

Running head: A COMPARISON OF TEACHER ATTRIBUTIONS

A COMPARISON OF TEACHER ATTRIBUTIONS FOR INTERNALIZING VERSUS
EXTERNALIZING BEHAVIOURS IN STUDENTS

by

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LIST OF ABBREVIATIONS USED

ADHD – Attention-Deficit/Hyperactivity Disorder

ADHD-C – Attention-Deficit/Hyperactivity Disorder, Combined Type

ADHD-HI – Attention-Deficit/Hyperactivity Disorder, Predominantly Hyperactive-Impulsive Type

ADHD-I – Attention-Deficit/Hyperactivity Disorder, Predominantly Inattentive Type

AD – Anxiety Disorder

ANOVA – Analysis of Variance

APA – American Psychiatric Association

ARS – Attribution Rating Scale

CD – Conduct Disorder

DSM-IV-TR – Diagnostic and Statistical Manual of Mental Disorders (4th Edition, Text Revision)

DSM-5 – Diagnostic and Statistical Manual of Mental Disorders (5th Edition)

HRSB – Halifax Regional School Board

IO – Inattentive-overactive

OD – Oppositional Defiant

ODD – Oppositional Defiant Disorder

NC – Normal Control

SAD – Social Anxiety Disorder

SD – Standard Deviation

URL – Uniform Resource Locator

ABSTRACT

This study examined the effect of child internalizing behaviour (i.e. anxiety and depression) and child externalizing behaviour (i.e., ADHD-Hyperactive/Impulsive and ADHD –Inattentive presentations) on teacher attributions for behaviour in a sample of 35 elementary and junior high school teachers. Teachers were asked to read vignettes describing a hypothetical student exhibiting behaviours consistent with ADHD-predominately Hyperactive-Impulsive type, ADHD predominately Inattentive type, anxiety or depression. Teacher responses to the hypothetical student were assessed using (a) attribution ratings on the dimensions of locus, control, and stability, and (b) ratings of helping behaviours with respect to referral, accommodations, and perceived manageability of student behaviour. Results indicated that attributions for internalizing versus externalizing behaviours did not differ significantly depending on the classification of the disorder. In addition, teachers with higher levels of mental health knowledge made attributions associated with the neurobiological nature of the disorders. Exploratory analyses of teaching style are also discussed. Findings are also used to identify future directions and address potential implications for school psychologists.

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CHAPTER ONE

Literature Review

Introduction to Childhood Internalizing and Externalizing Disorders

School-age children can experience a broad range of psychological disorders that affect their daily functioning, both in and out of the classroom. Childhood disorders are typically classified into two main categories: internalizing disorders or externalizing disorders. Internalizing disorders are characterized by withdrawn, anxious, inhibited, and depressed behaviours. They encompass feelings of inferiority, self-consciousness, shyness, hypersensitivity, and somatic (i.e. physical) complaints. Problems generally affect a child's internal psychological and emotional state, and are not necessarily disruptive to others. Some examples of disorders characterized as internalizing include Anxiety Disorders and Depressive Disorders (Bornstein, Hahn, & Suwalsky, 2013; Liu, 2004; Liu, Chen, & Lewis, 2011). In contrast, externalizing disorders are characterized by behaviour that is displayed outwardly and is directed towards the physical environment. These disorders can be disruptive to other people in the child's environment and can negatively affect a child's quality of life (Liu et al., 2011). Some examples include Attention-Deficit/Hyperactivity Disorder (ADHD), Conduct Disorder (CD), and Oppositional Defiant Disorder (ODD).

Although there is often some overlap in symptoms among these categories of disorders, and types of disorders are not mutually exclusive, externalizing and internalizing behaviours often affect functioning differently (Layne, Bernstein, & March, 2006; Rodriguez, 2011). Children who display internalizing behaviours are often overlooked when making referrals for services in comparison to their peers who exhibit

externalizing behaviours, given that symptoms of internalizing disorders are not readily observed (Layne et al., 2006). Specifically, children who display symptoms of internalizing disorders are generally not disruptive in the classroom setting and therefore, teachers may be less likely to recognize their behaviours as symptoms of an underlying disorder (Buyse, Verschueren, Doumen, Van Damme, & Maes, 2008). In contrast, children displaying behavioural symptoms of externalizing disorders are often disruptive in the classroom environment and teachers are often required to manage these behaviours, since they interfere with the teachers' ability to teach the curriculum. Furthermore, when confronted with challenging situations, children with externalizing disorders often respond in a hostile manner and their behaviour appears to be driven by emotions of frustration and anger (Barkley, 2006; Buyse et al., 2008). In contrast, children with internalizing disorders tend to avoid confrontations or withdraw (Buyse et al., 2008).

The presence of a psychological disorder in childhood can have a negative affect on many areas of functioning. One area in which these disorders can have the greatest impact is in the school setting. Given that children spend a large portion of their time in the school and that school is the setting in which children reach many important developmental milestones, it is important to understand and investigate the effects of internalizing and externalizing disorders with respect to school functioning. Given the broad scope of disorders classified as internalizing and externalizing, the following discussion will focus on Generalized Anxiety Disorder, Depressive Disorder, and ADHD as defined by the DSM-IV-TR (DSM-IV-TR; American Psychiatric Association, 2000).

Internalizing Disorders

Epidemiological research suggests that 10% to 15% of preadolescent children meet diagnostic criteria for an anxiety disorder (Snyder et al., 2009). According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; American Psychiatric Association, 2000), Generalized Anxiety Disorder can be defined as excessive anxiety and worry that occurs for more days than not for at least six months, is difficult for the child to control, and affects a broad range of functioning (e.g. school performance, social functioning). Symptoms can include restlessness, irritability, and sleep disturbances. The symptoms must cause clinically significant distress or impairment in important areas of functioning (American Psychiatric Association, 2000).

Epidemiological research shows that 3% to 5% of preadolescent children meet diagnostic criteria for a depressive disorder (Snyder et al., 2009). Depressive Disorder is characterized by having more than one episode of either a depressed mood (can be irritable mood in children) or loss of interest or pleasure. Other symptoms include feelings of worthlessness, fatigue or loss of energy, and diminished ability to think or concentrate. The symptoms must cause clinically significant distress or impairment in important areas of functioning (American Psychiatric Association, 2000). As a result of these symptoms, individuals who are depressed tend to have more pessimistic views about themselves and future outcomes. This affects their perception of future events, as they continue to feel incompetent, regardless of the task (Quiroga, Janosz, & Bissett, 2013).

Disorders such as anxiety and depression are often frequent, intense, and chronic expressions of distress, and are hypothesized to result from dysfunctional efforts at

emotional regulation (Snyder et al., 2009). Research shows that foundations for the development of emotion regulation begin in early to middle childhood (Morris, Silk, Steinberg, Myers, & Robinson, 2007). Most adolescents and adults who experience affective disorders, such as anxiety and depression, generally develop initial signs of the disorder in childhood; research suggests that children's symptoms of anxiety and depression can often be reliably measured in children as young as five years of age (Costello et al., 2002). Therefore, it is important that such disorders be recognized and treated early in order to avoid more serious problems in late childhood and adolescence (Snyder et al., 2009).

The effect of anxiety and depression on school functioning. Internalizing disorders, such as anxiety and depression, have been shown to be associated with impaired school functioning in children. Specifically, worries in children with Generalized Anxiety Disorder often revolve around school performance. Students may present as perfectionists, often redoing tasks due to dissatisfaction with their perceived poor performance (McCallum & Pask, 2013). They seek continuous approval from teachers and require excessive reassurance regarding the quality of their work (McCallum & Pask, 2013). Given that anxiety can affect participation in class activities, children with anxiety have been shown to be disengaged in the classroom when compared to classmates without anxiety (Rapport, Denney, & Hustace, 2001). Additionally, research shows that there is a link between high anxiety and impaired cognitive performance, such that, as anxiety increases, cognitive performance decreases, leading to poor academic outcomes (Galla & Wood, 2012; Wood, 2006). Elevated anxiety produces a state of physiological arousal that decreases the child's ability to attend to relevant stimuli, as he

or she is focusing on other stimuli that may be perceived as threatening (e.g. perception of others talking about him/her in the back of the class or the teacher perceiving him/her as incapable). This increased arousal in the classroom causes disruption in concentration on academic tasks. If anxiety persists throughout the school year, this can translate to lower performance, and subsequently may lead to lower marks on report cards (Galla & Wood, 2012; Wood, 2006).

Similarly, children with depression have difficulty concentrating in school, which can translate into difficulties completing assignments and attending in the classroom (McCallum & Pask, 2013). They often have difficulties beginning or completing assignments due to their decreased motivation and energy levels (McCallum & Pask, 2013). It has been suggested that depression may impair cognitive functioning as a result of the depressed person concentrating on depressive thoughts and interpretations of those thoughts, rather than focusing on the actual tasks at hand. In turn, a student's failure to complete tasks within the classroom may also further exacerbate depression, as he or she may internalize these academic failures, leading to feelings of incompetence. This, combined with the negative feedback they are likely to receive from teachers and parents in response to their failure, may also strengthen depressive thoughts, promoting learned helplessness, passivity, and avoidance (Fröjd et al., 2008). It is not surprising, then, that this pattern of perceived academic incompetence can lead to school dropout (Quiroga et al., 2013). Given that depressed individuals tend to have more pessimistic views about themselves, which fosters ongoing feelings of incompetence, this results in decreased engagement in learning activities and underachievement, and subsequently a higher likelihood of school dropout (Quiroga et al., 2013).

The effect of anxiety and depression on family functioning. Research on families of adolescents with internalizing symptoms show that family dysfunction is common (Hughes & Gullone, 2008). Depressive symptoms have been found to be related to overall family dysfunction, including increased family conflict, decreased family cohesion, a reduction in family support, as well as dissatisfaction with family functioning (Hughes & Gullone, 2008). There are also reports that parents of depressed children and adolescents experience more frequent irritability, quarrelling, and disagreements over childrearing than parents of non-depressed children (Hughes & Gullone, 2008). Nilzon and Palmerus (1997) reported that parents of depressed and anxious adolescents perceived their families to be less happy, were less likely to share decision making power, and were less confident in problem solving compared to parents of non-anxious children. Relationships among parents and children with internalizing disorders are more likely to be characterized by conflict and poor communication when compared to families of typically developing children (Hughes & Gullone, 2008).

The effect of anxiety and depression on social and emotional functioning.

With respect to social situations, anxious children may be overly cautious and avoidant of social situations (McCallum & Pask, 2013). Children who are highly anxious may avoid peer interaction, or may act in a less competent manner when around peers as a result of preoccupation with perceived threats around them and an inability to focus on immediate social cues (Galla & Wood, 2012; McCallum & Pask, 2013; Tempesta et al., 2013; Wood, 2006). Opportunities to practice social skills are inhibited by the child's avoidance of social situations (McCallum & Pask, 2013). Similarly, children with depression also exhibit difficulties in the area of social and emotional functioning. For example, children

who experience depression often have deficits in prosocial behaviour, which can result in social difficulties and poor quality friendships (Baker, Grant, & Morlock, 2008; Theodore, Ward, Bray, & Kehle, 2013). Episodes of depression often result in difficulties developing and maintaining friendships. This is due to the nature of symptoms associated with depression (e.g. irritable mood and loss of interest or pleasure in previously enjoyed activities). As a result, long-term outcomes of depression include drug use, suicide attempts, increased stress, reduced life satisfaction, poor self-esteem, educational underachievement, early marriage, marital dissatisfaction, and early parenthood (Rao et al., 1995; Woodward & Fergusson, 2001). Depressive episodes tend to have residual effects that increase the likelihood of future depressive episodes (Essau, 2007; Gordon, Tonge, & Melvin, 2011). These episodes cause people to withdraw from social interaction, which in turn, causes social isolation. Furthermore, depression in adolescents has been reported to be relatively stable over time, meaning that it often persists into adulthood (Essau, 2007; Gordon et al., 2011).

