use (Halladay et al., 2020), highlighting the role that positive student-teacher relationships can have on facilitating access to mental health supports and, consequently, improving mental health.

Collectively, the available body of empirical research provides compelling evidence that student-teacher relationships play a critical and influential role in shaping children and adolescents' academic and behavioural outcomes and overall well-being.

The Student-Teacher Relationship in Students with ADHD

As previously discussed, children and adolescents with a diagnosis of ADHD or presenting with ADHD symptoms experience more academic, behavioural, and social difficulties in the school environment than their neurotypical peers. With respect to the student-teacher relationship, in particular, mounting evidence suggests that students with ADHD are more likely to report less emotional closeness and heightened levels of conflict with their teachers (Ewe, 2019). In their meta-analytical review of 27 studies, MacLean and colleagues (2023) found a small, significant, and negative association between ADHD symptoms among children and adolescents and closeness within the student-teacher relationship, as well as a moderate, significant, and positive relationship between ADHD symptoms among children and adolescents and conflict within the student-teacher relationship. Interestingly, gender was not found to be a significant moderator between ADHD symptoms and closeness or conflict within the student-teacher relationship. As well, comorbidity was found to be a significant moderator between ADHD symptoms and conflict within the student-teacher relationship such that studies that reported comorbidity within their student samples demonstrated lower levels of conflictual student-teacher relationships (MacLean et al., 2023). In a community sample of children aged 6-to-10 years with high or low levels of ADHD symptoms and their teachers assessing affective and collaborative aspects of the student-teacher relationship, Rogers and colleagues (2015a) found that students in the ADHD group reported a weaker bond with their teachers and a less collaborative student-teacher relationship than students in the non-ADHD group, a finding that matched their teachers' reports. Interestingly, from the teachers' perspective, child gender did not significantly affect the aforementioned relationships; however, girls in the ADHD group were significantly more likely to report a weaker bond with their teachers and a less collaborative student-teacher relationship than their neurotypical counterparts (Rogers et al., 2015a). Based on elementary school teachers' perspectives, Prino and colleagues (2016) further found significantly low quality student-teacher relationships – marked by high levels of conflict and low levels of closeness – between elementary-aged students with ADHD and their teachers. More recently, Zendarski and colleagues (2020) found that first grade students with a formal diagnosis of

ADHD had significantly poorer student-teacher relationship quality with their teachers than their peers without ADHD, as reported by their teachers. As well, a moderate effect size for child gender was found, whereby boys with a formal diagnosis of ADHD had significantly poorer student-teacher relationship quality than girls (Zendarski et al., 2020). Taken together, it is evidently clear that children with ADHD symptoms, at both clinical and subclinical levels, are at heightened risk for experiencing low-quality relationships with their teachers which may, ergo, put them at additional risk for poor academic, behavioural, and social development.

Mental Health of Children and Adolescents

Child and adolescent mental health has been and continues to be an area of concern for researchers and clinicians across the globe (Benton et al., 2021; Patel et al., 2007). In their meta-analytical review of 41 studies, Polanczyk and colleagues (2015) estimated the pooled prevalence for any mental disorder among children and adolescents to be 13.4%. However, emerging research suggests that the COVID-19 pandemic exacerbated mental health challenges among children and adolescents (Meherali et al., 2021; Schmidt et al., 2021), with one meta-analytical review of 29 studies reporting that, compared with pre-pandemic estimates, the prevalence rates of anxiety and depression doubled during the pandemic (Racine et al., 2021). Left unmanaged, mental health challenges during childhood and adolescence can have profoundly detrimental and far-reaching impacts (Schlack et al., 2021). Accordingly, and in line with the theoretical propositions of the internalizing-externalizing transdiagnostic factor model of mental health, it is imperative to investigate the developmental and long-term outcomes of child and adolescent mental health difficulties.

Internalizing Problems

Internalizing symptoms are considered “inner-directed” and “involve withdrawal, depression, and anxiety” (Holland et al., 2017, p. 2). Broadly recognized internalizing disorders include anxiety and depressive disorders (Holland et al., 2017), with some research suggesting that eating disorders, obsessive-compulsive and related disorders, somatic symptom and related disorders, and trauma- and stressor-related disorders may also be considered internalizing disorders (De Wit & Polderman, 2023; Reynolds, 1990). The present study, however, will focus on anxiety and depressive disorders and their associated symptoms.

Anxiety disorders, including generalized anxiety disorder, separation anxiety disorder, and social anxiety disorder, “share features of excessive fear and anxiety and related behavioural

disturbances" (APA, 2013, p. 189). Among children and adolescents, the global prevalence of any anxiety disorder is estimated to be 6.5% (Polanczyk et al., 2015). In Canada, anxiety disorders are among the most common mental health conditions in childhood and adolescence, with prevalence rates estimated at nearly 9% in children and between 11% and 19% in adolescents (Klein et al., 2023). Depressive disorders, including disruptive mood dysregulation disorder, major depressive disorder, and persistent depressive disorder (i.e., dysthymia), are marked by "the presence of sad, empty, or irritable mood, accompanied by somatic and cognitive changes that significantly affect the individual's capacity to function" (APA, 2013, p. 155). Among children and adolescents, the global prevalence of any depressive disorder is estimated to be 2.6% (Polanczyk et al., 2015).

Within the school environment, substantial research demonstrates strong links between internalizing symptoms and academic and school-based outcomes (Grover et al., 2007; Pedersen et al., 2019; Riglin et al., 2014; Weidman et al., 2015). Additionally, a growing body of research provides evidence of the association between internalizing symptoms and school absenteeism. In their systematic and meta-analytical review of 19 studies, Finning and colleagues (2019a) found significant associations between depression and school absenteeism, as well as between depression and unexcused absences. In another systematic review of 11 studies, Finning and colleagues (2019b) found significant associations between any anxiety disorder and truancy, as well as between separation, generalized, and social anxiety disorders and school refusal. More severely, in their meta-analytical review of nine studies, Epstein and colleagues (2020) found that school absenteeism was significantly associated with an increased risk of self-harm and suicidal ideation. Within the context of the COVID-19 pandemic, Krause and colleagues (2025) found that internalizing behaviours among elementary and secondary students were concurrently associated with school absenteeism. Finally, Rogers and colleagues (2024) found that, among clinically referred elementary- and middle school-aged children, internalizing symptoms significantly predicted school absenteeism, especially as child age and severity of internalizing symptoms increased.

Externalizing Problems

Externalizing symptoms are considered "outer-directed" and "involve acting-out, defiant, and noncompliant behaviours" (Holland et al., 2017, p. 2). Broadly recognized externalizing disorders include ADHD, conduct disorder, and oppositional defiant disorder (Holland et al.,

2017). Conduct disorder (CD) is marked by "a repetitive and persistent pattern of behaviour in which the basic rights of others or major age-appropriate societal norms or rules are violated" (APA, 2013, p. 472). Among children and adolescents, the global prevalence of CD is estimated to be 2.1% (Polanczyk et al., 2015). Oppositional defiant disorder (ODD) is marked by "a frequent and persistent pattern of angry/irritable mood, argumentative/defiant behaviour, or vindictiveness" (APA, 2013, p. 463). Among children and adolescents, the global prevalence of ODD is estimated to be 3.6% (Polanczyk et al., 2015). Of note, ODD frequently precedes the development of CD, whereby symptoms of ODD usually appear during the preschool years and symptoms of CD usually appear between middle childhood and adolescence. However, many children and adolescents with ODD do not necessarily subsequently develop CD (APA, 2013).

Interestingly, the findings with regards to the association between externalizing problems and academic outcomes are mixed (Kulkarni et al., 2021). However, emerging research demonstrates strong links between externalizing symptoms and school absenteeism. Using data from the National Longitudinal Study of Adolescent Health, Wood and colleagues (2012) found that high levels of conduct problems among middle and high school students were associated with high levels of absenteeism at one-year follow-up. Similar to the aforementioned findings, Krause and colleagues (2025) found that externalizing behaviours among elementary and secondary students were concurrently associated with school absenteeism. Rogers and colleagues (2024) further found that externalizing symptoms significantly predicted school absenteeism, especially for younger children with low-to-moderate levels of externalizing symptoms.

Mental Health Symptomatology of Children and Adolescents with ADHD

Children and adolescents with ADHD are at a significantly higher risk of experiencing a range of poor short- and long-term mental health outcomes and poorer health-related quality of life compared to their peers without ADHD (French et al., 2024; Sciberras et al., 2009; Wanni Arachchige Dona et al., 2023). Additionally, children and adolescents with a diagnosis of ADHD are likely to have comorbid mental disorders; using a clinical sample in Denmark, for example, Jensen and Steinhausen (2015) found that 52% of their sample (n = 14,825) had one mental disorder comorbid to ADHD and 26.2% had two or more comorbid mental disorders.

With respect to internalizing and/or externalizing symptoms and disorders, research suggests that children and adolescents with ADHD experience high rates of comorbid internalizing and/or externalizing difficulties. For example, based on the United States' National

Survey of Children's Health (n = 45,169), 39.1% and 18.9% of children and adolescents with an ADHD diagnosis had comorbid anxiety symptoms and depression symptoms, respectively, with girls and adolescents (aged 12-17 years) reporting significantly greater comorbid anxiety and depression scores than boys and children (Danielson et al., 2024). As well, 44.1% of children and adolescents with an ADHD diagnosis had comorbid behavioural or conduct problems, with boys and young children (aged 3-5 years) reporting significantly greater comorbid behavioural or conduct problems than girls and older children or adolescents (Danielson et al., 2024). Furthermore, substantial research indicates that children and adolescents with ADHD exhibiting internalizing, externalizing, or co-occurring symptoms are more vulnerable to poor academic and social outcomes than their peers with ADHD-only. In their systematic review of 31 studies, Bishop and colleagues (2019) found that children and adolescents with comorbid ADHD and anxiety symptoms or disorders experienced higher levels of functional impairment (e.g., social problems) relative to their counterparts with ADHD-only. In their longitudinal investigation of the associations between internalizing and/or externalizing comorbidities and functional outcomes among elementary-to-middle school aged children with ADHD, Armstrong and colleagues (2015) found that, compared to children with ADHD-only, children with co-occurring internalizing and externalizing comorbidities had more parent-reported peer problems, greater daily functioning difficulties, and poorer psychosocial quality of life at 12-month follow-up. As well, children with externalizing comorbidities had greater peer problems; however, little evidence was found between internalizing comorbidities and functional outcomes (Armstrong et al., 2015). Additionally, Melegari and colleagues (2018) found that preschool- and primary-aged children with comorbid ADHD and generalized anxiety disorder presented with significantly more depressive disorders than their counterparts with ADHD-only. Bethune and colleagues (2023) further found that higher levels of internalizing symptoms among elementary-to-middle school-aged children with an ADHD diagnosis were positively and significantly correlated with functional impairment. More severely, in their systematic review of 18 studies, Garas and Balazs (2020) found that a diagnosis of ADHD or ADHD symptoms in childhood was associated with suicidal behaviour and/or attempts in adulthood.

With respect to gender, in relation to both internalizing and externalizing difficulties among children and adolescents with ADHD, empirical findings from across the globe are somewhat mixed. Generally, females with ADHD are more likely to experience internalizing

behaviours than their male counterparts, whereas males with ADHD are more likely to experience externalizing behaviours than their female counterparts (Dimitri et al., 2025). Using a clinical sample in Sweden, Elwin and colleagues (2020) found that girls were more likely to have comorbid anxiety and/or affective disorders; interestingly, however, no gender differences were observed for comorbid ODD or CD. Using a clinical sample in Singapore, Lau and colleagues (2021) found significantly higher externalizing problems among male participants than females, and non-significantly higher internalizing problems among female participants than males. Contrastingly, using a clinical sample in Italy, De Rossi and colleagues (2022) found that internalizing symptoms, including depressive and obsessive-compulsive symptoms, were more pronounced among boys than girls.

Collectively, the existing body of research cogently demonstrates that children and adolescents – especially those living with ADHD – presenting with mental health difficulties are at an increased risk for experiencing unfavourable academic, social, and school-based outcomes, including school absenteeism. The research gaps in the current literature base underscore the need to further examine risk and protective factors that shape school attendance behaviour

The Present Study

The literature reviewed above provides the following rationale for the present study. First, the scope, causes, and correlates of school absenteeism among students in Canada – including students living with ADHD – largely remain unclear. Arguably, scholars could draw from the large body of empirical literature on the scope of school absenteeism and the biopsychosocial risk factors for SAPs to hypothesize or predict the state of school attendance behaviour in Canada; notwithstanding this argument, however, it remains that the paucity of published Canadian research on the topic limits our ability to not only sufficiently and comprehensively appreciate for whom and under what circumstances school absenteeism is an issue within Canadian educational systems, but also to appropriately and effectively implement intervention or prevention strategies. Second, using tenets of attachment theory, substantial evidence underscores the influential role of the student-teacher relationship in shaping students' psychosocial development and promoting favourable academic, behavioural, and mental health outcomes. However, to our knowledge, no studies have applied attachment theory to examine the moderating role of student-teacher relationship quality between student mental health and school attendance behaviour, particularly for students reporting poor mental health. Given that younger

or more vulnerable children (e.g., relatively limited capacity for self-regulation, sensitive attachment system, require additional adult caregiving support) may regard their teacher as an attachment figure of heightened importance, the present study will explore these relationships among elementary-aged students (i.e., Kindergarten to Grade 8). Third, several individual- and family-level factors have been identified in the literature as both risk and protective factors for school absenteeism and SAPs. In an effort to better identify which students may require additional support, the present study will control for certain sociodemographic variables, e.g., parental education, child age, and child gender. Overall, the present study seeks a more nuanced appreciation of the interplay between students' mental health symptomatology, student-teacher relationship quality, and school attendance behaviour across ADHD status.

