

**UTILIZING THE THEORY OF PLANNED BEHAVIOUR TO EXAMINE THE
COGNITIVE AND SOCIAL DETERMINANTS OF BEHAVIOURAL RESPONSES TO
BULLY/VICTIM PROBLEMS IN MIDDLE AND SECONDARY SCHOOL STUDENTS**

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Abstract

Researchers have found that youths react in a variety of ways when faced with a bullying incident in their schools (Kochenderfer-Ladd, 2004). Despite being aware of the negative consequences of being victimized and holding generally negative attitudes towards bullying, youths tend to show reluctance to seek help from an adult or to intervene in defense of their victimized peer (Hawkins, Pepler, & Craig, 2001; Newman, Murray, & Lussier, 2001). Given the importance of the aforementioned behaviours in reducing bullying in schools, two studies were designed to examine the determinants of victim help seeking and bystander intervening behaviours in young people using Ajzen's Theory of Planned Behaviour (TPB: Ajzen, 1991). In Study 1, I examined the full TPB model using short-term longitudinal data collected from a sample of 609 secondary school students. To further examine the utility of the TPB model and to determine the impact of school climate on the model, in Study 2 I examined cross-sectional data collected from 113 middle school students. In Study 1, multiple regression analyses and path analyses indicated that the TPB model significantly predicted student's intentions to intervene on behalf a bullied peer and their actual self-reported intervention behaviour. The results for help seeking intentions and behaviours were mixed, with the TPB variables significantly predicting victim help seeking intentions but not self-reported behaviour. In Study 2, the TPB model significantly predicted both help seeking and intervention intentions. Additionally, the TPB variables of attitude, subjective norms, and perceived behavioural control significantly mediated the relationship between school climate and victim help seeking and bystander intervention intentions. The results are discussed in terms of their implications for methodology, theory, and policy.

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CHAPTER ONE

INTRODUCTION

Background Information

In the last 30 years, violence and aggression among children and adolescents have been recognized as a serious and growing problem within the clinical, educational and research sectors (Ambert, 1995; Carney & Merrell, 2001; Dawkins, 1995; Hazler & Hoover, 1996; Olweus, 1993; Ross, 1996; Slee & Rigby, 1994). A substantial proportion of school violence that occurs can be described as the systematic targeting of a peer by one individual or a group of individuals and is known as bullying, peer victimization, or peer harassment (Perry, Willard, & Perry, 1990). International researchers have shown that as many as 50% of youths have been involved in bullying either directly as the youth who is bullying their peers or is being victimized, or indirectly as a bystander who is witnessing the bullying (Forero, McLellan, Rissel, & Bauman, 1999; Nansel et al., 2004). The prevalence rates are particularly alarming considering the far-reaching short- and long-term consequences for all the actors involved in bully/victim problems, including those who simply witness bullying (Kaltiala-Heino, Rimpela, Marttunen, Rimpela, & Rantanen, 1999; Rigby, 2003; Swearer, Song, Cary & Mickelson, 2001).

While myths regarding the normalcy of bullying still exist in some circles, there is growing consensus in the educational, clinical, and research sectors that victimization is a critical problem to address among children and youths (Carney & Merrell, 2001; Craig, Peters, & Konarski, 1998; Sharp, Thompson, & Arora, 2000). As such, a multitude of school-based programs have been developed and implemented in schools in many countries with the goal of creating a school environment that is less tolerant of bullying through changing staff and student attitudes and behaviours (Olweus, 1997; Pepler, Craig, Zigler, & Charach, 1994; Smith & Sharp, 1994). At an individual level, a major focus of the programming teaches young people skills to deal with bullying when they themselves are victimized or when they witness bullying. At a

systems level, school rules and policies for dealing with and preventing bullying are established and implemented (Olweus, 1997; Pepler et al., 1994; Smith & Sharp, 1994).

Statement of the Problem

Despite the popularity of these programs, evaluations of such school-based programs have yielded conflicting results as to their effectiveness. Researchers have pointed to a number of person-, environment- and program-related factors which may influence program outcomes (Smith, Ananiadou, & Cowie, 2003; Smith, Schneider, Smith & Ananiadou, 2004; Stevens, de Bourdeaudhuij, & van Oost, 2001). However, one potential factor that may influence the conflicting results regarding program outcomes is the lack of research on the outcomes variables that programs seek to change, such as (1) seeking help from school staff and (2) intervening or standing up to bullying when one witnesses a peer is being victimized. Specifically, researchers have only begun to examine the antecedents and determinants of these behaviours. The mixed results in terms of program effectiveness may, in fact, be influenced by a lack of clear understanding of these complex behaviours and their determinants.

Seeking help from family, friends, and staff at school is often recommended as a strategy to cope with the emotional difficulties associated with bullying (Glover, Gough, Johnson, & Cartwright, 2000; Smith & Sharp, 1994). Additionally, bringing the bullying incident to the attention of school staff is one of the most effective methods of reducing the likelihood of future bullying (Kochenderfer & Ladd, 1997). Yet, children and adolescents tend to avoid seeking help from school staff for a variety of reasons, including fear of retribution and perceptions that their schools will not protect them (Cowie & Olafsson, 1999; Whitney & Smith, 1993). Although personal and environmental factors have been examined in relation to help seeking behaviours, research remains limited in understanding the process through which individuals come to the decision to seek help in response to bullying (Unever & Cornell, 2004).

Intervention behaviours, defined as standing up to the individuals engaged in the bullying in defense of a victimized peer, have been less frequently examined in the empirical literature compared to help seeking behaviours (Rigby & Johnson, 2006). While researchers have found that children and youths generally hold positive attitudes towards intervening on behalf of a victimized peer, the self-reported rates of actually engaging in these actions have been found to be low (Rigby & Johnson, 2006). Indeed, using naturalistic observations, Canadian researchers concluded that bystanders were present in 85% of schoolyard bullying situations but only intervened in 10% of the time (Craig & Pepler, 1995; 1997). A review of the literature to date has revealed that researchers have only begun to examine the variables that influence the manner in which youths respond to bullying when they witness it (Rigby & Johnson, 2006; Salmivalli & Voeten, 2004). However, researchers have not yet clearly articulated an explanatory model for how youths choose to respond to witnessing bullying at school.

Overall, a review of the current literature suggests that few studies have benefitted from clear theoretical frameworks with which to examine these behaviours. Generally, studies have been purely descriptive as opposed to explanatory. As such, in this program of study, I elaborated a model of help seeking and intervention behaviours in response to bully/victim problems, based on the widely used Theory of Planned Behaviour (TPB: Ajzen, 1991). The TPB is considered to be a deliberative processing model which assumes that individuals are able to make rational decisions based on the information provided to them by the environment (Ajzen, 1991, 2002). According to this theory, the most proximal determinant of behaviour is one's intention to engage in the behaviour, along with one's perception of control over the behaviour. Ajzen also proposed that three factors indirectly influence behaviour through the variable of intentions: (1) one's attitude towards the behaviour, (2) the perceived social pressure from others to engage in the behaviour (subjective norms), and (3) the perception of control over engaging in

the behaviour and an evaluation of barriers concerning the self and the environment (perceived behavioural control: PBC).

Examining help seeking and intervention behaviours using this model has significant implications from a theoretical and a policy perspective. From a theoretical perspective, the use of the explanatory model examining the psychological processes related to the decision to seek help or intervene would provide important insight into the nature of these behaviours.

Additionally, the results may provide much needed information on the impact of environmental factors, such as school climate, on individual intentions and behaviours in response to bullying.

From a policy perspective, understanding the factors that predict these behaviours would result in a better understanding of the mechanisms of change that are targeted in school-wide bullying prevention programs and subsequently, allow for the development of more effective programming that target these specific factors.

Purpose of the Study

The purpose of this study was twofold: (a) to examine the antecedents of help seeking and intervention behaviours in response to bully/victim problems using a widely used model of behaviour, the Theory of Planned Behaviour (Ajzen, 1991), and (b) to examine how school climate may determine help seeking and intervention intentions using the TPB model (Ajzen, 1991). I posited the following hypotheses:

- 1) Attitudes, subjective norms, and perceived behavioural control account for a significant amount of variance in victim help seeking intentions.
- 2) Attitudes, subjective norms, and perceived behavioural control account for a significant amount of variance in bystander intervention intentions.
- 3) Intentions and perceived behavioural control account for a significant amount of variance in victim help seeking behaviours.

- 4) Intentions and perceived behavioural control account for a significant amount of variance in bystander intervention behaviours.
- 5) Attitudes, subjective norms, and perceived behavioural control mediate the relationship between school climate and victim help seeking intentions.
- 6) Attitudes, subjective norms, and perceived behavioural control mediate the relationship between school climate and bystander intervention intentions.

In order to examine these hypotheses, two studies were conducted. In Study 1, I collected short-term longitudinal data from a sample of secondary school students. The full test of the TPB model, examining both victim help seeking and bystander intervention behaviour was carried out with this data. In Study 2, I sought to replicate the results examining the predictors of intentions using a cross-sectional study design and data collected from a sample of middle school students. Furthermore, a measure of school climate was included to assess whether attitudes, subjective norms, and perceived behavioural control mediated the relationship between school climate and intentions to seek help for oneself or intervene on behalf of a bullied peer.

Summary

In sum, despite the importance placed on victim help seeking and bystander intervention behaviours in widely used school-based bullying prevention and intervention programs, the lack of a clear explanatory model delineating the social and cognitive determinants of these behaviours serves as a limiting factor to the development of effective programming and increasing desired behaviours in young people in reaction to bullying. To help address this paucity in the literature, the current program of research examined the utility and robustness of the TPB model in the prediction of these two behaviours. Furthermore, I examined whether the TPB variables of attitude, subjective norms, and perceived behavioral control mediated the relationship between school climate and the intention to seek help or intervene.

The remainder of the dissertation is organized as follows. In chapter two, I provide an overview of the literature relevant to the current program of research and include information on bullying in schools, school-based bullying prevention programs, and the Theory of Planned Behaviour. Chapter two also presents the literature on help seeking behaviours, intervention behaviours, and the role of school climate in understanding bullying. I will then conclude the chapter by elaborating on the current program research and present the study hypotheses for the current dissertation. In chapter three, I will discuss the methodology for the current program of research. Chapter four reports the data analysis procedures and presents the results from both studies, including both significant and non-significant findings. Lastly, in chapter five, I will discuss the findings from the program of research and reflect on the theoretical and policy implications of the studies, along with the limitations and directions for future research.

CHAPTER TWO

Utilizing the Theory of Planned Behaviour to examine the cognitive and social determinants of behavioural responses to bully/victim problems in middle and secondary school students.

The first chapter of this dissertation provides a general review of the literature that is relevant to the questions being examined in the current research program. First, I will introduce the topic of bullying among children and adolescents in schools, followed by an examination of school-based intervention and prevention programs that have been designed to reduce bullying. The Theory of Planned Behaviour will then be presented and I will discuss the use of this model in the examination of help seeking and intervention behaviours in reaction to bullying situations. Following this, I will introduce the concept of school climate and present the empirical work examining its role in bullying, help seeking, and intervention behaviours.

Overview of Literature on Bullying

Bullying, or peer victimization, is a common and growing problem facing schools today. While bullying in schools is viewed as a phenomenon that has existed since the creation of the school system, it is only in the latter part of the twentieth century that the systematic investigation of the topic began (Smith & Shu, 2000). Since then, researchers have expended much time and effort in seeking to understand the nature of these behaviors, as well as the impact of bullying behaviours on all involved individuals.

Definition of Bullying

Dan Olweus originally described the phenomena of bullying as when an individual is repeatedly and systematically exposed to negative actions which causes, or attempts to cause, discomfort or pain to another person over time and involves an imbalance of power (Olweus, 1992, 1993, 1994). While various definitions of the term bullying exist and some debate has taken place (Espelage & Swearer, 2003; Smith, Cowie, Olafsson, & Liefhoghe, 2002),

researchers generally agree that bullying is a subset of aggression involving a systemic abuse of power (Olweus, 1993; Rigby, 2002; Rivers & Smith, 1994). Since the inception of this field of study, the understanding of what negative actions constitute bullying has changed (Smith, 2004). Despite these variations in definition, many researchers, clinicians, educators, and policy makers, seem to agree that an incident is characterized as ‘bullying’ when it meets three criteria: an intention to harm another through negative actions, a power differential, and repetition over time (Olweus, 1994).

The first criterion refers to actions by one or more individuals that intentionally cause another person physical or psychological pain or humiliate another peer in a group context (Olweus, 1992; Slee & Mohyla, 2007; Sullivan, 2000). As a result of numerous studies published on the topic, the scope and breadth of what actions can be included under the paradigm of bullying have changed over time. While direct physical and verbal assaults were initially hypothesized to exemplify bullying, researchers have broadened the scope to include a variety of negative actions such as aggression through a third party, damaging peer relationships, or spreading rumors (Smith, 2004). Currently, researchers generally agree that bullying can be classified as physical, verbal, relational, or electronic (Smith, 2004). Physical bullying may be characterized as physical contact such as hitting, pushing, or damaging another’s property while verbal bullying may include name-calling, or the use of sexually suggestive, or abusive language (Olweus, 1993; Sullivan, 2000). Negative actions may be defined as relational or social bullying when referring to actions such as social exclusion, malicious rumor spreading, withdrawal of friendship, and aversive levels of competition and social comparison (Besag, 1989; Olweus, 1993). Electronic bullying occurs via internet or cell phone messages and is as frequent and often parallels being bullied in other, more traditional ways (Raskauskas & Stoltz, 2007). More recently, researchers have proposed including the targeting of an individual based on their race or ethnicity within the definition of bullying (Larochette, Murphy, & Craig, 2010).

In seeking to understand bullying behaviors, researchers have also found it helpful to classify negative actions as direct or indirect forms of bullying (Bjorkvist, Lagerspetz, & Kaukiainen, 1992; Olweus, 1992; Salmivalli, Kaukiainen, & Lagerspetz, 2000; Sullivan, 2000). Olweus (1992) proposed that direct forms of bullying are those that are relatively open attacks on the individual, such as physical assault. Conversely, indirect forms may include more covert actions such as social exclusion or isolation.

The second criterion of an incident defined as “bullying” is the perceived or actual power imbalance that exists between the individual being victimized and the individual engaging in bullying. This imbalance results in the victimized individual feeling unable to defend him or herself or stop the bullying (Olweus, 1993; Sullivan, 2000). Olweus (1992) defined this relationship as one in which those who initiate the bullying possess more power either physically, socially, or psychologically compared to their victim. For example, differences in size, age, strength, and social status may be used to perpetuate and maintain the bullying. In children and youths, a social imbalance may be in terms of resources such as the amount of friends or degree of popularity.

More recently, researchers have proposed that the power imbalance criterion suggests that this behaviour is a “relationship” problem (Craig, Pepler, Murphy, & McCuaig-Edge, 2010). PREVNet, a Canadian organization raising awareness about bullying among children and adolescents, has defined bullying as a “disrespectful relationship problem”. Applying social dominance theory, the perpetrators of bullying take advantage of the power differential between themselves and others and use it and aggression to control and/or dominate others. Conversely, the individuals being bullied lose their power over the situation and thereby find it difficult to extricate themselves (PREVNet, 2011).

The third criterion in the definition of bullying is that the action is repetitive and occurs over time (Olweus, 1994). While generally agreed upon in principle, the frequency of incidents

signifying the presence of bullying is unclear. Olweus (1997) has suggested that behaviours must occur once or twice a month for them to be labeled as bullying. However, this criterion has received little attention in the literature. Other researchers have classified individuals as “victims” or as experiencing “chronic bullying” or if they reported having been bullied three or more times (Dubé et al., 2009). Researchers have further concluded that these individuals are at the greatest risk of negative outcomes compared to those who experience bullying less often (Craig, 2004; Dubé et al., 2009; Solberg & Olweus, 2003). Despite the literature, researchers have found that teachers and youths often disregard the frequency criterion when labeling bullying and often identify single occurrences of harassment as bullying (Cuadrado-Gordillo, 2012; Hazler, Miller, Carney, & Green, 2001). As such, this criterion remains an area for further study.

Scope of the Problem

Recent studies have confirmed the universality of bullying and have found that the majority of children and adolescents surveyed had been exposed to bullying in some context either as the youth who was victimized, who bullied others, or who witnessed the victimization (Baldry & Farrington, 1999; Carney & Merrell, 2001; Nansel et al., 2004). Nansel and colleagues (2004), in a study spanning twenty-five countries and using Olweus’ definition of “bullying behaviours” and a standardized method of data collection, found that the percentage of adolescents who reported being victimized ranged from 5% in Sweden to 20% in Lithuania, with an international average of 11%. With regard to those youths who engage in bullying behaviours, Nansel and colleagues found that the prevalence rates among adolescents ranged from 3% in Sweden and Wales to 20% in Denmark, with an average prevalence rate of 10%. The authors concluded that, based on the prevalence rates and the associated negative outcomes, bullying is a critical issue for all countries to address.

According to the literature, estimates of bullying are comparable in Canada (Beran, 2008; Beran & Tutty, 2002; Craig, 2004; Charach, Pepler, & Ziegler, 1995). Using nation-wide data from the National Longitudinal Survey of Children and Youth Data gathered by Statistics Canada, Craig and colleagues (1998) found that in boys aged 10-11 years old, 17.2% reported engaging in bullying behaviours while 13.6% reported being bullied. In girls of the same age, 8.7% admitted to bullying others while 8.1% reported being bullied. Comparing the Canadian prevalence rates to 35 other countries using data from the World Health Organization Health and Behaviour Survey of School-Aged Children (HSBC) conducted in 2001-2002, researchers found that the Canadian sample fell in the top quartile for rates of engaging in bullying behaviours and in the top third for being victimized (Craig, 2004). Using data from the most recent HSBC, Freeman and colleagues (2011) indicated that 22% of students in Grades 6 to 10 reported having been bullied, 12% reported having bullied others, while 41% reported having been involved in both bullying others and being victimized themselves. An examination of the trends since the 2002 HSBC survey has suggested that the number of students reporting bullying others has decreased (Freeman et al., 2011). However, the percentage of students reported being victimized remains stable and significant (Freeman et al., 2011).

More recently, researchers have begun to focus on the number of children and adolescents who have been exposed to bullying as a witness or bystander. Researchers have found that a vast majority of students have witnessed bullying in some form on school grounds and that witnesses are present in most of the incidents (Craig & Pepler, 1997; Flannery, Wester, & Singer, 2004; Janosz et al., 2008). For example, Craig and Pepler (1997) found that in 85% of bully/victim incidents, an average of four individuals were present. Regarding the frequency of witnessing bullying, Janosz and colleagues (2008) noted that half of their sample of Grade 7 students reported witnessing verbal abuse of a peer, while one in five participants reported witnessing students threatening others. Similarly, Flannery, Wester, and Singer (2004)

concluded that up to 87% of their participants from Grades 3 to 12 had witnessed physical bullying at school (e.g., hitting, punching) and 56% had witnessed one of their peers being beaten up.

Negative Consequences of Bully/Victim Problems

The deleterious effects of bullying have been studied extensively and researchers have found that peer victimization is associated with a slew of negative outcomes (Hawker & Boulton, 2000; Rigby, 2003; Sharp et al., 2000). Results from cross-sectional studies have consistently shown an association between victimization and lower levels of psychological well-being, lower levels of self-esteem and global self-worth, higher levels of psychological distress, and significant mental health difficulties (Egan & Perry, 1998; Juvonen, Graham, & Schuster, 2003; Nansel et al., 2004; Rigby, 2003; Salmivalli & Isaacs, 2005; Salmon, Jones, & Smith, 1998). Concerning mental health difficulties specifically, a recent meta-analytic review of cross-sectional studies from 1978 to 1997 found that peer victimization was most strongly associated with depression, but that victimized youths may also be characterized by loneliness, generalized anxiety, social anxiety, and low global and social self-worth (Hawker & Boulton, 2000). Furthermore, researchers have suggested that adolescents who are bullied and experiencing depressive symptoms are at a greater risk of suicide compared to those youths who were not victimized, and that bullying is an additional risk for suicidal behaviour (Carney, 2000; Kaltiala-Heino et al., 1999).

Peer victimization has also been correlated with negative physical symptoms, such as headaches and stomach pains (Williams, Chambers, Logan, & Robinson, 1996; Wolke, Woods, Bloomfield, & Karstadt, 2001), as well as lower social adjustment and negative school outcomes (Berthold & Hoover, 2000; Nansel et al., 2004; Rigby, 2003; Slee & Rigby, 1993). Being victimized by peers was consistently associated with poorer relationships with classmates, feelings of loneliness and being excluded (Graham & Juvonen, 1998; Kochenderfer & Ladd,

1996; Nansel et al., 2004), and self appraisal of popularity (Slee & Rigby, 1993). Victimization has also been associated with negative school outcomes such as increased school absenteeism, greater dislike of school, and feeling unsafe at school (Berthold & Hoover, 2000; Rigby & Slee, 1993). The effects of peer victimization in childhood and adolescence have also been associated with difficulties that extend into adulthood, such as interpersonal difficulties, loneliness, shyness, and a fear of intimacy (Gilmartin, 1987; Hugh-Jones & Smith, 1999; Tritt & Duncan, 1997).