Attention-Deficit/Hyperactivity Disorder

ADHD is one of the most common neurodevelopmental disorders of childhood, with prevalence rates ranging from 3% to 9% of the childhood population (Anderson, Watt, & Noble, 2012; Ohan, Visser, Strain, & Allen, 2011). Epidemiological studies indicate that the disorder is more prevalent in males as compared to females, with estimates of the male to female ratio ranging from 2.5:1 to 5.1:1, depending on the study (Barkley, 2006). According to the revised edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; American Psychiatric Association, 2000), ADHD can be defined as developmentally inappropriate levels of inattention,

hyperactivity, and impulsivity present before age seven. The current version of the Diagnostic and Statistical Manual (DSM-5: American Psychiatric Association, 2013) has altered the above statement to indicate that several inattentive or hyperactive-impulsive symptoms must be present before the age of 12. According to the DSM-IV-TR, there are three subtypes of ADHD: predominantly inattentive type (ADHD-I), predominantly hyperactive/impulsive type (ADHD-HI), and combined type (ADHD-C). To be diagnosed, symptoms of one or more subtypes must have been present for the six months preceding diagnosis, and should cause marked impairment in at least two settings (e.g. home and school) (American Psychiatric Association, 2000). The DSM-5 has changed this criterion, as several symptoms now need to be present in more than one setting, rather than just some impairment in more than one setting, as per the DSM-IV-TR. Rather than referring to subtypes of ADHD, the DSM-5 describes three presentations of the disorder: (1) predominantly inattentive presentation, which includes the presence of six or more symptoms of inattention within the past six months; (2) predominantly hyperactive-impulsive presentation, which includes six or more hyperactive-impulsive symptoms present in the past six months; and (3) a combined presentation, which includes six symptoms or more in total from both the inattentive and hyperactive-impulsive symptoms, that have been present in the past six months (American Psychiatric Association, 2013). For the purposes of the current research, ADHD will be described using DSM-IV-TR criteria.

Children diagnosed with ADHD-I exhibit developmentally inappropriate symptoms of inattention. Such symptoms may include making careless mistakes in schoolwork, demonstrating difficulty sustaining attention in tasks or play activities, and

not following through on directions (American Psychiatric Association, 2000). Children with ADHD-HI also demonstrate symptoms that reflect an inability to function at a developmentally appropriate level. The ADHD-HI subtype indicates that children must present symptoms consistent with hyperactivity and impulsivity. Hyperactivity refers to excessive motor activity, whereas impulsivity refers to hasty actions that occur without forethought (American Psychiatric Association, 2000). For example, hyperactive-impulsive symptoms may include squirming in their seat, running about or climbing in inappropriate situations, talking excessively, and often blurting out answers before the question has been completed (American Psychiatric Association, 2000). The combined subtype includes symptoms from both the inattentive and hyperactive-impulsive subtypes. It must include a minimum of six symptoms from each subtype to be diagnosed as ADHD-C (American Psychiatric Association, 2000).

The effect of ADHD on school functioning. School can be challenging for children with ADHD for several reasons. Children with ADHD have difficulty sitting still, attending, listening, following rules, organizing materials needed for class, and following through on instructions, which can negatively affect their ability to adjust to the academic and social demands of school (Barkley, 2006). These behaviours contribute to their inability to achieve academic goals and curriculum outcomes. Research shows that students with ADHD are at risk of several different types of academic failure such as poor performance on evaluations, high rates of grade retention, increased occurrence of comorbid learning disabilities, and lower scores on standardized tests of achievements (Ek, Westerlund, & Fernell, 2011). Indeed, findings show that students with ADHD often underachieve academically in relation to their measured cognitive ability (Ek et al.,

2011). That is, students with ADHD, although cognitively capable, are often unable to meet the demands of the curriculum, as behaviours related to ADHD significantly affect their learning potential. Given that children with ADHD tend to underachieve academically compared to typically developing children, they often require adaptations to the regular curriculum in order to meet the outcomes (Barkley, 2006). Students with ADHD will continue to struggle to meet the academic demands of the classroom unless appropriate programming is implemented.

Additionally, teachers may have negative perceptions of students with ADHD that may, in turn, affect students' ability to follow classroom rules (Eisenberg & Schneider, 2007; Ek et al., 2011). If teachers do not have a good grasp of the disorder, they may be less understanding of how ADHD affects children in the classroom setting and may develop negative impressions of students with ADHD. As a result, children with ADHD are more at risk of continued struggles and ongoing academic failure (Eisenberg & Schneider, 2007; Ek et al., 2011). Teachers are positioned well to identify need and program for students with ADHD, given that they spend a great deal of time with the child and have a large comparison base of other children. It is imperative that teachers be aware of the effects of ADHD on school and classroom performance, as spending less time on managing disruptive behaviours will allow teachers to spend more time on academics (Syed & Hussein, 2010).

The effect of ADHD on family functioning. Research indicates that parent-child relationships are more stressful and have considerably more conflicts when a child has ADHD than when a child does not have the disorder (Barkley, 2006; Johnston, Chen, & Ohan, 2006; Wehmeier, Schacht, & Barkley, 2010). For example, parents of children

with ADHD tend to be more hostile, whereas their children tend to be less responsive, more hostile, and avoidant (Barkley, 2006; Wehmeier et al., 2010). Parents of children with ADHD have been shown to be inconsistent with respect to behaviour management, such that they may tend to be more lax in their discipline on occasion and quite harsh in other instances (McNamara, Willoughby, & Chalmers, 2005). Many of the behaviours associated with ADHD make family relationships strained and difficult to navigate. Parents must be far more patient and understanding of the symptoms associated with the disorder as compared to parents of typically developing children (McNamara et al., 2005). Research shows that children with ADHD perceive their parents to be more negative and controlling, while parents perceive their families to be less supportive and more stressful (Gau & Chang, 2013). Subsequently, parents and children with ADHD tend to have more disjointed relationships that are characterized by struggles to find ways of co-existing peacefully (Finzi-Dottan, Manor, & Tyano, 2006; Gau & Chang, 2013).

The effect of ADHD on social and emotional functioning. Children with ADHD present with social and emotional impairments that can affect their quality of life and their relationships with parents, peers, and teachers (King et al., 2009; Mannuzza & Klein, 1999). Children diagnosed with ADHD have poorer social and communication skills compared to other children and adolescents and more difficulty with peer relationships (e.g. fewer friendships or limitations in their activities if they do have friends) (Barkley, 2006; Wehmeier et al., 2010). These problems cause an inability to efficiently participate in social exchanges, such as sharing or turn taking. Children with ADHD are often not well liked and are rejected more often than typically developing children, as they tend to be more intrusive and disruptive of the ongoing social

interactions of others. In addition, children with ADHD are often less liked by peers within days or even minutes of first meeting them (Pelham & Bender, 1982). They tend to express their anger and frustration more often than those without ADHD and show reduced empathy and guilt (Barkley, 2006; Wehmeier et al., 2010).

Peer and family relationships of children with ADHD are sometimes characterized by discord and negative interactions (American Psychiatric Association, 2000; Barkley, 2006; Hoza, 2007). Research shows that ADHD is a risk factor for later delinquency and use and abuse of substances (Barkley, Fischer, Smallish, & Fletcher, 2004; Mrug et al., 2012). Specifically, Barkley, Fischer, Smallish, and Fletcher (2004) found that children diagnosed with ADHD engaged in a greater number of antisocial activities, such as theft or disorderly conduct, and had been arrested five times more often than children without ADHD. The inattentive, hyperactive, and impulsive behaviours exhibited by children with this disorder often result in difficulties interacting with peers and teachers (Barkley, 2006; Hoza, 2007). Compared to their typically developing classmates, children with ADHD have been shown to appear as though they are not listening when spoken to directly, do not follow through on directions, are easily distracted by extraneous stimuli and are often forgetful in daily activities (American Psychiatric Association, 2000). They may also run about or climb in inappropriate situations, demonstrate an inability to engage quietly in leisure activities, be perceived as being restless or difficult to keep up with, talk excessively, and often interrupt or intrude on others (American Psychiatric Association, 2000).

Programming for Children with Internalizing and Externalizing Disorders

Given the difficulties in school, family, and social and emotional functioning exhibited by children with internalizing and externalizing disorders, it is important to develop and implement appropriate programs and interventions to target these difficulties. Although internalizing and externalizing behaviours present differently, the need for evidenced based intervention for each of these types of behaviours is equally important. Additionally, it is important to address difficulties early and implement timely interventions to avoid more serious difficulties later in childhood or adolescence (Lamb, Middeldorp, Van Beijsterveldt, & Boomsma, 2012; Snyder et al., 2009). One of these serious outcomes is decreased or unfavourable job experiences and poor quality of life (Baker et al., 2008; Wang & Peck, 2013). In order for interventions to be effective, they need to be applied consistently across multiple settings. Specifically, school is one of those important settings since children spend a great deal of time in the classroom.

Given that teachers spend a great deal of time throughout the day with their students, teachers are able to observe children in relation to their peers for extended periods of time, and are able to recognize developmentally appropriate behaviour (Groenewald, Emond, & Sayal, 2009; Layne et al., 2006; Sciotto, Terjesen, & Bender-Frank, 2000; Soles, Bloom, Heath, & Karagiannakis, 2008). The teacher's role in the psychoeducational process is multifaceted. Teachers are in the best position to detect problematic behaviours. They can contribute important information since they interact extensively with the children through structured and unstructured activities and social situations (Kypriotaki & Manolitsis, 2010, Sciotto et al., 2000; Soles et al., 2008). Although it is imperative that clinical approaches consist of norm-referenced measures,

Hale and Fiorello (2004) make a case for the inclusion of “head norms”, which speak to the value of ‘clinical norms’ or clinical judgement. They stress that each child is different and while the psychometrics of a particular case are important, as they provide confidence in a clinician’s conclusions; it is up to the clinician to make appropriate clinical judgments based on the information they have obtained (Hale & Fiorello, 2004). That being said, it is clear that not including the behavioural observations of those who spend a great deal of time with the child (i.e. the teacher) would be an error that could potentially impact the conclusion a clinician makes, and therefore, can mean that children may be at risk of not receiving appropriate intervention (D’Amato, Rothlisberg, & Rhodes, 1997).

With this in mind, there are additional factors that may present as barriers to programming. For example, negative teacher perceptions may influence student access to programming, which translates to students not receiving the appropriate interventions required to positively impact their academic success (Soodak & Podell, 1994). Additionally, teachers teach multiple children in the classroom that have varying needs, both academically and behaviorally. That being said, internalizing and externalizing disorders often manifest differently in the classroom and, as a result, it is important to understand how these differences impact programming for such students. Specifically, children with ADHD are often inattentive, hyperactive, and impulsive, whereas children with anxiety or depression are often withdrawn and seek teacher approval (McCallum & Pask, 2013; Theodore et al., 2013). As such, this may result in differential referrals based on observable behaviours for children with these disorders. That is, teachers or school personnel may view the severity of these behaviours differently depending on their

impact in the classroom and make referrals accordingly.

Research currently shows that teachers are much more likely to refer boys than girls when dealing with behaviours in the classroom (Sciutto, Nolfi, & Bluhm, 2004). This is because girls often display inward, non-disruptive behaviours (i.e. anxious, depressed behaviours) that do not impact the overall functioning of the classroom. Boys generally display much more disruptive behaviours, consistent with ADHD symptoms, which are problematic in the classroom. Therefore, internalizing behaviours such as those exhibited by children who have anxiety and depression are much less likely to be targeted for referral in comparison to children who exhibit symptoms consistent with externalizing disorders, such as ADHD-HI and ADHD-C (Pearcy & Clopton, 1993; Sciutto et al., 2004). Given these differences in symptom presentation, it is important to examine the effects of teacher attributions of these disorders to identify whether their attributions influence student access to programming.

Given the effect of internalizing and externalizing behaviours on various areas of the child's life, one important line of research is concerned with determining the manner in which others interpret this behaviour. From a social cognitive perspective, examining the interpretation of internalizing and externalizing behaviours is an important factor in understanding how people react to children with these disorders in social contexts. This in turn, could lead to a theoretical model of social relationships in children with internalizing and externalizing disorders, as well as possible interventions to address social functioning and relationships across multiple contexts.

Attribution Theory

One way to understand the manner in which teachers view internalizing and externalizing behaviours of students is to examine the *causal attributions* made for these behaviours. An attribution refers to the perceived cause of behaviour and serves as the link that one makes from an event or outcome to the reason for its occurrence (Seifert, 2004; Weiner, 1980). Much of the social cognitive literature that examines causal attributions for the behaviour of others is based on Weiner's (1980) Attribution Theory. Weiner (1980) suggests that causal attributions for behaviour rely on the assessments of three aspects of behaviour: locus of control (i.e. whether the cause of the behaviour is internal or external to the individual), controllability (i.e. whether or not the behaviour is within the individual's control), and stability (i.e. whether the behaviour is stable and likely to recur or unstable and inconsistent and not likely to recur). Weiner suggested that these three dimensions influence attributions of affective and behavioural reactions to other's behaviour, as well as expectations for future behaviour (Johnston & Patenaude, 1992; Weiner, 1980).