In light of the background literature, the objectives of the present study are: (1) to examine associations between students' rate of absence from school, student-teacher relationship quality (STRQ), and mental health symptoms; (2) to assess any differences between girls and boys; (3) to investigate the moderating role of STRQ between students' mental health symptoms and their rate of absence from school; and (4) to explore any significant differences in the aforementioned objectives between students with and without a formal diagnosis of ADHD.

With these broad goals in mind, there are three research questions for the present study:

(1) What is the rate of (i.e., total number of days missed) and reasons for absence from school in a two-week period among Canadian students with and without ADHD?

(2) Are there any significant differences between students with and without ADHD in rate of absence from school, STRQ, externalizing behaviours, or internalizing behaviours? Do these relationships vary based on child gender?

(3) Does STRQ moderate the relationships between students' internalizing and externalizing behaviours and their rate of absence from school (whilst controlling for key sociodemographic variables such as parental education, child age, and child gender) among students with and without ADHD?

Regarding the first research question, it is hypothesized that students with ADHD will exhibit significantly higher rates of absence from school in a two-week period than their peers without ADHD (H_1). However, as no studies to date have examined differences in the reasons for absence from school between students with and without ADHD, this component of the research question will adopt an exploratory focus. Regarding the second research question, it is

hypothesized that students with ADHD will exhibit significantly higher internalizing and externalizing behaviours and lower STRQ than their peers without ADHD (H_2). Given the mixed findings in the extant literature regarding differences between girls and boys, this part of the research question will also adopt an exploratory focus. Finally, regarding the third research question, it is hypothesized that students' internalizing and externalizing behaviours will be significantly, positively associated with their rate of absence from school, and significantly, negatively associated with STRQ (H_3). As well, it is hypothesized that STRQ will significantly moderate the relationship between students' internalizing and externalizing behaviours and their rate of absence from school, such that stronger STRQ will weaken the positive correlation between students' internalizing and externalizing behaviours and their rate of absence from school (H_4). Additionally, it is hypothesized that the moderating role of STRQ will be stronger among students without ADHD (H_5).

Methods

Participants

Parent and guardian participants in the present study were drawn from a larger, ongoing Canada-wide cross-sectional study (https://osf.io/qh642/files/xydhv). The focus of the larger study is to investigate the efficacy and psychometric properties of a new questionnaire assessing rate of and reasons for absence from school among children and adolescents, as well as to assess whether and which factors (e.g., environmental sensitivity, loneliness, mental health and well-being, parental beliefs about school, resilience, school relationships, etc.) are related to absence from school. Parent and guardian participants in the present study were recruited between November 25, 2024 and June 2, 2025 (round one), and between October 10 and December 5, 2025 (round two). Of note, during the first round of data collection, a high proportion of the sample had ADHD because a large number of participants were recruited from advocacy organizations. Thus, during the second round of data collection, targeted recruitment efforts were made to recruit parents and guardians of children without a diagnosis of ADHD. To ensure that the comparison group (i.e., non-ADHD) was roughly equivalent to the ADHD group, preliminary descriptive analyses of the latter sample's sociodemographic characteristics were conducted in Summer 2025 to inform the direction of our targeted recruitment efforts. ADHD status and presentation type were confirmed via two parent-report sociodemographic questions ("Has your participating child been diagnosed or identified with any of the following?" (*ADHD* was one of

the response options) and “Please select the type/presentation of ADHD your participating child has been diagnosed with” (*Predominately Inattentive*, *Predominately Hyperactive-Impulsive*, and *Combined* were the response options).

Parent and guardian participants were recruited via advocacy organizations (e.g., Centre for ADHD Awareness Canada), professional communities (e.g., Asian Psychology Section of the Canadian Psychological Association), and social media platforms (e.g., Instagram, Facebook). (See Appendix A for the recruitment poster that includes the survey link and QR code). Additionally, research assistants in the Rogers Child Mental Health Lab supported in-person recruitment efforts (e.g., community, recreation, and shopping centres) in Fall 2025. Specifically, research assistants approached and asked community members if they would like to participate in the larger study. When community members consented to participate in the study at the recruitment site, they were provided with an iPad to complete the survey.

To be included in the larger study, parent and guardian participants were required to be sufficiently proficient in the English language to complete the survey and have at least one child between Junior Kindergarten and Grade 12 who was living in Canada and attending a school in Canada at the time of data collection. Parent and guardian participants in the present study were excluded if they had a child (i) between Grades 9 and 12, (ii) living with autism spectrum disorder (ASD), and/or (iii) attending school on a part-time or modified schedule.

Children with ASD were intentionally excluded from the present study for the following reasons. With both ASD and ADHD classified as neurodevelopmental conditions, substantial empirical evidence suggests that ASD and ADHD share many clinical traits, including deficits in executive function and social functioning (Ceruti et al., 2024; Craig et al., 2015; Martinez et al., 2024; Reiersen & Todd, 2008). Moreover, children with comorbid ASD and ADHD typically have a distinct developmental profile as they tend to exhibit the use of fewer executive function and social functioning skills than children with either ASD- or ADHD-alone. Accordingly, to reduce potential confounding and improve statistical parsimony within both the comparison and ADHD groups, children with ASD were excluded from the present study.

Procedure

Institutional approval for the larger study was provided by *Carleton University Research Ethics Board*. Parent and guardian participants provided informed consent (see Appendix B) and completed the online survey via Qualtrics. The larger survey, named the *School Experiences*

Survey, consisted of sociodemographic questions, the novel Questionnaire for School Attendance Problems (QSAP), and several validated and non-validated measures assessing various factors possibly related to school attendance behaviour (e.g., environmental sensitivity, loneliness, mental health and well-being, parental beliefs about school, resilience, school relationships, etc.) (see Appendix C for the measures included in the present study). Importantly, parent and guardian participants could complete the survey only once and for one child. Participants with two or more children were asked to choose one of their children to report on throughout the entire survey.

The survey took approximately 30-45 minutes to complete. At the end of the survey, parent and guardian participants had the option to enter their email address for a draw to win a gift card. To protect participant privacy, identifying information provided in the compensation form was collected and stored separately and securely from the survey responses. Of note, parents and guardians who completed the survey at one of the in-person recruitment sites were compensated with a physical $5 gift card to Tim Horton's.

Measures

School Absenteeism

The Questionnaire for School Attendance Problems – Parent Report (QSAP; Canadian School Attendance Partnership, 2025) is currently in development by Maria A. Rogers (Carleton University), Jess Whitley (University of Ottawa), J. David Smith (University of Ottawa), Natasha McBrearty (University of Ottawa), and Carolynn Hare (Carleton University). The QSAP is being developed as a parent-report instrument that comprehensively assesses rate of and reasons for absence from school in a two-week period among children and adolescents. To inform the conceptual development of the QSAP, the authors drew from the School Non-Attendance ChecKlist (SNACK; Heyne et al., 2019), a brief, parent-report screening measure that educators, practitioners, and researchers can use to differentiate between nonproblematic absenteeism and the four types of SAPs. Exact items from the SNACK were not replicated in the QSAP, but instead were drawn from to create new items that would facilitate a more targeted assessment of attendance behaviour and support personalized intervention plans.

Parent and guardian participants are first asked to answer several questions regarding their child's schooling, including "How is your child currently attending school?", "Does your child typically attend school on a part-time or modified schedule?", and "Estimate how many full

days of school your child has missed over the last two weeks". Additionally, for parent and guardian participants who report that their child missed school in the last two weeks, participants are asked to select from a list of 28 possible reasons explaining their child's absence(s) from school (e.g., "My child was physically unwell"). Participants are able to select more than one reason explaining their child's absence(s) from school. For each reason selected, parent and guardian participants are asked to indicate how often that is the reason that their child is missing school; response options range from 1 (*rarely*) to 4 *(always*). Finally, parent and guardian participants are asked to answer two short open-ended questions: "In your own words, please comment on why your child usually misses school" and "Is your child's school attendance a concern for you? Please explain". The present study used the question "Estimate how many full days of school your child has missed over the last two weeks" as well as the list of 28 possible reasons explaining absence(s) from school to determine the rate of and identify the frequently cited reasons for absence from school, respectively.

School Relationships

The School Relationships Scale – Parent Report (SRS) is currently in development by Maria A. Rogers (Carleton University) and Robert C. Pianta (University of Virginia). The SRS is being developed as a 16-item parent-report instrument that assesses interpersonal relationships that are foundational to and have a meaningful impact on students' educational experiences: the student-teacher relationship (e.g., "My child values their relationship with their teacher"); the parent-child relationship (e.g., "I try to make my child feel confident in their schoolwork"); peer relationships (e.g., "My child has one or more good friendship(s) with a student at their school"); the parent-teacher relationship (e.g., "I ask my child's teacher their opinion about my child's progress"); and other relationships (e.g., "Other than their teacher(s), there is another adult *at school* who supports my child's learning through a close relationship"). To inform the conceptual development of the SRS, the authors drew from four existing instruments that have strong psychometric properties: (1) The Parent-Teacher Relationship Scale-II (Vickers & Minke, 1995; Dawson & Wymbs, 2016); (2) The Student-Teacher Relationships Scale (Pianta & Nimetz, 2001; Web & Neuharth-Pritchett, 2011); (3) The Strengths and Difficulties Questionnaire (Aitken et al., 2015; Goodman, 1997; He et al., 2013), and (4) The Parent-Support for Learning Scale (Rogers et al., 2014; 2018). Importantly, exact items from the aforementioned instruments were not

replicated in the SRS, but instead were drawn from to create new items that reflect the relationships of interest, include a school focus, and are appropriate for parent-report.

Response options for every item on the SRS range from 1 (*strongly disagree)* to 5 (*strongly agree*), with higher scores reflecting better relationship quality. The present study used the four-item student-teacher relationship subscale to calculate a mean student-teacher relationship quality score. This subscale demonstrated adequate internal consistency in the comparison (α = .80) and ADHD (α = .86) groups in the present study.

Externalizing and Internalizing Symptoms

The Ohio Youth Problem, Functioning, and Satisfaction Scales – Parent Rating, Short Form (Ohio Scales; Ogles et al., 2000; 2001; 2004) is a 48-item instrument originally developed to measure clinical outcomes in children and adolescents receiving behavioural health services. To assess students' internalizing and externalizing behaviours, the present study used the 20-item problem severity subscale (PSS-20) which consists of nine items that measure externalizing behaviours (e.g., "Yelling, swearing, or screaming at others") and 11 items that measure internalizing behaviours (e.g., "Feeling worthless or useless"). Response options range from 0 (*not at all*) to 5 (*all of the time*), with higher scores reflecting poorer mental health. In line with the goals of the present study, a mean externalizing score (i.e., the average of all nine items measuring externalizing behaviours) and a mean internalizing score (i.e., the average of all 11 items measuring internalizing behaviours) were separately calculated. The externalizing and internalizing subscales demonstrated adequate internal consistency in the comparison (α = .79 and α = .85, respectively) and ADHD (α = .82 and α = .83, respectively) groups. The PSS-20 has previously demonstrated strong psychometric properties; namely, Laba and colleagues (2022) reported excellent internal consistency (α = .90) within their sample. Additionally, the PSS-20 exhibited adequate convergent validity, as evidenced by a moderate, statistically significant correlation ($r = .31$, $p < .01$) with the Child and Adolescent Functional Assessment Scale, a widely used instrument to measure functional impairment among children and adolescents (Laba et al., 2022). Of note, with the exception of item 11 ("Can't seem to sit still, having too much energy"), the PSS-20 does not include any items that measure hyperactivity or inattention.

Data Cleaning and Preparation

Several steps were taken to clean and prepare the dataset prior to data analyses. There were a total of 977 participants in the raw dataset. First, participants were removed if they did

not consent to participating in the study or pass one or more of the screening questions (e.g., "Do you and your family currently live in Canada?" and "Do you have a child who is in Kindergarten to Grade 12?"). To identify and exclude bots, imposters, or careless respondents, three bot detection blocks were introduced in the survey: i) reCAPTCHA, ii) selecting the largest number in the sequence, and iii) setting a dial to the specified number. Participants were flagged if they failed one of the bot checks and removed if they failed two or more of the bot checks. Next, the dataset was examined for straight-lining (e.g., selecting the same response option for all items) and random responses (e.g., providing nonsensical answers to open-ended questions). Participants exhibiting these patterns were flagged and, when appropriate, removed. As well, the study completion time check was reviewed, whereby participants were flagged for potential speeding if they completed the survey in 10 minutes or less. Again, when appropriate and after reviewing their responses, these participants were removed. Finally, participants were removed if they answered some or all of the sociodemographic questions but did not answer the QSAP or any of the other measures included in the present study, and had a child i) between Grades 9 and 12, ii) living with ASD, and/or iii) attending school on a part-time or modified scheduled. Following data cleaning, a total of 225 participants were included in the present study. Of note, some participant responses were recoded where appropriate (e.g., recoding the response "2half days – max 8days to "8" for the question "Estimate how many full days of school your child has missed over the last 2 weeks"). Detailed data cleaning steps (including number of participants removed at each step) can be found in Appendix D.