In the individuals who bully others, researchers have also found a variety of negative short- and long-term psychological outcomes. In the short-term, poorer psychological functioning, increased prevalence of depression, and increased rates of suicidal ideation have been associated with history of bullying others (Kaltiala-Heino et al., 1999; Swearer et al., 2001). Youths who bully have been observed to be more aggressive, hostile towards others, dislike school, and have difficulty with self-control and impulsivity (Bjorkvist, Ekman, & Lagerspetz, 1982; Craig, 1998; Rigby & Slee, 1991). Furthermore, those who engaged in bullying were more likely to be involved in other antisocial and aggressive behaviours such as graffiti, shoplifting, truancy, cheating on tests, smoking or chewing tobacco, drinking alcohol, weapon carrying, and dating violence and/or sexual harassment compared to those who did not bully others (Berthold & Hoover, 2000; Nansel et al., 2004; Rigby & Slee, 1991).

Long-term negative effects have also been associated with past history of bullying others (McMaster, Connolly, Pepler, & Craig, 2002; Rigby & Cox, 1996). In studies, adults who bullied others in youth had a greater likelihood of having a criminal record by the age of 30 (Eron, Huesmann, Dubow, Romanoff, & Yarmel, 1987) and were more likely to seek mental health services compared to individuals who did not engage in bullying behaviours in their youth (Fombonne, Wostear, Cooper, Harrington, & Rutter, 2001; Olweus & Alsaker, 1991). It has been hypothesized that these individuals continue to utilize the aggressive interaction styles that provided them with immediate rewards in their youth. However, in adulthood, the same styles

increase the likelihood of impairment and result in limitations in academia, career, and personal life (Farrington, 1993; Fombonne et al., 2001; Gilmartin, 1987; Kazdin, 1993; Olweus & Alsaker, 1991; Walker & Sylwester, 1991).

The psychosocial effects of bullying on those individuals who engage in bullying while also being victimized by others (“bully-victims”) have been studied less extensively in the literature. However, youths who both bully and are victimized possess the greatest number of psychological and psychosomatic symptoms and are more impaired overall compared to youths who are only involved in one role (Forero et al., 1999; Haynie et al., 2001; Swearer et al., 2001). Similar to youths who bully others, researchers have found that individuals who bully and are bullied display greater levels of verbal and physical aggression compared to youths who are solely victimized or uninvolved (Craig, 1998). These youths have also been found to score higher on measures of externalizing behaviours, hyperactivity, and depressive symptoms (Austin & Joseph, 1996; Kumpulainen et al., 1998). Concurrent bullying and victimization has been associated with other problem behaviours such as drinking, smoking, theft, damage to property, and violation of parents’ rules (Haynie et al., 2001). On psychosocial correlates, these individuals also scored lower on social competence, self control, social acceptance, global self worth, and reported poorer relationships with their peers (Austin & Joseph, 1996; Nansel et al., 2004). Similar to youths who are only victimized, Forero and colleagues (1999) also concluded that these individuals disliked school more, felt more alone, and experienced more frequent and severe somatic symptoms.

More recently, researchers have begun to examine the effects of witnessing bullying on various outcomes such as aggressive tendencies, school adjustment, and internalization problems (Flannery, Wester, & Singer, 2004; Janosz et al., 2008; Rivers, Poteat, Noret, & Ashurst, 2009). In a sample of Grade 7 Canadian students, Janosz and colleagues (2008) found that exposure to bullying increased the likelihood of engaging in externalizing problem behaviours, and disliking

and avoiding school. Similarly, Flannery, Wester, and Singer (2004) found that witnessing violence significantly predicted psychological trauma symptoms (i.e., anxiety, depression, posttraumatic stress, dissociation, anger) and engaging in violent behaviour.

As such, due to the high prevalence of bullying among children and youths as well as the significant negative outcomes associated with being victimized, bullying others, and witnessing bullying, researchers have begun to focus on understanding the nature of bullying and the characteristics of those who are involved.

Developmental Course of Bullying

The relationship between age and frequency or form of bullying has been studied extensively in the literature using various methodologies. However, the results have been mixed as to the developmental course of bullying behaviours as children age.

A number of researchers have suggested that the frequency of bullying peaks between the ages of 9-15 years during the transition from elementary to middle or high school, and then decreases over time (Berthold & Hoover, 2000; Carney & Merrell, 2001; Hazler, 1996; Hoover, Oliver, & Hazler, 1992; Nansel et al., 2004; Pellegrini & Bartini, 2000; Pellegrini & Long, 2002; Pepler et al., 2006). The rise in prevalence at this distinct period has been hypothesized to be due to the manner in which the educational settings are organized, the negative effect of transitioning to different school systems, and the biological and psychosocial developmental levels of the youths (Carney & Merrell, 2001). For example, Pellegrini and Bartini (2000) have posited that the need to establish a new social status with the transition into a new school and peer group may promote the use of bullying-type behaviors.

Conversely, other researchers have found a decreasing trend in frequency of victimization that begins at age eight and continues until 16 years old (Boulton & Underwood, 1992; Freeman et al., 2011; Olweus, 1993, 1994; Rigby, 1996; Whitney & Smith, 1993). Olweus (1993, 1994), Whitney and Smith (1993), and Rigby (1996) found steady year-by-year decreases in the self-

report of victimization and these results have been replicated using peer nominations (Salmivalli, Lappalainen, & Lagerspetz, 1998). A number of theoretical explanations for the decrease in victimization have been posited (Smith, Madsen, & Moody, 1999). In interviews with youths, Smith and colleagues (1999) determined since youths tend to be victimized by older peers, as students age and the number of older peers decreases within their educational setting, less victimization takes place. Smith and colleagues also found that as youths age, they develop social skills through educational programs or personal experiences with peers which help them cope more effectively when they are being bullied.

Alternatively, researchers have posited that bullying changes in form as children age and that this reflects changes in developmental skills (Bjorkqvist, Osterman, & Kaukiainen, 1992; Freeman et al., 2011). Bjorkqvist and colleagues (1992) found that the proportion of children who engage in physical bullying decreased over time. However, the frequency of engaging more verbal or indirect forms of bullying tended to increase as children move into adolescence and develop a greater mastery of verbal and social skills (Bjorkqvist et al., 1992). Additionally, the use of specific forms of aggression has been found to parallel the general developmental needs. For example, McMaster and colleagues (2002) concluded that sexual harassment was significantly associated with the emergence of puberty and increasing participation in mixed-gender peer groups.

In sum, it remains unclear as to how the incidence of bullying varies with age over time. Examining the current literature generally suggests that bullying in all forms tends to decline over time as youths age but that bullying behaviors may experience a significant increase from the ages of 11 to 15 during puberty and the transition to other school systems (Carney & Merrell, 2001; Pellegrini & Bartini, 2000; Rigby, 1996). However, methodological issues, including standardization of data collection methods and consistent operationalization of the definition of bullying behaviors, serve as limiting factors to resolving this ambiguity. It is also likely that

different trajectories exist depending on the specific form of bullying in question (Bjorkqvist et al., 1992; Freeman et al., 2011). Future empirical work is warranted to fully understand how the frequency of various forms of bullying changes as children and youths age. However, researchers have concluded that bullying remains an area of concern for youths throughout their time in the educational system.

Bullying from a Socio-Ecological Framework

Bullying has often been viewed as a group phenomenon with terms such as ‘relational aggression’ (Pellegrini & Roseth, 2006) and ‘destructive relationship problem’ (Craig, Pepler, & Blais, 2007) being used to describe the construct (Craig & Pepler, 1995; Salmivalli, Lagerspetz, Björqvist, Österman, & Kaukiainen, 1996). Despite this, most of the traditional research on bullying has focused on the characteristics of and the interactions between those youths who bully and those who are victimized (Craig & Pepler, 1995; Orpinas & Horne, 2006; Pierce & Cohen, 199; Salmivalli, Karhunen, & Lagerspetz, 1996). Yet researchers have demonstrated that factors existing within the environment play a significant role in encouraging, maintaining, and ultimately inhibiting victimization (Espelage, Holt, & Henkel, 2003; Orpinas & Horne, 2006).

In an effort to understand the circumstances under which bullying behaviours are most likely to occur, researchers have pointed to the importance of understanding how the environment interacts with a child’s psychosocial and biological development (Carney & Merrell, 2001; Ladd, 2003; Salmivalli & Isaacs, 2005). According to the ecological systems approach (Bronfenbrenner & Ceci, 1994) and the related theory of social complexity (Hinde, 1992), multiple and interrelated environments influence individual behavior. Factors at the individual, family, peer group, school, community, and culture level are highly interrelated and thus rendering the individual inseparable from this complex system (Bronfenbrenner, 1979; Bronfenbrenner & Ceci, 1994; Hinde, 1992). Furthermore, the socio-cultural values and

physical environment at each level also influence the relationships among the systems (Hinde, 1992).

In the context of bullying, researchers have posited that the dyadic relationship between the youth who bullies and the one who is victimized is influenced by the interaction of variables at various levels of the social interaction, including the effect of group processes within the wider peer group that witness bullying incidents (Menesini, Codecasa, Benelli, & Cowie, 2003; Espelage & Swearer, 2003). Following this logic, many researchers have hypothesized that bullying should be regarded as a systemic problem which affects and is affected by individuals beyond the youths directly involved (O'Connell, Pepler, & Craig, 1999; Salmivalli, 2001a). With the increasing emphasis on the role of group processes, researchers have shifted empirical focus to the role of the wider peer group and the school climate in bully/victim problems.

Role of Peer Groups

Researchers have begun to examine the roles of the bystanders or 'silent majority' in bully/victim problems as studies have consistently demonstrated that other peers are present during a vast majority of bullying situations (Craig, Pepler, & Atlas, 2000; Hawkins, Pepler, & Craig, 2001; O'Connell et al., 1999). Using naturalistic observations, Craig and Pepler (1997) found that peers were present in 85% of bullying situations. Consistently, in Australian schools, the majority of research participants reported witnessing all forms of bullying at least once and the estimates of viewing physical and verbal bullying on a weekly basis increased as students moved into secondary school (Rigby & Johnson, 2005).

Aside from merely being present, bystanders often play an influential role in the victimization (Cowie, 2002; O'Connell et al., 1999; Salmivalli et al., 1999). Bystanders may influence bullying directly, by reinforcing or inhibiting the bullying behaviour, or indirectly, by serving as a passive audience for the incident (Craig & Pepler, 1997; Hawkins et al., 2001).

Glover and colleagues (2000) found that peer encouragement increased the likelihood of bullying

taking place such that groups of boys were three times as likely to engage in bullying as opposed to when they were alone, while girls were twice as likely to engage in bullying in groups compared to when they are alone.

In addition to encouraging bullying simply by their presence, it has been suggested that bystanders play one of several roles in bully/victim incidents including supporters/assistants of those who bully, defenders of victims, and remaining neutral (Salmivalli et al., 1996; Salmivalli et al., 1998; Sutton & Smith, 1999). Using peer nominations, Salmivalli and colleagues (1996) determined that there were six different roles that students can play which may influence the outcomes of bully/victim problems, namely: “bullies”, “victims”, “followers” who help the individual who is bullying and reinforce the behaviour, “defenders” who intervene on behalf of the victimized individual, and “outsiders” who witness the incident but do not get involved at all. Furthermore, the roles have been found to be relatively stable over time and predict future behaviour in relation to bullying incidents (Salmivalli et al., 1998).

Although the possibility of several roles for bystanders exists, researchers using observational data have suggested that youths generally tend not to intervene in bullying situations on behalf of their victimized peer (Hawkins et al., 2001; O’Connell et al., 1999; Salmivalli et al., 1996). In Canadian samples, researchers found that youths intervened in 10% of incidents in the classroom (Atlas & Pepler, 1998) and 11% of incidents on the school grounds (Craig & Pepler, 1995). Examining specific roles, Salmivalli and colleagues (1996) found that 20%-30% of their adolescent sample consisted of “followers” who encouraged the bullying, while 20% acted as defenders, and 20%-30% stood silently by. In a similar study, O’Connell and colleagues (1999) found that, on average, youths spent 54% of their time passively watching a bullying incident, 21% of the time actively modeling bullying, and 25% of the time intervening on behalf of the victimized youth. Interestingly, in studies using self-report to assess how often a youth has or is likely to intervene, estimates of intervention behaviour have been significantly

higher when compared to those rates obtained in naturalistic studies (Adair, 1999; Vettenburg, 1999; Rigby, 1996). Rigby (1996) found that 43% of elementary school children self-reported that they 'always or usually' attempted to intervene in bullying. Similarly, Adair (1999), in New Zealand, found that 54% of elementary school children reported that they intervened on behalf of a peer or sought help for them. The inconsistency between self and other reported data has suggested that youths may be responding in a socially desirable manner, that they acted out their behaviours privately, or that other barriers may have interfered in their ability to carry out their desired behaviours (Rigby & Johnson, 2006).

In seeking to understand the factors that influence bystander reactions to bullying, both the gender and age of youths have emerged as significant determinants. With regard to gender, boys have been found to be more likely to reinforce or assist the bullying individual, while girls are more likely to support the victimized peer or remain uninvolved (O'Connell et al., 1999; Salmivalli et al., 1996; Salmivalli & Voeten, 2004; Sutton & Smith, 1999). Researchers have also suggested that females tend to be more pro-victim, anti-bully, and more distressed by bullying incidents compared to males (Hazler, Hoover, & Oliver, 1991; Menesini et al., 1996; Rigby, 1997; Salmivalli 2001a). Regarding age, older students are generally more supportive of bullying behaviours and aggression compared to younger students (Huesman & Guerra, 1997; Menesini et al., 1997; Oliver, Hoover, & Hazler, 1994; Rigby, 1997). Rigby (1997), in sample of 2940 boys and 2508 girls in Australia between the ages of 9-18 years old, found via self report that youth became more supportive of bullying until the age of 16 years old.

The role of bystander attitudes towards bullying has also been implicated in determining response to witnessing victimization at school. In general, youths have been found to sympathize with the victimized individual and disapprove of their peers who bully others (Boulton, Bucci, & Hawker, 1999; Menesini et al., 1997; Rigby & Slee, 1993). Researchers have also shown that many students express admiration for those few peers who intervene on

behalf of the victimized peer, feel positive if they themselves intervened, and experience negative emotions, such as disgust or anger, towards those who bully (Lodge & Frydenberg, 2005; Rigby & Slee, 1993). However, researchers have proposed that individual appraisals and attribution of bullying incidents may contribute to how youths choose to respond. Indeed, Hymel and colleagues (2005) concluded that a significant proportion of youths engaged in a process of ‘moral disengagement’, whereby they placed blame on the victimized youth or provided rationales for the bullying when confronted with a bully/victim incident (Hymel, Rocke-Henderson, & Bonanno, 2005). Similarly, in survey of middle and high school students in Britain, 64% of youths judged that the victimized youth had brought on the bullying themselves, 51% of youths believed that the bullying was in fun and harmless, and 39% of youths thought that the bullying helped “toughen up” the victimized youth (Oliver et al., 1994). Furthermore, when examining the reasons behind bullying incidents, youths, who were both victimized and uninvolved, tended to attribute the victimization to external attributes displayed by the victimized youth, such as being physically weak or overweight, being different, wearing certain apparel, or being academically strong (Swearer & Cary, 2003). As such, youths’ appraisals or perceptions of what constitutes bullying and attributions of responsibility may play a significant role in determining youths’ responses.

In sum, despite holding generally negative attitudes towards bullying and positive attitudes towards intervening in bullying incidents, youth tend not to intervene. The inconsistency between attitudes and behaviours suggests that a number of other factors influence the actual completion of the desired behaviour (Rigby & Johnson, 2006). Yet, despite the incongruity, researchers and program developers have maintained that those youth who serve as the bystanders are a promising solution to addressing bullying in schools.

Environmental Factors

In addition to group processes, environmental factors, such as school climate, have been implicated in bully/victim problems (Olweus, 1993; Salmivalli, 2001a; Harel-Fisch et al., 2010). School climate, generally hypothesized to reflect both the relationships and quality of interactions between and among the staff and students, as well as the unwritten beliefs, values, norms, traditions, and attitudes held by the staff and students, has been associated with the frequency of bully/victim problems (Anderson, 1982; Brookover, Erickson, & McEvoy, 1997; Doll, Song, & Siemers, 2004; Orpinas & Horne, 2006; Power, Higgins, & Kohlberg, 1989; Rodkin, 2004).

According to the Social Development Model (Catalano, Haggerty, Oesterie, Fleming, & Hawkins, 2004), positive environmental conditions serve to promote the development of positive, pro-social behaviours, while inhibiting negative behaviours. While researchers have yet to formally agree upon the dimensions that comprise a positive or negative school climate (see Anderson, 1982 for a review), some consistencies have emerged regarding the dimensions of school climate that likely promote or inhibit bully/victim problems (Catalano et al., 2004; Cunningham, 2007; Haynie et al., 2001). Cunningham (2007), following the Social Development Model (Catalano et al., 2004), examined the following factors in youths from Grade 6 to 8: school bonding, perceptions of school norms (i.e., perceptions of academic expectations and behaviour in school), attitudes towards bullying, the presence of friends who bully, and past history of bullying. She determined that youths who were uninvolved in bully/victim problems were more bonded to the school, held more positive perceptions of the school norms (i.e., perceived high academic and behavioural expectations), and had a greater investment in pro-social behaviours and beliefs compared to youths classified in the bully, victim, or bully/victim category. Furthermore, the predictors correctly classified the youths into the appropriate bully/victim category 66.3% of the time (Cunningham, 2007). The results were

consistent with a similar study by Haynie and colleagues (2001), who found that school adjustment and bonding were significantly greater in youths who were not directly involved in bully/victim problems. Additional school climate factors that have been associated with bully/victim problems have included the quality of relationships between the students (Boulton, 1999; Kochenderfer & Ladd, 1997; Newman et al, 2001; Pellegrini, Bartini, & Brooks, 1999), relationships between the teachers and students (Barr & Parrett, 2001; Doll et al., 2004; Olweus, 1993), using cooperative learning strategies in class (Johnson, Johnson, Cotten, Harris, & Louison, 1995 ; Slavin, 1991), and encouraging the development of a sense of agency, self control and self determination (Deci & Flaste, 1995; Doll et al., 2004; Gini, Albiero, Benelli, & Altoe, 2008).

In sum, factors at the individual, group, and environmental level have been implicated in the development, maintenance, and inhibition of bullying in schools. Due to the importance of factors at various levels, researchers, educators, and policy makers have begun to develop and implement interventions at each level in an effort to reduce bullying within the educational system.

School-Based Bullying Prevention and Intervention Programs

The systematic effort to address bullying in schools is a relatively new phenomenon, emerging only in the late twentieth century (Smith & Shu, 2000). Since then, a plethora of intervention and prevention programs have been developed to address this problem. The following section will first discuss the theoretical background and essential elements of school-based programming to address bullying problems. I will then present the literature reviewing school-based bullying prevention and intervention programs and the possible factors that may influence their effectiveness.

Theoretical Background

Due to the importance of factors at the group and environment level, many researchers believe that the emphasis of school-based prevention programs should be on changing the behaviours of the “silent majority”, or the bystanders (Salmivalli, 2001b; Slee & Mohyla, 2007). It has been proposed that influencing the attitudes, beliefs, and behaviours of the bystanders and encouraging them to adopt more pro-active and pro-victim roles, may be an effective mechanism of diminishing the frequency and severity of bullying incidents (Farmer et al., 2002; Orpinas & Horne, 2006; Salmivalli, 2001b; Sjorstrom & Stein, 1996; Slee & Mohyla, 2007). The number of these programs, commonly characterized as “universal”, has grown significantly over the years (O’Connell et al., 1999; Salmivalli, 1999; Slee & Mohyla, 2007). These universal programs adopt a whole-school approach in which interventions are designed and implemented at the student level, class level, and school level to influence the behaviours of all the participants, rather than solely targeting the youths who are directly involved in bully/victim problems (Salmivalli, 1999; Slee & Mohyla, 2007; Tattum, 1997).

At the individual level, the intervention is directed towards those students directly involved in the bully/victim problems, either as the youth being victimized, bullying others, or those youth who are at high risk for becoming bullied (i.e., new students). Targeted programs focus on decreasing the individual risk factors and increasing the protective factors, which have been associated with bully/victim problems (Olweus, 1994; Slee & Mohyla, 2007). For example, youths who are bullied may be taught assertiveness skills and provided emotional support and protection (McFadden, 1986; Olweus, 1994). Youths who are engaged in bullying others may also be taught new skills (i.e., assertiveness training) and may require additional monitoring and supervision (Orpinas, Horne, & Staniszewski, 2003; Slee & Mohyla, 2007). Lastly, direct discussions between school officials and the involved students and their parents are also common student level strategies in addressing the issue (Olweus, 1994).