Much of the early work in attribution theory examined perceptions of and attributions for illness behaviour. For example, a study conducted by Mancuso, Litchford, Yaffe, and DiCiurcio (1980) posits that when individuals perceive and make attributions for the behaviour of others, they develop and use a person-perceiving dimension labeled *mentally ill/mentally healthy*. That is, they place the individual on a continuum in which the individual is considered to be mentally ill or mentally healthy (or somewhere in between) based on their perception of that individual's behaviour. Such a dimension promotes the expectation of particular kinds of behaviours from targeted individuals. For

example, if an individual is perceived to be “mentally ill”, then his or her behaviour is interpreted in this context. Weiner (1980) found that behaviours that were interpreted as occurring in the context of an illness were attributed to internal, uncontrollable causes and individuals exhibiting these behaviours elicited sympathetic, helpful responses from others. On the other hand, negative reactions and little help were resulted from behaviours that were perceived as internal and controllable (e.g. lack of effort) (Weiner, 1980; Johnston & Patenaude, 1994). Although attribution theory was originally used to understand illness behaviour in adult populations, it has more recently been used by researchers to understand the attributions parents make for the behaviour of children who exhibit externalizing behaviours.

Parental attributions for ADHD behaviours. Given the challenges associated with parenting a child with ADHD, some research has used attribution theory in an attempt to understand the difficulties experienced by parents of children with the disorder from a social cognitive perspective; that is, this research has examined the causal attributions for behaviour made by parents of children with ADHD. Specifically, Weiner’s attribution theory (1980) has been applied extensively in the area of parental attributions for the behaviour of children with ADHD (see Johnston, et al., 2006; Johnston & Freeman, 1997; Johnston, Hommersen, & Seipp, 2009; Johnston & Patenaude, 1994; Johnston, Reynolds, Freeman, & Geller, 1998 for examples). Broadly, much of the research in this area has shown that parents of children with ADHD tend to view their children’s behaviour as being caused by internal factors that are uncontrollable by the child (Johnston & Freeman, 1997; Johnston et al., 1998). However, some research suggests that parents of children with ADHD view their children’s behaviour as being

caused by controllable factors (Johnston & Patenaude, 1994). Research generally indicates that behaviours are perceived to be more stable over time, meaning that they are likely to recur in the future (Johnston et al., 2006; Johnston & Patenaude, 1994; Johnston & Freeman, 1997; Johnston et al., 2009; Johnston et al., 1998).

In a study conducted by Johnston and Patenaude (1994), mothers of children with ADHD were recruited as participants. They were asked to read a series of vignettes describing inattentive-overactive (IO) or oppositional-defiant (OD) ADHD behaviours. Following this, participants were asked to complete an attribution and reaction scale that recorded the casual attributions and reactions to the child's behaviour in the vignette. Results indicated that mothers of children with ADHD attributed negative behaviours such as refusing parental requests or behaving in a socially inappropriate manner to internal and controllable causes (Johnston & Patenaude, 1994). Parents seemed to be making attributions for the symptoms of ADHD that show inconsistency with the neurobiological nature of the disorder, meaning that, although they see the behaviours as a result of an underlying disorder that is innate to the child, they still fault the child for engaging in negative behaviours.

Johnston, Chen, and Ohan (2006) conducted a study that echoed the results reported by Johnston and Patenaude (1994). In this study, they examined mothers' behavioural attributions in three groups of boys: comorbid ADHD/oppositional defiant (ADHD/OD) boys, ADHD only boys, and non-problem boys. This study followed a similar procedure to that of Johnston and Patenaude (1994), but mothers were also asked to provide *in vivo* attributions for their sons' behaviour when viewed through a two-way mirror. Results indicated that mothers of children with ADHD/OD boys saw child

oppositional behaviours as a result of causes that were more pervasive and, as such, made more negative attributions for child failure and success compared to mothers of non-problem children. They found failure was associated with more internal and controllable causes whereas success was attributed to uncontrollable factors. Mothers of boys with ADHD only, however, either fell midway between the other two groups or did not differ from mothers of non-problem boys. There were no group differences in mothers' attributional ratings of the loci of causes; behaviours were generally rated as being due to internal causes. Pro-social behaviours were found to be most controllable and the causes of undesirable ADHD symptoms or OD behaviours as least controllable. Mothers of children with comorbid ADHD/OD rated inattentive-impulsive symptoms and oppositional behaviours as more likely due to enduring causes than did mothers of non-problem children (Johnston et al., 2006).

Johnston, Hommersen, and Seipp (2009) conducted a one-year follow-up to the study by Johnston et al. (2006). Most participants from the original study and some additional participants were asked to complete identical measures to that of Johnston et al. (2006). Results indicated that attributions for ADHD behaviours did not change significantly over time; the extent to which mothers saw their children's oppositional behaviour as attributable to persistent and pervasive factors was a significant predictor of higher levels of oppositional behaviour one year later. However, contrasting evidence was found, in that initial child oppositional behaviours did not significantly predict later maternal attributions. That is, in some circumstances, negative maternal attributions could significantly predict subsequent levels of child oppositional behaviour (Johnston et al., 2009).

Attributions for internalizing behaviours. Although parental attributions for behaviours associated with ADHD have been studied fairly extensively, this approach has not been as widely used to examine behaviours associated with internalizing disorders such as anxiety and depression. This is a shortcoming in the literature, as children with internalizing disorders often experience difficulty with respect to relationships with others. Examples include not attending when others are around due to preconceived threats around them, or having predetermined notions about their level of competence that block their ability to engage in a task (Baker et al., 2008; Theodore et al., 2013). Like the attributions made for the behaviour of children who exhibit externalizing behaviours, it is possible that attributions made for internalizing behaviours contribute significantly to the relationship difficulties experienced by this population.

In a research study conducted by Sheeber, Johnston, Chen, Leve, Hops, and Davis (2009), findings indicated that parents of depressed children generally attribute their children's negative behaviours to internal and controllable causes, whereas they attribute positive behaviours to external causes. In contrast, mothers and fathers in families of nondepressed adolescents make significantly fewer negative attributions for their children's behaviour than parents in families of adolescents with diagnostic or subdiagnostic levels of depressive symptoms (Sheeber, Johnston, Chen, Leve, Hops, & Davis, 2009). An interesting finding from the study was that negative parental attributions for adolescent behaviour during the problem-solving discussion were associated with harsher parenting as observed during the same parent-adolescent discussions. More specifically, negative attributions were associated with more aggressive and less facilitative parenting behaviour for both mothers and fathers (Sheeber

et al., 2009).

A study conducted by Kortlander, Kendall, and Panichelli-Mindel (1997) examined maternal expectations and attributions regarding their child's ability to cope with a stressful situation. Participants consisted of children with and without anxiety and their mothers. Anxiety disordered (AD) and normal control (NC) children completed self-report questionnaires and gave a five minute videotaped speech about themselves. Mothers were asked for their thoughts and feelings as they considered their child performing the videotaped speech task. While separated from their children, mothers watched a brief video of a staff member reading a standard set of instructions to all children prior to performing the speech. Mothers then completed the thought listing, and measures of their expectations and feelings about their child's performance on the speech task. Each child was randomly assigned to receive a fabricated rating of either (a) high coping or (b) low coping, on a 7-point scale ranging from "not at all able to cope" to "completely able to cope". After completing forms on their expectations about their child's coping ability, mothers were shown their child's assigned score and were asked to imagine that a staff member had given their child the assigned score. After viewing their child's assigned coping rating, mothers rated on six 7-point scales, ranging from "not at all" to "completely", the degree to which they agreed with each of six possible attributions for their child's assigned high or low coping rating. Causal attributions included: (a) tried hard, (b) difficult situation, (c) natural ability, (d) luck, (e) felt anxious, and (e) benefited from the instructions.

Overall, mothers of AD children expected their children to be more upset, less able to make themselves feel comfortable, and were less confident in their children's

abilities to perform task related behaviour in comparison to mothers of NC children. Specifically, mothers of AD children made fewer causal distinctions for the Assigned Coping Ratings (high vs. low). Although NC mothers endorsed a variety of five possible causes depending on their child's coping condition, AD mothers used only three: for low coping they more strongly endorsed *task difficulty* and *anxiety*, and for high coping they more strongly endorsed *beneficial instructions*. Not only did mothers of AD children show less differentiation in their attributions for high and low coping, their attributions were more external than internal. It seems that AD mothers hold a fairly rigid cognitive set about their children's coping ability with only limited possibilities for why they might cope well. In contrast, NC mothers find it easier to attribute a range of reasons for why their children coped well, with a more limited set of possibilities for coping poorly (Kortlander, Kendall, & Panichelli-Mindel, 1997).

Teacher attributions for internalizing and externalizing behaviours

Although there is a fairly large body of research examining parental attributions for child behaviours, less is known about teacher attributions for internalizing and externalizing behaviours. This is a potential shortcoming because teachers are often involved in making the initial referral for services such as assessment, diagnosis and intervention for children who exhibit challenging behaviour, be it internalizing or externalizing. As previously discussed, research supports the notion that teachers often refer students who exhibit problematic behaviour in the classroom for additional services (Percy & Clopton, 1993; Sciutto et al., 2004). This pattern results in more referrals for externalizing behaviours (e.g. ADHD) in comparison to internalizing behaviours (e.g. anxiety and depression) (Percy & Clopton, 1993). It is important to understand how the

social, emotional, and academic difficulties identified for children with internalizing and externalizing behaviours affect teachers' perceptions of these students, classroom behaviour management, and decisions to refer for services. Further research examining teacher attributions for internalizing and externalizing behaviours may provide insight into how these children can be better programmed for and supported, thereby making their outcomes more favourable.

CHAPTER TWO

A Comparison of Teacher Attributions for Internalizing versus Externalizing Behaviours in Students

Epidemiological research examining internalizing disorders suggests that 10% to 15% of preadolescent children meet diagnostic criteria for an anxiety disorder (Snyder et al., 2009), and 3% to 5% meet criteria for a depressive disorder (Snyder et al., 2009). Research examining the prevalence of externalizing disorders indicates that 3% to 9% of the childhood population meet criteria for ADHD (Anderson et al., 2012; Ohan et al., 2011). There are a variety of serious social, emotional and familial difficulties that are associated with both internalizing and externalizing disorders, such as strained parent-child relationships, poor social and communication skills, difficulties developing and maintaining friendships, and poor academic outcomes (see Barkley, 2006; Galla & Wood, 2012; Hughes & Gullone, 2008; Johnston et al., 2006; King et al., 2009; Mannuzza & Klein, 1999; McCallum & Pask, 2013; Wehmeier et al., 2010; Wood, 2006). As such, research is needed to understand the various factors that contribute to and maintain these behaviours in children with internalizing and externalizing disorders.

One line of research examines the role of attributions in the development and maintenance of behaviour. Attributions refer to an individual's perception of the cause of behaviour from occurrence to outcome (Seifert, 2004; Weiner, 1980). Specifically, Weiner (1980) suggests that causal attributions for behaviour rely on the assessments of three aspects of behaviour: locus of control (i.e. whether the cause of the behaviour is internal or external to the individual), controllability (i.e. whether or not the behaviour is within the individual's control), and stability (i.e. whether the behaviour is stable and

likely to recur or unstable and inconsistent and not likely to recur).

Much of the recent attribution research focuses on the parent-child relationship. Weiner's attribution theory (1980) has been applied extensively in the area of parental attributions for the behaviour of children with ADHD (see Johnston et al., 2006; Johnston & Freeman, 1997; Johnston et al., 2009; Johnston et al., 1998 for examples). Broadly, much of the research in this area has shown that parents of children with ADHD tend to view their children's behaviour as being caused by internal, uncontrollable factors (Johnston & Freeman, 1997; Johnston et al., 1998). However, some research suggests that parents of children with ADHD view their children's behaviour as being caused by controllable factors (Johnston & Patenaude, 1994). These behaviours are generally perceived to be stable over time (Johnston et al., 2006; Johnston & Patenaude, 1994; Johnston & Freeman, 1997; Johnston et al., 2009; Johnston et al., 1998). Additionally, some research exists that examines parent-child relationships of children with internalizing disorders (see Kortlander et al., 1997 for an example). Much of this research indicates that parents make attributions for their child's behaviour that are external in nature.

Although there is a fairly large body of research examining parental attributions for ADHD behaviours, less is known about teacher attributions for child internalizing and externalizing behaviours. As a result, the factors that influence teacher responses to child behaviour are unclear. This is a shortcoming in the current research, as teachers are often expected to manage diverse behavioural and mental health needs in the classroom, and typically inform school planning teams about students who may require individualized programming to meet the challenges of the classroom. It is possible, then, that teacher

perceptions of and attributions for student behaviour could be important determinants of referral for additional services (e.g. school psychology, behavioural consultant). Access to service has been found to have important implications for long-term success in the school setting (Barkley, 2006; Ek et al., 2011; Galla & Wood, 2012; McCallum & Pask, 2013; Quiroga et al., 2013).