Data Analytic Approach

All analyses were completed using IBM© SPSS Statistics (v30.0.0.0). With the exception of one of the independent samples t-test's (described below), all analyses were separately conducted for the comparison (i.e., non-ADHD) and ADHD groups. Statistical significance was set at $p < .05$ for all analyses and Cohen's (1992) effect sizes were used to interpret the effect sizes of all the statistical relationships.

Analyses of survey data first involved descriptive statistics to characterize the sample in terms of child, parental, and family sociodemographic characteristics. Descriptive statistics were further employed to identify the most frequent reasons for absence from school in a two-week period. Next, two items in the student-teacher relationship subscale were reverse-coded prior to calculating the mean student-teacher relationship quality (STRQ) score. Internal consistency of

multi-item theoretical constructs (e.g., STRQ, externalizing behaviours, and internalizing behaviours) was then assessed using Cronbach's alpha with a threshold of at least $\alpha = .70$. Subsequently, mean scores using the items within each theoretical construct were computed. Next, Pearson's bivariate correlations were conducted to examine associations between students' rate of absence from school, STRQ, externalizing behaviours, and internalizing behaviours, and cases were excluded listwise. Three independent samples t-tests were then conducted to assess any group differences across the primary variables of interest (i.e., absence from school, STRQ, externalizing behaviours, and internalizing behaviours); the first t-test examined group differences between the comparison and ADHD groups, while the second and third t-tests examined group differences between girls and boys (where the child gender variable was computed as a dichotomous variable, whereby 0 = girl and 1 = boy) within the comparison and ADHD groups. Again, cases were excluded listwise. Finally, four separate moderated regression analyses were conducted using PROCESS macro for SPSS at Model 1 (v4.2; Hayes, 2022). Prior to conducting the analyses, the predictor and moderating variables were mean-centered to reduce multicollinearity. Externalizing (X_1) and internalizing (X_2) behaviours functioned as separate predictor variables, absence in the last two weeks functioned as the outcome variable (Y), and STRQ was the moderating variable (W), whilst parental education, child age, and child gender were added as covariates. Significant interactions were explored by examining simple slopes of externalizing behaviours and internalizing behaviours on absence from school at low, medium, and high levels (e.g., -1 SD, mean, and +1 SD, respectively) of the moderating variable.

Results

Sociodemographics

Within the comparison group (n = 124), mean age of children was 8.15 years (SD = 2.44). Parent and guardian participants reported that 50% (n = 62) of their children identify as a girl, 15.3% (n = 19) have an individual education or program plan (IEP or IPP), and 13.7% (n = 17) have an anxiety and/or learning disorder. As well, 88.7% (n = 110) of parents and guardians reported they were married or living common law, 66.2% (n = 82) reported they had a Bachelor's or Master's degree, and 56.4% (n = 70) reported a household income of $150,000 or more.

Within the ADHD group (n = 101), mean age of children was 9.25 years (SD = 2.21). Children in the sample were distributed across all ADHD presentations: predominantly inattentive (n = 25), predominantly hyperactive/impulsive (n = 13), and combined (n = 63).

Parent and guardian participants reported that 33.7% (*n* = 34) of their children identify as a girl, 75.2% (*n* = 76) have an IEP or IPP, and 52.2% (*n* = 53) have an anxiety and/or learning disorder. As well, 88.2% (*n* = 84) of parents and guardians reported they were married or living common law, 62.3% (*n* = 63) reported they had a Bachelor's or Master's degree, and 38.6% (*n* = 39) reported a household income of $150,000 or more. Additional participant characteristics are summarized in Table 1.

Table 1

Participant characteristics (n = 225)

	Comparison (*n* = 124)	**ADHD (*n* = 101)**
Child characteristics	*n* (%)	*n* (%)
Child gender		
Boy	61 (49.2)	67 (66.3)
Girl	62 (50.0)	34 (33.7)
Other	1 (0.80)	-
Child grade		
Kindergarten	16 (12.9)	2 (2.0)
Grade 1	11 (8.9)	4 (4.0)
Grade 2	15 (12.1)	10 (9.9)
Grade 3	10 (8.1)	18 (17.8)
Grade 4	23 (18.5)	11 (10.9)
Grade 5	22 (17.7)	9 (8.9)
Grade 6	10 (8.1)	20 (19.8)
Grade 7	6 (4.8)	18 (17.8)
Grade 8	11 (8.9)	9 (8.9)
Individual Education or Program Plan		
Yes	19 (15.3)	76 (75.2)
No	105 (84.7)	25 (24.8)
Is school meeting requirements set out in IEP or IPP?		
Yes	16 (12.9)	58 (57.4)
No	3 (2.4)	17 (16.8)
Child ethnicity	-	
White	97 (78.2)	84 (83.2)
South Asian	5 (4.0)	4 (4.0)
Southeast Asian	-	1 (1.0)
Chinese	2 (1.6)	3 (3.0)
Korean	2 (1.6)	-
Black	6 (4.8)	3 (3.0)
West African	2 (1.6)	-
Latin American	5 (4.0)	1 (1.0)

Arab	4 (3.2)	-
Indigenous (First Nations, Metis, or Inuit)	10 (8.1)	7 (6.9)
Other group	5 (4.0)	5 (5.0)
Prefer not to answer	1 (0.8)	-
Child clinical diagnosis		
Post-traumatic stress disorder	1 (0.8)	1 (1.0)
Depression	2 (1.6)	6 (5.9)
Anxiety disorder	10 (8.1)	25 (24.8)
Obsessive-compulsive disorder	-	1 (1.0)
Tourette syndrome	-	2 (2.0)
Oppositional defiant disorder	-	9 (8.9)
Learning disorder	7 (5.6)	28 (27.7)
Intellectual disability	-	2 (2.0)
Speech language disorder	5 (4.0)	8 (7.9)
Physical disability	1 (0.8)	3 (3.0)
Chronic medical condition	8 (6.5)	7 (6.9)
Other	6 (4.8)	13 (12.9)
Medication for behavioural or mental disorder		
Yes	5 (4.0)	66 (65.3)
No	117 (94.4)	35 (34.7)
Parental/Guardian characteristics	*n* (%)	*n* (%)
Parental/Guardian gender		
Man	26 (21.0)	5 (5.0)
Woman	96 (77.4)	96 (95.0)
Other	2 (1.6)	-
Marital status		
Single, never married	7 (5.6)	5 (5.0)
Divorced	-	3 (3.0)
Separated	5 (4.0)	8 (7.9)
Married	93 (75.0)	69 (68.3)
Living common law	17 (13.7)	15 (14.9)
Prefer not to answer	2 (1.6)	1 (1.0)
Parental/guardian education		
High school diploma/GED	9 (7.3)	8 (7.9)
College diploma	12 (9.7)	24 (23.8)
Bachelor's degree	41 (33.1)	46 (45.5)
Master's degree	41 (33.1)	17 (16.8)
Doctoral (e.g., PhD) or Professional School (e.g., MD) degree	20 (16.1)	5 (5.0)
Prefer not to answer	1 (0.8)	1 (1.0)
Hours of paid work per week		
0-5	10 (8.1)	11 (10.9)
6-20	7 (5.6)	4 (4.0)
21-39	44 (35.5)	41 (40.6)
40 or more	62 (50.0)	45 (44.6)
Missing	1 (0.8)	-

Household income (CAD)		
$29,999 or less	4 (3.2)	2 (2.0)
Between $30,000 and $59,999	6 (4.8)	9 (8.9)
Between $60,000 and $89,999	9 (7.3)	12 (11.9)
Between $90,000 and $149,999	24 (19.4)	32 (31.7)
Between $150,000 and $299,999	50 (40.3)	31 (30.7)
$300,000 or more	20 (16.1)	8 (7.9)
Prefer not to answer	11 (8.9)	7 (6.9)
Family characteristics	*n* (%)	*n* (%)
Canadian province of current residence		
British Columbia	2 (1.6)	4 (4.0)
Alberta	4 (3.2)	38 (37.6)
Manitoba	1 (0.8)	2 (2.0)
Ontario	105 (84.7)	40 (39.6)
Quebec	7 (5.6)	5 (5.0)
New Brunswick	5 (4.0)	9 (8.9)
Nova Scotia	-	2 (2.0)
Newfoundland and Labrador	-	1 (1.0)
Primary language spoken at home		
English	100 (80.6)	92 (91.1)
French	13 (10.5)	5 (5.0)
Other	11 (8.8)	4 (3.9)

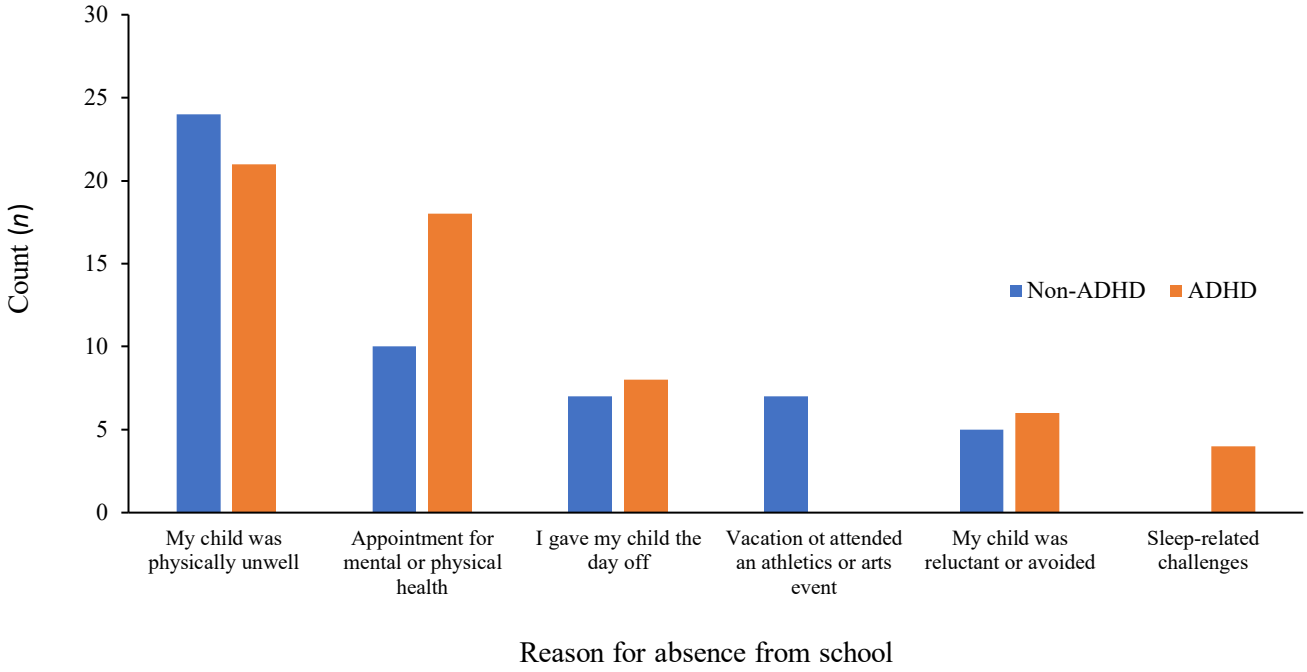
Rate of and Reasons for Absence from School

Consistent with the dimensional approach, school absenteeism was operationalized in the present study as the total number of days absent during a two-week period, irrespective of the reason(s) for absence. Within the comparison group, the average number of days missed was .96 days (*SD* = 2.01) in a two-week period. As seen in Figure 1, the most frequently selected reasons by parents and guardians explaining their child's absence were: i) "My child was physically unwell" (*n* = 24), ii) "My child attended appointments to support their physical or mental health" (*n* = 10), iii) "I gave my child the day off" (*n* = 7), iv) "My child was on vacation or attended an athletics or arts event" (*n* = 7), and v) "My child was reluctant or avoided" (*n* = 5).

Within the ADHD group, the average number of days missed was .84 days (*SD* = 1.43) in a two-week period. As seen in Figure 1, the most frequently selected reasons by parents and guardians explaining their child's absence were: i) "My child was physically unwell" (*n* = 21), ii) "My child attended appointments to support their physical or mental health" (*n* = 18), iii) "I gave my child the day off" (*n* = 8), iv) "My child was reluctant or avoided" (*n* = 6), and v) "My child missed school due to sleep-related challenges" (*n* = 4).