At the class level, researchers have focused on altering the attitudes, perceptions, and behaviours of those youths who may be classified as bystanders. The goal of interventions at the classroom level is to change the role that bystanders play when they are confronted with bully/victim problems from being neutral and uninvolved, to becoming defenders and coming to the aid of the victimized youth (Charach, Pepler, & Zigler, 1995; Farmer et al., 2002; Smith et al., 2004). Attitude and behaviour change is believed to arise from a three step process: 1) raising awareness of the problem and the role of group processes in maintaining and eliminating the problem, 2) encouraging self-reflection whereby youths become aware of their own behaviours and attitudes toward bullying and the inconsistency that typically exists, and 3) emphasizing behaviour change by learning skills to intervene and oppose bullying (Salmivalli, 1999; Salmivalli et al., 1998). Examples of activities commonly used in the three step process have included classroom presentations, group discussions, developing classroom rules, role playing, using drama, or literature. It has been hypothesized that such activities would result in youths becoming more attuned to the experiences of peers, developing perspective taking skills, fostering empathy towards those youths who are victimized and increasing perceptions of self-efficacy for engaging in defending behaviors (Rock, Hammond, & Rasmussen, 2004).

With older students, a common method to address bullying is to adopt a peer-support system (Menesini et al., 2003). This method recognizes the diminishing influence of adults (i.e., teachers, administrators) and growing influence of peer systems as youths move through adolescence (Mash & Wolfe, 2007). Following this method, youths engage in group discussions about bullying, focus on cooperative group work, provide support to youths who are bullied, and befriend youths who currently are or are at risk of being bullied (Cowie, Hutson, Oztug, & Myers, 2008; Menesini et al., 2003; Ortega & Lera, 2000; Salmivalli, 2001b).

At the school level, the strategies implemented resemble those employed at the classroom level with the goal of changing the overall culture and climate of the school (Whitted & Dupper,

2005). Programs seek to increase all school staff's knowledge about the definition of bullying, where bullying occurs, and actions that can be taken to address and resolve bully/victim problems. Programs also emphasize the importance of involving all the staff in the creation of a whole-school policy that delineates a clear definition of bullying, the school's position regarding bullying behaviours, the strategies to manage and respond to bullying, and the philosophy and goals of the school (Hoover & Oliver, 1996; Rigby, 1996).

Review of School-Based Bullying Prevention Programs

The first comprehensive school wide program to be implemented and evaluated systematically was the Olweus Bullying Prevention Program developed in Norway (Olweus, 1992, 1993). The intervention program was based on a set of key principles that had been previously used in modifying behaviour difficulties in the home. The principles, based on the authoritative adult-child interaction model, included creating a school environment that was warm and interested in the students, increasing adult involvement and monitoring, and having clearly defined limits to unacceptable behaviours. The last key principle was to provide support and protection for those youths who were victimized. Olweus emphasized that the whole school should be involved in making bullying an unacceptable behaviour and creating a firm and consistent policy regarding how bullying is handled by the school administrators (Olweus, 1992, 1997).

According to Olweus, (1992, 1993, 1997), interventions, similar to those described above, were designed and implemented at the school, class and individual level. In an evaluation of the program with 2,500 students in Bergen, Norway, Olweus found significant reductions in the number of bullying episodes (being victimized and bullying others) in both genders across all age cohorts. After eight months of intervention, Olweus found a reduction in bullying of 48% in boys and 58% in girls. The percentages increased even further after twenty months of intervention. Unintended results included an improved overall social climate, as defined by

more positive attitudes towards school, improved order and discipline, and more positive social relationships among students (Olweus, 1992).

Many of the subsequent interventions that have been designed follow similar logic and method as Olweus (Pepler, Craig, Ziegler, & Charach, 1994; Peterson & Rigby, 1999; Salmivalli, Kärnä, & Poskiparta, 2011; Slee & Mohyla, 2007; Smith & Sharp, 1994). However, despite the research and effort expended on anti-bullying programs, outcome evaluations of many programs have not been as strong and consistent as those found by Olweus (Peterson & Rigby, 1999; Smith & Sharp, 1994; Stevens, de Boudeaudhuij, & Van Oost., 2000). In a review of the literature, Berger (2006) concluded that the results have been ‘disappointing’, a sentiment which has been echoed by many other researchers.

Well known and evaluated programs, modeled on Olweus’ original school wide program, include those conducted by Smith and Sharp (1994) in Sheffield, England, Pepler and colleagues (1994) in Toronto, Canada, Roland (1993) in Rogaland, Norway, and Salmivalli and colleagues (2011) in Finland. The evaluations of these programs, however, have yielded mixed results. In England, Smith and colleagues (1994) found significant decreases in victimization and bullying rates (17%) in many of the participating schools. Similarly, Salmivalli and colleagues (2011) found that the implementation of the KiVa whole school program in students from Grades 4 to 6 in 78 schools led to significant reductions in all forms of bullying behaviors, including more indirect forms such as social exclusion and electronic bullying. Conversely, Pepler and colleagues (1994) found mixed results with a significant 18% decrease in the number of children reporting being bullied once in the last 5 days but a 24% increase in students reporting that they bullied others during the same time period. In Rogaland, Norway, Roland (1993) replicated the original study by Olweus and found undesirable results with an increase of 24% in self-reported bullying behaviours and a 44% increase of self-reported victimization in boys. In girls, there

was a 13% decrease in reported victimization but a 14% increase in reported bullying others (Roland, 1993).

Results using different intervention models have also been mixed. For example, Menesini and colleagues (2003) used the befriending model, which emphasized creating a classroom climate that was empathetic, responsible for and respectful of others, and found no significant change in bullying behaviours or attitudes. Conversely, bullying behaviours and positive attitudes toward bullying increased in the control group. The authors posited that the intervention was effective at preventing the increase in bullying and pro-bullying attitudes that has been associated with increasing age (Menesini et al., 2003).

The role of bystanders has been examined in a number of intervention studies and the results have also mixed and inconsistent. Positive changes in terms of youths' self reported behavior in response to witnessing bully/victim incidents have been noted in a number of empirical investigations (Salmivalli, Kaukiainen, & Voeten, 2005; Slee & Mohyla; 2007; Whitney, Rivers, Smith, & Sharp, 1994). For example, in the United Kingdom, Whitney and colleagues (1994) found that significantly more students (9%) reported that they would not join in bullying another student. Salmivalli, Kaukiainen, and Voeten (2005), using the participant role approach, found less assisting and reinforcing of bullying behaviours in Grade 4 students and more defending of the victimized peer in the Grade 5 sample. Similarly, in an Australian sample, Slee & Mohyla (2007) found an increase in knowledge about how to stop bullying and who to talk to about it. However, the authors noted that the self-report of behaviours were inconsistent with the peer reports and that students overestimated their defending behaviors. Conversely, other researchers, such as Boulton and Flemington (1996), Olweus and Alsaker (1991), Menesini and colleagues (2003), and Pepler and colleagues (1994), evaluating anti-bullying interventions by did not find any significant changes in attitudes towards bullying among students who witness bullying or in attempts to intervene in bully/victim problems.

Results from meta-analyses and review papers have also yield conflicting results with regard to the effectiveness of bullying prevention programs (Baldry & Farrington, 2007; Farrington & Ttofi, 2009; Ferguson, San Miguel, Kilburn, & Sanchez, 2007; Mytton, DiGuseppi, Gough, Taylor, & Logan, 2006; Smith et al., 2003; Smith et al., 2004; Stephens, 2011; Stevens et al, 2001; Vreeman & Carroll, 2007). In a recent meta-analysis on the effectiveness of anti-bullying programs implemented in schools, Ferguson and colleagues (2007) reviewed intervention studies from 1995-2006 and found an overall effect size of $r=.12$ which, according to Lipsey (1998) is below the cut off for practical significance. However, the authors noted that the effect size was slightly greater than Cohen's (1988) cut off signifying a small effect ($r \geq .10$). Similarly, Smith and colleagues (2004) examined whole-school programs and, using the categories proposed by Cohen (1988), concluded that the majority of effect sizes fell in the categories of small, negligible or negative. Conversely, other recent reviewers have come to different conclusions (Baldry & Farrington, 2007; Merrell, Gueldner, Ross, & Isava, 2008). Baldry and Farrington (2007) examined the effectiveness of 16 programs to prevent school bullying by examining the relative effect size (RES). They concluded that eight programs produced desirable results which indicated a 10% or more decrease in bullying and victimization, two produced undesirable results whereby bullying and/or victimization increased by more than 10% and four produced small results where the RES was less than 10%. Similarly, in a meta-analysis of 16 studies over a 25-year period and using a broader literature base than Smith and colleagues (2004), Merrell and colleagues (2008) found that for only one-third of the outcomes variables, meaningful and clinically important positive effects were determined. While the effectiveness of the outcomes were not always consistent, Merrell and colleagues concluded that there is some evidence to support the effectiveness of programs in the following areas: students' social competence, students' self esteem and peer acceptance and, to a lesser degree, reducing rates of bullying and victimization. Overall, researchers have noted that it is difficult to compare

programs across studies since different evaluation methods and questions are generally used (Rigby, 2002). Additionally, Ryan and Smith (2009) recently commented on the scientific rigor used in evaluation studies and pointed to deficiencies in the specification of intervention components, design of the evaluation, statistical analyses used, and selection of informants. Given the current state of the literature, researchers have generally agreed that empirical investigations have revealed mixed results regarding the effectiveness of anti-bullying programs delivered at the school level and that those effects, if they are found, are often small or modest (Farrington & Ttofi, 2009; Rigby, 2002; Smith et al., 2004).

Examinations of the effectiveness of individual components of programs have been completed to some degree. Recently, the U.S. Department of Health and Human Services (USDHHS, 2003) conducted a review of the existing programs and surveyed educators and then delineated 10 strategies that are purported to represent the “best practices” in bullying prevention and intervention programs. The strategies included (1) focusing on the social environment of the school, (2) assessing bullying at the school, (3) garnering staff and parent support for bullying prevention, (4) forming a group to coordinate the school’s bullying activities, (5) training school staff in bullying prevention, (6) establishing and enforcing school rules and policies related to bullying, (7) increasing adult supervision in hot spots where bullying occurs, (8) staff intervening consistently and appropriately in bullying situations, (9) focusing some class time on bullying prevention and intervention, and (10) continuing efforts to address bullying over time. In general, USDHHS emphasized the importance of involving the whole school in the anti-bullying efforts and continuing the implementation of program components from kindergarten until high school (USDHHS, 2003).

In an effort to understand the mixed results, researchers have examined a number of factors which may influence program effectiveness. These factors have included an evaluation of the individual program components, the degree and quality of implementation within the

schools, and individual effects of the sample (Ferguson et al., 2007; Merrell et al., 2008; Peterson & Rigby, 1999; Rigby, 2002; Smith et al., 2004; Smith & Sharp, 2004; Vreeman & Carroll, 2007).

Variations in program content or comprehensiveness have been noted as a possible reason for inconsistent results across studies (Smith et al., 2004). Many of the programs involved numerous components, yet, there is no clear evidence as to which components were important contributors to the changes in outcome variables and which were not (Smith et al., 2004). Rigby (2002) recently suggested that programs that focus on using the problem solving approach and changing the behaviour and attitudes of the system result in more positive outcomes versus those programs that emphasize the creation of rules and implementation of consequences. Additionally, Smith and colleagues (2004) also implicated program length as a reason for varying results and found that the longer programs were often the most effective.

Implementation factors, specifically program fidelity and school commitment, have also been implicated in the effectiveness of programs. Researchers have hypothesized that schools often implement sections of programs, or a 'watered down' version of the program to reduce costs and effort, which may result in reduced effectiveness (Smith et al., 2004). It has been hypothesized that demonstration programs are often more carefully monitored by researchers and schools are provided with more support compared to other programs, therefore yielding more significant effects (Smith et al., 2004; Wilson, Lipsey, & Derzon, 2003). Commitment to the implementation of the program by all members of the school has also been implicated in the overall effectiveness of the program (Rigby, 2002; Smith et al., 2004). Recently, Ozer (2006) suggested that contextual factors, such as school climate, may also serve to influence the effectiveness of the programs.

Moreover, factors associated with the sample, such as gender and age, have been implicated in the reasons for the inconsistent results (Menesini et al., 2003; Peterson & Rigby,

1999; Salmivalli, 2001b; Slee & Mohyla, 2007; Smith & Sharp, 2004). Using individual outcome studies and meta-analyses of prevention programs, researchers have found that the effectiveness of many of the programs decreases as students age indicating the need for an alternate method of intervention (Baldry & Farrington, 2007; Smith et al., 2003). For example, Peterson and Rigby (1999) found significant reductions in the rate of victimization as a result of their intervention in Grade 7 students only while no significant reductions were found among older students. With regard to gender, Salmivalli's (2001b) peer-led intervention was more effective with girls than with boys. The author concluded that this effect may be due to girls initially endorsing more negative attitudes towards bullying and positive attitudes towards intervening, which may predispose them to be more easily influenced by the intervention strategies than boys (Salmivalli, 2001b).

In sum, the preceding review of the research suggests that there are a variety of interventions that have been designed to cope with bully/victim problems in schools. Yet, evaluations of programs have yielded mixed, and sometimes negative, results. A number of explanations have been posited including those related to implementation factors. However, from the review, it remains unclear what theoretical model of behaviour change the program is based upon or what mechanism is involved in changing the intended behaviours (i.e., increasing help seeking or intervention behaviours). Programs are generally based on the assumption that increasing knowledge about actions to take when confronted by a bully/victim problem, and practicing said behaviours will result in attitude and behaviour change. However, the literature on the determinants of behaviour and behaviour change suggests that a number of other factors influence a youth's intention or decision to engage in a particular behaviour (Ajzen, 1991). The lack of a theoretical model elucidating the determinants of intention and actual behaviour may prevent researchers from adequately understanding and ultimately changing these complicated behaviours. Furthermore, failure to fully comprehend the behaviours in question may lead

researchers to mistakenly interpret results from evaluation studies of school-based programs. Therefore, in order to bring about behaviour change through school wide bullying prevention programs, it is suggested that researchers need to first clearly understand the determinants and mechanisms that govern both help seeking in youths who are victimized and intervention behaviours (i.e., standing up for peers) in youths who witness bullying.

Ajzen's Theory of Planned Behaviour (TPB) has the potential value to predict and explain help seeking and intervention behaviours as it examines the informational and motivational influences on these behavioural choices that an individual ultimately makes (Ajzen, 1991). It is a model that has been extensively studied in the health sciences and has recently been proposed as a theoretical framework through which prevention initiatives may be conceptualized (Romano & Netland, 2008). In the current context, the use of this model would allow researchers to understand the cognitive process that youths undergo and the effect of environmental factors on that process when arriving at the decisions to engage in a specific response when faced with a bully/victim problem. As opposed to being merely explanatory, a focus on the mechanisms through which the decisions occur would allow greater understanding of the determinants of the behaviours and for the development of more targeting programming to increase the frequency of these behaviours in the desired direction. As such, in this program of research, I will examine the determinants of help seeking and intervention behaviours, including the role of school climate, using the well known theoretical model of behaviour, Ajzen's Theory of Planned Behaviour.

The Theory of Planned Behaviour

The focus of this section is to present the research model that I will use to investigate the antecedents of both help seeking and intervention behaviours in reaction to bully/victim problems in schools. First, I will present the theoretical background to the model and then discuss the utility of the model with a variety of behaviours and populations.

Theoretical Background

Since Wicker's (1969) seminal review of the relationship between general attitudes and behaviours revealed that low correlations existed between the two variables, researchers have begun examining alternative factors that may increase the predictive power of attitudes on behaviours (Armitage & Conner, 2001). The Theory of Reasoned Action (TRA: Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) and the later conceptualization of The Theory of Planned Behaviour (TPB: Ajzen, 1991) were conceived as a model to understand the antecedents, including attitudes, which influence behaviours. The primary difference between the TRA (and later TPB) and the previous models of attitude-behaviour relations was that Fishbein and Ajzen (1975) hypothesized that it was not one's attitude towards a general object (i.e., smoking) that predicted behaviour, but one's attitude towards the specific behaviour in question (i.e., quitting smoking) that predicted the actual behaviour. Since then, the TPB has become one of the most commonly employed conceptual frameworks used by researchers to examine the motivational determinants on intentions and behaviours (Ajzen, 1991).

According to both the TRA and TPB, behavioural intentions are the most immediate antecedent to behaviour (Ajzen & Fishbein, 1980). Intentions have been understood as those instructions that individuals provide themselves with regard to their own behaviour. This suggests that intentions represent an individual's motivation or conscious plan to engage in a particular set of behaviours and take into consideration how much effort one is willing to devote (Ajzen, 1991, 2001). As such, the variable of intention is proposed to encompass both the direction of the behavior (e.g., to engage in X or Y) as well as the intensity (e.g., how much time and effort to expend). The importance of the variable of intentions, which is the central factor in the TPB model, is based on the premise that individuals typically engage in behaviours that they intend to engage in (Ajzen, 1991).

The hypothesis that intentions are the most immediate and important predictors of behaviour is one that has been proposed by several researchers in addition to Ajzen and Fishbein (1980). Triandis' (1980) attitude-behaviour theory and Rogers' (1983) protection motivation theory also posit the salience of intentions in predicting behaviours. Researchers examining the link between intentions and behaviours have found that intentions are reliably associated with behaviour (Armitage & Conner, 2001; Sheeran, 2002). Armitage and Conner (2001), in a meta-analysis of 185 studies, found an average correlation of .47 between intention and behaviours. Sheeran (2002) conducted a meta-analysis of meta-analyses and concluded that intentions accounted for, on average, 28% of the variance in behaviours and resulted in an effect size of 0.53. Examining causal data, a meta-analysis of 47 experimental tests, which sought to alter behaviours through modifying intentions, determined that interventions that resulted in a medium-to-large change in intention led to a small-to-medium change in behaviour (Webb & Sheeran, 2006).

Under the original conceptualization of the TRA, it was assumed that all social behaviours were under complete volitional control, and therefore, one's intentions to behave would accurately predict one's actual behaviours (Ajzen & Fishbein, 1980). However, research using this model demonstrated it was only effective in predicting the restricted range of behaviours that were found to be under the individuals' total volitional control, which limited the applicability of the theory. The limitations led Ajzen (1991) to recognize that in particular situations, certain intentions and behaviours may not necessarily be under complete volitional control and therefore adjustments to the model were needed. For example, certain characteristics of the environment may prevent an individual from engaging in a desired behaviour. As a result, Ajzen (1985, 1991) extended the model into the Theory of Planned Behaviour (TPB) and included a second predictor of actual behaviours, called perceived behavioural control (PBC), which reflected the degree of control that an individual holds over engaging in the behaviour. As

such, engaging in a particular behavior requires both the intention to do so as well as the skills, resources, and other prerequisites involved. The extent to which the perception of skills, resources, and other prerequisites required to engage in the behavior are reflective of reality influence the ability of the variable to predict behavior (Ajzen, 1985, 1991). As such, if the measure of perceived behaviour control is deemed to be an accurate reflection of reality, this measure may be used as a proxy for a gauge of actual control. The new revision allowed for the prediction of non-volitional behaviours by taking into consideration an individual's perception of the skills, resources, and opportunities required to engage in a particular behaviour. Therefore, the TPB expands the domain of available behaviours to include both volitional and non-volitional behaviour, as well as more complicated goals and outcomes which are dependent on additional, complex factors (Ajzen, 1991).

The model of TPB posits three conceptually independent determinants of one's behavioural intentions, which indirectly predict behaviour through one's intentions. The three inter-related factors are: 1) one's attitude towards the act or behaviour; 2) the perceived subjective norms from significant others to engage in the behavior; 3) and one's perceived behavioural control over the behavior (see Figure 1). Each of the variables has an expectancy-value structure in that each is derived from the combination of a particular set of salient beliefs about the behavior which is then weighted by relevant value components (Ajzen, 1991, 2002). Following from the belief in the importance of *explaining* behavior as opposed to merely predicting it, Ajzen (1991) suggested that behavior is a function of salient beliefs that are associated with the behavior in question. According to the TPB model, these salient beliefs are proposed to be the prevailing determinants of intentions and behaviors.