Although there is currently a paucity of research examining teacher attributions for student behaviour, some studies have examined aspects of teacher attributions. With respect to externalizing behaviour, studies tend to find that teachers typically attribute behaviour to causes internal to the child (see Bibou-Nakou, Kiosseoglou, & Stogiannidou, 2000; Brophy & Rohrkemper, 1981; Christenson, Ysseldyke, Wang, & Algozzine, 1983; Guttman, 1982; Soodak & Podell, 1994 for examples). Bibou-Nakou, Kiosseoglou, and Stogiannidou (2000) found that teachers attributed misbehavior to internal child factors. The authors of this study concluded that this finding suggests that teachers tend to make a connection between a child's problem and disposition and familial factors (either in terms of child upbringing or constitutional and personality traits), thereby neglecting and/or underestimating their own involvement. Similarly, Christenson, Ysserldyke, Wang, and Algozzine (1983) found that teachers attributed 62% of students' 'problems' to controllable factors; that is, teachers viewed difficulties as being due to a deficit or deficiency within the child that could be controlled. Although some studies indicate that teachers acknowledge the importance of teaching and school factors, such as inadequate or inappropriate teaching and teacher-child relationships, in maintaining problematic behaviours (e.g. Hughes, Barker, Kemenoff, & Hart, 1993), the majority of studies show that teachers tend to attribute externalizing behaviours to internal child

factors.

In contrast, when examining the literature on internalizing disorders, findings indicate that teachers tend to attribute behaviours to factors external to the child (see Christenson et al., 1983; Poulou & Norwich, 2000 for examples). For example, Poulou and Norwich (2000) asked teachers to read vignettes depicting a number of child behaviour problems (i.e. mild/severe conduct, mild/severe emotional, and mild/severe conduct and emotional). Teachers were then asked to complete an attribution scale that examined perception of causes (i.e. child's family, teacher, school, and the child him/herself), emotional and cognitive responses to the behaviours, and perceptions of actual and effective coping strategies. Across behaviour types, attributions for school and teacher factors were consistently higher than those for family and child factors, meaning that when teachers made attributions for all behaviours, including those consistent with behaviours typically seen with anxiety and depression, they attributed the behaviours predominantly to external factors (Poulou & Norwich, 2000).

Teacher Helping Behaviours

Teacher attributions for student behaviour are important to study, as they could potentially influence teachers' service delivery choices. These factors can also have practical implications for school-based personnel who are attempting to use best practices for managing children with emotional and behavioural difficulties (Ohan et al., 2011). Given the research on parental attributions for child behaviour, it is possible that teacher attributions for student behaviour may influence how they develop and/or implement programming for children with behavioural difficulties in their classrooms (e.g. referral for psychoeducational assessment, counselling, and consultation). For example, a teacher

who attributes a student's failure on an assignment to factors external to the child may modify teaching practices to better accommodate the child compared with a teacher who attributes the failure to the student's disposition (Brady & Woolfson, 2008; Jordan, Lindsay, & Stanovich, 1997).

Similarly, if a teacher views the cause of a child's difficulty as unstable, they may assume that the child can change and may then develop a greater expectation of progress for the child as compared to a teacher who sees them as stable (Brady & Woolfson, 2008). In contrast, if behaviours are viewed to be due to stable causes, the behaviours are perceived as less modifiable, and optimism regarding positive change is reduced (Sharrock, Day, Qazi, & Brewin, 1990). Thus, when a child's behaviour is attributed to stable causes, this may lead to decreased teacher confidence with respect to his or her ability to implement effective interventions. This outcome has direct relevance to whether teachers will find interventions acceptable and whether they will implement them with integrity (Waas & Anderson, 1991). Further, if interventions are attempted solely to comply with school policy, improvements in the child's behaviour are unlikely to change the teacher's beliefs about his/her problems (Waguespack & Moore, 1993). A further example of this line of research includes a study conducted by Bibou-Nakou et al. (2000), that found that students who were perceived as being more in control of their problems were more likely to be disciplined by teachers. In contrast, students were more likely to be treated sympathetically if they were seen as victims of circumstances.

Given the lack of research in teacher attributions for internalizing and externalizing behaviours, it is important to address this shortcoming in the literature by conducting more studies of teacher attributions for student behaviour. However, it is also

important to examine teacher factors that may influence attributions for students' behaviour. Two important factors to consider are teaching style and teacher knowledge of mental health.

Teaching Style

Grasha (1996) argues that there are at least five teaching styles that interact with and influence the classroom dynamic; in turn, teaching style can affect the student's learning experience. According to Grasha (1996), teachers can be classified into five distinct styles: (1) *Expert*, (2) *Formal Authority*, (3) *Personal Model*, (4) *Facilitator*, and (5) *Delegator*. *Expert* teachers possess the knowledge and expertise that students need. They strive to display detailed knowledge and challenge their students to enhance their competence; however, if this knowledge is overused in the classroom, it may lead to students becoming intimidated. The *formal authority* teacher focuses on providing clear expectations and acceptable ways of completing tasks; however, a strong investment in this style can lead to rigidity in their teaching and less flexible ways of managing students. The *personal model* teacher believes in teaching through the use of personal examples and encourages students to observe and emulate the teacher's approach. This can, however, lead to feelings of inadequacy on the student's part if he or she feels unable to live up to the teacher's expectations and standards. The *facilitator* attempts to develop the student's capacity for independent action, initiative, and responsibility. Facilitators demonstrate a great deal of flexibility in their teaching and focus on supporting the student through encouragement in a consultative manner. However, if this approach is not executed in a positive and affirming manner, the student may feel uncomfortable. This style is also time consuming and is sometimes employed in situations where a more direct

approach is warranted. Finally, *delegator's* focus much more on their role as a resource, whereby they are available at the request of a student, but are focused on developing students' capacity to function as an independent learner. This style may lead to a misjudgement on the teachers' part with respect to the student's readiness for independent work, leading to anxiety in some students. Teachers generally possess each of the five teaching styles to a varying degree (Grasha, 1996) and the interaction of these styles ultimately creates the climate within the classroom.

LaBillois and Lagace-Seguin (2009) provide preliminary evidence to suggest that teaching style might be associated with a child's ability to regulate his or her emotions in the classroom. They found that there is a correlational relationship between teaching style and children's anxiety (LaBillois & Lagace-Seguin, 2009). Specifically, the interaction between expert teaching style and emotional regulation was found to significantly predict anxiety in children. Additionally, the facilitator and formal authority teaching styles interacted with emotional regulation to predict anxiety. That is, the more strongly a teacher identified as formal authority or facilitator, the lower the anxiety levels for children who were high regulators (LaBillois & Lagace-Seguin, 2009).

Given the different teaching styles that can be adopted by educators and research suggesting that teaching style can influence student behaviour, it is clear that teachers play an important role in the lives of their students. Teachers are largely responsible for providing learning opportunities and discipline for children in the absence of parents (LaBillois and Lagace-Seguin, 2009) and, as a result, contribute to child social and academic development throughout childhood and adolescence (see Battistich, Solomon, & Schaps, 1997; Battistich, Solomon, Watson, Solomon, & Schaps, 1989; Wentzel,

2002). Different teaching styles have been shown to affect student outcomes (e.g. behavioural and academic) in a variety of domains; however, it is not clear how teaching styles interact with child behaviour, and teachers' attributions for this behaviour, to affect outcomes for students who exhibit atypical behaviour in the classroom.

Teacher Knowledge

As noted previously, teacher knowledge is another important factor to investigate with respect to understanding teacher attributions for student internalizing and externalizing behaviour in the classroom. Indeed, research suggests that increased teacher knowledge of various disorders leads to more appropriate referrals and subsequent programming for children with ADHD (e.g. Kypriotaki & Manolitsis, 2010; Mahar & Chalmers, 2007; Sciutto et al., 2000). That being said, it is estimated that fewer than 1% of students are provided the appropriate services needed for social, emotional and behavioural difficulties (Soles et al., 2008). Since teachers are critical participants in the referral process, their understanding of the complexities of emotional and behavioural disorders, as well as the children challenged by these disorders, is important in ensuring appropriate referrals that will aid in providing efficient and effective intervention in the school setting (Soles et al., 2008).

Research has shown that teachers often have various degrees of knowledge of childhood mental health disorders. Specifically, compared to externalizing disorders, internalizing disorders are frequently misunderstood by educational professionals (Buyse et al., 2008; Herbert, Crittenden, & Dalrymple, 2004; Kashdan & Herbert, 2001). For example, Herbert, Crittenden, and Dalrymple (2004) found that educational professionals demonstrated significantly lower knowledge of Social Anxiety Disorder (SAD) relative

to ADHD, despite the fact that SAD appears to be more common than ADHD. This discrepant knowledge has been hypothesized to be a result of the fact that children with ADHD tend to be more disruptive in the classroom setting, which leads to increased referrals for service and, subsequently, an increase in knowledge and ability to recognize the disorder (e.g. Barkley, 2006; Buyse et al., 2008; Kashdan & Herbert, 2001).

Additionally, lack of knowledge of internalizing disorders means that some symptoms may be more likely to be mistaken for shyness and dismissed by educators as a child personality trait that has no clinical significance and, therefore, no need for referral (see Beidel, 1998).

Importance of Attribution Research in Understanding Child Behaviour

Findings from previous research suggest that teachers play an important part in recognizing symptoms of child mental health disorders and making referrals for services. Given the role of adult attributions in responding to child behaviour, it is important to assess whether teachers make different attributions for internalizing versus externalizing symptoms in their students, as this has the potential to affect referral for service and subsequent program implementation. Understanding the relation between teacher attributions for student behaviour, teaching style, and teacher knowledge of mental health is important to examine experimentally, as findings may assist school mental health professionals, such as school psychologists, in helping teachers recognize symptoms and make appropriate referrals.

Research Objectives

With this in mind, the current study has the following primary objectives: (1) to determine whether teachers differ in their attributions for internalizing (i.e. anxiety and

depression) versus externalizing (i.e. ADHD) behaviours; (2) to determine whether teacher attributions for these behaviours are related to likelihood of referral for services and implementation of programming; (3) to determine whether teaching style influences how teachers perceive and make attributions for behaviour; and (4) to determine whether teacher knowledge of mental health disorders is associated with attributions for internalizing and externalizing behaviours.

Based on findings from previous research, it is hypothesized that the behaviours of children exhibiting internalizing symptoms will be attributed to external causes when compared to children exhibiting externalizing behaviours, but that attributions for stability and control will be similar across behaviour types. It is also hypothesized that teachers will feel less competent and willing to design and implement programming for students with internalizing symptoms in comparison to those who demonstrate externalizing symptoms, as research indicates that teachers generally have less knowledge about internalizing disorders as compared to externalizing disorders. Finally, it is hypothesized that teachers with better knowledge of mental health disorders will attribute behaviours to more internal, uncontrollable, and stable causes as compared to teachers with less knowledge. Given the lack of existing research investigating the relation between attributional style and teaching style, the intent of this examination was largely exploratory.

Method

Participants

Participants were 35 elementary and junior high school teachers who were recruited from multiple schools in the Halifax Regional School Board. For the purposes

of this study, elementary school is defined as grades 1 through 5, and junior high as grades 6 through 9. Substitute teachers and student teachers were excluded from participation, as they do not teach a consistent group of students throughout the academic year and may not have had the opportunity to make ongoing observations of children with anxiety, depression, and ADHD. In addition, they follow classroom instructions provided by regular classroom teachers and are not responsible for decisions about accommodations and classroom inclusivity for children with various mental health disorders. In keeping with the typical sex distribution of teachers in Canada (Lin, 2006), the participants were predominantly female (91%; N = 32). The Mount Saint Vincent University Research Ethics Board and the Halifax Regional School Board Research Review Committee provided clearance for this study.

Measures

Lime Survey Software, which is hosted by Mount Saint Vincent University's web server, was used to develop an online survey. Participants were asked to log onto the site via a web link and asked to complete the survey on their own time. Each component of the survey is described below.

Demographic questionnaire (see Appendix A). Participants were asked to complete a brief demographic questionnaire consisting of general questions about themselves and their educational career. Items consisted of age, sex, highest degree held, years of teaching experience, grade(s) taught, an estimate of the number of students they have taught/are teaching with a mental health disorder, and how many students they have referred for assessment throughout their educational career.

Student behaviour vignettes (see Appendix B). Teachers were presented with four vignettes describing a hypothetical student who exhibited various internalizing and externalizing symptoms. Two vignettes described internalizing behaviours and reflected a child with typical anxious symptomatology and a child with depressive symptomatology. The other two vignettes described externalizing behaviours and reflected a child with two typical presentations of ADHD (i.e. predominantly inattentive type and predominantly hyperactive/impulsive type). All vignettes were based in a classroom setting. Participants were asked to put themselves in the place of the teacher interacting with the hypothetical student described in the vignette. Vignettes were adapted from previous research (see Green, Clopton, & Pope, 1996; Headley & Campbell, 2011; Johnston et al., 2006; Ohan, Cormier, Hepp, Visser, & Strain, 2008; Ohan et al., 2011; Percy & Clopton, 1993). Criteria for the vignettes were based on diagnostic criteria for internalizing and externalizing disorders in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition – Text Revision (DSM-IV-TR). Vignettes were matched for length and child characteristics and were similar in nature, excluding the symptoms that were presented.