Figure 1

Reasons for absence from school in comparison group, i.e., non-ADHD (n = 124) and ADHD group (n = 101)



Bivariate Correlations and Descriptive Statistics

Bivariate correlations and descriptive statistics are presented in Tables 2 and 3. Within the comparison group, absence in the last two weeks was significantly, negatively associated with STRQ (r = -.37, p < .01) and significantly, positively associated with internalizing behaviours (r = .38, p < .01); in other words, among students without ADHD, higher rates of absence from school in a two-week period correlated with lower-quality student-teacher relationships and higher internalizing behaviours. STRQ was further found to be significantly, negatively associated with both externalizing (r = -.27, p < .01) and internalizing (r = -.29, p < .01) behaviours.

Within the ADHD group, absence in the last two weeks was significantly, positively associated with internalizing behaviours (r = .22, p < .05). As well, STRQ was significantly, negatively associated with both externalizing (r = -.38, p < .01) and internalizing (r = -.42, p <

.01) behaviours. In other words, among students with ADHD, higher-quality student-teacher relationships correlated with fewer internalizing and externalizing behaviours.

Table 2

Bivariate correlations and descriptive statistics for comparison group, i.e., non-ADHD (n = 120)

Variable	*M*	*SD*	α	1	2	3	4
1. Rate of absence	.96	2.01	-	-			
2. Student-teacher relationship quality	4.07	.80	.80	-.37**	-		
3. Externalizing	1.52	.41	.79	.12	-.27**	-	
4. Internalizing	1.43	.51	.85	.38**	-.29**	.48**	-

Note: *$p < .05$, **$p < .01$

Table 3

Bivariate correlations and descriptive statistics for ADHD group (n = 99)

Variable	*M*	*SD*	α	1	2	3	4
1. Rate of absence	.84	1.43	-	-			
2. Student-teacher relationship quality	3.61	.92	.86	-.13	-		
3. Externalizing	2.22	.67	.82	.11	-.38**	-	
4. Internalizing	2.00	.74	.83	.22*	-.42**	.46**	-

Note: *$p < .05$, **$p < .01$

Differences Among Study Variables Across ADHD Status

Children in the comparison group ($M = .96$, $SD = 2.01$) were reportedly more absent from school in a two-week period than children in the ADHD group ($M = .84$, $SD = 1.43$), but this was not a significant difference, $t(217) = .48$, $p = .63$. However, children in the comparison group ($M = 4.07$, $SD = .80$) demonstrated significantly higher STRQ than children in the ADHD group ($M = 3.61$, $p = .92$), $t(217) = 4.01$, $p < .001$. As well, children in the comparison group demonstrated significantly lower externalizing ($t(155.93) = -9.02$, $p < .001$) and internalizing ($t(169.30) = -6.40$, $p < .001$) behaviours than children in the ADHD group. Taken together, students without ADHD exhibited stronger relationships with their teachers and had fewer internalizing and externalizing behaviours than students with ADHD. See Table 4 for full details.

Table 4

Independent samples t-test of study variables between comparison (n = 120) and ADHD (n = 99) groups

Variable	Comparison		ADHD					
	M	*SD*	*M*	*SD*	*t*	*df*	*p*	*d*
Rate of absence	.96	2.01	.84	1.43	.48	217	.63	.07
Student-teacher relationship quality	4.07	.80	3.61	.92	4.01	217	<.001	.54
Externalizing	1.52	.41	2.22	.67	-9.02	155.93	<.001	-1.28
Internalizing	1.43	.51	2.00	.74	-6.40	169.30	<.001	-.90

Differences Among Study Variables Between Girls and Boys

Within the comparison group, there were no significant differences between girls and boys in rate of absence ($t(118) = .91$, $p = .36$), STRQ ($t(118) = .28$, $p = .78$), externalizing behaviours ($t(118) = -1.84$, $p = .07$), or internalizing behaviours ($t(118) = .41$, $p = .68$). Similarly, within the ADHD group, there were no significant differences between girls and boys in rate of absence ($t(41.48) = 1.46$, $p = .15$), STRQ ($t(97) = .07$, $p = .94$), externalizing behaviours ($t(97) = -1.13$, $p = .26$), or internalizing behaviours ($t(97) = 1.84$, $p = .07$). Put another way, there were no differences between girls and boys with or without ADHD across the primary variables of interest. See Tables 5 and 6 for more details.

Table 5

Independent samples t-test of study variables between girls (n = 62) and boys (n = 58) in comparison group, i.e., non-ADHD

Variable	Girls		Boys					
	M	*SD*	*M*	*SD*	*t*	*df*	*p*	*d*
Rate of absence	1.12	2.19	.78	1.81	.91	118	.36	.17
Student-teacher relationship quality	4.09	.74	4.05	.86	.28	118	.78	.05
Externalizing	1.45	.40	1.59	.42	-1.84	118	.07	-.34
Internalizing	1.45	.57	1.41	.45	.41	118	.68	.08

Table 6

Independent samples t-test of study variables between girls (n = 34) and boys (n = 65) in ADHD group

Variable	Girls		Boys					
	M	*SD*	*M*	*SD*	*t*	*df*	*p*	*d*
Rate of absence	1.19	2.00	.66	.98	1.46	41.48	.15	.38
Student-teacher relationship quality	3.62	.97	3.60	.90	.07	97	.94	.02
Externalizing	2.11	.69	2.27	.66	-1.13	97	.26	-.24
Internalizing	2.18	.85	1.90	.66	1.84	97	.07	.39

Moderated Regressions

Comparison Group

Full regression details can be found in Table 7. Within the comparison group, the overall models testing the effects of externalizing behaviours and STRQ (Model 1) and internalizing behaviours and STRQ (Model 2), whilst controlling for parental education, child age, and child gender, were statistically significant, $R^2 = .23$, $F\ (6,112) = 5.60$, $p < .01$ and $R^2 = .41$, $F\ (6,112) = 12.90$, $p < .01$, respectively. As seen in Table 7, there was a significant main effect of STRQ in both Model 1 ($b = -.73$, $p < .01$) and Model 2 ($b = -.49$, $p = .01$). That is, higher-quality student-teacher relationships are related to lower rates of absence.

In Model 1, a direct effect of parental education ($b = -.41$, $p = .01$) and child age ($b = .01$, $p < .05$) was observed. That is, parental education and child age were found to independently contribute to the variance in school absence when externalizing behaviours was the predictor variable. In other words, higher parental education is associated with lower rates of absence, and rate of absence from school increases as children age. There was no significant interaction observed between externalizing behaviours and STRQ ($b = -.13$, $p = .79$), nor was there a significant main effect of externalizing behaviours ($b = .47$, $p = .31$).

In Model 2, a direct effect of parental education ($b = -.47$, $p < .01$) as well as a significant interaction between internalizing behaviours and STRQ ($b = -1.11$, $p < .01$) was observed. That is, STRQ significantly moderated the relationship between internalizing behaviours and absence from school (see Figure 2). Specifically, there was a significant, positive relationship between internalizing behaviours and absence in the last two weeks at low STRQ ($b = 1.53$, $p < .01$), but

there was not a significant relationship between internalizing behaviours and absence in the last two weeks at average STRQ (b = .64, p = .05) or high STRQ (b = -.24, p = .61).

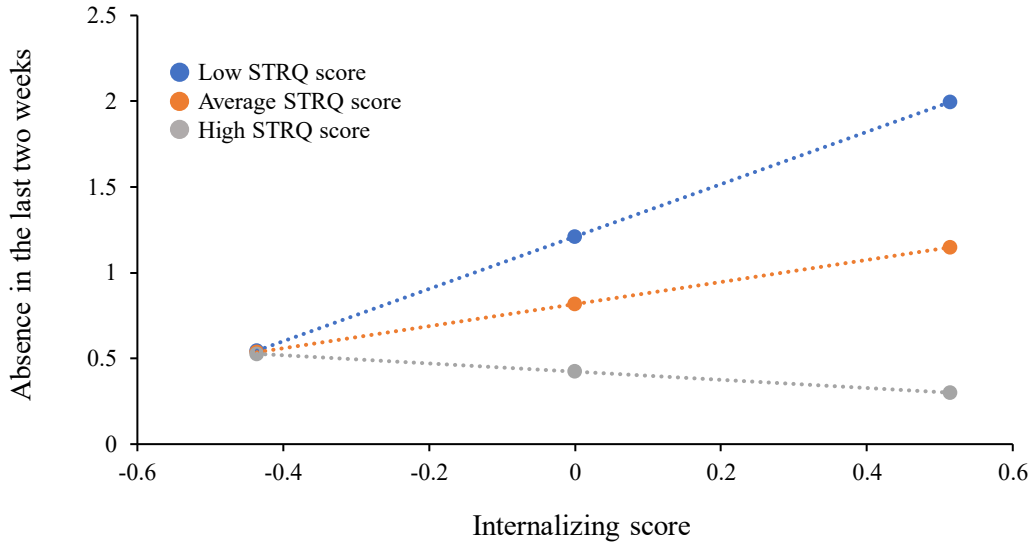
Table 7

Moderating effects of STRQ on the relationship between externalizing and internalizing behaviours and absence in the last two weeks in comparison group, i.e., non-ADHD (n = 119)

	Rate of absence (Y)			
	b	*SE*	*CI*	*p*
Model 1: R^2 = .23, F (6,112) = 5.60, p < .01				
Externalizing (X_1)	.47	.46	[-.45, 1.38]	.31
STRQ (W)	-.73	.24	[-1.20, -.26]	<.01
Ext*STRQ	-.13	.47	[-1.06, .81]	.79
Parental education	-.41	.16	[-.73, -.10]	.01
Age	.01	.01	[.00, .03]	.04
Gender	-.40	.35	[-1.09, .28]	.25
Model 2: R^2 = .41, F (6,112) = 12.90, p < .01				
Internalizing (X_2)	.64	.33	[-.01, 1.30]	.05
STRQ (W)	-.49	.20	[-.89, -.10]	.01
Int*STRQ	-1.11	.26	[-1.62, -.59]	<.01
Parental education	-.47	.14	[-.74, -.19]	<.01
Age	.01	.01	[-.00, .02]	.17
Gender	-.27	.30	[-.87, .33]	.38

Figure 2

Model 2: Simple slopes of the regression of internalizing behaviours on absence in the last two weeks at three levels of STRQ in comparison group, i.e., non-ADHD (n = 119)



ADHD Group

Full regression details can be found in Table 8. Within the ADHD group, the overall models testing the effects of externalizing behaviours and STRQ (Model 3) and internalizing behaviours and STRQ (Model 4), whilst controlling for parental education, child age, and child gender, were statistically significant, R^2 = .13, F (6,91) = 2.27, p = .04 and R^2 = .14, F (6,91) = 2.52, p = .03, respectively.

In Model 3, a direct effect of parental education (b = -.30, p = .05) and child gender (b = -.64, p < .05) was observed. Similar to the comparison group, higher parental education is associated with lower rates of absence; however, unlike the comparison group, girls with ADHD were observed to miss more school than their male counterparts. There was no significant interaction observed between externalizing behaviours and STRQ (b = .33, p = .15), nor was there a significant main effect of externalizing behaviours (b = .23, p = .31) or STRQ (b = -.16, p = .36).

In Model 4, a direct effect of parental education (b = -.32, p < .05) and a main effect of internalizing behaviours (b = .45, p = .05) was found. That is, higher internalizing behaviours are

related to higher rates of absence. There was no significant interaction observed between internalizing behaviours and STRQ (b = .24, p = .23), nor was there a significant main effect of STRQ (b = -.09, p = .59).

Table 8

Moderating effects of STRQ on the relationship between externalizing and internalizing behaviours and absence in the last two weeks in ADHD group (n = 98)

	Rate of absence (Y)			
	b	*SE*	*CI*	*p*
Model 3: R^2 = .13, F (6,91) = 2.27, p = .04				
Externalizing (X_1)	.23	.23	[-.22, .68]	.31
STRQ (W)	-.16	.17	[-.50, .18]	.36
Ext*STRQ	.33	.23	[-.12, .78]	.15
Parental education	-.30	.15	[-.60, -.01]	.05
Age	-.01	.01	[-.02, .00]	.27
Gender	-.64	.30	[-1.23, -.05]	.04
Model 4: R^2 = .14, F (6,91) = 2.52, p = .03				
Internalizing (X_2)	.45	.22	[.01, .90]	.05
STRQ (W)	-.09	.17	[-.44, .25]	.59
Int*STRQ	.24	.20	[-.15, .64]	.23
Parental education	-.32	.15	[-.61, -.02]	.04
Age	-.01	.01	[-.02, .00]	.27
Gender	-.48	.30	[-1.08, .11]	.11

Discussion

School absenteeism, including its risk and protective factors, as well as the short- and long-term impacts at the individual, family, school, and environment level**,** has been extensively researched by scholars from a range of academic and professional disciplines for over a century (Kearney, 2003). In recent years, some researchers have directed their efforts toward mapping patterns of risk exposure (Hancock et al., 2018; Maynard et al., 2012) to support the development of individualized intervention and treatment plans. Despite the large amount of knowledge on the scope, causes, and correlates of school absenteeism in other high-income

countries around the world, little is known about the issue – including its nuances and the broader context that surrounds school attendance behaviour – within Canadian educational systems. Thus, guided by attachment theory and the internalizing-externalizing transdiagnostic factor model of mental health, the present study endeavoured to (1) determine the rate at which and the reasons why students miss school in a two-week period, (2) examine whether students' mental health symptoms are associated with their rate of absence from school, (3) investigate whether and how student-teacher relationship quality (STRQ) moderates the relationship between students' mental health symptomatology and their rate of absence from school, and (4) ascertain any salient differences between students with and without ADHD. Findings from the present study shed light on some of the reasons underlying students' absences in a two-week period. Additionally, findings reveal expected and unexpected differences between students with and without ADHD, and between girls and boys. Importantly, the present study provides valuable insights into the function of STRQ, particularly as a moderator between internalizing behaviours and school attendance behaviour among elementary-aged students without ADHD. Finally, among the covariates that were controlled for, parental education was found to be the most important factor contributing to students' school attendance behaviour across ADHD status and mental health presentation.