Within the Theory of Planned Behaviour, attitudes have been defined as the degree to which an individual holds a positive or negative evaluation or appraisal of engaging in a specific behaviour (Ajzen, 2001; Greenwald et al., 2002; Olson & Zanna, 1993). These attitudes, in

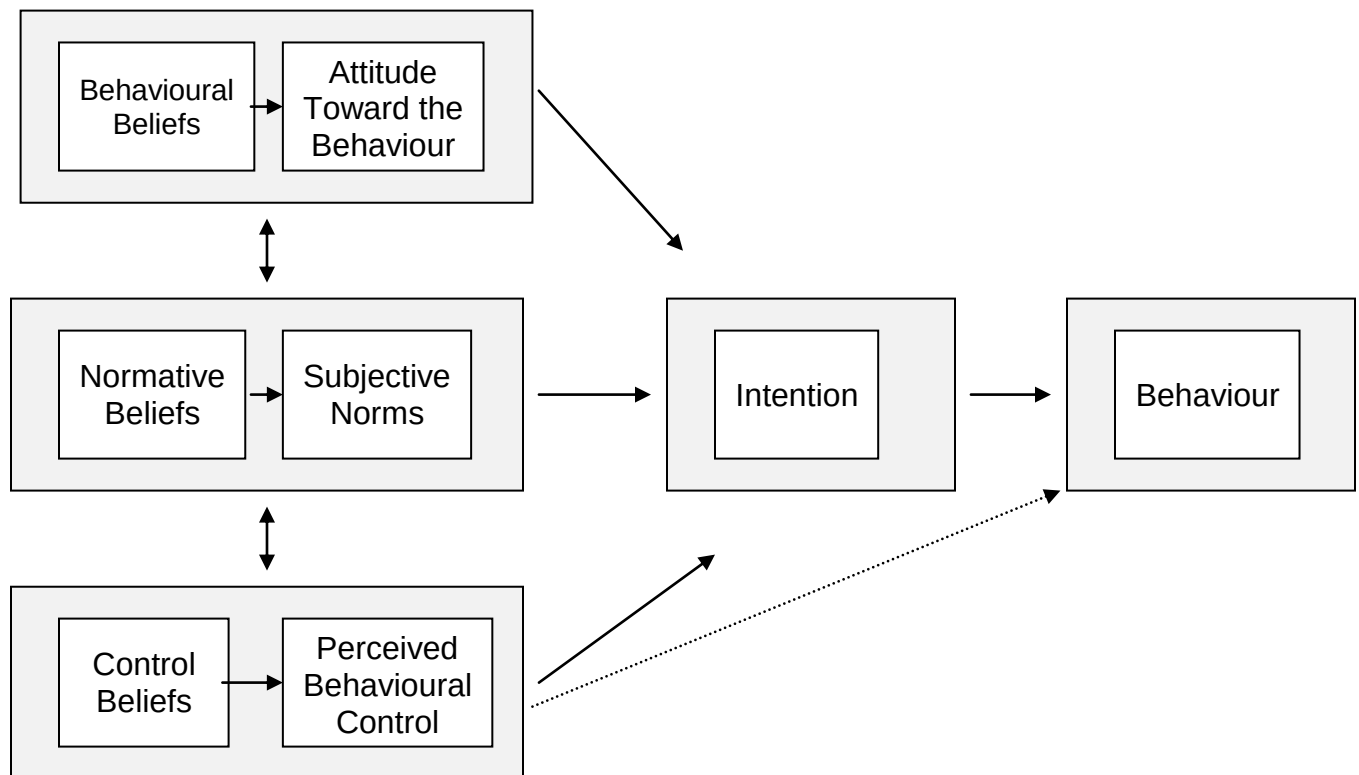


Figure 1. Components of Ajzen's Theory of Planned Behaviour

turn, are determined by two components. The first component is an assessment of one's salient beliefs about the likely consequences arising out of engaging in a behaviour, also referred to as *behavioural beliefs*, which is then weighted by an evaluation of the desirability of those outcomes or the subjective value of the expected outcomes (Ajzen, 1991; Fishbein & Ajzen, 1975).

The second determinant of intentions, subjective norms, refers to a social cognitive component and is a function of the *normative beliefs* that an individual holds. Normative beliefs are conceptualized as the perceived normative expectations of significant others or the beliefs about how other people would like one to behave. This variable is then weighted by an individual's motivation to comply with those expectations (Ajzen, 1991). Subjective norms are assessed for various referent groups and then summed to obtain the subjective norms variable. A number of researchers have found subjective norms to be the weakest predictor of intentions (Godin & Kok, 1996). Reasons posited for the weak predictive nature of subjective norms

include a lack of clarity regarding the appropriate normative influences and measurement problems (Godin & Kok, 1996).

The final antecedent of intentions, perceived behavioural control (PBC), which is theoretically similar to Bandura's concept of perceived self-efficacy (Ajzen, 1991, 2002; Bandura, 1973, 1986), comprises of the amount of volitional control an individual believes they possess over performing a particular behaviour. The indirect route, through behavioural intentions to behaviour, is posited to reflect motivational influences on intentions. The operationalized variable PBC consists of an individual's *control beliefs*, defined as a beliefs about whether one possesses the resources and opportunities to engage in the behaviour. The control beliefs include beliefs about both internal control factors (i.e., skills, information, personal deficiencies, emotions) as well as external control factors (i.e., opportunities, barriers) (Ajzen, 1991). Control beliefs are then weighted by an additional component of perceived controllability over the behaviour in question, which is assessed as the perceived ease or difficulty in actually performing the behaviour (Ajzen, 1991, 2002; Conner & Armitage, 1998). Individuals assess the perceived likelihood of enhancing or interfering factors being present and on their perceptions of the impact that such a factor would have on their behaviour (Ajzen, 1991). Additionally, the perceived controllability of engaging in the behaviours while considering one's own control beliefs, is posited to exist along a continuum with those behaviours that are easily executed on one end while the more complex behaviours are located at the opposite end (Ajzen, 1991).

As noted earlier, PBC also exerts a direct influence on behaviour. Ajzen (1991) posited that when individuals believe that they possess little control over a particular behaviour due to lack of resources, they will display lower levels of behaviour, regardless of attitudes and subjective norms. Originally posited as a moderator of the intention-behaviour relation, researchers have found that the inclusion of an interaction term into the prediction equation often

emerged as non-significant or yielded little additional variance in the prediction of behaviour (Ajzen, 1991; Armitage & Conner, 2001). While it is unclear why the interaction effects have emerged as non-significant, linear models in which PBC is proposed to exert a main effect on behavior have been found to account for the psychological data (Albarracin, Fishbein, Johnson, & Muererleile, 2001; Armitage & Conner, 1999b; Godin & Kok, 1996). As such, the majority of investigators examine the direct effect of PBC on behaviour. This direct route through which PBC affects actual behaviours is posited to reflect the degree of actual control that an individual holds over engaging in a particular behaviour as PBC may often be used as a substitute measure for actual control. However, the correspondence between perceived control and actual control is proposed to depend on whether individuals are realistic about their ability to engage in specific behaviours. Indeed, Ajzen (1985) cautioned that as external factors or resources vary, or as one's knowledge about the behaviour is reduced, then PBC will exhibit a decreased ability to accurately capture the perception of actual control. Furthermore, Ajzen (1991) noted that the relationship is likely to be significant when an individual in fact holds a level of perceived control over the behaviour in question and the perceptions of the level of control are accurate. Research examining the variable of PBC has demonstrated that PBC significantly influences one's intention to behave in a particular manner as well as the act of behaving (Ajzen, 1991, 2002) and therefore is included in both models. Bandura and colleagues (1980) examined a similar hypothesis and determined individual behaviour is strongly influenced by their perceptions of self-efficacy.

According to Fishbein and Ajzen (1975), there are two conditions, or rules, that affect the degree of relationships between the three antecedents, behavioural intentions and behaviours. According to the Theory of Compatibility, the first boundary states that the factors and outcomes need to be assessed at the same level of specificity in terms of the action, target, context, and time frame in order to be predictive. The second boundary relates to the stability of time

between assessing one's intentions and the subsequent behaviours. The authors suggest that a time span limitation between the measurement of the determinants, intentions and behaviours is required (Fishbein & Ajzen, 1975). While a specific time frame has not been specified, Webb and Sheeran (2006) suggested that the time frame must be limited to the extent that one's intentions have not changed by the time that they engage in the behaviour. As such, it has been suggested that the TPB antecedents, intentions, and target behaviors should be assessed within a close timeframe (Fishbein & Ajzen, 1975; Webb & Sheeran, 2006).

Research Using the TPB Model

In order to maximize its applicability, Ajzen and colleagues (Ajzen, 1991; Fishbein & Ajzen, 1975) designed the TRA and the TPB to be content-free. Researchers have compared the predictive ability of the TPB to other content-specific models, such as the health belief model, and determined that those content-specific models performed only slightly better and, in some instances, worse, than the TPB (de Witt, Stroebe, de Vroome, Sanford, & van Griensven, 2000; Quine, Rutter, & Arnold, 1998; Taylor & Todd, 1997).

Research using this theoretical model supports the ability of attitudes, subjective norms, and PBC to predict behavioural intention and for intentions and PBC to predict actual behaviours in a wide range of domains in youths and adults (Armitage & Conner, 1999a, 1999b, 2001; Conner & Sparks, 1996; Godin & Kok, 1996; Sutton, 1998). In a meta-analysis of 185 studies using the weighted average of sample correlations to estimate effect sizes, Armitage and Conner (2001) determined that the TPB accounted for 27% to 39% of the variance in behaviour and intention, respectively. Similarly, Godin and Kok (1996), in an examination of health related behaviours, found that the TPB factors accounted for 41% of the variance in intentions and 34% of the variance in behaviours. Using a prospective design over a three month period, Armitage and Conner (1999b) examined a repeated behaviour (food choice) and determined that the TPB was a useful predictor of intentions and behaviours as the antecedents predicted a significant

amount of variance in each criterion variable. They further concluded that there was little difference in predicting intentions and behaviours when assessing behaviours prospectively or contemporaneously with the TPB variables.

In addition to seeking to understand the antecedents to behaviours, one of the principle goals of social cognitive theories is to develop intervention programs in order to change particular target behaviours (Conner & Norman, 1996). As such, researchers have utilized the TPB in the development of intervention programs whose goal is to alter behavioural, normative, and control beliefs, as well as their respective value components (Fife-Shaw, Sheeran, & Norman, 2007; Hardeman et al., 2002). Webb and Sheeran (2006), who conducted a meta-analysis of 18 interventions based on the TPB or TRA, found effect sizes in the medium range using Cohen's d for behaviour ($d = 0.36$) and intentions ($d = 0.66$) (Cohen, 1988). Similarly, using statistical stimulations, Fife-Shaw, Sheeran and Norman (2007) found that interventions that closely modeled the TPB also led to significant changes in behavioural intentions.

As noted above, Ajzen and colleagues (1975, 1991) have posited that the three antecedents of intentions are inter-related. However, the relative importance of the three variables in predicting intentions and behaviours has been hypothesized to vary according to factors related to the individual in question, the nature of the situation, and behaviour in question (Ajzen, 1991; Armitage & Conner, 1999b; Godin & Kok, 1996; Trafimow & Finlay, 1996). Godin and Kok (1996) found that when examining addictive behaviours (i.e., smoking) and clinical or health screening behaviours (e.g., getting a mammogram, breast self-exam), perceived behavioural control carried more weight in predicting behaviour versus intention. Schlegel and colleagues (1992) examined the effect of PBC and intentions on alcohol consumption in self-reported problem-drinkers and a control group. The authors concluded that in the control group, intention was the most proximal determinant of behaviour and that PBC only affected behaviour through intentions. Conversely, in individuals with problematic drinking habits, PBC was a

direct predictor of alcohol consumption only when intentions did not significantly predict the behaviour in question (Schlegel, d'Avernas, Zanna, DeCourville, & Manske, 1992).

According to Fishbein and Ajzen's (1975) sufficiency hypothesis, personality, environmental, and demographic variables have been proposed to influence behavioural intentions through the primary variables of attitudes, subjective norms, and perceived behaviour control. However, Ajzen (1991, 2011) acknowledged the possibility of including additional variables into the model only if they could account for variance over and above the original model. Recently researchers have suggested that the intention-behaviour consistency varies according to the behaviour type, intention type, properties of the intention, and cognitive and personality variables (Sheeran, 2002). Variables such as degree of controllability of behaviour, the temporal stability of intentions, whether intentions are more influenced by attitudes or norms, and accessibility of intentions have all been posited as factors that may moderate the relationship between intentions and behaviours (Sheeran, 2002). Studies examining cognitive and personality variables, which involve an individual's general tendency to think or act in a particular manner, have found some support for the moderation effect of anticipated regret, self-schemas and conflicting intentions (see Sheeran, 2002, for a review). As such, it appears that there is room for improvement to the existing TPB model in order to increase its ability to predict intentions and behaviours.

Recently, in challenging the assumption that the three antecedents were sufficient, researchers have suggested a number of additional factors that are believed to influence intentions and behaviours (Conner & Armitage, 1998; Webb & Sheeran, 2006). A review by Conner and Armitage (1998) examined the evidence in support of six additional variables (belief salience, past behaviour/habit, perceived behavioural control versus self efficacy, moral norms, self-identity and affective beliefs) that have been hypothesized as being predictive of intentions and behaviours. In particular, past behaviour has been emphasized as being highly relevant

based on the assumption that habits play a predictive role in intentions and behaviours over and above that of the three TPB antecedents (Eagly & Chaiken, 1993). Conner and Armitage (1998) reviewed 11 studies and, after taking into account the variables of TPB, found that past behaviour accounted for 7.2% of the variance in intentions and recommend that future research include a corresponding measure in model testing. However, the authors suggested that inclusion of all the mentioned variables may result in an unwieldy model making empirical study more difficult. As such, they recommended that additional variables be included into the model when they are hypothesized to be relevant to the specific behaviour in question (Conner & Armitage, 1998).

In conclusion, a review of the literature suggests that the TPB is an empirically robust model that may be applied to predict a variety of behaviours in adults and youths. Furthermore, Ajzen (1991) has left open the possibility of including additional factors in the model if research determines that they account for significant variance in intentions and behaviours. As such, it is worthwhile to examine help seeking and intervention behaviours from the TPB perspective in order to gain a better understanding of these complex behaviours.

Victim Help Seeking Behaviours in Response to Bully/Victim Problems

Research has found that bullying behaviours occur with greater frequency and severity in the absence of an adult thus the responsibility for informing the appropriate school staff of the incident falls to the students (Cunningham, 2007; Olweus, 1991). As a result, one of the main objectives of bullying prevention programs within schools has been encouraging youths who have been victimized or who have witnessed bullying of a peer to report the situation to someone who is able to help them, such as school staff or parents (Glover et al., 2000; Smith & Sharp, 1994). The rationale behind the programs has been that reporting bully/victim problems to adults, particularly at school, generally reduces the probability of being victimized in the future (Kaukinen, 2002; Kochenderfer & Ladd, 1997). However, in general, youths are unlikely to

seek help from adults for bullying whether they are victimized or bystanders. For example, Whitney and Smith (1993) found that only about 50% of their sample of youths who were victimized reported having sought help for bully/victim problems. A number of possible explanations have been considered to understand why youths refrain from seeking help. One possibility is that children or youths may not be aware of the fact that they are being bullied, particularly when dealing with social or more indirect forms of bullying (O'Connell et al., 1999). Alternatively, children and youths may fear retaliation from the perpetrator of the bullying or ridicule from their peers (Cowie & Olafsson, 1999; Rigby & Slee, 1991; Smith & Sharp, 1994). Lastly, children and youths may not believe that their schools or parents can help them (Cowie & Olafsson, 1999).

In an effort to understand the low rates of help seeking, researchers have investigated the factors that influence the likelihood of engaging in help seeking behaviour in response to bullying. Personal factors (e.g., age, gender) and environmental characteristics (e.g., chronicity or form of the bullying, school climate) have been examined extensively in relation to help seeking behaviours (Newman et al., 2001; Olweus, 1993; Smith et al., 1999; Unever & Cornell, 2004). In terms of demographics, youths who were younger and female were more likely to seek help than older youths and males (Glover et al., 2000; Hunter, Boyle, & Warden, 2004; Kristensen & Smith, 2003; Tisak & Tisak, 1996). With regard to type of bullying experienced, victimized youths who experienced verbal bullying were the least likely to seek help, followed by indirect bullying (i.e., exclusion, rumors). Youths who experienced direct bullying (i.e., physically hurt or property stolen) were the most likely to seek help (Baldry, 2005; Elsea, 2001; Rigby & Johnson, 2005). In terms of their role in the bullying incident, youths were more likely to seek help from a teacher or other school staff when they witnessed bullying versus if they themselves were the target (McLaughlin, Arnold, & Boyd, 2005; Rigby & Johnson, 2005).

When personal and environmental characteristics were examined together, Unever and Cornell (2004) found that bullying chronicity was the strongest predictor of help seeking. However, they also found that perceived school climate that was supportive of bullying interfered with students' willingness to seek help. Hunter, Boyle and Warden (2004) found that identifying as female and the experiencing a greater level of distress during the victimization were the strongest predictors of help seeking. Lastly, Newman and colleagues (2001), in addition to the effect of gender on help seeking intention, found that boys who were more confident in their peer relations were more likely to seek help compared to less confident boys. However, the opposite pattern emerged for girls with those feeling more confident in their peer relations seeking less help from adults for bullying.

As such, the research on understanding the factors associated with help seeking by youths who are victimized has grown. However, research remains limited in regarding how youths come to the decision to seek help in response to bullying. Understanding this process is key when designing interventions with the aim of increasing help seeking behaviour.

Models of Help Seeking

A review of the literature suggests that models of help seeking for bully/victim problems have not yet been clarified. However, help seeking for mental health difficulties in adults and youths has been studied extensively. As such, a review of the latter area is presented and discussed in relation to help seeking for victimization. While differences exist between help seeking for mental health difficulties and in reaction to being bullied, a review of this literature may provide some guidance for the use of the TPB model in understanding youths' behaviours in reaction to bullying.

Researchers have attempted to develop theoretical models to understand the pathway that begins with the realization that a difficulty exists to communicating the psychological nature of the distress to a health or mental health professional. While help seeking is generally

understood as being influenced by both personal and interpersonal factors, the majority of theories of help seeking have focused on the personal, social, and economic factors that are associated with an individual's access to services (Andersen, 1995; Cabiya et al., 2006; Powers, Eiraldi, Clarke, Mazzuca, & Krain, 2005; Tijhuis, Peters, & Foets, 1990). However, Leaf and Bruce (1987) cautioned that attempting to understand help seeking by increasing the number of factors entered into conceptual models prevents empirical examination as it is difficult to decide on which variables to examine in order to understand the underlying processes. Mechanic (1979) further noted that the tendency to add variables (e.g., demographic variables, SES) to the models of help seeking does little to add to the understanding of this process and the models have been found to provide only modest predictive ability for actual help seeking behaviours. Lastly, Leaf and Bruce (1987) and Rickwood and colleagues (1990) have commented that the theories are often descriptive rather than explanatory as they often delineate many of the correlates of help seeking behaviour but lack a sound theoretical framework.

As such, many researchers have emphasized the need to understand the underlying factors at the individual level, as well as the interpersonal factors, when developing a theoretical model of help seeking in youths (Kessler, Brown, & Broman, 1981; Rickwood et al., 2005; Rogler & Cortes, 1993). Researchers have posited that an individual's social inferences about him or herself and the environment should be taken into consideration when examining help seeking behaviours. Specifically, examining adolescents' perceptions and evaluations of themselves, their social network, their difficulties, and the sources of help that are available to them have been hypothesized to be relevant factors (Boldero & Fallon, 1995). Indeed, many of the models do include both cognitive and/or psychological factors within the adolescent as well environmental influences such as social network, culture and context (Cauce et al., 2002; Logan & King, 2001; Rickwood et al., 2005). Unfortunately, many of the findings based on these models have not been consistent which suggests that much research remains to be done to

understand these behaviours (Kuhl, Jarkon-Horlick, & Morrissey, 1997). Furthermore, help seeking behaviours involve decision making at various points along the way and the reported models do not clearly articulate the actual process of how an adolescent makes the decision to seek help and what factors are involved once they recognize the symptoms and the need for help.

Rationale for Victim Help Seeking and the TPB Model

Rickwood and colleagues (2005), based on the conclusions of a review of 19 research papers on help seeking in adolescence, have emphasized the importance of integrating the wide range of findings into a coherent model based on theory. Researchers have begun, in a limited sense, to utilize the components of the TPB model to examine the predictive ability of an individual's attitudes, subjective norms, and PBC for determining help seeking intentions and behaviours for mental health difficulties (Bayer & Peay, 1997; Rickwood et al., 2005).

Research examining the strength of the relationship between help seeking intentions and actual help seeking behaviours has found variable, but typically modest, results. Deane and colleagues (2001) found that youths' intentions to seek help from a guidance counselor predicted 13% of the variance in actual help seeking behaviour. Similarly, Rickwood and colleagues (2004) found correlations ranging from $r = .20$ to $r = .28$ between help seeking intentions and behaviours over a two week period.

One's attitude towards seeking help has been consistently implicated in actual help seeking behaviour (Kessler et al., 1981; Rickwood & Braithwaite, 1994; Tijhuis et al., 1990). Gould and colleagues (2004) surveyed coping and help seeking behaviours in 2419 American high school students and found an overall positive attitude towards seeking help as a method of dealing with depression. Furthermore, in adolescents, research has consistently demonstrated that one's attitude towards help seeking significantly predicts actual help seeking behaviour (Rickwood & Braithwaite, 1994; Tijhuis et al., 1990). When examining the factors that predicted intention to seek help, Bayer and Peay (1997) found that one's attitudes towards seeking help

and subjective norms significantly predicted whether individuals would seek help for a mental health difficulty.

With regard to subjective norms in help seeking for mental health difficulties, studies have found that perceived stigma from others reduces the likelihood of seeking help (Manion & Davidson, 1996) whereas social encouragement is associated with a greater likelihood of seeking help (Froijid, Martunnen, Pelkonen, von der Pahlen, & Kaltiala-Heino, 2007). Despite being understudied in the literature, researchers have emphasized the importance of the beliefs of significant individuals about help seeking in the decision to seek help (Froijid et al., 2007; Pirkis & Burgess, 1998; Rickwood et al., 2005; Tudiver & Talbot, 1999). In a Finnish sample, Froijid and colleagues (2007) found that greater concern from people close to the youths was associated with increased likelihood of help seeking from formal sources. In adults, the beliefs of intimate partners and general practitioners about whether an individual should seek help or not influenced professional help seeking (Pirkis & Burgess, 1998; Tudiver & Talbot, 1999). Furthermore, the influence of adults is hypothesized to be stronger in young adults compared to older individuals in determining behaviour (Logan & King, 2001).