To reduce the possibility of the child in the vignette being perceived as female or male, a neutral name (Taylor) was used. The vignettes were short paragraphs depicting various symptoms associated with internalizing and externalizing disorders. Vignettes were reviewed for accuracy and to ensure that they were reflective of DSM-IV-TR diagnoses of Generalized Anxiety Disorder, Major Depressive Disorder, and ADHD – Predominantly Inattentive Type and Predominantly Hyperactive/Impulsive Type.

Attribution Rating Scale (adapted from Johnston et al., 1994, 1997, 2006; see Appendix C). After reading each vignette, participants were asked to complete an Attribution Rating Scale (ARS). The scale consisted of six items, each with a 5-point Likert scale and a written response section. The first three items assessed teacher attributions for the child's behaviour along three dimensions using a 5-point Likert scale. The first dimension explored *locus of control* (i.e. whether the cause of the behaviour was internal or external to the child); teachers were asked to rate the cause of the behaviour on a five-point scale (1 = something about the child; 5 = something about the environment). The second dimension explored *controllability* (i.e. whether or not the behaviour was within the child's control); teachers were asked to rate whether or not the behaviour was within the child's control using a five-point scale (1 = completely within the child's control; 5 = not at all within the child's control), and the third dimension explored *stability* (i.e. whether the behaviour was stable and likely to recur or unstable and inconsistent); teachers were asked to rate the stability of the behaviour on a five-point scale (1 = will happen again in the future; 5 = a one-time thing).

The next three items assessed teachers' reactions to the described behaviour and the degree to which they would intervene with helping behaviours using a 5-point Likert scale. The first dimension examined likelihood of referral for further assessment (1 = not at all likely the child would be referred for assessment; 5 = very likely the child would be referred for assessment). The second dimension examined teacher ratings of perceived benefits of classroom accommodations for Taylor (1 = no benefit of classroom accommodation; 5 = definite benefit of classroom accommodations). Finally, teachers were asked to indicate their confidence in managing Taylor's classroom behaviour (1 =

not at all confident in ability to manage behaviour; 5 = extremely confident in ability to manage behaviour). The written response section was optional for participants who wished to explain their causal attribution for each vignette.

Self-evaluation for teachers (see Appendix D). Participants were asked to indicate their knowledge of mental health disorders using the Self-evaluation for Teachers from the Mental Health and High School Curriculum Guide (Canadian Mental Health Association, 2012). The Self-evaluation for Teachers includes 30 true or false questions designed to assess the general knowledge of teachers with respect to mental health disorders affecting adolescents.

Teaching style survey (see Appendix E). Participants were asked to complete the Teaching Style Survey (Grasha, 1996). The survey is a 40-item measure that examines a number of teacher characteristics to characterize teachers into five distinct teaching styles (Expert, Formal Authority, Personal Model, Facilitator, and Delegator). Grasha (1996) reports acceptable reliability ($\alpha = 0.68$ – 0.75 on individual scales, and $\alpha = 0.72$ for the entire test) and validity.

Procedure

Principals from 26 schools in the Halifax Regional School Board were contacted via telephone or approached in person and asked to distribute the research study login information to their teaching faculty (see Appendix F for the HRSB Email Script). Participants received a URL address to access the Lime Survey online. They were asked to voluntarily complete the survey on their own time. Once participants logged onto the web link provided, they were asked to review the informed consent form and acknowledge their acceptance and wishes to participate in the study by clicking a box

(see Appendix G for the Consent Form). Participants were then directed to the series of five online measures for completion.

First, participants completed the demographic questionnaire. They were then asked to read a series of four vignettes and answer questions pertaining to causal attributions using the Attribution Rating Scale (see Table 1 for a description of the ARS items). Given that Lime Survey does not allow for digital and automatic item randomization, all participants viewed the vignettes in the same order. To account for this lack of randomization, the vignettes were randomly selected to appear in sequence and each vignette appeared in the same order to each participant. Once the vignettes and Attribution Rating Scale was complete, participants were asked to complete the Self-Evaluation for Teachers. Finally, participants were asked to complete the Teaching Style Survey. Participants did not have the option of saving their responses and returning to complete the survey at a later time. In total, the study took approximately 35 minutes to complete. Participants were given the opportunity to be entered into a draw to win one of two Chapters gift cards as a token of appreciation for their participation in the study. All participation was conducted on a voluntary and anonymous basis.

Results

Demographic Characteristics of the Sample

Descriptive statistics for participant demographics are shown in Table 2. Initially, 60 participants began the survey, however, not all participants were able to complete all parts of the study due to difficulties with the survey software. Specifically, participants were unable to save their work and continue later, which likely resulted in many participants being ‘timed out’ before being able to complete. As a result, the final sample

consisted of varying numbers of participants who completed each component of the study. The final sample consisted of 35 participants ($N = 32$ women; $N = 1$ 'prefer not to answer') who completed the attribution rating scales, 31 participants ($N = 28$ women; $N = 1$ 'prefer not to answer') who completed the teacher knowledge survey, and 24 participants ($N = 22$ women) who completed the teaching style survey. All participants were elementary or junior high school teachers recruited from the Halifax Regional School Board.

Attributions for Student Behaviour

To examine teacher attributions for internalizing versus externalizing behaviour, ratings on each attributional dimension (i.e. locus, control, stability) were compared using a series of within-subjects repeated measures analyses of variance (ANOVA), with behaviour type (ADHD-I vs. ADHD-HI vs. Depression vs. Anxiety) as the within-subjects variable. All participants included in these analyses were required to have completed all items on the attribution rating scales to be included in the study. Group means and standard deviations for each dimension are presented in Table 3.

Locus. A one-way within-subjects repeated measures ANOVA was conducted to examine attributions for locus (i.e. internal vs. external causes of behaviour). No significant differences in teacher ratings of attributions were observed between behaviour types.

Control. A one-way within-subjects repeated measures ANOVA was conducted to examine attributions for control (i.e. controllable vs. uncontrollable causes of behaviour). Results indicated a significant main effect of behaviour type, $F(3, 102) = 4.17, p = .008$, partial $\eta^2 = .11$. Follow-up paired samples t-tests on each variable

separately indicated that teachers rated behaviour exhibited by the student with ADHD-I as being more controllable by the student when compared to students exhibiting ADHD-HI ($t(34) = 2.33, p = .026$) and anxiety ($t(34) = 3.43, p = .002$).

Stability. A one-way within-subjects repeated measures ANOVA was conducted to examine attributions for stability (i.e., stable vs. unstable causes of behaviour). Results indicated a significant main effect of behaviour type, $F(3, 102) = 9.63, p < .001$, partial $\eta^2 = .22$. Follow-up paired samples t-tests on each variable separately indicated that teachers rated behaviour exhibited by the student with anxiety as being more stable than behaviours consistent with ADHD-HI ($t(34) = 2.98, p = .005$), depression ($t(34) = -4.85, p < .001$), and ADHD-I ($t(34) = -4.85, p < .001$).

Helping Behaviours

To examine teacher helping behaviours towards students with internalizing and externalizing symptoms, teachers' ratings on each helping behaviour dimension (i.e. likelihood of making a referral, benefit of accommodations, confidence in ability to manage behaviour) were compared using a series of within-subjects repeated measures ANOVAs, with behaviour type (ADHD-I vs. ADHD-HI vs. Depression vs. Anxiety) as the within-subjects variable. Group means and standard deviations for each dimension are presented in Table 3.

Likelihood of referral for further assessment. A one-way within-subjects repeated measures ANOVA was conducted to examine whether behaviour type influenced teachers' decisions to refer the student for further assessment. Results indicated that behaviour type did not significantly impact the likelihood of referring for further assessment.

Benefit of classroom accommodations. A one-way within-subjects repeated measures ANOVA was conducted to examine whether teachers felt that students would differentially benefit from accommodations. Results indicated a significant main effect of behaviour type, $F(3, 102) = 6.53, p < .001$, partial $\eta^2 = .16$. Follow-up paired samples *t*-tests on each variable separately indicated that teachers rated behaviour of the student with ADHD-HI as benefitting more from classroom accommodations in comparison to depressive behaviours ($t(34) = 2.97, p = .005$) and ADHD-I behaviours ($t(34) = 3.03, p = .005$). In addition, results indicated that teachers rated behaviour exhibited by the student with anxiety as benefitting more from classroom accommodations in comparison to depressive behaviours ($t(34) = 3.83, p = .001$) and ADHD-I behaviours ($t(34) = 2.79, p = .009$).

Confidence in managing behaviour in the classroom. A one-way within-subjects repeated measures ANOVA was conducted to examine teacher confidence in managing behaviour in the classroom. Results indicated a significant main effect of behaviour type, $F(3, 102) = 5.54, p = .001$, partial $\eta^2 = .14$. Follow-up paired samples *t*-tests on each variable separately indicated that teachers would feel more confident managing the behaviour of the anxious student as opposed to students exhibiting ADHD-HI behaviours ($t(34) = -3.63, p = .001$) and depressive behaviours ($t(34) = 3.43, p = .002$). Results also indicated that teachers would feel more confident managing the behaviour of ADHD-HI students as opposed to those displaying ADHD-I behaviours ($t(34) = 2.31, p = .027$). Finally, results indicated that teachers would feel more confident managing the behaviour of ADHD-I students as opposed to those displaying depressive behaviours ($t(34) = -2.16, p = .038$).

Teaching Style Survey

When examining the predominant teaching style of each participant, the majority of participants identified as either a “Personal Model” (N = 6) or “Facilitator” (N = 16). One teacher identified as “Expert” and one teacher identified as “Formal Authority”. Initially, it had been the intention to examine whether different teaching styles influenced attribution ratings; however, due to small group sizes and an overall small sample size, it was not possible to conduct ANOVAs. Instead, exploratory correlational analyses were conducted to determine whether any relationship between these variables existed.

Correlation between Teaching Style and Attributions for Behaviour.

Pearson’s correlations were conducted to investigate the relation between teaching style scores and teacher ratings on the ARS for each behaviour type. There were significant positive correlations between the Expert teaching style and accommodations for depression ($r(24) = .425, p = .038$), and the Facilitator teaching style and confidence in management for anxiety ($r(24) = .454, p = .026$). There were also significant positive correlations between the Delegator teaching style and accommodations for ADHD-HI ($r(24) = .433, p = .035$), and accommodations for ADHD-I ($r(24) = .431, p = .036$).

Results indicated a significant negative correlation between the Personal Model teaching style and controllability for depression ($r(24) = -.443, p = .030$), and the Expert teaching style and confidence in management for anxiety ($r(24) = -.419, p = .041$). In addition, there were significant negative correlations between the Delegator teaching style and locus of control for depression ($r(24) = -.613, p = .001$), and stability for depression ($r(24) = -.438, p = .032$). Finally, there were significant negative correlations between the Formal Authority teaching style and confidence in management for anxiety

($r(24) = -.460, p = .024$), and likelihood of referral for depression ($r(24) = -.413, p = .045$).

Knowledge of Mental Health Disorders

Correlation between Self-evaluation and ARS responses. Pearson's correlations were conducted to investigate the relation between knowledge scores on the self-evaluation for teachers and teacher ratings on the ARS for each behaviour type. Results indicated a significant correlation between knowledge scores and controllability for depression ($r(31) = .400, p = .026$). There was also a significant negative correlation between knowledge scores and stability for depression ($r(31) = -.359, p = .047$). In addition, there was a significant positive correlation between knowledge scores and controllability for ADHD-I ($r(31) = .403, p = .025$). No other significant correlations were observed between knowledge scores and any other items on the ARS.

Discussion

The current study had four main objectives. First, it sought to determine whether teachers differ in their attributions for internalizing behaviours (i.e. anxiety and depression) vs. externalizing behaviours (i.e. ADHD). Second, it investigated whether teacher attributions for these behaviours are related to likelihood of referral for services and implementation of programming. Third, it aimed to determine whether teaching style influences how teachers perceive and make attributions for behaviour. Finally, it sought to determine if teacher knowledge of mental health disorders is associated with attributions for internalizing and externalizing behaviours. Each objective will be discussed in turn below.