Rate of and Reasons for School Absences

On average, students in both the comparison (i.e., non-ADHD) and ADHD groups were reportedly absent from school for less than one day in a two-week period. Interestingly, students without ADHD were observed to have a slightly higher rate of absence from school than students with ADHD. This finding is not consistent with what we see in the literature base; previous research studies have found that students with ADHD are reportedly more absent from school and are at higher risk for chronic absenteeism than their neurotypical peers (Black & Zablotsky, 2018; Kent et al., 2010; May et al., 2020; Niemi et al., 2022). Therefore, our first hypothesis (i.e., students with ADHD will exhibit significantly higher rates of absence from school than their peers without ADHD) is rejected. Importantly, the difference in the rate of absence between the two groups was not significant, and the p-value of the difference suggests that this was not a meaningful difference; nevertheless, there are some plausible explanations for why we may be seeing this contradictory finding in the present study. First, rate of absence was measured cross-sectionally and over a two-week period. Previous investigations of absenteeism have typically

employed longitudinal research designs to measure whether a student's school attendance behaviour is typical, shows signs of an emerging problem, or is chronic (Ansari & Pianta, 2019). True differences in absenteeism, then, may be better captured by tracking students' school attendance behaviour across several time points in a school year. For example, in both the comparison and ADHD groups, the two most frequently selected reasons for absence were *physical sickness* and *appointment for mental or physical health*. Of note, both of these explanations for missing school are common among students, and neither of these reasons reflect a true school attendance problem (Heyne et al., 2019).

Additionally, it is possible that students with ADHD, because of their formal diagnosis, were receiving more instrumental or tangible support (e.g., medication, accommodations, specialized instruction or services, etc.) than their neurotypical peers which, in turn, facilitated their school attendance. Of note, among the parents and guardians of students with ADHD receiving an IEP, approximately 76% indicated that their child's school was meeting the requirements set out in the formal plan. Thus, a large proportion of children in the ADHD group had their educational needs met by their school.

As stated above, the difference between the comparison and ADHD groups in the rate of absence over a two-week period was not statistically or practically significant. As well, the mean rate of absence in both groups as well as the reasons for absence did not signal any concern that either group is at risk for chronic absenteeism or experiencing a true school attendance problem. Thus, it is advised that these findings be interpreted and utilized cautiously.

Differences Between Comparison and ADHD Groups

With the exception of rate of absence from school, there were statistically significant differences with moderate-to-large effect sizes observed in the hypothesized direction between students with and without ADHD on externalizing behaviours, internalizing behaviours, and student-teacher relationship quality. Thus, our second hypothesis (i.e., students with ADHD will exhibit significantly higher externalizing and internalizing behaviours and significantly weaker student-teacher relationships than their peers without ADHD) is supported. As evidenced in the research literature, elementary-aged children with a diagnosis of ADHD are more likely to experience poor mental health than their peers without ADHD (French et al., 2024; Sciberras et al., 2009; Wanni Arachchige Dona et al., 2023) and are likely to experience comorbid internalizing and/or externalizing difficulties (Danielson et al., 2024). In the present study, 5.9%,

24.8%, and 8.9% of the ADHD sample had a diagnosis of depression, anxiety, and oppositional defiant disorder, respectively, whereas only 1.6% and 8.1% of the comparison sample had a diagnosis of depression and anxiety, respectively. Moreover, in line with the theoretical propositions of the internalizing-externalizing transdiagnostic factor model of mental health, it could be that there were children in the ADHD group who were experiencing significantly impairing but subthreshold psychopathology, thereby further contributing to the significantly higher level of internalizing and externalizing behaviours observed in the present study.

Additionally, students without ADHD reported stronger student-teacher relationships than students with ADHD. This finding aligns with the existing body of empirical research (Rogers et al., 2015a, Zendarski et al., 2020). Of note, the student-teacher relationship subscale that was used in the present study to calculate a mean student-teacher relationship quality score was composed of two items that reflected the relationship dimension of closeness (Birch & Ladd, 1997), and two items that reflected the relationship dimension of conflict (Birch & Ladd, 1997). Thus, it remains unclear whether the significant differences observed between the two groups are due to large variations on the closeness dimension or the conflict dimension. To ascertain more salient differences between students with and without ADHD with regards to the quality of their relationship with their teacher, future research could independently measure the aforementioned relationship constructs.

Differences Between Girls and Boys

Within both the comparison and the ADHD groups, there were no statistically significant differences between girls and boys on rate of absence from school, student-teacher relationship quality, externalizing behaviours, or internalizing behaviours. The absence of significant differences between girls and boys with or without ADHD is somewhat in alignment with existing research findings, where there are mixed results. Specifically, among children without ADHD, research consistently indicates that teachers have poorer relationships with boys than with girls (Baker, 2006; Hamre & Pianta, 2001; O'Connor, 2010). However, while some research suggests there are no gender differences in internalizing symptoms (Segura-Frontelo et al., 2025), other research suggests that girls are more likely to experience higher rates of internalizing symptoms than boys (Zahn-Waxler et al., 2008). Interestingly, regarding school absenteeism, previous studies have shown no gender differences (Allen et al., 2018; Anderson & Romm, 2020; Henry, 2007; Rogers et al., 2024).

Among children with ADHD, some research suggests girls are more likely to report a weaker relationship with their teachers than boys (Rogers et al., 2015a), whereas other research suggests boys are more likely to report a weaker relationship with their teachers than girls (Zendarski et al., 2020). As well, some research indicates that girls are more likely to have comorbid anxiety and depression than boys (Danielson et al., 2024); contrastingly, other research demonstrates that boys are more likely to exhibit internalizing symptoms than girls (De Rossi et al., 2022). Regarding school absenteeism, the research on gender differences is scant.

These mixed gender findings in the literature may be observed due to a number of factors, including the use of varied methodology, use of diverse scales or instruments measuring slightly dissimilar phenomena, sample size of study, characteristics of the sample (e.g., age), differences in implementation fidelity, contextual factors (e.g., cultural, economic, and social factors) impacting how the study is conducted, and more. In the present study, the absence of significant differences across gender may be partly explained by the sociodemographic characteristics of our sample. For example, regarding internalizing symptoms, research shows that gender differences become more salient in adolescence (Gutman et al., 2020). Given that our sample was comprised of elementary- and middle-school-aged children, it is possible that our sample was simply not old enough to detect any gender differences. As well, previous studies that have detected gender differences on internalizing or externalizing symptoms used a clinical sample (Compas et al., 1997; Andersson, 2002), whereas the present study recruited a community sample. Overall, more research is needed to elucidate the effect of gender, especially among children with ADHD and particularly in relation to school absenteeism.

Mental Health, Student-Teacher Relationship Quality, and Absence from School

Among students with and without ADHD, students' externalizing behaviours were not associated with their rate of absence from school. Contrastingly, students' internalizing behaviours were positively associated with their rate of absence from school. Accordingly, our third hypothesis (i.e., students' externalizing and internalizing behaviours will be significantly, positively correlated with their rate of absence from school) is partially rejected. It is well documented in the literature that students' mental health, including externalizing and internalizing behaviours and ADHD symptoms, is associated with and predicts school-related outcomes, including school absenteeism (Classi et al., 2012; Finning et al., 2019a; Finning et al., 2019b; Krause et al., 2025; Niemi et al., 2022; Rogers et al., 2024; Wood et al., 2012). The non-

significant relationship observed between externalizing behaviours and school absence may be partly explained by the relatively lower severity and narrower range of externalizing behaviours reported in our sample compared to samples in previous research studies where a relationship was found (Rogers et al., 2024). With regards to the significant relationship observed between internalizing behaviours and rate of absence from school in the present study (as well as previous studies), some research suggests that students presenting with internalizing symptoms are less likely to be identified (Gresham & Kern, 2004) and less likely to receive more targeted or intensive intervention (Bradshaw et al., 2008) since their distress is less observable and covert. It is plausible, then, that lack of access to interventions or structured supports may contribute to poor school-related outcomes, including school absenteeism. Weist and colleagues (2018) further noted that "many schools and collaborating partners from the mental health and other youth-serving systems struggle to develop multitiered programs for youth with internalizing challenges" because "the underlying tenets and approaches for addressing internalizing problem behavior differ from those that focus on improving more distinct externalizing behaviors" (p. 172). Future research could extend the large body of literature on the topic and seek to implement a multi-tiered systems of support model (Stoiber & Gettinger, 2016) for addressing mental health challenges – especially internalizing behaviours – in their student population, particularly in relation to school attendance behaviour.

Among students with and without ADHD, lower externalizing and internalizing behaviours were associated with higher student-teacher relationships. Thus, our third hypothesis (i.e., students' externalizing and internalizing behaviours will be significantly, negatively correlated with student-teacher relationship quality) is supported. Bidirectional and causal relationships between students' mental health and the quality of students' relationship with their teachers have been found in several research studies (Lei at al., 2016; Miller-Lewis et al, 2014; O'Connor et al., 2012). Although not investigated in the present study, Halladay and colleagues (2020) theorized that the ability of teachers to observe and identify emerging mental health concerns among their students may represent an important social process that facilitates mental health help seeking behaviour among students, thereby supporting students' mental health outcomes. It is conceivable, then, that teachers' responsiveness to their students' mental health problems may contribute toward improved student mental health. Moreover, in line with the theoretical propositions of attachment theory (Pianta & Steinberg, 1992; Hamre & Pianta, 2001;

Sabol & Pianta, 2012), it may be that teachers who demonstrate a capacity to foster trusting, close relationships with their students are more likely to act as a safe haven whom their students can approach during times of mental distress, as well as a secure base from which their students can seek mental health help (García-Rodríguez et al., 2023). While these findings must be interpreted and utilized cautiously given that the correlational research design of the present study precludes us from making any causal interpretations, future investigations could extend the current research findings and longitudinally measure the association between students' mental health and student-teacher relationship quality as well as any underlying factors (e.g., teachers' attentiveness and responsiveness to students' well-being) contributing to the relationship. Finally, the effect sizes of the relationship between students' externalizing and internalizing behaviours and student-teacher relationship quality was larger among students with ADHD relative to students without ADHD. This finding is consistent with previous research (Berchiatti et al., 2022) and further contributes to our understanding of the heightened challenges faced by children living with ADHD.

Moderating Role of Student-Teacher Relationship Quality

Across all four moderated regression models, student-teacher relationship quality moderated the association between internalizing behaviours and rate of absence for students without ADHD. Importantly, the interaction coefficient was negative, meaning that student-teacher relationship quality weakened the positive association between internalizing behaviours and absence from school. Interestingly, student-teacher relationship quality did not change the strength or direction of the association between externalizing behaviours and rate of absence for students without ADHD, nor did student-teacher relationship quality alter the association between either externalizing or internalizing behaviours and rate of absence for students with ADHD. Therefore, our fourth hypothesis (i.e., student-teacher relationship quality will significantly moderate the relationship between students' externalizing and internalizing behaviours and their rate of absence from school across ADHD status) is partially supported, and our fifth hypothesis (i.e., the moderating role of student-teacher relationship quality will be stronger among students without ADHD) is supported.

In the present study, it was found that at low student-teacher relationship quality, students' internalizing behaviours were associated with absence from school whereas at moderate or high student-teacher relationship quality, students' internalizing behaviours were not

associated with absence from school. In other words, it appears that students without an ADHD diagnosis are more likely to be absent from school when they exhibit high levels of internalizing behaviours and report a poor relationship with their teacher. This finding supports previous theoretical and empirical research which suggests that the combination of risk factors across multiple risk contexts contributes to higher rates of absences above and beyond any single risk factor (Ingul et al., 2012; Skedgell & Kearney, 2018). Additionally, this finding substantiates existing theoretical and empirical research (Hamre & Pianta, 2001; Verschueren & Koomen, 2012) which suggests that the mere presence of a relationship between a teacher and a student is not sufficiently adequate in maintaining or improving school-based outcomes; rather, it is the quality of the student-teacher relationship that predicts students' academic and psychosocial developmental trajectories. Indeed, findings from the present study suggest that, among students reporting the same number and severity of internalizing behaviours, those reporting moderate or high quality relationships with their teachers may not experience the same detrimental academic impacts compared to their peers reporting low quality relationships with their teachers. Taken together, in relation to school attendance behaviour, it is hypothesized that poor student-teacher relationships are more predictive of attendance rates among students with internalizing problems than moderate or high quality student-teacher relationships, such that weak student-teacher relationships are strongly linked to poor attendance. Again, while the correlational research design of the present study precludes us from making any causal interpretations, future research could extend the current research findings and investigate this hypothesis.