In terms of perceived behavioural control, researchers have noted the importance of evaluating external factors, such as treatment-related and person-related barriers, when an individual decides to seek help for mental health difficulties (Rickwood et al., 2005). Treatment-related factors, such as cost and lack of access, and person-related barriers, such as poor problem recognition and mental health literacy, embarrassment and apathy, have been implicated as barriers to help seeking (Wilson, Rickwood, & Deane, 2007). The construct of perceived behavioural control takes into account restrictions within individuals and their environment, which may impede an individual's ability to engage in a desired behaviour. However, PBC also includes a self-evaluation of one's ability to engage in a particular behaviour. The lack of barriers has been found to be an important factor in access to services but is "but not sufficient in

ensuring adequate intervention for adolescents with emotional problems” (Froijd et al., 2007, p. 950) suggesting that the decision to engage in help seeking requires more than simply the lack of barriers. A review of the literature suggests that research has thus far not examined this concept within the area of help seeking and, therefore, it is a topic for future studies.

Following a review of the literature, it appears that researchers have not yet explored the factors associated with the TPB with regard to help seeking behaviours in youths who are bullied. However, in general, the literature on help seeking in youths and, in particular, in response to bully/victim situations, is scarce and the findings are inconsistent. Furthermore, the area generally lacks a clear theoretical model with which to examine such a complex phenomenon such as making the decision to seek help. Given this review of the literature, I propose that the Theory of Planned Behaviour is one such model that would be applicable in examining the factors which are predictive of help seeking behaviours of youths who are victimized. Therefore, I hypothesized that attitudes, subjective norms, and perceived behavioural control, with regard to help seeking for bully/victim problems, would account for a significant amount of variance in help seeking intentions. In turn, I hypothesized that help seeking intentions and perceived behavioural control would also predict a significant amount of variance in actual help seeking behaviour (see Figure 2).

There are several important reasons for examining help seeking behaviours in response to bully/victim problems within the context of the Theory of Planned Behaviour. Theoretically, the widely used model of understanding behaviours has not been applied to this area in a systematic manner and doing so would greatly increase researchers' understanding of this complex behaviour. From a practical perspective, if help seeking behaviours in youths could be increased, clinicians and other relevant individuals would be able to access a greater number of young people in need of services and help. Furthermore, understanding the antecedents to help

seeking would allow interventions to target the specific factors that are theoretically and empirically linked to the outcome behaviour thus improving the likelihood of behaviour change.

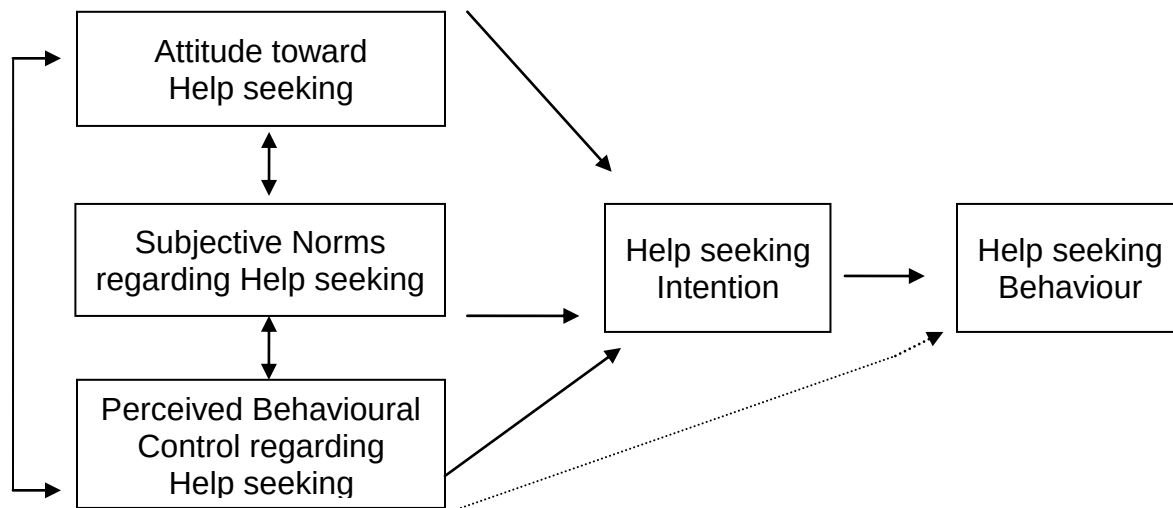


Figure 2. TPB Model of Help Seeking Behaviour

Bystander Intervention Behaviours in Response to Bully/Victim Problems

In addition to help seeking, whole-school bullying prevention and intervention programs encourage youths who witness bullying to intervene on behalf of their victimized peers if they feel safe to do so (Britney & Title, 1996; Newman-Carlson, & Horne, 2004; Olweus, 1993; Salmivalli, 2001b; Salmivalli et al., 2005). Strategies used for achieving this goal include activities to increase perspective taking, role playing assertive responses to increase the likelihood of engaging in intervention behaviour, class activities to increase sensitivity to being victimized, and installing clear class rules about managing bully/victim problems so intervention behaviour is self evident (Olweus, 1994; Salmivalli et al., 2005; Smith & Sharp, 1994; Rigby & Slee, 2008). Unfortunately, program evaluators have found mixed results with regard to changes in students' attitudes, intentions, and behaviours (Boulton & Flemington, 1996; Olweus & Alsakar, 1991; Stevens et al., 2000). Additionally, although several interventions have been found to change students' attitudes towards intervening when they observe bullying, this attitude change often does not bring about the corresponding behaviour change (Salmivalli et al., 2005; Tisak & Tisak, 1996).

One possible explanation for the mixed results is that we have no model for intervention which examines the determinants of the behaviour in question. In fact, researchers (Rigby, 2005; Rigby & Johnson, 2006; Salmivalli & Voeten, 2004; Stevens et al., 2000) have recently commented that there has been limited effort by the research community to identify and understand the variables that influence the manner in which youths respond to bullying. Some of the work that has been completed has identified a range of social, cognitive, and contextual factors associated with intervention behaviours that are consistent with the Theory of Planned Behaviour (Stueve et al., 2006; Rigby & Johnson, 2006). Furthermore, a number of researchers have recently begun recognizing the utility of the TPB constructs in understanding intervention behaviours in youths (Rigby & Johnson, 2006; Salmivalli & Voeten, 2004; Stevens et al., 2000; Stueve et al., 2006).

Rationale for Bystander Intervention Behaviours and the TPB Model

With regard to the link between intentions and behaviours, a review of the research suggests that youths tend to self-report that they would intervene in a situation when confronted; although the observational data suggest that youths overestimate their actual behaviours (Adair, 1999; Rigby, 1996; Rigby & Johnson, 2006). Rigby and Johnson (2006) theorized that youths may over-report their intention because of: 1) the effect of social desirability and/or 2) factors that may act as barriers once they are in the bullying situation, such as being unaware of who to approach for help. The lack of correspondence between youths' intention to intervene and their actual behaviors suggests that other factors, such as perceptions of barriers or control beliefs, may play a greater role in influencing whether youths engage in intervention behaviours or not (Rigby & Johnson, 2006).

The relationship between youths' general attitudes towards bullying and engaging in bullying has been extensively studied (Almeida, Correia, & Marinho, 2010; Rigby & Johnson, 2006; Salmivalli & Voeten, 2004). However, the association between attitudes towards the

specific behaviour of intervening in bully/victim problems and self-reported behaviour has only received limited attention (McLaughlin et al., 2005; Rigby & Johnson, 2005). Overall, a more positive overall attitude towards youths who are victimized has been negatively correlated with engaging in bullying behaviours (Rigby & Slee, 1993; Rigby, 2005) and positively correlated with intervening and supporting peers who are victimized (McLaughlin et al., 2005; Rigby & Johnson, 2006). Salmivalli and Voeten (2004) found that pro-bullying attitudes predicted student behaviour in response to bully/victim problems, such as defending their victimized peer or joining in on the bullying behaviour. However, the attitude-behaviour link emerged as rather modest (Salmivalli & Voeten, 2004). Researchers have only recently begun to examine what motivates youths to intervene. For example, using qualitative data, researchers have found that youths tend to intervene because of a perceived sense of justice (i.e., they feel bullying is wrong and not fair) and an attitude that it is 'good to stick up for people' (McLaughlin et al., 2005; Rigby & Johnson, 2005). As such, consistent with research utilizing the TPB model, future research in this area, should examine attitudes that youths hold specifically about intervening in a bullying incident as opposed to their overall attitude towards bullying.

Group level processes such as peer group pressure and conformity to the pressure have been implicated in bullying related behaviours for some time (Almeida et al., 2010; Olweus, 1993; Orpinas et al., 2003). It has been hypothesized that, in addition to personal normative beliefs about bullying related behaviours, youths are greatly influenced by the perceived group norms and that both factors may affect behaviour in a unique manner (Henry et al., 2000; Huessman & Guerra, 1997). Indeed, perceptions about how significant others expected that a youth would behave in a bullying incident has significantly predicted actual behaviour and accounted for a significant amount of variance in bullying related behaviours (Almeida et al., 2010; McLaughlin et al., 2005; Rigby & Johnson, 2005; Salmivalli & Voeten, 2004). Other researchers examined the differential influence of the expectations of parents, friends, and

teachers on behaviour and determined that, among students of both genders in Grades 6 to Grade 9, the expectations of parents and friends were significantly correlated with expressing support for a victimized peer while teachers' expectations were not (McLaughlin et al., 2005; Rigby & Johnson, 2006). Furthermore, the expectations of friends contributed significantly more variance over and above the variance contributed with parents' expectations (Rigby & Johnson, 2006). The results are consistent with past research that has suggested that in preadolescence and adolescence, peers groups play an increasingly important role in the decision about behaviours (Dworetzky, 1995; Mash & Wolfe, 2007). Therefore, it appears that while the subjective norms associated with parents and friends are both associated with the role that youths play in bully/victim incidents, the group norms of peers may be a greater influence on behaviour within the school context.

According to the TPB, perceived behavioural control (PBC), or the perceived ability to actually engage in the desired behaviours, is associated both with intentions and behaviours. Yet, researchers have not yet examined this specific variable within intervention behaviours. However, researchers have examined the construct of self-efficacy, which is viewed as conceptually similar by many to PBC (Ajzen, 1991, 2002). Self-efficacy can be defined as an individual's belief in his or her competence or level of functioning (Bandura et al., 1980). Studies have found that one reason cited as to why youths fail to intervene is the lack of perceived ability to cope with the situation and lack of self-efficacy for intervening (Gini et al., 2008; Pepler et al., 1994). Youths who witness bullying were more likely to act if they feel they know what actions to take and believe they have the necessary resources (Cramer, McMaster, Bartell, & Dragna, 1988; Sutton & Smith, 1999). Self-efficacy for intervention behaviours has been posited to play such an important role, that youths may refrain from intervening despite feeling empathy towards their victimized peer (Gini et al., 2008). Lastly, researchers have stressed the importance of examining perceptions of self-efficacy with regard to the specific

behaviour of intervening as it takes into account the perceived barriers to completing the behaviour as opposed to simply asking about general levels of self-efficacy, which have not been significantly associated with intervention behaviours (Andreou & Metallidou, 2004; Gini et al., 2008; Rigby & Johnson, 2005).

When examined all together, many of the variables similar to the components of the TPB have been found to be predictive of intervention intentions. Researchers have generally concluded that those youths more likely to intervene are characterized as being younger, holding pro-victim attitudes, believing that their friends expect that they would intervene, and possessing past experiences intervening (Gini et al., 2008; McLaughlin et al., 2005; Rigby & Johnson, 2006; Salmivalli & Voeten, 2004). Rigby and Johnson (2005) found that the variables accounted for 52% of the variance in youth's expressed intention to intervene. This can be viewed as a positive step forward in an area that has been neglected for quite some time by the research community.

However, while the constructs similar to those espoused by the TPB have been assessed, researchers have not yet fully examined this theoretical model within this context. An important aspect of TPB is the importance of the specificity of the attitudes, subjective norms, and PBC with respect to the behaviour in question (Ajzen, 1991). Researchers have utilized measures of one's general attitudes towards bullying as a predictor of intervention behaviour as opposed to using a measure of one's attitude towards intervening in bully/victim problems and the usefulness of such behaviour. Similarly, one's perception of self-efficacy in general or in social situations has been assessed, yet one's self efficacy in intervening has been cited as a reason for remaining uninvolved. One's general sense of self-efficacy does not take into account the barriers to completing the intervention behaviour. By examining one's perceived behavioural control, as defined by the TPB, researchers would be able to take into account one's perceived ability to engage in the specific behaviour of intervening and the barriers that are salient in such situations. As such, it would be worthwhile to examine one's attitudes, subjective norms, and

perceived behavioural control with specific regard to intervention behaviours in predicting intentions and behaviours.

While researchers have introduced the TPB as a method of examining bystander behaviours and have included appropriate constructs in their studies, they have not conducted adequate model testing of the TPB within this domain. It is unclear how much variance PBC and intentions to intervene predict self-reported behaviours. It is also unclear how much variance the three constructs of attitudes, subjective norms, and PBC account for in one's intentions to engage in intervention behaviours. The implication of such limitations is that a model of intervention behaviours has not been clearly established in the literature and, as such, makes altering such behaviour through bullying prevention programs difficult to understand. For example, the inability of a program to change intervention behaviours may be a result of limitations at a number of points within the model, such that youths' attitudes towards the behaviour may have become more positive but they may be held back by the perceived ability to successfully engage in the behaviour. Conducting model testing of the TPB within the context of intervention behaviours would result in theoretical understanding and direct implications for program development and assessment.

The current research program will examine the plausibility and robustness of the TPB model in predicting and explaining intervention intentions and behaviours (see Figure 3). More specifically and consistent with the theory, it is posited that youths' attitudes, subjective norms, and perceived behavioural control with regard to intervening in bully/victim problems will account for a significant amount of variance in intervention intentions. Furthermore, intervention intentions, along with perceived behavioural control, will also account for a significant amount of variance in intervention behaviours.

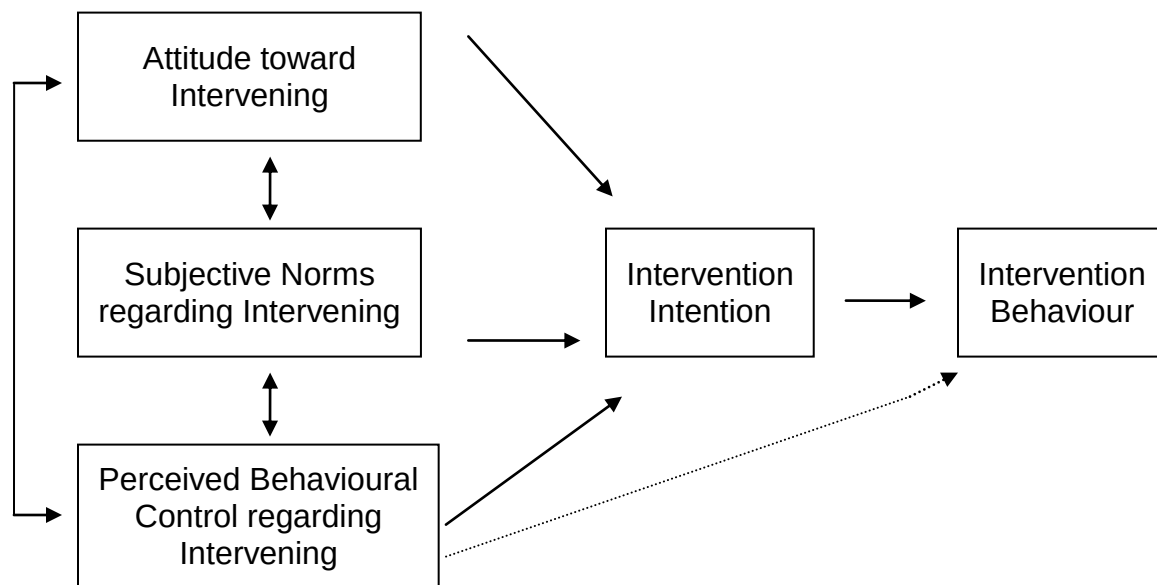


Figure 3. TPB model of Intervention Behaviour

School Climate and Responses to Bully/Victim Problems

Researchers have long recognized the role of school climate in the development, perpetuation, and reduction of bullying (Orpinas & Horne, 2006; Orpinas et al., 2003). In fact, the premise behind many of the bullying prevention programs implemented in schools today is that bullying is a systemic problem which may be remedied by intervening both at the individual and systems level. At the systems level, programs aim to reduce tolerance for bullying behaviour while promoting a more interventionist role for students who witness bullying. Additionally, many programs include recommendations for school staff which would decrease the occurrence of bullying (Orpinas & Horne, 2006). Programs focus on encouraging teachers and school staff to recognize bullying behaviours as problematic as opposed to developmentally appropriate behaviours and implementing strategies to increase the likelihood that victimized students could seek help from adults at school (Orpinas & Horne, 2006). Due to the importance that researchers place on school climate, this construct is proposed as an additional factor to be included in the TPB model which may affect youths' intentions to seek help or intervene and their actual engagement in these behaviours in response to bully/victim problems. A review of

the literature suggests that school climate may affect the behaviour of students through multiple mechanisms. The following section will examine the concept of school climate, the relationship between this construct and student well-being, and the role that school climate may play in influencing help seeking and intervention behaviours in youths in response to bully/victim problems.

Conceptualization of School Climate

The concept of school climate, or the developmental ecology of schools, and its influences on the school community of staff and students, has long been recognized by school administrators and researchers as playing a vital role in the academic achievement and adjustment of those individuals who work or study there (Felner & Felner, 1989). Historically, schools have been viewed as socialization agents for children and youths as, in addition to providing formal education, schools were expected to aid in the social, moral, and behavioural development of their students (Bronfenbrenner, 1979; Perry, 1908). The concept of a “school climate” arose in 1908 when Perry, an educational leader, hypothesized an association between school climate, or “school spirit”, and school effectiveness and student wellbeing. However, the empirical examination of the construct of a school climate did not evolve until later in the 20th century.

According to Anderson (1982), the research on school climate developed from the literature on organizational climate and school effects research. Research on the organizational climate of workplaces originated through studies examining the dynamic interaction between an employee’s personal needs and the environmental press, or external influences on motivation, of an organization, which may frustrate or satisfy the employee needs (Murray, 1938). While Murray (1938) focused on the measurement of employee needs and personality, the development of measures to assess environmental press was neglected until Pace and Stern (1958) posited that individual behaviours could be better predicted when the construct of environmental press

included a reference to the social demands inherent in the situation. In an interesting study, Pace and Stern (1958) sought to assess the atmosphere of academic institutions by asking students to serve as “reporters” and assess variables such as the nature of the relationships among staff and students, the curriculum, student organizations, the facilities, and the classroom methods of their school. The basic premise of the study held that student behaviour would be influenced by the fit between the environmental features of the school and their own personality. Furthermore, the researchers held that a student consensus of the features of a school would represent the environmental climate (Pace & Stern, 1958). Soon after, research examining college climates and school-related outcomes supported Pace and Sterns’ proposition about the importance of the environment on individual perceptions and behaviours (see Anderson, 1982, for a review). However, while the notion of school climate was introduced, the conceptualization of the nature of school climate remained an area of disputation.

According to Anderson (1982), the conceptualization of school climate developed over time more intuitively than based on empirical work and findings. For example, Halpin and Croft (1963) understood school climate to be the personality of an organization as it is to an individual. Similarly, Cohen (2006) posited that school climate represented the subjective experience of being in a school. However, over time, various researchers have attempted to understand and conceptualize the underlying dimensional structure of school climate. Tagiuri’s (1968) theoretical work, framed within the modern paradigm and using the social-ecology model, first conceptualized school climate as a taxonomy comprising of four elements: 1) ecology, which referred to the physical nature of the school, 2) milieu, which referred to the background characteristics of the students and teachers (i.e., socio-economic status, gender), 3) social system, which referred to the relationships and patterns of interactions between and among the staff and students, and 4) culture, which included the beliefs, values, cognitive structures, and meanings. Similarly, Insel and Moos (1974) proposed six different ways of conceptualizing human

environments and included both physical (e.g., meteorological, geographic variables, structural dimensions of organizations) and social (e.g., personal characteristics, psychosocial characteristics) dimensions of the environment inhabitants. In examining the psychosocial qualities of environments such as schools, Insel and Moos (1974) focused on the nature of the relationships among inhabitants (relationship dimension), the opportunities for personal growth and development of self esteem (personal development or goal orientation dimension), and the extent to which the environment is orderly and responsive to change (system maintenance and change dimension).