Attributions for Student Behaviour

The first objective was to examine whether teachers differed in their attributions for internalizing versus externalizing behaviours. Results indicated that attributions for internalizing versus externalizing behaviours did not differ significantly depending on the classification of the disorder (i.e. internalizing versus externalizing), but rather, depending on the behavioural symptoms that are specific to the disorder. For example, although ADHD is classified as an externalizing disorder, teacher attributions for behaviours differed significantly between subtypes of the disorder, in that they attributed behaviour exhibited by the student with ADHD-I as being more controllable by the student than ADHD-HI behaviour. This finding suggests that the nature of the behaviour, rather than the diagnosis, may be an important determinant of teacher attributions. That is, children who exhibit inattentive behaviours do not cause the teacher to interrupt lessons to manage their behaviour, since it is not as disruptive to the classroom environment as hyperactive/impulsive behaviour. Therefore, students who display inattentive behaviour could be perceived as having more control of their behaviours in comparison to a child displaying hyperactive/impulsive behaviours, due to the perceived energy and destruction that occurs with hyperactive/impulsive behaviour (Barkley, 2006; Johnston et al., 2006). Uncontrollable behaviour, such as the ADHD-HI behaviour depicted in the vignettes, may be more likely to receive intervention, as the teacher may associate the behaviour with factors that are no fault to the child (Johnston et al., 2006; Johnston & Patenaude, 1994).

Findings from previous research suggest that patterns of motivational deficits differentiate between different ADHD subtypes. Specifically, children with ADHD-C

rated themselves as more motivated by ego factors (e.g. competitiveness and a desire to be perceived as superior to others) than children with ADHD-I, indicating that children with ADHD-I may have less desire to be perceived by others as high performing (Carlson, Booth, Misung, & Canu, 2002). This may account for some of the current attributional results, in that teachers may attribute the behaviours associated with ADHD-I to more controllable causes and perceive children as having less motivation to be perceived as high performing.

Carlson, Booth, Misung, and Canu (2002) also found that parents rated their children with ADHD-I as less competitive than parents of children with ADHD-C or no diagnosis, and this pattern of scores was similar in teacher ratings. In summary, they found that children with ADHD-C can be characterized as more competitive and motivated by wanting to be perceived as superior to others, whereas the children in the ADHD-I group are less uncooperative and possibly more passive in their approach to academic work, as reflected by their greater reliance on external validation than on internal drive (Carlson et al., 2002). Given this information, perhaps teachers attribute ADHD-I behaviours to more controllable causes, since they view children with ADHD-I behaviours as more passive and unmotivated, and therefore, have a perception that such behaviours are controllable by the child. Interestingly, behaviours exhibited by the student with anxiety were also rated as being less controllable than behaviours exhibited by the student with ADHD-I.

With respect to stability, teachers rated behaviour exhibited by the student with anxiety as being more stable, whereas they rated ADHD-HI, depressive, and ADHD-I behaviours as being less stable, and therefore, more amenable to change. This suggests

that children's anxious behaviours, overall, are attributed to less controllable, but more stable causes, which indicates that teachers may view these behaviours as personality characteristics rather than symptoms of a disorder. Shyness (or behavioural inhibition) and anxiety share many common features and are linked conceptually (see Rapee & Coplan, 2010 for a review). In addition, results from several studies have documented empirical links between childhood shyness and "subclinical" levels of anxiety (e.g. Coplan, Arbeau, & Armer, 2008; Shamir-Essakow, Ungerer, & Rapee, 2005). Given that some degree of anxiety is normal in childhood as children are facing new challenges (i.e. starting school and developing new friendships) (Headley & Campbell, 2011; Muris & Merckelbach, 2000), it is not unlikely that teachers may perceive anxiety to be a natural part of a child's development, and therefore, attribute such behaviours to personality characteristics, such as shyness. Teachers who see a child's difficulties as stable and, therefore, not readily amenable to change, may hold lower expectations for the future success of those children. These low expectations could mean that the teacher sets fewer goals for the child, which in turn, can negatively impact the child's achievement (Brady & Woolfson, 2008).

Similar to Johnston et al. (2006), participants did not differ in their attributional ratings of the loci of causes of child behaviours. This could have been a result of the nature of the hypothetical vignettes, in that participants were only provided a short description of a situation as opposed to being given supplemental information that may have strengthened their attributions. In general, participants attributed all types of behaviour to neither internal nor external causes; specifically they indicated that all behaviours were "something caused equally by Taylor and the environment".

Impact of Student Behaviour on Teacher Helping Behaviours

The second objective of the current study was to investigate whether teacher attributions for internalizing and externalizing behaviours have a significant impact on the likelihood of referral for services and implementation of programming. Teachers did not differ in their likelihood of referral based on the behaviour type presented. On the contrary, for all vignettes, teachers indicated that they would “look into it”, which was not indicative of a definitive response to the behaviour (i.e. *definitely would refer* to *definitely would not refer*). However, research shows that elementary school teachers are typically more sensitive to students’ needs in comparison to middle school and high school teachers. They are therefore more likely to refer students to mental health services, since their focus is on the well being of their students and less on the content of the curriculum (Mahar & Chalmers, 2007). Given this research, it is surprising that teachers provided such a noncommittal response. However, given the limited information contained in the vignette, it is possible that teachers did not feel they were able to make a proper assessment.

Not surprisingly, teachers rated behaviour of the student with ADHD-HI as benefitting more from classroom accommodations in comparison to depressive behaviours and ADHD-I behaviours. This is not surprising given existing research that depicts uncontrollable behaviours as being more likely to benefit from intervention (Brady & Woolfson, 2008; Johnston et al., 2006; Johnston & Patenaude, 1994) and that students with disruptive behaviours are far more likely to receive intervention in comparison to those whose behaviour does not impact the classroom environment (Percy & Clopton, 1993; Sciotto et al., 2004). The current finding is consistent with

preliminary research conducted by Cousineau (2013), who also found ADHD-HI behaviours as benefitting more from accommodation than ADHD-I behaviours in a similar study of teacher attributions. However, results also indicated that teachers rated behaviour exhibited by the student with anxiety as benefitting more from classroom accommodations in comparison to depressive behaviours and ADHD-I behaviours. This is also consistent with the speculation that teachers viewed anxious behaviours as personality characteristics, rather than behavioural symptoms of an anxiety disorder as they did with the other behaviour types. When viewing anxiety as a personality characteristic, it is feasible that teachers could identify a need for accommodation if they view the child as being unable to function in the classroom environment without additional supports. This is consistent with the parenting research, which indicates that parents of anxious children attribute much of their children's success to external factors, thereby warranting additional support (Kortlander et al., 1997).

With respect to confidence in managing the behaviours, results suggested that teachers would feel more confident managing the behaviour of the student displaying anxious behaviour as opposed to the student exhibiting ADHD-HI behaviours and depressive behaviours. Perhaps teachers feel more confident managing behaviours that are viewed as personality characteristics as opposed to disruptive behaviours. Personality characteristics can be perceived as consistent in nature, and therefore, teachers may feel more confident managing them since there is less expected variability in the child's behaviour. Another explanation could be that teachers perceive the disruptive behaviour as difficult to manage and do not feel that they have the skills required to manage this type of behaviour in the classroom setting. Given that hyperactivity/impulsivity can be

very disruptive, a teacher's lack of confidence in managing these symptoms may translate to the teacher being more apt to "give up" or "give-in," resulting in them referring children to services rather than pursuing changes within their environment (Ohan et al., 2008). This possibility is consistent with research showing that confidence positively influences choices that are made, how long one persists with obstacles, and how much effort is put forth (Bandura, 1995).

Results also indicated that teachers would feel more confident managing the behaviour of students with ADHD-HI as opposed to those with ADHD-I. This may be influenced by the attributions of control made for the behaviour of the hyperactive/impulsive student. Teachers are required to manage disruptive behaviour in their classroom since it impacts their ability to teach (Syed & Hussein, 2010). In contrast, ADHD-I behaviours are less disruptive, and therefore, do not present the same need for awareness as that of ADHD-HI. This finding is inconsistent with findings from Cousineau (2013), who found that teachers felt more confident managing a student displaying ADHD-I behaviour, in comparison to ADHD-HI behaviour. This finding would seem reasonable given that ADHD-I behaviours are less disruptive to the classroom, thereby, causing less need to manage such behaviours in the classroom. However, the disruption associated with ADHD-HI may cause an increased requirement for knowledge of the disorder, and therefore lead to increased confidence in managing the disruptive behaviour. Given the possibility that teachers have a greater knowledge of behaviour consistent with ADHD-HI, and that such behaviours are easily observable, it is also possible that teachers have developed concrete strategies to deal with such behaviours. In comparison, teachers may have more difficulty operationalizing

behaviours consistent with ADHD-I, since the behaviours are less disruptive and less readily observed and, therefore, this may cause teachers to feel less confident in managing such behaviours.

Results also indicated that teachers would feel more confident managing the behaviour of ADHD-I students as opposed to those displaying depressive behaviours. Again, teachers may be more knowledgeable regarding ADHD in comparison to depression, given that ADHD is slightly more prevalent than depression in preadolescence (Anderson et al., 2012; Ohan et al., 2011; Snyder et al., 2009), and therefore, they feel this knowledge provides them with confidence in managing these behaviours. Another explanation for the lack of confidence in managing depressed behaviours could be due to the nature of the depression; that is, depression is often seen as resulting in serious outcomes such as suicide and long-term disability. It is possible that teachers feel less confident about managing these behaviours, as they may feel responsible for the outcomes associated with the disorder, and do not feel adequately prepared for the perceived responsibilities associated with classroom interventions for depression.

Teaching Style

The third objective of this study was to determine whether teaching style influenced how teachers perceive and make attributions for behaviour. In general, the more the rigid the teaching style (i.e., Expert and Formal Authority styles), the less confident participants felt in managing anxious behaviours. With the more rigid teaching styles, students can often feel intimidated by the teacher's level of expertise, which can translate into anxiety (Grasha, 1996). One of the disadvantages is that teachers who have

a stronger investment in the more rigid styles can develop standardized and less flexible ways of managing students and their concerns, thereby decreasing their confidence in their ability to manage various behaviours (Grasha, 1996). However, another possible explanation could be that teachers identify management as unnecessary since they could be viewing the child's behaviour as a personality characteristic (Coplan et al., 2008; Shamir-Essakow et al., 2005). Despite their lack of confidence in managing anxious behaviours, participants indicated that they felt that students with depressed behaviours would benefit from accommodation and would not require referral for further services. Again, this rigidity in teaching may account for these findings. They may feel that their establishment of learning goals, expectations and rules of conduct are sufficient to allow a child to flourish within their classroom (Grasha, 1996), therefore negating the need for referral.

In contrast, teachers with less rigid teaching styles (Delegator and Facilitator) expressed more confidence in managing anxious behaviours. In addition, they identified that students displaying ADHD-HI and ADHD-I behaviours would benefit from accommodations. These styles generally thrive on a consultative type of interaction with students, encouraging personal flexibility and focusing on students' needs and goals (Grasha, 1996). They have a willingness to explore options and alternative course of action, as necessary (Grasha, 1996). Given the focus on autonomy, it is not surprising that a student who is hyperactive/impulsive would be difficult to teach, and therefore warrant further accommodation. Again, a child with ADHD-I, like a child with ADHD-HI, could be seen perceived as benefiting from accommodation, as Grasha (1996) indicates that teachers who adopt a less rigid style may be misreading their student's readiness for

independent work, and therefore, may be more apt to explore alternative teaching methods. A child who is unable to concentrate in class will likely have difficulty adapting to the less rigid teaching style, as he or she will likely need more redirection than is offered through these styles (Barkley, 2006; Grasha, 1996). Interestingly, the less rigid teaching styles also correlated with internal and stable attributional causes for depressed behaviour. This is consistent with the neurobiological nature of depression; that is, teachers are identifying that depressed behaviours will likely persist and are due to causes that are internal to the child.

Teacher Knowledge of Mental Health Disorders

The final objective was to determine whether teacher knowledge of mental health disorders was associated with attributions for internalizing and externalizing behaviours. Results indicated a significant positive correlation between knowledge of mental health disorders and controllability for depression. Specifically, teachers with increased knowledge were less likely to think that the student's depressed behaviour was controllable. There was also a significant negative correlation between knowledge scores and stability for depression. Specifically, teachers with increased knowledge were more likely to attribute Taylor's depressed behaviour to stable causes. Finally, there was a significant positive correlation between knowledge scores and controllability for ADHD-I. Specifically, the higher the knowledge scores, the less they felt Taylor's ADHD-I behaviour was within his/her control.

It is interesting to note that, in general, as scores increased, teachers made attributions that were more consistent with a neurobiological explanation of the disorders. Specifically, they attributed behaviours to uncontrollable and stable causes. That being

said, it is more beneficial for teachers to have knowledge of mental health disorders, as opposed to having little or no knowledge, since current findings indicate that there is a correlation between knowledge scores and various attributions associated with internalizing and externalizing behaviours. Prior knowledge of mental health disorders may provide the teacher with information about symptoms, information about the diagnostic criteria, as well as assistance available through school based interventions, thereby increasing their ability to better serve the students they teach (Sciutto et al., 2000).