Notably, student-teacher relationship quality did not change the strength or direction of the association between either externalizing or internalizing behaviours and absence from school for students with ADHD. Importantly, the present study deliberately chose to exclude participants attending school on a part-time or modified schedule (i.e., students attending school for a few hours per day or a few days per week) as the lived experiences of many children attending school on such schedules are greatly different than their peers attending school on a full-time schedule (Whitley et al., 2026). Specifically, a disproportionate number of students attending school on a part-time or modified schedule are living with behavioural, communication, intellectual, and/or physical disabilities (Whitley et al., 2026), including ADHD. Of note, preliminary descriptive analyses revealed that approximately 50% of students on part-time or modified schedules from the larger study had a clinical diagnosis of ADHD. Thus, it may

be that student-teacher relationships do, in fact, play a moderating role between students' mental health symptoms and their school attendance behaviour, but was simply not observed in the present study due to a reduction in sample variance. Indeed, previous theoretical and empirical research suggests that strong relationships between students with ADHD and their teachers can buffer against some negative academic or behavioural outcomes (Rogers et al., 2015a; Tavlin et al., 2025). Thus, future research could build upon the present study and aim to include or primarily investigate students with ADHD attending school on a part-time or modified schedule to gain more insight into the moderating role of the student-teacher relationship quality for students living with ADHD.

The Role of Parental Education in School Attendance Behaviour

Within the broad child development literature, parental education is often conceptualized as the highest level of education completed by one or more parent(s) or caregiver(s) in the household in which the child resides (Hauser, 1994). Parental education is often considered one of the core indicators of parental socioeconomic status (SES) alongside parental occupation and family income (Bradley & Corwyn, 2002). Among the three covariates added in the moderated regression models, parental education had a direct effect on rate of absence from school in each model. That is, among students with and without ADHD and presenting with internalizing and/or externalizing behaviours, higher parental education was associated with lower rates of absence. Although research into the role of parental education on school attendance behaviour is limited and especially scarce among children with ADHD, this finding is consistent with what we see in the small body of literature; namely, that parental education is associated with school attendance behaviour, such that lower parental education is associated with absenteeism (Klein et al., 2020) and higher parental education is associated with lower rates of absence (Balkis et al., 2016). The mechanisms by which parental education influences school attendance behaviour are currently ill-defined; however, drawing on the extant theoretical and empirical research on the relationship between parental education and children's academic outcomes, it could be postulated that the effects of parental education on school attendance behaviour may occur via parental beliefs and behaviours, e.g., parental beliefs about and parental involvement in education. Indeed, a large body of research demonstrates that parental beliefs about school readiness (Elliot & Bachman, 2018; Puccioni, 2015), parental educational expectations (Elliot & Bachman, 2018; Fan & Chen, 2001), and parental involvement in education (including home- and school-based involvement;

Englund et al., 2004; Erol & Turhan, 2018; Sénéchal & LeFevre, 2002; Wilder, 2014) are associated with and robustly predict children's academic achievement. Accordingly, it is possible that these very same parental beliefs and behaviours may either encourage a child to regularly attend school or contribute to problematic or chronic absenteeism. Interestingly, there is substantial evidence to suggest that the quality and quantity of parental involvement in education among parents of children with ADHD differs from parents of children without ADHD. Specifically, previous research has found that parents of children with ADHD often report lower levels of parental involvement in their children's education (Musabelliu et al., 2018; Ogg et al., 2020; Rogers et al., 2009a; Rogers et al., 2009b). Although an exploration of the differences in the quality and quantity of parental involvement in education between parents of children with and without ADHD is beyond the scope of the present study, the literature on the topic may lend some support to what is observed in the present study; namely, that the effect size of the direct effect of parental education is larger among students without ADHD than students with ADHD. Future research may consider investigating the mediating role of parental beliefs and behaviours between parental education and school attendance behaviour.

Importantly, parental education may have had a statistically significant direct effect on rate of absence due to the sociodemographic characteristics of the sample. Specifically, parents and guardians in both samples were highly educated, with 82.3% and 67.3% of the comparison and ADHD samples, respectively, reporting a bachelor's degree or higher. It is possible that a direct effect of parental education may not have been observed had the sample been comprised of parents and guardians with less education or been more representative of the general Canadian population.

Practical Implications

An important finding that emerged from the present study was that, among students in the comparison group reporting a poor relationship with their teacher, higher internalizing behaviours were associated with a higher rate of absence from school. Pragmatically, this finding signals two areas of concern for both educators and clinicians alike in relation to school attendance behaviour: students' mental health and the quality of students' relationship with their teacher. Accordingly, to promote school attendance behaviour, proactive efforts must be made by school boards and policymakers to address mental health challenges among students and support the development and advancement of relational skills among educators.

One possible endeavour to support students' mental health could be the implementation of a multi-tiered systems of support (MTSS) model. The MTSS framework was developed to support schools in improving academic, behavioural, and socioemotional outcomes for all students using evidence-based assessment and interventions strategies (Stoiber & Gettinger, 2016). With regards to students' mental health, prevention and intervention strategies are classified along a continuum; Tier 1 approaches (primary or universal) may include strategies that enhance overall student mental health and prevent poor mental health outcomes, e.g., class-wide curricula interventions, school-based mental health programs (Arora et al., 2019); Tier 2 approaches (secondary or targeted) may include programs delivered in a small group format for students identified at risk for or showing signs of poor mental health, e.g., community-based mental health professionals conducting group sessions at school (Arora et al., 2019; Doll et al., 2017); and Tier 3 approaches (tertiary or intensive) may include one-on-one support for students with a mental health diagnosis or significantly impairing mental health symptoms (Arora et al., 2019; Kearney, 2016).

Additionally, there is growing recognition within the field of education that educators' relational competencies are imperative for students' short- and long-term academic, behavioural, and psychosocial outcomes (Borremans et al., 2024; Jensen et al., 2015; Jönsson et al., 2024). Indeed, Sabol and Pianta (2012) noted that the quality of the relationship between a teacher and their student is largely dependent on the interpersonal skills and characteristics of the teacher. Crucially, some of the relational competencies that contribute to high quality student-teacher relationships may be developed, learned, or improved upon (Sabol & Pianta, 2012). Importantly, our findings suggest that the student-teacher relationship quality may be a potentially modifiable factor that could be targeted by training programs. Accordingly, efforts have been made by researchers and professional development programs to support educators in fostering the skills required to have more high quality relationships with their students. For example, drawing from the tenets of attachment theory and using a quasi-experimental research design, Bosman and colleagues (2021) found that a teacher-based coaching intervention improved elementary teachers' perceptions of the affective relationship quality (e.g., increased closeness and decreased conflict) between them and two of their students with whom they reported a poor relationship quality prior to the intervention. Notably, at the school level, school-wide interventions that target student-teacher relationship quality have demonstrated overall improvements in student

mental health and well-being and school climate (Aldridge & McChesney, 2018; Thapa et al., 2013). Such efforts to build upon and advance educators' relational competencies show promise in improving student outcomes, including school attendance behaviour.

Theoretical Contributions

To our knowledge, the present study is the first to apply attachment theory to examine the moderating role of student-teacher relationship quality in preventing high rates of absence from school, especially for students presenting with internalizing and/or externalizing behaviours. Theoretically, findings from this study advance our understanding of attachment theory when applied to the student-teacher relationship in the context of school absenteeism. Importantly, the student-teacher relationship subscale used in the present study was composed of two items that broadly reflected the relationship dimension of closeness ("My child values their relationship with their teacher" and "My child shares an affectionate, warm relationship with their teacher") and two items that broadly reflected the relationship dimension of conflict ("My child and their teacher always seem to be struggling with each other" and "Dealing with my child seems to drain their teacher's energy"). To further advance our understanding of attachment theory within the school absenteeism literature, future research could aim to modify existing scales (e.g., The Student-Teacher Relationships Scale; Pianta & Nimetz, 2001) or create new scales that explicitly measure closeness and conflict within the student-teacher relationship with regards to school attendance behaviour.

Additionally, results from the present study found support for the internalizing-externalizing transdiagnostic factor model of mental health; namely, that mental health symptom severity is associated with unfavourable outcomes (i.e., poor school attendance behaviour). These findings contribute to a growing body of research (Keulen et al., 2025; Sawrikar et al., 2022) arguing that mental health symptoms among children and adolescents should be conceptualized dimensionally given that mental health symptom profiles and patterns of mental illness progression in childhood and adolescence are less stable than in adulthood. Within the context of school absenteeism, examining internalizing and externalizing behaviours dimensionally may allow researchers and clinicians to detect salient relationships between symptom severity and absenteeism across the full spectrum of school attendance behaviour, rather than comparing students who do and do not meet diagnostic criteria. This approach may provide a more holistic understanding of risk factors associated with school absenteeism.

Strengths and Limitations

There are many notable strengths of the present study. Broadly, the present study contributes to our overall understanding of the scope, causes, and correlates of school absenteeism among Canadian elementary-aged students. This is an observable strength as, to date, limited efforts have been made by scholars to investigate the nuances of school absenteeism within Canadian educational systems. Additionally, the present study aimed to investigate key variables of interest among students with and without ADHD. By separating the analyses by the presence or absence of a formal diagnosis of ADHD, the present study was able to make important comparisons between students with and without ADHD, thereby allowing clinicians, educators, and researchers to appreciate for whom and under what circumstances school absenteeism is an issue. Finally, the present study was able to maintain ecological validity as it included participants with a range of clinical diagnoses, thereby allowing for some generalizability of findings.

Despite the contributions and strengths of the present study, there are several limitations that should be noted. For one, the present study investigated the relationship between absence from school and a small number of factors at the individual- (e.g., child mental health, child age, child gender), family- (e.g., parental education), and school-level (e.g., student-teacher relationship), each of which is either proximally or distally influenced by other factors across multiple contexts. As mentioned earlier, theoretical and empirical research suggests that the interaction of risk factors across multiple environmental systems may better explain the development and maintenance of high rates of school absenteeism above and beyond any single risk factor or risk context (Klan et al., 2024; Gottfried et al., 2017; Hancock et al., 2018; Ingul et al., 2012; Skedgell & Kearney, 2018). While not a formal limitation, but rather a delimitation, it remains that several contextual factors – which have previously demonstrated causal associations with the primary variables of interest in the present study and may have contributed to the variance in the regression models – were not examined. Thus, findings from the present study should be interpreted and utilized cautiously. Additionally, the present study used only parent- and guardian-reported data and did not use student- and teacher-reported data or observational data. It is possible that parent and guardian participants may have provided responses that did not accurately capture or reflect their child's school attendance behaviour, mental health status, or relationship quality with their teacher, either due to social desirability bias (thereby only

providing answers that reflect positively on them) or lack of knowledge about their child's experiences. Variables such as student-teacher relationship quality, for example, are measuring the perception of the relationship quality between a student and a teacher; such a variable may be better appreciated using student- and teacher-reported data. Similarly, observational data such as student report cards or school databases may provide an objective measurement of rate of absence from school compared to the subjective reports of parents and guardians which may lack accuracy. Another important limitation of the present study is that data were collected cross-sectionally. Accordingly, the present study was not able to determine the directionality of the associations or the causality of effects. In the study of school absenteeism, however, longitudinal investigations over the course of one or more school years are necessary insofar that they provide rich insights into whether a student's rate of absence from school reflects true chronic absenteeism. Furthermore, longitudinal investigations allow for more robust measurements of change, e.g., examining whether changes in student-teacher relationship quality or mental health outcomes are related to changes in school attendance behaviour over time (Brittain & Vaillancourt, 2026). Furthermore, the present study lacks diversity. Namely, over 75% of children in both the comparison and ADHD samples were White and parents and guardians reported high educational attainment and household income. Regarding parental socioeconomic status (SES; including parental education and income), research demonstrates that students from low SES backgrounds are more likely to be absent from school than their peers from high SES backgrounds (Klein et al., 2020; Sosu et al., 2021). Relatedly, there is a possibility that self-selection bias occurred during the recruitment phase of the study. Specifically, parents and guardians of children with ADHD were largely recruited from advocacy organizations (e.g., Centre for ADHD Awareness Canada), suggesting that participants in the ADHD group were highly mobilized in supporting their children's well-being. Thus, the present study is limited in its generalizability. Another key limitation is the absence of data on students' ADHD symptom severity. As the larger study did not include a measure on ADHD symptom severity, the present study was not able to ascertain the level of functional impairment among students living with ADHD. Access to such data may have provided a more nuanced appreciation of the context in which the ADHD sample was situated. Finally, data for the present study were collected at various time points between November 2024 and December 2025. Though the data were gathered cross-sectionally, the data were not uniform across the sample as the data were not

collected within a single time frame. Additionally, most of the data for the ADHD group were gathered in Fall 2024 and Spring 2025, whereas most of the data for the comparison group were collected in Fall 2025. This is a noteworthy limitation as differences across days, months, or school years could generate variability in the data both between and within participants. In other words, data collected across a large period of time may vary depending on when the data were collected, e.g., rate of and reasons for school absence over a two-week period may differ between the fall season and spring season.