More recently, Stockard and Mayberry (1992) proposed a model of school climate based on sociological, economic, and psychological theories of organizations. According to the researchers, school social-psychological climate was composed of two broad categories: 1) Social Order, and 2) Social Action. Social Order phenomenon referred to the broad school level structures that facilitate student achievement and outcomes such as norms, values, and organizational structure. Conversely, Social Action variables referred to micro-level, small group organizational phenomenon that may be assessed within the classrooms such as the day to day interactions and quality of teaching. The two categories can be further categorized as Expressive components which promote positive feelings among the group, maintain cohesion, and motivate (i.e., norms, values, relationships) or Instrumental components which clarify or maintain goals, and include the material to accomplish the tasks (i.e., organizational structure, quality of teaching).

Anderson (1982) conducted an extensive review of over 200 references examining the concept of school climate and found that the operationalization of school climate generally referred to a combination of Taguiri's (1968) two variables, social systems and school culture. The quality of the interactions among the staff, students, and administration and between the three groups and the formal and informal structures that govern the interactions between the

three parties have been included in the variable named social systems (Anderson, 1982). The second variable, school culture, generally has referred to the unwritten beliefs, values, norms, traditions, and attitudes held by the staff and students (Anderson, 1982; Brookover et al., 1997; Hoy, 1990; Power et al., 1989). Similarly, Chen and Weikart (2008) concluded that, while a formal definition of school climate has yet to be agreed upon by researchers, it is generally hypothesized to include the expectations, beliefs, and impressions or perceptions of the students and staff about their school. As such, a general definition of school climate as encompassing the quality and frequency of interactions among and between students and staff and including the subjects' perceptions, beliefs, and attitudes towards the school system has been frequently used among researchers (Anderson, 1982). Additionally, the school climate has been posited to encompass all areas within the school, including but not limited to, the classrooms, hallways, school yard, and teachers' lounge (Ashby & Krug, 1998).

Despite the general agreement on a common understanding of the concept, ambiguity remains when seeking to define the concept of school climate and the specific features that comprise the construct. This may be due to the diversity of typologies, differences in theory base or units of measurement, and the use of subjective versus qualitative data (for a full review, see Anderson, 1982). Anderson (1982) further suggested that the dimensions that are included in each empirical investigation have depended on the theoretical orientation of the researchers. For example, Haynes and colleagues (1997) posited the following school-level factors as central to the understanding of school climate and in predicting academic achievement and well being: achievement motivation, collaborative decision making, equity and fairness, general school climate (i.e., quality of interactions among individuals, degree of respect), order and discipline, parent involvement, school-community relations, staff dedication to student learning, staff expectations, leadership, school building, sharing and resources, caring and sensitivity, student interpersonal relations and student-teacher relations. In their studies, Brand and colleagues

(2003) added the variables of perceptions of safety, support of pluralism, and diversity to their conceptualization of school climate. In a review of educational policy statements regarding school climate, Cohen and colleagues (2009) concluded that the majority relied on vague, meaningless definitions and only six included reference to the term *subjective experience* of students. Therefore, as a result of the variability in definition, there remains a lack of a clarity regarding the salient features that may be included in the construct of school climate.

Although researchers have not been able to agree on a specific operationalization of the school climate construct, it has been generally accepted that when assessing school climate, it is the person-environment fit between the personality and needs of the inhabitants and the features of the environment that determines the level of adjustment and well being of the residents (Anderson, 1982; Insel & Moos, 1974; Kuperminc, Leadbeater, Emmons, & Blatt, 1997). As such, research commonly has focused on the individual's perceptions of experiences of the school climate as opposed to objective accounts of school features (Anderson, 1982; Eccles et al., 1993; Griffiths, 2000).

School Climate and Student Outcomes

Research has yielded consistent results regarding the association between students' perceptions of their school experiences and social climate of the classroom with a variety of academic outcomes (Brand, Felner, Shim, Seitsinger & Dumas, 2003; Rowan, Raudenbush, & Kang, 1991; Stewart, 2008; Trickett & Moos, 1973; Way, Redder & Rhodes, 2007). A review of literature suggests that a positive school climate has been directly associated with increased student academic achievement and academic motivation (Brookover et al., 1997; Griffiths, 1995; Rutter, 1983). Stewart (2008) defined three dimensions of school climate as consisting of school culture, school organization, and school social milieu and found that school climate predicted student achievement. When examining the construct in more detail, Anderson (1982) concluded that student learning and academic achievement was associated with teacher engagement,

positive peer norms, cooperative environment, high expectations, rule consistency, and clearly defined school rules and goals. Stockard and Mayberry (1992) added the variables of orderly school environment, high morale, and active engagement of students to the selection of variables that predict academic achievement. Additionally, Roeser and Eccles (1998) found that students' sense of competence and academic values was predicted by the level of fairness and equal standards displayed by the teachers. A positive relationship between teachers and students was also associated with higher levels of motivation and school engagement and less delinquent behaviours (Brand et al., 2003; Karcher, 2002; Lo et al., 2011).

As opposed to the extensive literature on academic outcomes, little research has been done examining the effect of various school-level variables on the psycho-social adjustment of youths. This is particularly important since during the transition from elementary to middle school, school climate and the opportunities afforded by the school environment become increasingly associated with the emergence of psycho-social difficulties (Eccles et al., 1993; Seidman et al., 1994). For example, as youths age, establishing relationships and a sense of autonomy increases in importance and school environments may facilitate or hinder these needs and be associated with psycho-social difficulties (Eccles et al., 1993; Kuperminc et al., 1997). The importance of exploring the concept of school climate is further illustrated by findings that suggest that school climate can have long-lasting effects on youths' psychosocial development and have implications for their future functioning (Haynes et al., 1997).

Limited research has suggested that school climate affects student cognitive and affective behaviour, values, psychological adjustment, such as depression, and overall satisfaction (Anderman, 2002; Dupper & Meyer-Adams, 2002; Gadin & Hammarstrom, 2005; Kuperminc, Leadbeater, & Blatt, 2001; Ma, 2003; Roeser & Eccles, 1998; Way, Reddy, & Rhodes, 2007). The schools' social climate has also been found to be associated with the emergence of emotional and behavioural problems (Caldas, 1993; Goldschmidt & Wang, 1999; Hawkins,

Catalano, & Miller, 1992; Kuperminc et al., 1997; Kuperminc, Leadbeater, & Blatt, 2001; Roeser & Eccles, 1998; Simon-Morton et al., 1999) and levels of self-esteem (Hoge, Smit, & Hanson, 1990; Way et al., 2007). Brand and colleagues (2003) conducted a large scale study of 188 schools and concluded that a positive perception of school climate was associated with increased emotional adjustment. Similarly, Kuperminc and colleagues (2001) found that positive perceptions of school social climate moderated the negative effects of self criticism on both externalizing and internalizing problems and the negative effects of low self-efficacy on internalizing problems. Utilizing longitudinal data, Roeser and colleagues (1998) determined that student's positive perceptions of school climate measured in Grade 7 predicted emotional functioning a year later. Similar unidirectional results were found by Way and colleagues (2007) in a longitudinal study of 1,451 youth from sixth to eighth grade. With regard to self-esteem, longitudinal studies have found that more positive perceptions of school climate, particularly teacher support, were associated with improved self-esteem (Hoge et al., 1990). The concept of school belonging has received more focus in recent years as a basic psychological need (Baumeister & Leary, 1995; Deci, Vallerand, Pelletier, & Ryan, 1991) and has been linked to academic achievement as well as psychological and behavioural outcomes (Anderman, 2002; Fine, 1989).

Researchers have attempted to delineate the structure of the construct of school climate to identify which factors of a school's environment are the most significant in determining a variety of behavioural and psychosocial outcomes (Bachman & O'Malley, 1986; Kuperminc et al., 1997; Way et al., 2007). Three aspects of school climate have been posited to be essential to psychosocial outcomes: 1) relatedness, which refers to the nature of the relationships between teachers and students and among students, 2) opportunities for autonomy, which refers to perception of self determination or autonomy in making decisions, and 3) the existence of clear, consistent rules (Bachman & O'Malley, 1986; Kuperminc et al., 1997; Way et al., 2007). In

examining the social correlates of youths' health risk, the international Health Behaviour in School-Age Children (HBSC) Study, determined that perceptions of decision making, positive relationships among students and being supported by teachers were significantly correlated with smoking, physical activity, and perceived health and quality of life (Currie et al., 2000). Schools that provide safe, responsive environments have been found to foster a sense of connection to the school (Blum, McNeely, & Rinehart, 2002) and this connection has emerged as a strong predictor of adolescence academic and health outcomes (McNeely, Nonnemaker, & Blum, 2002). A strong connection to one's school has also been found to be a protective factor for violence and risky behaviours including sexual activity and drug use (Catalano et al., 2004; Karcher, 2002). The above aspects have been hypothesized as being particularly important for middle school students as they are consistent with the developmental needs of youth of that age (Eccles et al., 1993).

School Climate and Responses to Bullying Behaviour within a TPB Model

Researchers have begun to emphasize the importance of school climate in influencing youths intention and behaviour in bully/victim problems over and above individual and peer norms (Eliot, Cornell, Gregory, & Fan, 2010; Kumar, O'Malley, Johnston, Schulenberg, & Bachman, 2002). A plethora of prevention programs have been developed which presume that altering the overall school climate would result in changes in individual attitudes and behaviours for a range of topics from safe sex, conflict resolution, to smoking prevention (Basen-Engquist et al., 2001; Shapiro & Watson, 2000; Simon-Morton et al., 1999). For example, Kumar and colleagues (2002) determined that the normative school climate did in fact influence self-reported youth substance use. Altering the school climate to create an atmosphere in which bullying is unacceptable is one of the main components of widely used whole school bullying prevention programs (Olweus, 1992; Orpinas & Horne, 2006). However, it remains unclear how

school climate and specific dimensions of school climate affect behavioural outcomes, particularly help seeking and intervention behaviours.

School climate factors, such as teacher responsiveness, have been associated with the likelihood that youths will seek help for bullying (Eliot et al., 2010; Newman, 2003; Unever & Cornell, 2004). Newman (2003) posited that that a classroom climate whereby teachers were perceived as being caring and responsive, being authoritative, and modeling and teaching effective problem solving skills, would be associated with an increased likelihood that students will seek help from a teacher. Other school climate factors that have been implicated in help seeking include perceptions of tolerance for aggression, firmness of rules and discipline, and perceived expectations for behaviours (Newman, 2003; Unever & Cornell, 2004). Factors within the school may also serve as barriers to help seeking such as perceived stigma, fearing a lack of confidentiality, and believing teachers do not possess the resources to deal with bullying (Cowie & Olafsson, 1999; Dubow, Lovko, & Kausch, 1990; West, Kayser, Overton, & Saltmarsh, 1991).

Although the goal of the majority of school wide programs is to alter the school climate, there is paucity in the literature on the facets of school climate that are associated with youths' intervention behaviours as bystanders. Recent research on school climate has suggested that a positive school climate may be associated with greater empathy and perspective taking (Barr & Higgins-D'Alessandro, 2007; Battistich, Solomon, & Watson, 1997; Carlos, Fabes, Laible, & Kupanoff, 1999; Gallay & Pong, 2004). However, the results have not been entirely consistent. Pro-social behaviours, such as intervening on a peer's behalf, understood as 'enacted empathy', or the student response to a situation when experiencing empathy, and have been linked with other socially competent behaviours (Eisenberg & Fabes, 1990). In adolescents, emotional concern and perspective taking have been implicated in determining the likelihood of demonstrating pro-social behaviour (Eisenberg et al., 1987; Moore, 1990). According to Carlos and colleagues (1999) and Eisenberg and colleagues (2006), school climate has been posited to

play a significant role in the development of empathy through the promotion of concepts such as connectedness and cooperation. Gallay and Pong (2004) found that a positive school climate was associated with a greater sense of social responsibility which, in turn, was associated with increased active peer interventions for risky behaviours such as drinking and smoking. Conversely, Barr and Higgins-D'Alessandro (2007) found that student-peer relationships and student-teacher relationships were positively associated with emotional concern. School norms, defined as feelings of connectedness and cooperation, were positively associated with perspective taking. Overall, the results suggested that although school climate was significantly associated with empathy, it was not associated directly with pro-social behaviour. However, the results still suggested a link between school climate, empathy and pro-social and intervention behaviours.

As a result, research has suggested that school climate dimensions may be associated with the three antecedents in the TPB model when examining victim help seeking and bystander intervention behaviours. However, these factors have not been examined systematically within a theoretical framework of behaviour change. Accordingly, I will also extend the TPB model of help seeking and intervention behaviour to include a variable assessing school climate. Since group processes and school environment have been found to be significant factors in determining attitudes and perception of barriers, norms, and expectations, I posit that school climate will influence one's attitudes, subjective norms, and PBC regarding help seeking and intervention behaviours (see Figure 3 and Figure 4). As such, the three antecedents are hypothesized to mediate the relationship between school climate and intentions and behaviours.

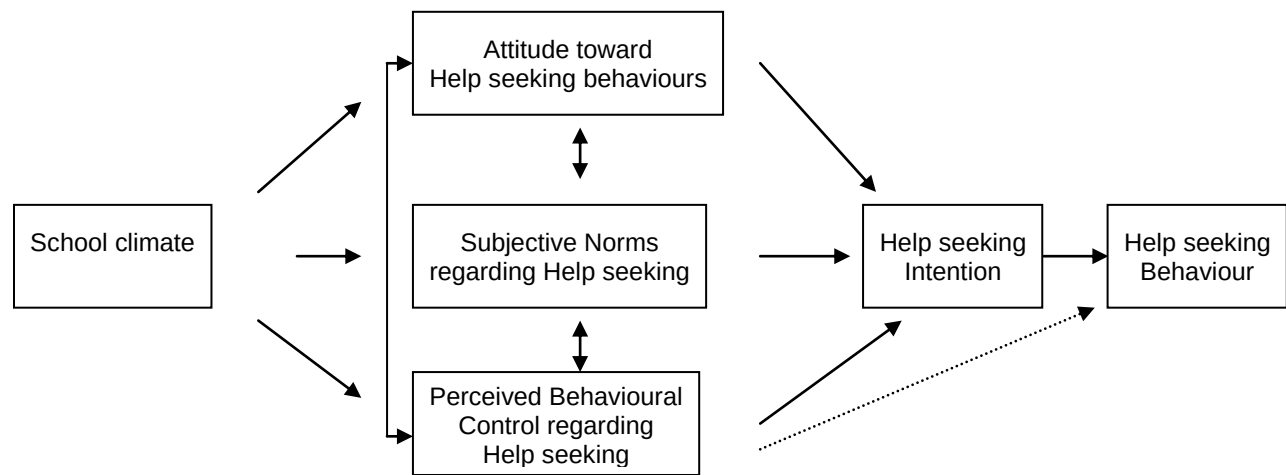


Figure 4. Extended TPB Model of Help seeking Behaviour

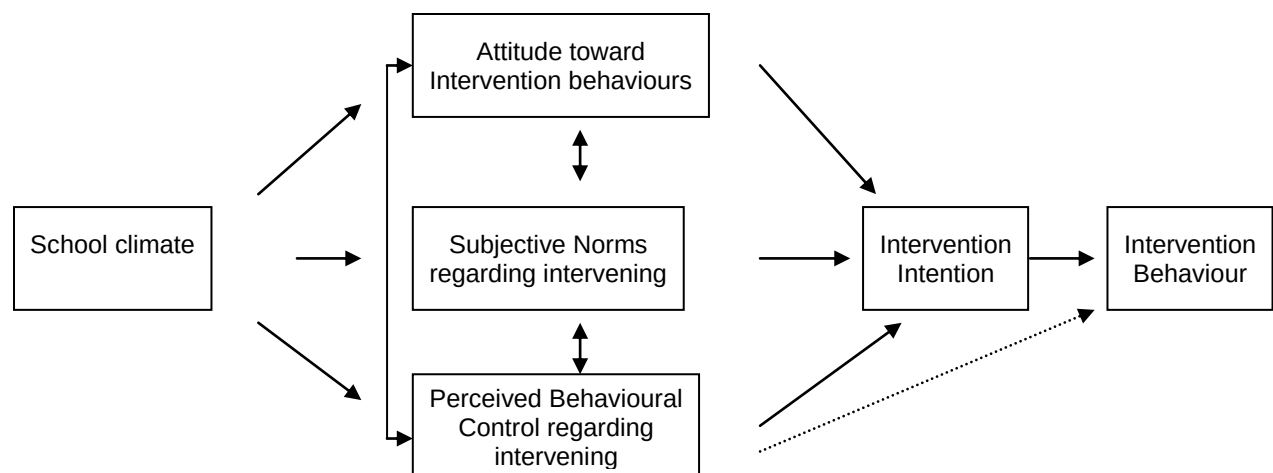


Figure 5. Extended TPB model of Intervention Behaviour

The Current Program of Research

A review of the literature has indicated that help seeking and intervention behaviours are integral aspects to bullying prevention programs. However, outcome studies examining changes in help seeking and intervention behaviors after the implementation of a school wide program have revealed mixed results (Berger, 2006; Peterson & Rigby, 1999; Stevens et al., 2000; Smith & Sharp, 1994). The lower level of program effectiveness has been attributed to a number of possible variables, e.g. variations in program components implemented or program fidelity (Smith et al., 2003; Smith et al., 2004; Stevens et al., 2001). However, it may be hypothesized that a lack of clear understanding of the determinants of the specific behaviours may have also contributed to the inconsistent results. Researchers have not yet fully examined the mechanisms which operate upon youths' decisions on how to react to bullying incidents, nor have they been able to utilized a theoretical model to further understand these complex behaviours. For these reasons, the first goal of this research program was to examine the antecedents of help seeking and intervention behaviours in response to bully/victim problems using a widely used model of behaviour, the Theory of Planned Behaviour (Ajzen, 1991). The second goal was to examine the role that school climate plays in determining help seeking and intervention behaviours. From a theoretical perspective, the results of the current program of research would contribute to the limited research in understanding the determinants of these complex behaviours and would open up new avenues for research. From a clinical perspective, increased knowledge of the mechanism through which youths decide to seek help or intervene in bully/victim problems would allow for the development of more targeted and effective school-based prevention and intervention programs.

Overview of Studies and Hypotheses

The current program of research consists of two studies. In the first study, I examine the proposition that the social and cognitive factors that determine whether a youth will engage in

help seeking or intervention behaviours may be subsumed within Ajzen's (1991) Theory of Planned Behaviour (TPB), a widely used and empirically robust model examining the motivational determinants of intentions and behaviours. In the second study, I seek to substantiate the results from the first study and to examine the utility of extending the TPB model with measures of school climate.

Study 1. The goal of the first study, involving short-term longitudinal data from two secondary schools, was to assess the robustness and utility of the TPB model to understand help seeking and intervention behaviours in a general sample of high school students. As such, two separate models were examined (see Figure 2 and 3). Based on previous work, I first hypothesized that the constructs related to attitudes, subjective norms, and perceived behavioural control would significantly predict intentions to seek help for bullying when they are victimized. With regard to bystander intervention behaviour, I hypothesized that youths' behaviour-specific attitudes, perceived subjective norms, and perceived behavioural control would explain a significant amount of variance in youths' intentions to intervene on behalf of a victimized peer. Second, due to the short-term longitudinal nature of the data, the full TPB model, including the construct of behaviour as assessed at Time 2, was tested. As such, I hypothesized that one's intention and perceived behavioural control with regard to victim help seeking as measured at Time 1 would account for a significant amount of variance in behaviour at Time 2. Similarly, I hypothesized that one's intentions and perceived behavioural control with regard to bystander intervention behaviours as measured at Time 1 would account for a significant amount of variance in intervention behaviours at Time 2.

Study 2. The second study, which used a cross-sectional sample of middle school students, had two goals. The first goal was to replicate a portion of the results from Study 1 by examining the plausibility and robustness of the TPB in explaining the youths' intention to seek help for bullying and engage in intervention behaviours as bystanders. As such, it was

hypothesized that the TPB antecedents of intentions, namely, attitude, subjective norms, and perceived behavioural control would account for a significant amount of variance in victim help seeking and bystander intervention intentions in two separate models.

The second goal of the study was to extend the TPB and include a measure of school climate, which has been hypothesized to be relevant to youths' reactions to bullying (see Figure 4 and 5). I hypothesized that the three TPB antecedents of intentions (i.e., attitude, subjective norms, and perceived behavioural control) would significantly mediate the relationship between school climate and both victim help seeking and bystander intervention intentions in youth.

CHAPTER THREE

METHODOLOGY

General Method

Overview

In order to examine the utility of the TPB model in understanding help seeking and intervention intentions and behaviours in middle and secondary school students, two studies were completed. The following sections detail the measures that were used in both studies. Subsequently, I will present the methods that were specific to each study.

Measures

Across the two studies that comprised this research program, participants completed the same measures to facilitate interpretation and generalization. The measures administered assessed demographic information, roles in bully/victim problems, and the TPB constructs for help seeking and intervention intentions and behaviours.

Demographic. Demographic information was collected from all study participants. Information included gender, age, grade, languages spoken at home, living situation, and parental education and occupation (Appendix A).