Strengths and Limitations

A particular strength of this study is its contribution to the research on teacher attributions for student behaviour, a relatively understudied area. As discussed, there is minimal research examining teacher attributions, and far less research that investigates teacher attributions based on behaviour type (internalizing versus externalizing). This study is one of the few to examine internalizing and externalizing attributions. As discussed, teachers spend a great deal of time with their students, and therefore can influence a child's academic development (Syed & Hussein, 2010). Findings from this study provide further information about attributions and how those attributions can impact students.

Another strength of the current research is that each participant made attributions for both internalizing and externalizing behaviours. This allowed the researcher to compare within subject samples to identify significant differences between various behaviour types. All behaviours displayed in the vignettes were based on criteria from the DSM-IV-TR. This meant that all teachers were making attributions for behaviours that

mapped directly onto criteria for the respective disorder in the DSM-IV-TR.

Additionally; all participants were recruited from the Halifax Regional School Board, which ensured that they were current practicing teachers. Finally, the study was conducted via an online survey, making the recruitment process much more user friendly and reduced participant burden, thus increasing the likelihood of participant completion.

That being said, the study's findings must be interpreted in light of several limitations. First, time constraints of the project made it impossible to continue recruitment, thus limiting the total sample. In addition, the limited sample pool eliminated the possibility of performing between group analyses that examined the potential interaction between teacher attributions and teaching style. Second, the online survey presented a number of limitations that made data collection and analyses difficult. Specifically, the survey software did not allow for randomization of the vignettes, meaning that the order in which the vignettes were presented had to be done via random selection on the part of the researcher. Unfortunately, due to difficulties with the survey software, participants were also unable to save their work and continue later, which likely resulted in many participants being 'timed out' before being able to complete the whole study. Another limitation of the study was the sample size, as it was not very representative of both sexes (the sample was 91% female). However, the low proportion of males in the sample is representative of the occupational field of elementary school teachers, in that the majority of elementary teachers are female (Ohan et al., 2008).

In addition to the above-mentioned limitations, external validity may also be limited by the use of hypothetical vignettes. In an effort to ensure simplicity and ease of reading, each vignette does not depict the complexity of classroom dynamics nor does it

provide a complete picture of a child's behaviours. In other words, it is a snapshot of a hypothetical child. Therefore, when interpreting the vignettes, the teachers could have made unintended inferences about the children; for example, the extent and severity of the difficulties, the sex, and the age of the child (Johnston et al., 2006). In future research, it will be helpful to provide more specific information in the vignette (e.g. provide multiple vignettes depicting the same behaviour with a male versus a female child) to reduce possible inferences that teachers could make regarding the vignettes. In addition, increasing the information that teachers have about the child (e.g. provide more extensive information to build the child's behavioural profile) would be helpful to provide teachers with more information on which to base their responses. That being said, there are a number of strengths associated with the use of vignettes. First, they are a very practical way of obtaining information about how teachers make attributions for child behaviour. Vignettes allow for simultaneous data collection from a large number of subjects, as well as the manipulation of multiples variables, which is not possible in observation studies (Gould, 1996). Second, written attributional ratings allow for control over the attributional stimuli as each participant is responding to the same vignette of child behaviour, which ensures uniformity (Johnston et al., 2006).

Future Directions

The current study examined teacher attributions for internalizing and externalizing behaviours. In addition to this, teaching style and knowledge were also investigated to determine if these factors impacted attributions made. Future research could extend current research by further examining the dynamics between children and their students. Specifically, it may be beneficial to use a qualitative methodology to

examine the subtleties in teacher attributions for behaviour. Furthermore, using in vivo observations may also allow for examination of teacher attributions for child behaviour in a more naturalistic setting (see Johnston et al., 2006).

Given the high correlations found between teaching style and attributions, it would be interesting to conduct a study that could examine potential interactions between teaching style and attributions. This may provide further information about the effect of teaching style on teacher attributions for childhood behaviour. If teachers are aware of their preferred teaching style, this may offer a deeper understanding of how their teaching style can be modified in order to meet the needs of their students more effectively.

Lastly, the vignette was developed using a gender-neutral name to reduce the likelihood that participants would make inferences based on sex of the student. As such, future research could focus on attributions and their relation to sex. It would be interesting to note whether sex plays a role in how teachers make attributions for behaviour, but more specifically, if the helping behaviours vary depending on the sex of the child. For example, research shows that boys are much more likely than girls to receive referral for mental health services (Pearcy & Clopton, 1993; Sciotto et al., 2004). This is despite that research examining prevalence rates of childhood psychological disorders has consistently shown similar rates of problems for normative samples of boys and girls (Pearcy & Clopton, 1993). In addition, it would be interesting to investigate whether teachers make different attributions based on their own biological sex. More specifically, identify if female teachers make different attributions in comparison to male teachers. It would be important to note whether the sex of the teacher impacts how they

perceive and make attributions for student behaviour and ultimately, if their attributions impact their referrals and subsequent programming in the same way.

Implications for School Psychologists

The role of the teacher in understanding various behaviours and their impact on their students is key to the identification and implementation of appropriate interventions. The teacher needs to have the information about treatments for various disorders so he or she can be aware of the benefits of the interventions administered in the school setting. School psychologists may be a vital link between medical professionals and teachers, as they are able to help teachers implement and monitor the effects of behavioural and medical interventions (Anderson et al., 2012). In addition, they have knowledge of childhood behaviour and training in diagnosis and differential diagnosis. School psychologists should be involved in increasing awareness of the potential emotional responses to teaching children, and be involved in the development of coping skills (Anderson et al. 2012). It is the school psychologist's responsibility to increase awareness of emotional and behavioural disorders among teachers, thereby increasing the likelihood that teachers will identify and refer for intervention when necessary.

This responsibility demands that school psychologists practice in a consultative manner, which is currently not typical. Generally, school psychologists are viewed as assessors, and therefore do not have the time to meaningfully fulfill other areas of practice (i.e. consultation), since the majority of their time is spent conducting psychoeducational assessments (Corkum, French, & Dorey, 2007; Sheridan & Gutkin, 2000). The literature that exists on teacher-school psychologist communication (e.g. Anthon, 1999) indicates that teachers desire more consultation and prevention services

and less assessment and diagnosis. Providing schools with increased school psychology coverage would increase the likelihood that school psychologists could offer further expertise. This would in turn promote teacher awareness and allow for a smoother and more proactive approach to working with children with internalizing and externalizing behaviours.

Understanding the various factors that contribute to successful identification and treatment of emotional and behavioural disorders is necessary for ensuring that students have the most optimal social, emotional, behavioural, and cognitive trajectories. The current findings provide preliminary evidence to support the premise that teacher attributions affect student outcomes and program implementation. Therefore, school psychologists are charged with the task of sharing their expertise to empower teachers to gain confidence and accuracy in identifying and programming for students with internalizing and externalizing behaviours.

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Table 1

Descriptions of the Attribution Ratings Scale (ARS) Variables

ARS Variable	Description Question	Internal Cause	External Cause
Locus of Control	What is the cause of behaviour	Caused by individual	Caused by environment
Controllability	How controllable is the behaviour?	Controlled by individual	Controlled by environment
Stability	How stable is the behaviour?	Stable	Unstable

Note: Attribution Ratings Scale variables adapted from Weiner's (1980) study on attribution theory.

Table 2

Demographic Statistics for the Total Sample

	N	%
Sex		
Male	2	6
Female	32	91
Prefer not to answer	1	3
Age Range (years)		
20 – 29	5	14
30 – 39	10	29
40 – 49	9	26
50 – 59	11	31
60 +	0	0
Level of Education		
Bachelor Degree + Education Degree	13	37
Concurrent Bachelor Degree + Education Degree	2	6
Masters Degree + Education Degree	18	51
Other	2	6
Teaching Experience (years)		
1 – 2	3	9
3 – 5	4	11
6 – 10	8	23
11 – 20	9	26
21+	11	31
Grades Taught*		
Primary/Kindergarten	17	49
Grade 1-2	17	49
Grade 3-4	19	54
Grade 5-6	16	46
Grade 7-9	14	40
Grade 10-12	7	20
Other	5	15
Taught an ADHD student? **		
Yes	33	94
No	2	6
Taught a student with anxiety? **		
Yes	31	89
No	4	11
Taught a student with depression? **		
Yes	17	49
No	18	51
Made a psychoeducational referral?		
Yes	29	83
No	5	14

*Note: Participants were able to select multiple answers as deemed necessary

**Note: It is possible that teachers in the 'yes' category have taught students with other mental, physical or behavioural difficulties.

Table 3

Means and SD for Attribution Ratings Scale Behaviour Measures by Condition

Behaviour Measures	ADHD-HI		ADHD-I		Anxiety		Depression	
	M	SD	M	SD	M	SD	M	SD
Attribution								
Locus (internal to external)	2.91	0.95	2.66	0.91	2.97	0.92	2.91	1.10
Control (controllable to uncontrollable)	3.34	0.73	2.97	0.82	3.49	0.78	3.20	0.80
Stability (stable to unstable)	2.03	0.57	2.37	1.09	1.60	0.65	2.26	0.66
Helping Behaviour								
Referral (not at all to definitely)	3.09	1.10	2.80	1.08	3.14	0.88	3.20	0.93
Accommodations (no benefit to direct benefit)	4.06	1.00	3.40	1.24	4.06	1.03	3.31	1.28
Manageability (not confident to very confident)	3.34	0.80	3.60	0.81	3.77	0.65	3.26	0.85

Note: Attribution Ratings Scale scores measured in numerical values, based on a scale from 1 to 5. HI =Hyperactive/Impulsive ADHD behaviours, I = Inattentive ADHD behaviours

Appendix A
Demographic Questionnaire

1. Age

20 – 29

30 – 39

40 – 49

50 – 59

60 +

2. Sex

Male

Female

Prefer not to answer

3. Educational Background

Bachelor Degree + Education Degree

Concurrent Bachelor Degree and Education Degree

Masters Degree + Education Degree

Other (please explain) :

4. Years of Teaching Experience

1–2

3–5

6 – 10

11 – 20

21 +

5. Grades Taught (check all that apply)

Primary/Kindergarten

Grade 1 – 2

Grade 3 – 4

Grade 5 – 6

Grade 7 – 9

Grade 10 – 12

Other (please explain) :

6. Have you ever taught a student with an emotional, behavioural or developmental disability/disorder (e.g. Autism, ADHD, Depression, Anxiety, Learning Disability)?

Yes _____ approximate # of times

No

If yes, check all that apply:

Autism

Attention-Deficit/Hyperactivity Disorder

Depression

Anxiety

Learning Disability

Other

7. Have you ever referred a student for a psychoeducational assessment?

Yes _____ approximate # of times

No

If yes, please state the reason(s) why you referred the student:

Appendix B

Vignettes

ADHD – Predominantly hyperactive/impulsive

You build a model with blocks to demonstrate a lesson you are teaching in class that day. You had to come into school earlier than usual to build the model and it took longer than you expected, but you believe it is an important visual aid for the students. You encourage the students to walk around and observe the model. Taylor, one of your students, impulsively runs into the model and knocks it over. While you are asking the students about the model in relation to the lesson, Taylor is being loud and constantly blurting out answers before you even get the chance to finish the question.

ADHD – Predominantly inattentive

As you are reviewing last night's homework with your class, one of your students, Taylor, tells you that their homework is missing. Taylor explains that they became sidetracked when a relative came over last night with a new puppy and forgot to put the homework in their backpack. When you ask Taylor what the classroom rules for forgetting homework are, Taylor is absently staring at a fly buzzing around the classroom and not paying attention. After you complete an in class activity with your students, you collect all the activities and notice that Taylor's activity is incomplete and messy.

Generalized Anxiety Disorder

As you are reviewing last night's homework with your class, one of your students, Taylor, continues to ask questions about the assignment and says they need further clarification about many aspects of the assignment. You know that Taylor usually worries a great deal about making sure assignments are completed properly and that Taylor tends to nitpick about the details and ask a lot of questions. Taylor really wants to please you and therefore fears making mistakes and often feels guilty when tests or assignments are poorly done. Taylor tends to make multiple corrections to assignments and never seems happy with the end result.

Major Depressive Disorder

You build a model with blocks to demonstrate a lesson you are teaching in class that day. You had to come into school earlier than usual to build the model and it took longer than you expected, but you believe it is an important visual aid for the students. You encourage the students to walk around and observe the model as part of a class activity. Taylor, one of your students, does not wish to participate in the activity. You have noticed Taylor is more withdrawn recently and this is yet another occurrence where Taylor has not wanted to engage in activities that were previously enjoyed.

Appendix C

Attribution Rating Scale

Imagine you are the teacher in this scenario you've just read, and the described child, Taylor, is one of your students.

Please fill out this scale, reflecting on how you feel about the child and what interpretations you made while reading it – just provide your best opinion when answering each question. Please circle only one response for each individual scale. There is a section at the bottom of each scale for your own personal reflection. Please read the instructions and fill it out accordingly.