Future Directions

To address some of the limitations inherent to the present study, future research could examine the primary variables of interest (e.g., absenteeism patterns, internalizing and externalizing behaviours, student-teacher relationship quality) alongside other contextual factors over the course of one school year. Such a rigorous investigation would allow researchers to make predictions, ascertain the directionality of the associations and the causality of effects, and draw firmer conclusions. Moreover, by including additional familial (e.g., parental psychopathology, family income), school (e.g., academic achievement, perceived sense of safety), environmental (e.g., weather, air quality), and other contextual factors to the investigation, researchers can explore how the interaction of risk and protective factors across multiple contexts contribute toward the development and maintenance of school absenteeism over and above one single risk factor or risk context. Such an investigation may be aided by the use of mediation or hierarchical regression models.

Furthermore, in addition to examining the student-teacher relationship, future research could aim to extend the current literature (Dias et al., 2024) and study whether and how other interpersonal relationships assumed to have a meaningful impact on a student's educational experience – e.g., the parent-child relationship, the parent-teacher relationship, peer relationships, and other relationships (e.g., student-coach relationship) – contribute to school attendance behaviour. By probing into those interpersonal school relationships considered to be foundational to a child's academic growth and socioemotional development, researchers can gain a more nuanced appreciation of the role that social relationships play in fostering well-being and favourable academic outcomes, including school attendance, as well as highlight the short- and long-term impacts of relational approaches in education. Such an investigation could include

teacher- and child-reported data and observational data, and be aided by the use of multiple linear regression models.

Finally, future research could seek to replicate this study with certain populations not examined in this study, e.g., students living with behavioural, communication, intellectual, and/or physical disabilities or other neurodevelopmental conditions (e.g., autism spectrum disorder), students attending school on a part-time or modified schedule, students from newcomer families, or students living in financially precarious households. Students facing multiple, intersecting biopsychosocial challenges may have a unique set of reasons for missing school. As mentioned earlier, there is considerable heterogeneity in the etiology and presentation of chronic absenteeism. Thus, by exploring the unique challenges that lead to chronic absenteeism for at risk populations, as well as the risk contexts in which these challenges are situated, clinicians, educators, policymakers, and researchers may be better informed on the complexities that lead to chronic absenteeism and create intervention plans and policies that, ultimately, support students' learning and school attendance behaviour. Such an investigation may be aided by the use of qualitative research methodology.

Conclusion

For many children and adolescents, the school environment is paramount insofar that it provides them with a space to build social connections, discover their career ambitions, explore their identity and values, learn skills for the real world, and gain an education. Yet for some children and adolescents, access to such opportunities may be insufficient to support regular school attendance, or perhaps such opportunities may not be granted to them for reasons out of their control. For some, regularly attending school may be seen as non-negotiable whereas for others, the act of attending or not attending school is layered and multifaceted, made complicated by intersectional forces at the individual-, family-, school-, and community-level. In our endeavour to get students back into the school environment, it is imperative that we examine the risk contexts in which students' lives are situated as well as the risk factors contributing to school absenteeism. Moreover, we must also identify protective factors that may support students in regularly attending school.

The present study sought to investigate the interplay between students' mental health symptomatology, student-teacher relationship quality, and school attendance behaviour. The present study contributes to the Canadian literature base and identifies for whom and under what

circumstances school absenteeism may be an issue. It is hoped that findings from this study will support educators, clinicians, researchers, and policymakers in the development and implementation of strategies to remediate school absenteeism and improve school attendance behaviour altogether. Ultimately, it will be through the joint effort of schools, families, communities, and research programs that will allow us to effectively address and intervene in school absenteeism, thereby ensuring that every student has the chance to succeed and thrive.

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Appendix A

Recruitment Poster

DO YOU HAVE CONCERNS ABOUT YOUR CHILD'S SCHOOL ATTENDANCE?

We want to hear from you!

We are looking for:

- Parents of youth attending School (K-12)
- Living in Canada
- Proficient in English

In this online survey we will be looking at school attendance and related factors!

You will be entered into a draw for a variety of e-gift cards. The survey will take approximately 30-45 minutes of yout time. Please scan the QR code if you're interested!

If you have any questions, please contact Dr. Carolynn Hare: carolynnhare@cunet.carleton.ca



CANADIAN SCHOOL ATTENDANCE PARTNERSHIP | PARTENARIAT CANADIEN POUR LA FRÉQUENTATION SCOLAIRE

uOttawa

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Appendix B

Study Consent Form

Project Title: Determining the Psychometric Properties of the Novel Questionnaire of School Attendance Problems

Name and Contact Information of Principal Investigator:
Maria Rogers, Ph.D., C.Psych.
Department of Psychology
Carleton University
Ottawa, Ontario
Email: MariaRogers@cunet.carleton.ca

Protocol #: 121269

Invitation: Thank you for your interest in participating in our study! As a parent, caregiver, or guardian of a child in a Canadian school, your knowledge and experiences are very important. This survey is being conducted by a multidisciplinary team of researchers and clinicians who are invested in promoting our understanding of school absenteeism and child and youth wellbeing.

Objectives and Summary: The aim of this study is to assess the efficacy of a newly developed questionnaire that measures school absenteeism experiences of students of all ages. The survey is estimated to take 30-45 minutes to complete. Questions that ask about your child's school attendance, how your child functions in other areas (e.g., mental health, with peers) as well as your beliefs of your child's education will be included. Your participation is voluntary, and you may choose not to take part, or not to answer any of the questions. We expect to survey approximately 300 parents.

Risks and Benefits: Your participation in this study will involve responding to some personal questions about yourself and your child (e.g., your child's behaviour and functioning). Therefore, it is possible that these questions will make you feel uncomfortable or distressed. Please be assured that you do not have to answer any questions that make you feel uncomfortable, and that you can choose to withdraw from the study at any time without consequence. If you feel distressed, or visit crisisservicescanada.ca to find local resources, distress lines and support. Your participation in this study will help to further the understanding and measurement of school absenteeism of children and youth. This can improve efforts to intervene and reduce chronic school absenteeism of students of all ages.

Compensation: To thank you for your contribution to the research project, you can enter a draw to win one of fourteen $15 gift cards, three of 25$ e-gift cards and one 50$ e-gift card Amazon, Indigo, or Walmart e-gift card drawn each school year. The draw is open to all participants who enter their e-mail address in the draw, regardless of whether you decide to stop completing the whole survey. If you wish to receive compensation, a link to a separate form for entering your email will be provided in the questionnaire. You are welcome to enter the draw for compensation

even if you choose to withdraw from the study. In-person participants will receive an additional 5$ Tim Hortons gift card.

Confidentiality and Data Storage: To minimize the risk of security breaches and to help ensure your confidentiality, we recommend that you use standard safety measures such as signing out of your account, closing your browser, and locking your screen or device when you are no longer using them. We will treat your personal information as confidential, although absolute privacy cannot be guaranteed. No information that discloses your identity will be released or published without your specific consent. Research records may be accessed by the Carleton University Research Ethics Board to ensure continuing ethics compliance. The information from the survey will be owned by the research team, and will not be shared with any government, school board, or anyone else. Only the researchers will have access to your information. The research team will analyze the information collected, and the overall results of this study may be published and presented in future research articles and in presentations, but the data will be presented so that it will not be possible to identify you. Regarding anonymity, all questionnaires will be identified by a participant number. Because the data will be anonymous, it will not be possible to remove your data if you decide to withdraw from the study. You may also choose to provide your email if you wish to be contacted for future research. This contact information will not be connected to your survey data in any way and will be kept securely in password-protected computers in a locked room. The answers to the survey will be stored on Qualtrics's secure storage until the survey is finished (June 2026). It will then be downloaded and all computer files will be kept on password-protected computers in a locked room. All identifying information will be kept for 10 years after the study is completed. After the 10 years, this information will be destroyed; electronic information will be purged, and paper documents will be shredded. These study results will be reported in ways that ensure complete confidentiality.

REB Review and Contact Information: This project was reviewed and cleared by the Carleton University Research Ethics Board. If you have any ethical concerns with the study, please contact the Carleton University Research Ethics Board by phone at 613-520-2600 ext. 4085 or by email at ethics@carleton.ca.

I voluntarily agree to participate in this study.

- ☐ Yes
- ☐ No

Appendix C
Study Measures

Sociodemographics

The survey includes 3 parts:

1. The first section will include questions about you and the child for whom you are responding.
2. The second section will include questions about your child's school attendance.
3. The third section will include questions about factors that may be related to your child's school attendance and school experiences.

Did you fill out this survey for one of your children in the 2024-2025 school year?

- ☐ Yes
- ☐ No

Do you and your family currently live in Canada?

- ☐ Yes
- ☐ No

Do you have a child who is in Kindergarten to Grade 12?

- ☐ Yes
- ☐ No

What province or territory do you live in?

- ☐ Alberta
- ☐ British Columbia
- ☐ Manitoba
- ☐ New Brunswick
- ☐ Newfoundland and Labrador
- ☐ Northwest Territories
- ☐ Nova Scotia
- ☐ Nunavut
- ☐ Ontario
- ☐ Prince Edward Island

- ☐ Quebec
- ☐ Saskatchewan
- ☐ Yukon

What is your relationship to the child?

- ☐ Biological Mother
- ☐ Biological Father
- ☐ Stepmother
- ☐ Stepfather
- ☐ Foster Mother
- ☐ Foster Father
- ☐ Adoptive Mother
- ☐ Adoptive Father
- ☐ Parent's Partner (living in household)
- ☐ Other (please specify): _____

The questions on this page will ask you (the parent/caregiver).

What is your age? _____

What is your sex?

- ☐ Male
- ☐ Female
- ☐ Intersex
- ☐ You don't have an option that applies to me. I am: _____

What is your gender identity?

- ☐ Man (includes trans man)
- ☐ Woman (includes trans woman)
- ☐ Agender
- ☐ Genderfluid
- ☐ Genderqueer
- ☐ Non-binary
- ☐ Two Spirit

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

Please select the highest level of education in your household.

- ☐ Less than high school
- ☐ High school or GED
- ☐ College diploma
- ☐ Bachelor's degree
- ☐ Master's degree
- ☐ Doctoral degree (PhD, EdD) or Professional school degree (MD, DDS, DVM, JD)
- ☐ Prefer not to answer

On average, how many hours of paid work a week do you work?

- ☐ 0-5 hours
- ☐ 6-20 hours
- ☐ 21-39 hours
- ☐ 40 hours or more

How many adults care for the children in your household (including you)? _____

What is your marital status?

- ☐ Single, never married
- ☐ Divorced
- ☐ Separated
- ☐ Married
- ☐ Living together as if married
- ☐ Widowed
- ☐ Prefer not to answer

What is your annual family income? Please check one:

- ☐ Under $30,000
- ☐ $30,000 to $60,000
- ☐ $60,001 to $90,000
- ☐ $90,001 to $150,000
- ☐ $150,001 to $300,000
- ☐ $300,000+
- ☐ Prefer not to say

What is the primary language spoken in your home?

- ☐ English
- ☐ French
- ☐ Mandarin
- ☐ Cantonese
- ☐ Russian
- ☐ Spanish
- ☐ Vietnamese
- ☐ Korean
- ☐ Indigenous (please specify): _____
- ☐ Other (please specify): _____

What is your Canadian Citizenship Status?

- ☐ Canadian Citizen
- ☐ Permanent Resident
- ☐ Temporary via (e.g., work visa, student visa)
- ☐ Diplomat or foreign government official
- ☐ Refugee / Asylum seeker
- ☐ You don't have an option that applies to me. My citizenship status is: _____

Were you born in Canada?

- ☐ Yes
- ☐ No. Specify country of origin: _____

Please describe your generation status:

- ☐ 1st generation (you were born outside of Canada and immigrated to Canada at age >18 years)
- ☐ 1.5 generation (you were born outside of Canada and immigrated to Canada at age <17 years)
- ☐ 2nd generation (you were born in Canada and have at least one parent born outside of Canada)
- ☐ 3rd generation (you were born in Canada and both your parents were born in Canada)

If you were born in another country and immigrated to Canada, what year did you immigrate to Canada? _____

The following questions will ask about your child. If your have more than one child, please choose only one of your children to answer the questions about. Please answer the entire questionnaire with the same child in mind.

What is your participating child's date of birth?

- ☐ Month: _____
- ☐ Day: _____
- ☐ Year: _____

What is your child's sex?

- ☐ Male
- ☐ Female
- ☐ Intersex
- ☐ You don't have an option that applies to my child. My child is: _____

What is your child's gender identity?

- ☐ Boy
- ☐ Girl
- ☐ Non-binary
- ☐ You don't have an option that applies to my child. My child identifies as: _____

What is your child's race/ethnicity?