Frequency of bully/victim problems. To assess the extent to which students are involved in bullying, participants were asked to anonymously complete the Bully/Victim questionnaire (PrevNet 2004). This measure consisted of 18 items assessing a variety of aspects of bully/victim problems that students may have been exposed to within the school context. The definition of bullying behaviour as being systematic, repetitive, and including a power imbalance was provided at the onset of the questionnaire to orient students to the dependent variables (Olweus, 1992). The variables that were assessed included global measures, which inquired about the frequency with which the participants have been bullied, bullied other peers, or have witnessed bullying in their school in the previous four weeks. Items are measured using a 5

point Likert-type scale ranging from 1= never to 5= several times a week. Within the same measure, participants were also asked about the various forms of bullying that they had been subjected to, perpetuated on others, or witnessed in the same time frame. The forms of bullying inquired about included physical, verbal, social, racial and cyber bullying. Items were also measured on a 5 point Likert-type scale ranging from 1= never to 5= several times a week. A score of 3 or more, indicating a frequency of 2-3 times a month or more, has been used as a cut-off point by a number of researchers to refer to someone who experiences or engages in a meaningful amount of bullying (Dubé et al., 2009).

This measure was based on Olweus' original measure and its revised versions have been used extensively with a variety of populations including American, Canadian, and Norwegian students (Olweus, 1992; Bauer, Lozano & Rivara, 2007). Olweus (1996) reported an internal consistency ranging from 0.80 to 0.90, while Kyriakides, Kaloyirou, and Lindsay (2006) found that the measure has satisfactory psychometric properties in terms of its reliability and construct validity. This measure has been found to be highly correlated with other types of measures assessing bullying and victimization (Solberg & Olweus, 2003). In sum, this measure has been widely used with and recommended for middle and high school students (Austin & Joseph, 1996; Pellegrini et al., 1999).

Measures of TPB. To assess the social and cognitive determinants of help seeking and intervention behaviours in response to being victimized or witnessing bully/victim problems, a measure of TPB was constructed according to the guidelines set out by Ajzen (2006) and other researchers (Francis et al., 2004). This new measure was entitled the TPB Measure of Reactions to Bullying (Santor & Rosval, 2008) (see Appendix B).

There have been two schools of thought related to the construction of TPB questionnaires (Manstead & Parker, 1995). Items may inquire directly about the construct (direct measures) or they may refer to the determinants of the construct (belief-based measures). Using a belief-based

measure, attitudes are determined by salient behavioural beliefs weighted by an evaluation of the belief (outcome evaluations), subjective norms are determined by salient normative beliefs weighted by one's motivation to comply, and PBC is determined by control beliefs weighted by the influence of said beliefs. When the two methods were compared, only modest correlations have been found (Ajzen, 1991). Ajzen (1991) has suggested that the reason is that the two methods induce different responses, with the direct measures evoking relatively automatic responses while belief-based measure require respondents to use more careful deliberation.

Researchers have typically utilized direct measurements of the TPB constructs and have found that they are generally more strongly associated with behavioural intentions and behaviours (Gagné & Godin, 2000; Madden, Ellen, & Ajzen, 1992; Notani, 1998). However, the question of whether to utilize direct or belief-based items to measure the TPB constructs remains unresolved and research examining the predictive validity of utilizing each method is mixed (Ajzen, 1991; Ellen & Madden, 1990). Ellen and Madden (1990) found that measures requiring more concentration and deliberation on the part of the respondent yielded higher predictive validity of intentions and attitudes. Conversely, Wilson and colleagues (Wilson & Dunn, 1986; Wilson, Dunn, Bybee, Hyman, & Rotondo, 1984) determined that attitudinal measures that were based on more automatic responses were more highly correlated with intentions and behaviour. Fazio (1986) argued that more accessible attitudes, that are evoked using direct measures, would also be highly accessible when respondents are faced with the attitude object and therefore, are more likely to direct behaviour. Notani (1998) determined that a direct measure of PBC was equally predictive of intentions and behaviours as a belief-based measure. Researchers generally recommend utilizing a measure that includes both direct and belief-based items as the latter allows researchers to include additional factors that may influence intentions and behaviours (Ajzen, 2006; Manstead & Parker, 1995).

In the current project, I opted to utilize only a direct measure of the TPB model. This was done for both theoretical and pragmatic reasons. A review of the literature suggests that direct measures are equally or more strongly associated with intentions and behaviours than belief-based measures (Madden et al., 1991; Notani, 1998). Numerous researchers have utilized only direct measures of the TPB model and demonstrated high predictive validity (Doll & Ajzen, 1992; Fife-Shaw, et al., 2007; Notani, 1998). Pragmatically, the measures were part of a large battery of questionnaires the participants were asked to complete and including belief-based items would have presented a significant burden on the participants and the school.

Consistent with the manuals and research on measure development in the Theory of Planned Behaviour (Ajzen, 2006; Francis et al., 2004), the target behaviour was specified in terms of its target, action, context and time in order to operationalize the behaviour in question. The items were initially drafted following the model set forth by Ajzen (2006). The measures were then reviewed by the members of the research group to determine the nature and wording of the items and a consensus procedure was utilized to construct the final measures (see Tables 1 and 2).

In the current studies, youths were asked about their behaviours in reaction to bully/victim problems in two separate scenarios; if they were being victimized themselves and if they witnessed a peer being victimized. The completed measure consisted of two sections: 1) help seeking for self; 2) intervening in bullying on behalf of a peer. Prior to completing the measures, the participants were provided with written definitions of the target behaviours that were referred to in the items. Seeking help was defined as *“reporting the situation to an adult who can help you deal with the bullying situation such as a teacher, guidance counselor, or other staff”*. Intervention behaviour, also called asserting oneself, was defined as *“taking a stand against the bully, telling them to stop what they are doing”*.

Table 1.

TPB Measure of Responses to Bullying – Help seeking

Construct	Sample Item
Past Behaviour	When you were bullied in the last month, how often did you seek help from an adult at school?
Intention	The next time I am bullied, I plan to seek help from an adult at school. The next time I am bullied, I know I will seek help from an adult at school.
Attitudes	Seeking help from an adult at school when I am bullied... (rate from makes things worse....makes things better) (rate from is good to do...is bad to do) (rate from is useful... is useless)
Subjective norms	When I am being bullied, most people who are important to me think that I should seek help for bullying from an adult at school. When I am being bullied, people who are important to me expect that I should seek help from an adult at school. When I am being bullied, people who are important to me want me to seek help from an adult at school.
Perceived Behavioural Control	When I am being bullied, I am confident that I could seek help from an adult at school. For me, to seek help from an adult at school when I am being bullied is easy. It is mostly up to me whether to seek help from an adult at school when I am being bullied.

Table 2.

TPB Measure of Responses to Bullying – Asserting Self

Construct	Sample Item
Past Behaviour	When you saw someone else being bullied in the last month, how often did you assert yourself to the bully/bullies?
Intention	The next time I see someone being bullied, I plan to assert myself to the bully/bullies. The next time I see someone being bullied, I know I will assert myself to the bully/bullies.
Attitudes	When I see someone being bullied, asserting myself to the bully/bullies... (rate from makes things worse....makes things better) (rate from is good to do...is bad to do) (rate from is useful... is useless)
Subjective norms	When I see someone being bullied, most people who are important to me think that I should assert myself to the bully/bullies. When I see someone being bullied, people who are important to me expect that I should assert myself to the bully/bullies. When I see someone being bullied, people who are important to me want me to assert myself to the bully/bullies.
Perceived Behavioural Control	When I see someone being bullied, I am confident that I could assert myself to the bully/bullies. For me, to assert myself to the bully/bullies when I see someone being bullied is easy. It is mostly up to me whether to assert myself to the bully/bullies when I see someone being bullied.

The TPB constructs were measured using 7 point-scales (1= strongly disagree to 7= strongly agree). Intentions were assessed by two items (e.g. “The next time I am bullied, I plan to [perform behaviour]”, *strongly disagree – strongly agree* and “The next time I am bullied, I

know I will [perform behaviour]”, *strongly disagree- strongly agree*). Items designed to assess subjective norms were measured by three items using the open referents (i.e., people who are important to me). Referents were not specified so youths were able to select the individuals that were salient for them. Normative influence was assessed using three different wordings that suggested an increasing level of expectation of compliance (e.g. “*think that I should*”, “*expect that I should*” and “*want me to*”, *strongly agree – strongly disagree*). Perceived behavioural control was assessed with three items each assessed along the *strongly agree – strongly disagree* dimension: “when I am being bullied, I am confident that I could [perform behaviour]”, “for me, to [perform the behaviour] when I am being bullied is easy”, and “It is mostly up to me whether I [perform the behaviour] when I am being bullied”. The items assessing attitudes towards a behaviour took the form of “Seeking help from an adult at school when I am bullied is...” or “When I see someone being bullied, asserting myself to bully/bullies is...” and youths were asked to rate their responses on three semantic differential scales (*makes things better-makes things worse, is good to do-is bad to do, is useful-is useless*). Lastly, behaviour was assessed by asking how often, in the previous month, the participant engaged in a particular behaviour. The response options ranged from *none of the time – 100% of the time*. Youths had the option of selecting “not applicable” if they were not bullied or did not witness bullying. Studies using similarly constructed measures found satisfactory reliabilities for the TPB variables (Fife-Shaw et al., 2007). Across numerous behaviors, Fife-Shaw and colleagues (2007) found median alphas of .97 and .83 for the attitudes and perceived behavioural control subscales respectively and median correlations of .94 and .87 for the subscales assessing intentions and subjective norms respectively.

Method Study 1

In the first study, I examined the robustness of the TPB model in understanding help seeking and intervention intentions and behaviours in a general sample of high school students.

The complete TPB model, including behaviour, was tested using short-term longitudinal data that were collected at two time points.

Participants

The sample for the first study consisted of all students attending two secondary schools in Southern Ontario. In total, approximately 1600 students were approached by researchers in their classes to complete the Time 1 study measures. Of those approached, 907 students completed the Time 1 measures representing a response rate of 57%. The sole exclusion criterion for the completion of the baseline measures was that the participant be able to read English. At the second data collection, students who completed the Time 1 measures were approached to participate in the second phase of the study. Of those approached, 648 agreed representing an attrition rate of 28%. The difference in sample sizes may be due to fluctuations in student enrolment, student absences on the day of administration, and participant refusal. Additionally, participants who had been absent or had not been present during data collection at Time 1 were not asked to complete Time 2 data. Due to the short-term longitudinal nature of the analyses, only the data from participants who completed measures at both time points were included in the final sample. Of the original sample of 648 participants who completed the measures at Time 1 and 2, 39 individuals agreed to participate and signed the consent form but did not complete enough of the measures to include the variables of interest and were therefore excluded. In total, 609 participants were included in the current study.

Descriptive statistics for the 609 participants were gathered. The participants ranged in age from 13.85 to 18.85 years with a mean age of 15.84 ($SD = 0.98$) at Time 1. At Time 2, the ages ranged from 13.99 to 18.98 years with a mean age of 15.98 ($SD = 0.98$). In the Time 1 sample, 281 participants (46%) self-identified as male, while 328 participants (54%) self-identified as female. Students ranged in grade levels with 32% ($N = 199$) in Grade 9, 37% ($N = 226$) in Grade 10, 22% ($N = 131$) in Grade 11, and 9% ($N = 53$) in Grade 12. With regard to

language spoken in the home, 89% (N = 544) reported that they spoke English only at home while 9% (N = 56) reported that they spoke both English and another language. The remaining 2% of participants indicated that they spoke almost entirely another language at home. In terms of ethnicity, 89% (N = 540) of participants self identified as Caucasian, 3% (N = 17) as African-Canadian, 2% (N = 10) as Native Canadian, 2% (N = 10) as Asian Canadian, 1% (N = 6) as South Asian, and 4% (N = 26) as other. Lastly, in terms of living situation, 68% of the participants reported that they lived with both natural parents, 12% indicated that they lived with one natural parent and a step parent, 9% said that they lived with one natural parent, and 8% indicated that they lived with both their parents in a shared custody arrangement. Finally, 3% indicated that they lived in an alternate situation (e.g., foster parent, grandparent).

To ascertain whether the sample of single-time completers was similar to those students who completed the measures at both time points, the two groups were compared on demographic information such as age and gender. The results revealed no significant difference in terms of age; however, significantly more female students completed both time points compared to male students.

Procedure

Data collection for the current study was part of a larger program evaluation being conducted in conjunction with Alexandra Sutherland, MA, and Wendy Craig, PhD, CPsych from Queen's University in Kingston, Ontario. The program being evaluated was a whole-school bullying prevention program, entitled RespectED Beyond the Hurt, that was designed by the Canadian Red Cross. The RespectED program seeks to teach middle and high school students skills to recognize signs of bullying, change attitudes about bullying, and how to cope with being or witnessing victimization. Student facilitators are provided with two-day training sessions to help them design an in-class workshop to deliver to their peers.

Ethics approval for the data collection was obtained from the Research Ethics Board at Queen's University. Data collection was completed by the researchers and a group of undergraduate and graduate volunteers from Trent University, Queen's University, and the University of Ottawa. Prior to receiving the in-class workshop, researchers and volunteers visited the schools to gather baseline data. Researchers and volunteers first introduced the purpose of the evaluation and youths were asked to read and sign the attached consent form. All youths were asked to provide written consent to participate in the evaluation. Since youths were older than 13 years of age and the evaluation was mandated by the school board, parental consent was not required. Students were assigned an identification number which was positioned on the cover of their Time 1 and 2 measures.

Researchers and volunteers notified the students of the incentives to encourage participation (i.e., entries into a raffle to win movie tickets and gift certificates) and were then asked to complete the measures quietly during the class using pencil and paper. During the completion of the measures, the researchers and volunteers were available to answer any questions that arose. Once the participants were completed, researchers or volunteers collected the packages.

After the baseline measures had been completed, the peer facilitators who were selected by the schools from the student population received training from the Red Cross Canada trainers about devising and presenting a workshop on bullying. The peer facilitators then presented their workshops to a number of classes within their schools, at the discretion of the school administrators. One month subsequent to the administration of the baseline measures and after all the workshops were presented, researchers and volunteers provided students with the follow-up battery of measures in their classrooms.

The current study utilized a subset of the data from the evaluation that was provided at baseline and post-workshop. Ethics approval for the use of secondary data was sought and obtained from the Research Ethics Board at the University of Ottawa.

Measures

The measures for Study 1 consisted of a demographic measure, the Bully/Victim Questionnaire (PrevNet, 2008), and the TPB Measure of Reaction to Bullying (Santor & Rosval, 2008) which are described in the general methods section above.

Method Study 2

The goal of Study 2 was to replicate the results from the first study and examine the plausibility and robustness of the TPB in explaining youths' intentions to seek help for bullying and engage in intervention behaviours as bystanders. Additionally, I examined the role of school climate in determining help seeking and intervention intentions within the TPB model.

Participants

Participants for the second study consisted of 113 students enrolled at a middle school in the Upper Canada District School board. The mean age of the 113 participants was 12.67 years ($SD = 0.68$, age range 10.78 – 15 years) in Grades 7 and 8 combined classes, with 53% of the sample identifying themselves as male and 47% as female. In terms of language spoken at home, 92% of the participants indicated that they spoke English only at home, while 7% reported that they spoke both English and another language. Within this sample, 1% indicated that they spoke almost entirely another language at home. With regard to living situation, 62% of the participants reported that they lived with both natural parents, 18% indicated that they lived with one natural parent and a step parent, 9% said that they lived with one natural parent, and 4% indicated that they lived with both their parents in a shared custody arrangement. Lastly, 7% indicated that they lived in an alternate situation (e.g., foster parent, grandparent). In terms of ethnicity, 95% self-identified as white/Caucasian, 1% as black/African Canadian, 4% self-

identified as Native Canadian, and 1% self-identified as other. No participants self-identified as Asian or south Asian.

Procedure

Data collection for the current study was part of a larger evaluation of an in-class bullying prevention program. The in-class presentation, entitled, Stand Up! Stand Out! A Bullying Prevention Program (Rosval & Santor, 2010) was designed and implemented by the current researchers. Middle and high schools in the Upper Canada District School Board were approached to participate in the program and the subsequent evaluation and one intermediate/high school south of the city of Ottawa agreed to participate. Participants were students in nine Grade 7 and 8 combined classes.

After receiving approval from the University of Ottawa Research Ethics Board, assent forms were delivered to the school to send home to parents explaining the in-class program and the research study. If a parent chose not to allow their child to participate in the study, they returned the signed form to the school indicating their decision. Since the program was mandated by the school board, all students participated in the presentation aspect of the study. However, their parents were free to choose whether to allow their children were to participate in the evaluation component.

Prior to the delivery of the in-class presentation, pre-test data were collected online through the Yoomagazine website, which is a health and mental health literacy website for young people. All Grade 7 and 8 students were explained the purpose of the study and provided with a unique access code to the Yoomagazine website. Once logged on, they were asked to choose their own password to maintain their anonymity. The anonymous nature of the internet coupled with the high usage rates among youths for obtaining knowledge in this manner suggests it is an appropriate forum through which to collect data about a variety of topics, including

perceptions of school climate and reactions to bullying (Santor, Poulin, LeBlanc, & Kusumakar, 2007).

Once online, participants were then asked for their consent to participate in the evaluation. Students were informed of confidentiality practices and that they had the right to withdraw from the study at any point. Participants were also informed that they would be entered into a raffle for a prize (e.g., iPod Nano) for each set of questionnaires that they completed. Students were then asked to provide their consent for the current study by selecting either “I agree” or “I disagree”. If participants chose not to participate, they were directed automatically towards the regular Yoomagazine page. Using a unique access code provided by the research group to the schools, students were able to access the school’s specific site anonymously and browse the static as well as interactive material on a variety of topics with a focus on health and mental health literacy. If participants chose to participate in the study, they were redirected to the online measures. Subsequent to the completion of the measures, participants were directed to the school-specific Yoomagazine site.

Following the data collection, in class presentations were delivered to nine classes by the author and a volunteer. A total of 270 students participated in the presentation portion of the study. After the presentation, students were asked to log onto the Yoomagazine site and complete the second set of online measures.

In total, 128 students completed the measures at the pre-test phase of the study. For the current study, the data consisted of the responses collected at Time 1. Data were collected only from students whose classes participated in the presentation.

Measures

In current study, youths were asked to complete the Bully/Victim questionnaire (PrevNet, 2008), the TPB Measure of Reactions to Bullying (Rosval & Santor, 2008) as well as a survey of demographics. Please see the general methods section for a description of these measures.

Additionally, participants completed the School Climate and Stigma Scale (Rosval & Santor, 2008: Appendix C)

School climate. In order to assess the relationship between school climate and help seeking and intervention behaviours, we examined the literature for a measure that included items referring to the traditional dimensions of school climate, as well as those assessing the school's norms and beliefs regarding help seeking and perception of stigma. An extensive review of the literature suggested that one such measure did not exist. As such, a new measure of school climate was created and included dimensions previously examined in the research as well as those identified as being significant by Anderson (1982). A general definition of school climate as encompassing the quality and frequency of interactions among and between students and staff and including the students' perceptions, beliefs, and attitudes about various aspects of the school system was used based on a review of the literature (Anderson, 1982; Brookover et al., 1997; Hoy, 1990; Power et al., 1989).

The first phase of the development of the School Climate and Stigma Scale involved the creation of the items. We reviewed the literature on school climate, help seeking for mental health difficulties, and stigma and the available measures in these areas. We examined existing validated scales and determined which domains, based on the literature on bullying and helps seeking, would be appropriate for the current study. We then selected appropriate items from the appropriate, validated domains. For the current study, the scale included both negatively and positively worded items to avoid acquiescence bias (Billiet & McClendon, 2000). Lastly, items focused on students' perceptions of what "most students" feel about their school in an effort to tap into an overall school climate as opposed to individual perceptions of school climate (Van Horn, 2003).

The items for the scale were articulated as declarative statements which were preceded with the statement, "how often are the following true about your school? Please mark the best

answer for each statement". The items were developed on a 5 point Likert-type scale from 1 (never true) to 5 (always true). We, along with a group of graduate students, reduced the original pool of items to the final set of items which were randomly ordered. In total, 45 items were included in the final version of the measure.

Table 3.

Items from the School Climate and Stigma Scale and corresponding subscales

Number of items	Subscale name	Sample item
6	School engagement	Students enjoy learning at this school
4	Cooperation	This school places more importance on cooperation rather than competition
3	Teacher praise and reward	Teachers praise students when they do well in class
2	Teacher expectations	Teachers expect students to do their very best
3	Teacher academic support	Students are encouraged to ask questions when they don't understand the material being taught
2	Teacher emotional support	Teachers care about me as a person
4	Peer relations	Students treat each other with respect and fairness
4	Delinquency	I have seen the sale of drugs on school grounds
2	Order	Students are well behaved at this school
4	School structure	Teachers enforce the class rules
4	Autonomy	Students are given a say in what material they learn in class or what courses to take
4	Help seeking	Students are able to ask a teacher for help if they have a problem with another student
3	Stigma	Students with mental health problems in my school are made fun of, ignored or treated badly.

Pilot studies with the measure determined a Cronbach's alpha of .95 for the measure, suggesting very high internal consistency. Pearson's correlations ranging from .53 to .91 between the subscales and the overall school climate rating also indicated high levels of internal consistency (Neufeld & Santor, 2008). Research also revealed that overall school climate was significantly associated with help seeking for mental health difficulties indicating appropriate content validity as a more positive, supportive school climate was associated with greater help seeking (Neufeld & Santor, 2008).