1. What is the direct cause of Taylor's behaviour in the scenario?

1 -- 2 -- 3 -- 4 -- 5

- 1 = Something directly caused by Taylor
- 2 = Something caused somewhat by Taylor
- 3 = Something caused equally by Taylor and the environment
- 4 = Something caused somewhat by the environment
- 5 = Something directly caused by the environment

2. How in control would Taylor be of the behaviour witnessed in this scenario?

1 -- 2 -- 3 -- 4 -- 5

- 1 = Completely within the child's control
- 2 = Most likely within the child's control
- 3 = Somewhat within the child's control
- 4 = Most likely not within the child's control
- 5 = Not at all within the child's control

3. How likely is it that Taylor's behaviour will occur again?

1 -- 2 -- 3 -- 4 -- 5

- 1 = It will definitely happen again
- 2 = It will most likely happen again
- 3 = It might happen again
- 4 = It most likely will not happen again
- 5 = It seems like a one time occurrence

4. How likely would you be to refer Taylor for further assessment?

1 -- 2 -- 3 -- 4 -- 5

- 1 = Not at all likely
- 2 = Most likely would not
- 3 = I would look into it
- 4 = Quite likely
- 5 = Definitely make a referral

5. How much would Taylor benefit from accommodations made in the classroom?

1 -- 2 -- 3 -- 4 -- 5

- 1 = Absolutely no benefit
- 2 = Somewhat benefit
- 3 = Moderate benefit
- 4 = Probably benefit
- 5 = Direct benefit

6. How confident would you be in successfully managing Taylor's behaviour in the future?

1 -- 2 -- 3 -- 4 -- 5

- 1 = Not at all confident
- 2 = Fairly unconfident
- 3 = Somewhat confident
- 4 = Mostly confident
- 5 = Extremely confident

In your opinion, based on the evidence from the scenario you just read, why do you think Taylor was acting this way? Please provide as much or as little detail as possible in your explanation.

Appendix D

Self-Evaluation for Teachers

1. A phobia is an intense fear about something that might be harmful (such as height, snakes).
True False
2. Useful interventions for adolescent mental disorders include BOTH psychological and pharmacological treatment.
True False
3. Mental distress can occur in someone who has a mental disorder.
True False
4. Stigma against the mentally ill is uncommon in Canada.
True False
5. Substance abuse is commonly found together with a mental disorder.
True False
6. The most common mental disorders in teenage girls are eating disorders.
True False
7. The stresses of being a teenager are a major factor leading to adolescent suicide.
True False
8. Three of the strongest risk factors for teen suicide are: romantic breakup, conflict with parents, and school failure.
True False
9. Schizophrenia is a split personality.
True False
10. A depressed mood that lasts for a month or longer in a teenager is very common and should not be confused with a clinical depression that may require professional help.

True False

11. Teen suicide rates have decreased over the last decade in North America.

True False

12. Diet, exercise and establishing a regular cycle are all effective treatments for many mental disorders in teenagers.

True False

13. Anorexia nervosa is very common in teenage girls.

True False

14. Bipolar disorder is another form for manic depressive illness.

True False

15. Many clinical depressions that develop in teenagers come “out of the blue”.

True False

16. Obsessions are thoughts that are unwanted and known not to be correct.

True False

17. Serotonin is a liver chemical that helps control appetite.

True False

18. Mental disorders may affect between 15-20 percent of Canadians.

True False

19. Most people with panic disorder do not get well with treatment.

True False

20. Depression affects about 2 percent of people in North America.

True False

21. A psychiatrist is a medical doctor who specializes in treating people who have a mental illness.

True False

22. Attention Deficit Hyperactivity Disorder (ADHD) is equally common in boys and girls.

True False

23. A hallucination is defined as a sound that comes from nowhere.

True False

24. Panic disorder is a type of Anxiety disorder.

True False

25. Medications called “anti psychotics” are helpful to treat the symptoms of schizophrenia.

True False

26. A delusion is defined as seeing something that is not real.

True False

27. Lack of pleasure, hopelessness and fatigue can all be symptoms of a clinical depression.

True False

28. Nobody with schizophrenia ever recovers.

True False

29. People with mania may experience strange feelings of grandiosity.

True False

30. Mental disorders are psychological problems caused by poor nutrition.

True False

Appendix E

Teaching Style Survey

The following is a Grasha-Riechmann teaching style survey. Respond to each of the items below in terms of how you teach. If you teach some courses differently than others, respond in terms only of one specific course.

Try to answer as honestly and as objectively as you can.

Resist the temptation to respond as you believe you should or ought to think or behave, or in terms of what you believe is the expected or proper thing to do.

Respond to questions below by using the following rating scale:
1 = strongly disagree | 2 = moderately disagree | 3 = undecided |
4 = moderately agree | 5 = strongly agree

1. Facts, concepts, and principles are the most important things that students should acquire.

1 -- 2 -- 3 -- 4 -- 5

2. I set high standards for students in my class.

1 -- 2 -- 3 -- 4 -- 5

3. What I say and do models appropriate ways for students to think about issues in the content.

1 -- 2 -- 3 -- 4 -- 5

4. My teaching goals and methods address a variety of student learning styles.

1 -- 2 -- 3 -- 4 -- 5

5. Students typically work on course projects alone with little supervision from me.

1 -- 2 -- 3 -- 4 -- 5

6. Sharing my knowledge and expertise with students is very important to me.

1 -- 2 -- 3 -- 4 -- 5

7. I give students negative feedback when their performance is unsatisfactory.

1 -- 2 -- 3 -- 4 -- 5

8. Activities in this class encourage students to develop their own ideas about content issues.
- 1 -- 2 -- 3 -- 4 -- 5
9. I spend time consulting with students on how to improve their work on individual and/or group projects.
- 1 -- 2 -- 3 -- 4 -- 5
10. Activities in this class encourage students to develop their own ideas about content issues.
- 1 -- 2 -- 3 -- 4 -- 5
11. What I have to say about a topic is important for students to acquire a broader perspective on the issues in that area.
- 1 -- 2 -- 3 -- 4 -- 5
12. Students would describe my standards and expectations as somewhat strict and rigid.
- 1 -- 2 -- 3 -- 4 -- 5
13. I typically show students how and what to do in order to master course content.
- 1 -- 2 -- 3 -- 4 -- 5
14. Small group discussions are employed to help students develop their ability to think critically.
- 1 -- 2 -- 3 -- 4 -- 5
15. Students design one of more self-directed learning experiences.
- 1 -- 2 -- 3 -- 4 -- 5
16. I want students to leave this course well prepared for further work in this area.
- 1 -- 2 -- 3 -- 4 -- 5
17. It is my responsibility to define what students must learn and how they should learn it.

1 -- 2 -- 3 -- 4 -- 5

18. Examples from my personal experiences often are used to illustrate points about the material.

1 -- 2 -- 3 -- 4 -- 5

19. I guide students' work on course projects by asking questions, exploring options, and suggesting alternative ways to do things.

1 -- 2 -- 3 -- 4 -- 5

20. Developing the ability of students to think and work independently is an important goal.

1 -- 2 -- 3 -- 4 -- 5

21. Lecturing is a significant part of how I teach each of the class sessions.

1 -- 2 -- 3 -- 4 -- 5

22. I provide very clear guidelines for how I want tasks completed in this course.

1 -- 2 -- 3 -- 4 -- 5

23. I often show students how they can use various principles and concepts.

1 -- 2 -- 3 -- 4 -- 5

24. Course activities encourage students to take initiative and responsibility for their learning.

1 -- 2 -- 3 -- 4 -- 5

25. Students take responsibility for teaching part of the class sessions.

1 -- 2 -- 3 -- 4 -- 5

26. My expertise is typically used to resolve disagreements about content issues.

1 -- 2 -- 3 -- 4 -- 5

27. This course has very specific goals and objectives that I want to accomplish.

1 -- 2 -- 3 -- 4 -- 5

28. Students receive frequent verbal and/or written comments on their performance.

1 -- 2 -- 3 -- 4 -- 5

29. I solicit student advice about how and what to teach in this course.

1 -- 2 -- 3 -- 4 -- 5

30. Students set their own pace for completing independent and/or group projects.

1 -- 2 -- 3 -- 4 -- 5

31. Students might describe me as a "storehouse of knowledge" who dispenses the fact, principles, and concepts they need.

1 -- 2 -- 3 -- 4 -- 5

32. My expectations for what I want students to do in this class are clearly defined in the syllabus.

1 -- 2 -- 3 -- 4 -- 5

33. Eventually, many students begin to think like me about course content.

1 -- 2 -- 3 -- 4 -- 5

34. Students can make choices among activities in order to complete course requirements.

1 -- 2 -- 3 -- 4 -- 5

35. My approach to teaching is similar to a manager of a work group who delegates tasks and responsibilities to subordinates.

1 -- 2 -- 3 -- 4 -- 5

36. There is more material in this course than I have time available to cover it.

1 -- 2 -- 3 -- 4 -- 5

37. My standards and expectations help students develop the discipline they need to learn.

1 -- 2 -- 3 -- 4 -- 5

38. Students might describe me as a "coach" who works closely with someone to correct problems in how they think and behave.

1 -- 2 -- 3 -- 4 -- 5

39. I give students a lot of personal support and encouragement to do well in this course.

1 -- 2 -- 3 -- 4 -- 5

40. I assume the role of a resource person who is available to students whenever they need help.

1 -- 2 -- 3 -- 4 -- 5

Appendix F

HRSB Email Script

Dear teachers,

Aleasha Warner is a graduate student at Mount Saint Vincent University completing her Master of Arts degree in School Psychology under the supervision of Dr. Sara King. She is looking for your help in gathering data for her study that examines how teachers think about and respond to student behaviours in the classroom.

Participation is completely voluntary. The study consists of five online questionnaires that we ask you to complete on your own time. The study will take approximately 35 minutes to complete. The questionnaires need to be completed all at once, as there is no way to save your answers and return to complete it at a later time.

In appreciation of your time commitment, you will be entered into a draw to receive one of two Chapters gift cards. Thank you for your consideration in participating in this study! Please click on the web link below to begin the study.

[Insert link here]

Sincerely,

[Insert Principal Name here]

Aleasha Warner, BA
MA School Psychology Student
Mount Saint Vincent University

Sara King, PhD, R.Psych
Assistant Professor
Faculty of Education
Mount Saint Vincent University

Appendix G

Information and Consent Form

Study Title: Teacher Understanding of Student Behaviours in the Classroom

Principal Investigator:

Aleasha Warner, BA
Graduate student in School Psychology
Mount Saint Vincent University

Supervisor:

Sara King, Ph.D R.Psych
Assistant Professor of School Psychology
Mount Saint Vincent University

Funding:

MSVU New Scholar Grant (awarded to S. King)

I, Aleasha Warner, am a student in the School Psychology program in the Faculty of Education at Mount Saint Vincent University. I am inviting you to participate in my study, *Teacher Understanding of Student Behaviours in the Classroom*. The purpose of the study is to examine how teachers think about and respond to students' behaviours in the classroom.

This study involves completing an online survey. The first part of survey will ask you a series of questions about your education and career as a teacher, and will include multiple choice and short answer questions. This will take about five minutes to complete. The second part of the questionnaire will ask you to read a series of vignettes about a fictional student, and then ask you to answer questions based on the vignettes you read. The questions are in multiple choice and short answer formats. This section will take approximately 20 minutes to complete. The last part of the series will ask you to complete two questionnaires concerning your knowledge of mental health disorders and your teaching style. These questionnaires are in multiple choice and true/false format and will take approximately 10 minutes. All participants will be filling out the same questionnaire series.

There are no direct benefits to participating in this study, but what we learn may help us collaborate with teachers working with children with various special needs and provide helpful ways to improve the classroom experience for teachers and students. In appreciation for your time commitment, you will be entered into a draw to receive one of two gift cards to Chapters. Your participation is completely voluntary (your choice). You may withdraw from this study at any time without penalty.

All of your answers will be anonymous and no one, not even the researchers, will know that you participated in this study. All information will be maintained by Lime Survey Software, which is hosted by Mount Saint Vincent University's Web Server. No

individual participants will be identified in any reports resulting from this study.

If you have any questions about this study, please contact Aleasha Warner at aleasha.warner@msvu.ca. You may also contact Ms. Warner's thesis supervisor, Dr. Sara King, at (902) 457-6552 or at sara.king@msvu.ca. This study has been approved by the University Research Ethics Board at Mount Saint Vincent University and by the Halifax Regional School Board Ethics Committee. If you have any questions or concerns about this study and wish to speak with someone who is not directly involved with this study, you may contact the University Research Ethics Board, by phone at (902) 457-6350 or by e-mail at research@msvu.ca.

By clicking the box below, you are indicating that you fully understand the above information and agree to participate in this study.