- ☐ Aboriginal / First Nations / Metis / Inuit
- ☐ White / Caucasian
- ☐ South Asian (e.g., East Indian, Pakistani, Sri Lankan, etc.)
- ☐ Chinese
- ☐ Black
- ☐ Filipino
- ☐ Latin America
- ☐ Arab
- ☐ Southeast Asian (e.g., Vietnamese, Cambodian, Laotian, Thai, etc.)
- ☐ West Asian (e.g., Iranian, Afghan, etc.)
- ☐ Korean
- ☐ Japanese

- ☐ Prefer not to answer
- ☐ Other (please specify): _____

What is your child's Canadian Citizenship Status?

- ☐ Canadian Citizen
- ☐ Permanent Resident
- ☐ Temporary visa (e.g., work visa, student visa)
- ☐ Diplomat or foreign government official
- ☐ Refugee / Asylum seeker
- ☐ You don't have an option that applies to me. My citizenship status is: _____

Was your child born in Canada?

- ☐ Yes
- ☐ No. Specify country of origin: _____

Please describe your child's generation status:

- ☐ 1.5 generation (you were born outside of Canada and immigrated to Canada at age <17 years)
- ☐ 2nd generation (you were born in Canada and have at least one parent born outside of Canada)
- ☐ 3rd generation (you were born in Canada and both your parents were born in Canada)

If your child was born in another country and immigrated to Canada, what year did your child immigrate to Canada? _____

Has your participating child been diagnosed or identified with any of the following? Select all that apply.

- ☐ None
- ☐ Chronic medical condition (e.g., Asthma, Crohn's Disease)
- ☐ Physical disability (e.g., Cerebral Palsy)
- ☐ Blind / Low vision
- ☐ Deaf / Hard of hearing
- ☐ Anxiety Disorder
- ☐ Attention-Deficit/Hyperactivity Disorder (ADHD)
- ☐ Autism Spectrum Disorder (e.g., Autism, Asperger's Syndrome, PDD-NOS)
- ☐ Depression

- ☐ Learning Disorder/Disability (e.g., Dyslexia, Dysgraphia, Dyscalculia)
- ☐ Intellectual Disability
- ☐ Speech/Language Disorder
- ☐ Eating Disorder
- ☐ Tourette Syndrome
- ☐ Oppositional Defiant Disorder
- ☐ Conduct Disorder
- ☐ Post-Traumatic Stress Disorder
- ☐ Obsessive Compulsive Disorder
- ☐ Bipolar Disorder
- ☐ Other (please specify): _____

Please select the type/presentation of ADHD your participating child has been diagnosed with:

- ☐ Predominately Inattentive
- ☐ Predominately Hyperactive-Impulsive
- ☐ Combined

Please select the type/level of Autism Spectrum Disorder your participating child has been diagnosed with:

- ☐ Autism Level 1 (requiring support – includes Asperger's Syndrome and PDD-NOS)
- ☐ Autism Level 2 (requiring substantial support)
- ☐ Autism Level 3 (requiring very substantial support)

Please select the Learning Disorder/Disability that your participating child has been diagnosed with (select all that apply):

- ☐ Reading (e.g., Dyslexia)
- ☐ Writing (e.g., Dysgraphia)
- ☐ Math (e.g., Dyscalculia)
- ☐ Non-verbal

Please select the level of Intellectual Disability your participating child has been diagnosed with:

- ☐ Mild
- ☐ Moderate
- ☐ Severe
- ☐ Profound

Please select the type of Eating Disorder your participating child has been diagnosed with (select all that apply):

- ☐ Anorexia Nervosa
- ☐ Bulimia Nervosa
- ☐ Binge-Eating Disorder
- ☐ Avoidant/Restrictive Food Intake Disorder (ARFID)
- ☐ Other (please specify): _____

Please select the Anxiety Disorder your participating child has been diagnosed with (select all that apply):

- ☐ Separation Anxiety
- ☐ Generalized Anxiety Disorder
- ☐ Social Anxiety
- ☐ Specific Phobia
- ☐ Panic Disorder
- ☐ Other (please specify): _____

Which type of professional(s) made the above diagnoses for your child?

- ☐ Psychologist
- ☐ Family doctor
- ☐ Pediatrician
- ☐ Psychiatrist
- ☐ Other mental health professional
- ☐ Other (please specify): _____
- ☐ I don't know
- ☐ Not applicable

Is your participating child taking medications for a behavioural or mental disorder?

- ☐ Yes (please specify): _____
- ☐ No

Trauma is a term used to describe the challenging emotional consequences that living through a distressing event can have for an individual. Traumatic events can be difficult to define because the same event may be more traumatic for some people than for others. Do you believe that your child has experienced trauma at any time in their development?

- ☐ Yes
- ☐ No

What grade is your child in?

- ☐ Kindergarten
- ☐ Grade 1
- ☐ Grade 2
- ☐ Grade 3
- ☐ Grade 4
- ☐ Grade 5
- ☐ Grade 6
- ☐ Grade 7
- ☐ Grade 8
- ☐ Grade 9
- ☐ Grade 10
- ☐ Grade 11
- ☐ Grade 12

Does your child have a formal written plan that describes special education programs, accommodations, and/or services that a school provides for a student? This is sometimes referred to as an Individual Education Plan (IEP) or Individual Program Plan (IPP)?

- ☐ Yes
- ☐ No

Is your child's school meeting the requirements set in their formal plan (e.g., IEP or IPP)?

- ☐ Yes
- ☐ No

What are the first 2 letters of your first name? _____

What are the first 2 letters of your child's first name? _____

Questionnaire of School Attendance Problems (QSAP) – **Parent Report** (in development)

Below are some questions that ask about your child's school attendance.

1. How is your child currently attending school?
   - ☐ Goes to school in person
   - ☐ Virtual learning
   - ☐ Hybrid (a mix of in person and virtual)
   - ☐ Homeschooling
   - ☐ My child does not go to school

2. Estimate how many **FULL DAYS** of school your child has missed over the last **2 WEEKS**. Please add up half-days missed (i.e., 3 half-days missed would be 1.5 full days):

   _____ days missed

3. Below are some reasons for children missing school. Of the days that your child missed in the past 2 weeks, check the reasons that best explain these absences. Check as many as needed on the left-hand side of the page. For the selected reasons, please rate how often this is a reason using the scale on the right.

Check all that apply	Reasons for Absences	For each reason you checked, indicate how often this is a reason for your child missing school?			
		Rarely	*Sometimes*	*Often*	*Always*
	1. My child was reluctant or avoided				
	2. I gave my child a day off				
	3. The school sent my child home due to their behaviour				
	4. My child was physically unwell				
	5. My child attended appointment(s) to support their *mental* health				
	6. My child attended appointment(s) to support their *physical* health				
	7. My child attended religious / cultural ceremonies or cultural outings				
	8. My child skipped school				
	9. I let my child stay home because I like having them around				
	10. The school asked my child to stay away from school				
	11. I kept my child at home because I no longer have the energy to get them to school				

	12. My child did not feel welcome at school due to discrimination				
	13. My child missed school due to sleep-related challenges				
	14. I decided to keep my child home because I feel as though the school is not meeting my child's needs				
	15. My child was on vacation or attended an athletic/arts event				
	16. My child was absent because I do not trust their school				
	17. My child was absent because they did not feel *physically* safe at school				
	18. My child was absent because they did not feel *emotionally* safe at school				
	19. My child missed school because of their learning challenges				
	20. My child stayed home because they are being bullied at school				
	21. My child had to go to work				
	22. My child stayed home for menstruation related issues				
	23. My child could not attend school due to transportation issues (e.g., bus shortages, vehicle issues, distance, etc.)				
	24. My child did not attend school because of their problematic use of technology (e.g., phones, video games, etc.)				
	25. My child did not attend school because my ex-partner and I are experiencing custody issues.				
	26. My child has a long history of not attending school and it feels overwhelming at this point.				
	27. My child did not attend because they do not see the importance or value in going to school.				
	28. Other reason, please specify:				

In your own words, please comment on why your child usually misses school?

Is your child's school attendance a concern for you? Please explain.

If your child is enrolled in school, does your child typically attend school on a part-time or modified scheduled?

- ☐ No
- ☐ Yes (if yes, answer the following questions):

How many days per week does your child attend school:

☐ 1 day ☐ 2 days ☐ 3 days ☐ 4 days ☐ 5 days

How many hours per day does your child attend school:

☐ 1-2 hrs ☐ 2-3 hrs ☐ 3-4 hrs ☐ 4-5 hrs ☐ 5-6 hrs

In a few words, briefly state why your child attends part-time or on a modified schedule:

What does your child do for the remainder of the school day? (e.g., attends a specialized program, goes home, has babysitter, etc.):

For feedback only: [After completion of the above questionnaire]

Please provide a brief description of what it was like to complete this questionnaire about your child's school absenteeism. How difficult was it to answer the questions?

Is there anything that you would change about the questionnaire? Is there anything that you would like to add to the questionnaire to make it more useful?

School Relationships Scale (SRS) – Parent Report (in development)

These questions are about your children's relationships at school. Please indicate how much you agree with the following statements. For questions that ask about teachers, please think about the teacher that your child spends the most time with.

1 – Strongly Disagree / 2 – Disagree / 3 – Neutral / 4 – Agree / 5 – Strongly Agree

1. My child's teacher and I trust each other.
2. My child's teacher and I understand each other.
3. I tell my child's teacher when I am concerned.
4 I ask my child's teacher their opinion about my child's progress.
5. My child and their teacher always seem to be struggling with each other.
6. Dealing with my child seems to drain their teacher's energy.
7. My child values their relationship with their teacher.
8. My child shares an affectionate, warm relationship with their teacher.
9. Other than their teacher(s), there is another adult *at school* who supports my child's learning through a close relationship (i.e., counsellor, coach, administrator, librarian, custodian, lunch monitor, educational assistant (EA), etc.).
10. My child has one or more good friendship(s) with a student at their school.
11. For the most part, my child is liked by other students at their school.
12. My child faces bullying or gets picked on by other students at their school.
13. I support my child in the things they do at school.
14. I try to make my child feel confident in their school work.
15. I am happy to talk to my child about their learning.
16. Other than parents/caregivers, there is another adult(s) *outside of school* who supports my child's learning through a close relationship (i.e., tutor, sibling, afterschool program leader, extended family member, etc.).

Ohio Youth Problem Subscale - Parent Rating, Short Form (Ogles et al., 2000; 2001; 2004)
The following questions will ask about any challenges your child might be experiences and how those challenges are impacting their life. Please rate the degree to which your child has experienced the following problems in the past 30 days.

0 – Not at All / 1 – Once or Twice / 2 – Several Times / 3 – Often / 4 – Most of the Time / 5 – All of the Time

1. Arguing with others.
2. Getting into fights.
3. Yelling, swearing, or screaming at others.
4. Fits of anger.
5. Refusing to do things teachers or parents ask.
6. Causing trouble for no reason.
7. Using drugs or alcohol.
8. Breaking rules or breaking the law (out past curfew, stealing).
9. Skipping school or classes.
10. Lying.
11. Can't seem to sit still, having too much energy.
12. Hurting self (cutting or scratching self, taking pills).
13. Talking or thinking about death.
14. Feeling worthless or useless.
15. Feeling lonely and having no friends.
16. Feeling anxious or fearful.
17. Worrying that something bad is going to happen.
18. Feeling sad or depressed.
19. Nightmares.
20. Eating problems.

Appendix D

Data Cleaning and Preparation Steps

1) Participants were excluded if they did not consent to participate in the study (467 participants removed).
2) Participants were excluded if they did not answer "yes" to one or both of the following screening questions:
   - Do you and your family currently live in Canada? (68 participants removed)
   - Do you have a child who is in Kindergarten to Grade 12? (9 participants removed)
3) Participants were removed if they completed the pilot study prior November 22, 2024 (7 participants removed).
4) Participants were removed if they completed they survey more than once, as verified by matching IP addresses and initials (2 participants removed).
5) Participants were removed if they answered some or all of the sociodemographic questions, but did not answer the QSAP or any of the other measures included in the present study (44 participants removed).
6) Participants were removed if they completed the survey in two minutes or less and had no responses to any of the sociodemographic questions (8 participants removed).
7) Participants were excluded if they had a child in Grade 9, 10, 11, or 12 (87 participants removed).
8) Participants were excluded if they had a child attending school on a part-time or modified schedule (26 participants removed).
9) Participants were excluded if they had a child living with autism spectrum disorder (30 participants removed).
10) Participants were excluded if they had a child whose reported age was outside the expected age range of students enrolled in Kindergarten through Grade 8 (4 participants removed).
11) Participants were flagged if they failed one of the following bot checks and removed if they failed two or more of the bot checks: (a) reCAPTCHA; (b) Selecting the largest number in a sequence of numbers; (c) Setting a dial to a specified number (13 participants flagged, 0 participants removed).

12) Participants were flagged for potential speeding if they completed the survey in 10 minutes or less (9 participants flagged, 0 participants removed).
13) Participants were flagged and, when appropriate, removed for providing nonsensical responses to open-ended questions (17 participants flagged, 0 participants removed).
14) Several participant responses to open-ended questions were recoded where appropriate:
    - E.g., for the question “How many adults care for the children in your household (including you)?”, the response “Me” was recoded to “1”