CHAPTER FOUR

RESULTS

Study 1 Results

Preliminary Analyses

A total of 609 participants completed measures at Time 1 and Time 2. Prior to analysis, the variables relevant to the current study (i.e., demographic information, frequency of bullying, victimization, and witnessing bullying, and the TPB constructs) were examined for data entry errors, missing values, normality, homoscedasticity, and homogeneity of variances following the guidelines set out in Tabachnik and Fidell (2007) in SPSS version 19. Data entry was verified by conducting frequency analyses on all the pertinent variables to ascertain whether the values fell within the appropriate ranges. Scores that were incorrectly entered were rescored as “missing”. An analysis of the missing data was then conducted and results indicated that 6% of the data were missing. Given the small percentage of missing values, a single imputation of missing values was performed using the SPSS version 19.0 statistical analysis software. Data imputation using expectation maximization is a commonly used method for dealing with missing data in which unknown data are substituted on the basis of variables that are known. In this method, parameters are estimated using known data and then missing data are estimated using those parameters (Tabachnick & Fidell, 2007).

The data were then examined for univariate outliers and assessed for normality. A number of univariate outliers were found on measures assessing the frequency of bullying others and being victimized. By examining Z scores, 15 univariate outliers were found on a measure examining the frequency of victimization and 10 univariate outliers were found on a measure examining frequency of bullying others. The high frequency of participants reporting that they had not been victimized or bullied others was to be expected from the literature given the non-normal nature of these behaviours and that only a small proportion of youths report engaging in

them. Transformations and the removal of outliers did not correct the situation and therefore, the variables were dichotomized. To maintain consistency, the variable of witnessing bullying was also dichotomized for parametric analyses.

Concerning the TPB measures, regression diagnostics were completed to determine whether the data met the assumptions of multiple regression analyses and whether any outliers existed. In examining regression diagnostics, residuals plots were examined to assess for the violation of assumptions such as normality, equal variance, and linearity. The results of these assessments with the current data set indicated that the assumptions have been met. To assess for univariate and multivariate outliers, leverage and studentized deleted residuals were examined using a scatter plot and no data points were deemed to be significant univariate outliers.

An examination of multivariate outliers for each of the proposed regression models revealed a number of cases such that the probability of obtaining the Mahalanobis' distances was less than 0.001. These cases were eliminated from the corresponding regression analyses. The final dataset contained variables that had distributions that were appropriate for subsequent statistical analyses. Additionally, alpha levels were set at 0.05 for the subsequent statistical tests.

Group differences on the continuous TPB outcome variables and the variable of frequency of witnessing bullying were assessed between the two schools using one-way ANOVAs. The results indicated no significant effect of school on the majority of the study variables. Significant group differences were found on the measures of help seeking intention ($F(1, 607) = 11.56, p < .001$) and subjective norms ($F(1, 607) = 5.03, p = .025$). A significant group effect was also determined for the variable measuring intervention behaviour at Time 2 ($F(1, 607) = 5.97, p = .015$). Chi-square analyses were conducted on the categorical variables of frequency of bullying and victimization and revealed no significant group effects with ($\chi^2 = .661, p = .416$) and ($\chi^2 = .251, p = .617$) respectively. Despite some group differences, the decision was

made to examine the TPB model within both groups together since examining the model in each school would reduce the sample size for the analyses. Furthermore, no a-priori group differences were hypothesized prior to the collection of data and the meaning of the group differences are unclear.

Frequency of Involvement in Bully/Victim Problems

Results from the self-report measure of bullying in the school suggests that a small, but significant portion of participants reported having been bullied, bullied others, or witnessed bullying within the previous four weeks. Overall, these reported frequencies of being bullied, bullying, and witnessing bullying were similar to those found in other Canadian studies suggesting that the responses provided in the current study were valid (Beran, 2008; Craig, 2004; Nansel et al., 2001). Further details of these results are located in Table 4.

Table 4.

Frequencies of self-reported involvement in bully/victim problems

Type of exposure	Frequency (%)				
	Never in the last 4 weeks	1 time in the last 4 weeks	2 or 3 times in the last 4 weeks	About once a week	Two or more times a week
Was victimized	74	12	8	3	3
Boys	75	11	9	4	2
Girls	74	12	8	3	3
			Chi-square (1) = .11 $p=.736$		
Bullied others	67	19	9	3	2
Boys	63	20	11	4	2
Girls	70	19	7	2	2
			Chi-square (1) = 2.12 $p=.145$		
Witnessed bullying	18	21	30	14	17
Boys	19	17	29	13	21
Girls	17	24	31	14	14
			Chi-square (1) = .33 $p=.566$		

Notes: (i) N=609; (ii) Because of the low frequency of behaviours in the current sample and the skewed distributions, the categories “1 time in the last 4 weeks”, “2 or 3 times in the last 4 weeks”, “About once a week”, and “Two or more times a week” were combined.

In examining the present data on victimization, a significant proportion of participants reported being bullied at least once in the previous month (26%). Additionally, 3% of our sample reported that they were bullied on a regular basis, with incidents occurring multiple times a week. Using the cut-off point of being bullied 3 times a month or more as indicative of experiencing “chronic bullying” as noted in the literature (e.g., Dubé et al., 2009), 13% of participants in the current sample fell into this category.

In the present study, 14% of participants reported that they had bullied others 2-3 times or more in the past month. These results are similar to those found in a recent sample of students in American high schools (Nansel et al., 2001) and in international studies (Due et al., 2005).

With regard to witnessing bullying, the results suggested that a vast majority of students witnessed a bully/victim incident in their schools in the sampled time frame. According to the results, approximately 4 in 5 youth reported witnessing some form of bullying at least once in the past month, which is consistent with previous literature (Janosz, et al., 2008). Additionally, one in five participants reported witnessing bullying numerous times a week.

In general, most participants did not report having been bullied or having bullied others (74 % and 69% respectively) in the previous month, which is consistent with the literature (Beran, 2008; Nansel et al., 2001). Conversely, a small proportion reported having participated in bully/victim problems on a more consistent basis either as the youth being victimized or bullying others. Given the fact that the current study is examining relatively low frequency behaviours (i.e., bullying, victimization), a skewed distribution was to be expected. To minimize the effect of the skewness, the two variables were dichotomized for analysis purposes. The third variable assessing frequency of witnessing bullying was dichotomized as well for consistency.

Gender and age differences have been reported in the frequency of involvement in bullying incidents. As such, the data were examined for gender and grade differences using the dichotomized dependent variables of frequency of victimization, bullying, and witnessing

bullying (0=no, 1=yes). Chi-Square analyses using gender as the independent variable suggested that there was no significant difference in being bullied ($\chi^2=0.11$, $p=.736$), bullying others ($\chi^2=2.12$, $p=.145$), or witnessing bullying ($\chi^2=0.33$, $p=.566$) between the two genders.

Table 5.

Results for the pair wise comparisons frequency of bullying others by Grade (n=609)

Comparison	Pearson chi-square	P – value (alpha)	Cramér's V
Grade 9 vs. Grade 11	9.62	.002 (.008)	.17
Grade 9 vs. Grade 10	5.35	.021 (.01)	.11
Grade 9 vs. Grade 12	2.73	.098 (.0125)	.10
Grade 10 vs. Grade 11	1.39	.239 (.0167)	.06
Grade 11 vs. Grade 12	0.34	.559 (.025)	.04
Grade 10 vs. Grade 12	0.06	.814 (.05)	.01

Note: Alpha values derived from Holm's Sequential Bonferroni Method are located in parentheses

A two-way contingency table was constructed to evaluate whether certain grades (9, 10, 11, and 12) reported higher frequencies of being bullied, bullying others, and witnessing bullying (0=no, 1=yes). The results suggested that there is no significant effect of grade on reported victimization, Pearson χ^2 (3, n=609) = 5.25, $p = .155$, Cramér's V = .09, or on reported witnessing of bullying, Pearson χ^2 (3, n=609) = 5.62, $p = .131$, Cramér's V = .10. However, grade was significantly related to frequency of bullying others, Pearson χ^2 (3, n=609) = 11.32, $p = .010$, Cramér's V = .14. As such, follow-up pairwise comparisons were conducted to examine the differences among the proportions. The Holm's Sequential Bonferroni Method was used to control of Type 1 error during multiple hypothesis testing. This method uses varying alpha levels depending on the number of comparisons being examined and is superior to the traditional Bonferroni method as it is less conservative and has greater power (Green & Salkind, 2005). Table 5 presents the results of these analyses with the alpha values in parentheses. The only significant pairwise difference was found between participants in Grade 9 and those in Grade 11. The results suggested that the youngest students in the school were more likely to report bullying others compared to their older peers in the eleventh grade. An examination of Cramér's V

suggested, however, that the strength of this association was relatively weak as it fell closer to 0 than to 1. Yet, these results were consistent with past research suggesting that self-reported bullying behaviours decrease as students age through high school (Nansel, et al., 2001).

To further understand the bullying situations that students experience at school, the frequency of experiencing, perpetuating, and witnessing five different types of bullying were examined and included verbal, physical, social, racial, and electronic bullying (see Table 6). In general, the results indicated that the current sample was exposed to many forms of bully/victim problems on a regular basis in their schools.

Table 6.

Frequencies of types of bully/victim problems at reported at Time 1

Variable	Frequency (%)				
	Never in the last 4 weeks	1 time in the last 4 weeks	2 or 3 times in the last 4 weeks	About once a week	Two or more times a week
Type of Victimization					
Physical	87	8	3	1	1
Verbal	61	22	9	4	4
Social	68	18	9	3	2
Electronic	85	11	2	2	0
Racial/Ethnic/Religious	93	4	1	0	2
Type of Bullying					
Physical	88	8	2	1	1
Verbal	67	21	8	2	3
Social	78	14	6	1	1
Electronic	90	8	2	1	0
Racial/Ethnic/Religious	92	5	1	1	1
Type Bullying Witnessed					
Physical	45	28	15	5	6
Verbal	23	26	25	11	15
Social	35	24	22	8	12
Electronic	60	19	10	5	6
Racial/Ethnic/Religious	69	16	8	3	4

In examining the frequencies in more detail, participants reported a higher likelihood of experiencing and engaging in verbal bullying compared to other forms of bullying, which is consistent with previous research (Fekkes, Pijpers, & Verloove-Vanhorick, 2004; Rivers &

Smith, 1994). More specifically, a substantial number of students reported having been subjected to verbal bullying, such as name-calling (39%), and social bullying, such as having rumours spread about them or social exclusion (32%). Similar numbers reported having engaged in these bullying behaviours in the month before (34% and 22% respectively).

In terms of witnessing bullying, as to be expected, participants reported high frequencies of being a bystander to verbal bullying (77%) and to social bullying (66%). Given the relative homogeneity of the ethnicities and religions in the sample schools, lower rates of racial/ethnic/religious bullying were experienced (7%) and perpetuated (8%); yet, interestingly, a third of participants reported having witnessed this form of bullying (31%).

Frequency of Self-Reported Behaviours in Response to Bully/Victim Problems

Reactions to being victimized or witnessing bully/victim problems were then ascertained in those individuals who reported that they had been involved in some manner in a bully/victim problem. The frequencies are located in Table 7 and represent the percentages of participants who were bullied or witnessed bullying and therefore had the opportunity to engage in either help seeking or intervention behaviours.

Table 7.

Frequency of self-reported engagement in help seeking and intervention behaviours at Time 2

Frequency of behaviours	Frequency (%)	
	Help seeking	Intervention
N/A not witnessed/been bullied	385	270
0%	136 (61%)	152 (45%)
1-19%	58 (26%)	64 (19%)
20-39%	12 (5%)	47 (14%)
40-59%	12 (5%)	26 (8%)
60-79%	4 (2%)	14 (4%)
90-99%	0	19 (6%)
100%	2 (1%)	17 (5%)

Note: Frequencies represent percentages of the participants who self-reported had the opportunity to engage in help seeking (n=224) and intervention (n= 339) behaviours.

Regarding self-reported help seeking behaviours, 224 (37%) participants noted that they had been bullied at least once in the previous month. Of those, the majority of participants (61%) did not seek help from a resource at school, which is consistent with past literature (Whitney & Smith, 1993). Conversely, 8% of those respondents noted that they sought help in 40% or more of the times that they had been bullied.

In total, 339 (56%) participants reported that they had witnessed a peer being bullied in the previous month. Of those individuals, 45% reported that they did not get involved in the situation by standing up for their peer. However, the remaining participants indicated that they did indeed intervene in a percentage of the bullying situations. Additionally, 10% of the participants indicated that they intervened on behalf of their peer more than 90% of the times that they witnessed bullying.

TPB Measure of Reactions to Bullying

Since the measures of the TPB constructs were designed for the current study as per the instructions of Ajzen (2003), an examination of the internal consistency of the measure was completed by examining the Spearman's rank order correlations coefficients among the items, the means, standard deviations, and the Cronbach's alpha (α).

To determine the internal consistency among measures of the same construct following the procedure set forth in Reinecke, Schmidt, and Ajzen (1996), Spearman's rank order correlations were conducted to determine the relationship among the items of the TPB Measure of Reactions to Bullying scales. As a non-parametric method of analysis, variables need not be normally distributed. Additionally, this method of correlation has been found to be robust to the effects of outliers. The results are shown in Tables 8 and 9 for help seeking and intervention behaviours respectively. Despite the number of correlational analyses completed, Bonferroni corrections were not utilized due to the exploratory nature of the analyses. However, even after the corrections were applied, the patterns of results remained the same.

TPB Measure of Reaction to Bullying – Help Seeking. A review of the results of the TPB Measure of Reactions to Bullying - Help Seeking from Time 1 (see Table 8) revealed a mixed range of correlation coefficients among the items. The correlations among the indicators ranged from $r_s(607) = .02, p = .652$ between Att3 and PBC3 to a high of $r_s(607) = .89, p < .001$ between Int1 and Int2. In general, there were moderate to strong, positive correlations among the items on the subscales assessing intentions, subjective norms, and perceived behavioural control, which were statistically significant ($p < .001$). Of note, the majority of the correlations between the Att2 and Att3 items and the remaining items fell in the small range suggesting both that the internal consistency of the Attitudes subscale was low and that there was a weak relationship between these and the remaining items.

The pattern of correlations among the items from the TPB measure revealed some problematic results, namely, the negative correlations between then TPB antecedent items and the measure of behaviour at Time 2. The results suggested that more positive attitudes, greater perceived behavioural control, and more perceived influence from others to seek help, resulted in less likelihood to seek help. It is possible that these negative correlations were due to a low

Table 8.

Spearman's rank order correlations among items on TPB Measure of Reactions to Bullying Help seeking Time 1 and behaviour at Time 2

Latent Variable	Item	1	2	3	4	5	6	7	8	9	10	11	12
Intention	Int1	1.0											
	Int2	.89**	1.0										
Attitude	Att1	.44**	.42**	1.0									
	Att2	.06	.030	.19**	1.0								
	Att3	.12**	.09*	.25**	.61*	1.0							
Subjective norms	SN1	.64**	.65**	.32**	.11**	.11**	1.0						
	SN2	.65**	.66**	.32**	.08*	.14**	.78**	1.0					
	SN3	.61**	.61**	.32**	.09*	.13**	.76**	.72**	1.0				
PBC	PBC1	.55**	.59**	.28**	.09*	.10**	.49**	.52**	.57**	1.0			
	PBC2	.37**	.40**	.33**	.09*	.13**	.26**	.30**	.27**	.57**	1.0		
	PBC3	.07	.03	.09*	.09*	.02	.19**	.15**	.23**	.26**	.22**	1.0	
Behaviour	Beh	-.13**	-.11**	-.14**	.02	.02	-.13**	-.19**	-.12**	-.12**	-.11**	-.01	1.0
	Mean	3.30	3.10	3.81	4.32	4.09	3.84	3.83	4.07	3.85	3.59	5.37	1.60
	SD	2.00	1.93	1.81	1.79	1.83	2.00	1.98	1.94	2.00	2.03	1.80	1.00

** $p < .001$, * $p < .05$

base-rate for engaging in help seeking behaviours since the majority of participants reported not having been bullied, not requiring help seeking. Therefore, despite overall positive intentions and situation-specific cognitions towards help seeking, the environment did not require the engagement of the behaviour.

The psychometric properties for the TPB Measure of Reactions to Bullying Help Seeking at Time 1 are presented in Table 9. With regard to the TPB Help seeking measure, the Cronbach's alphas for the intention and subjective norms scale were high, indicating excellent internal consistency for these scales. However, the Cronbach's alphas for the scales of attitude and perceived behavioural control were both in the questionable range following the same guidelines. Further examination revealed that the removal of the final item of the PBC subscale improved the internal consistency to 0.72 which would be deemed acceptable. However, given the small number of items per subscale (e.g, as few as three), a lower Cronbach's alpha is not unexpected. Furthermore, due to the exploratory nature of the current analyses, it was decided to keep the three items of the PBC subscale. As such, consideration should be taken in the interpretation of results using this subscale.

Table 9.

Mean, standard deviations, and psychometric properties of the subscales of the TPB Measure of Reaction to Bullying- Help Seeking at Time 1.

Variable	N	M	SD	α	Range		Skew
					Potential	Actual	
Intention	609	3.23	1.91	.94	1-7	1-7	5.18
Attitude	609	4.08	1.37	.63	1-7	1-7	1.24
Subjective norms	609	3.91	1.82	.91	1-7	1-7	-.10
PBC	609	4.27	1.50	.65	1-7	1-7	1.30

Note: N=number of participants, PBC= Perceived behavioural control, M=Mean, SD=Standard deviation, α =Cronbach's alpha

Considering the attitude subscale for help seeking, a review of the correlation table among indicators and the item-total correlations tables suggested that the second and third items did not load with the first item. The measure was designed to include some reversed scored items to avoid an acquiescence bias (i.e., the tendency to agree with all items) as per the Ajzen's

(2003) instructions. However, it is possible that participants did not take note of the reversal and continued to respond in the same direction as the first item. As such, for the remaining analyses, the first item of the attitude subscale (i.e., makes things better/worse) was used to measure the construct. While single item measures for psychological constructs are discouraged due to generally low reliability, some researchers have advocated that they may be useful for assessing global constructs (e.g., quality of life: Zimmerman, Ruggero, Chelminski, Young, Posternak, Friedman, et al. 2006), when holistic impressions are desired (Youngblut & Casper, 1993), or when multiple-item instruments are not suitable due to limited resources (Cunney & Perri, 1991). Nevertheless, consideration should be taken when interpreting the current results.

TPB Measure of Reactions to Bullying- Assert Self. An examination of the correlation table (see Table 10) examining the items from the TPB Measure of Reactions to Bullying Assert Self from Time 1 suggested an internal consistency that is in the moderate range with the majority of the correlations being characterized as medium to large. The correlation coefficients

Table 10.

Spearman's Rank Order Correlations Among Indicators on TPB Measure of Reactions to Bullying Assert self Time 1 and Behaviour at Time 2

Latent Variable	Indicator	1	2	3	4	5	6	7	8	9	10	11	12
Intention	Int1	1.0											
	Int2	.90**	1.0										
Attitude	Att1	.48**	.46**	1.0									
	Att2	.22**	.19**	.19**	1.0								
	Att3	.20**	.17**	.16**	.68**	1.0							
Subjective norms	SN1	.65**	.69**	.36**	.17**	.14**	1.0						
	SN2	.60**	.67**	.35**	.11**	.15**	.79**	1.0					
	SN3	.62**	.66**	.32**	.15**	.17**	.79**	.86**	1.0				
Perceived Behavioural Control	PBC1	.65**	.68**	.39**	.18**	.19**	.58**	.60**	.56**	1.0			
	PBC2	.58**	.62**	.41**	.11**	.16**	.54**	.53**	.49**	.78**	1.0		
Behaviour	PBC3	.38**	.36**	.25**	.14**	.18**	.40**	.40**	.39**	.51**	.48**	1.0	
	Beh	.09*	.13**	.14**	.01	.04	.08	.09*	.06	.11**	.10*	.10*	1.0
	Mean	3.97	3.79	4.39	4.32	4.28	4.21	4.06	4.07	4.27	4.01	4.84	2.36
	SD	1.82	1.77	1.74	1.78	1.71	1.78	1.81	1.81	1.84	1.90	1.92	1.82

** p<.001, *p<.05

ranged from a low of $r_s(607) = .11$, $p < .001$ between Att2 and SN2 to a high of $r_s(607) = .90$, $p < .001$ between Int1 and Int2. Of note, the correlation coefficients of the Att2 and Att3 items tended to fall in the small range which again suggested a low internal consistency on this subscale and a weak relationship between these items and the remaining indicators. Examining the correlations between the measure of behaviour at Time 2 and the items at Time 1 assessing intention and perceived behavioural control, positive but small correlations were found that were significant at the $p < .001$ level.

The psychometric properties for the TPB Measure of Reactions to Bullying Assert self scale are located in Table 11. In assessing constructs related to intervention behaviour at Time 1, the Cronbach's alphas generally indicated good to excellent internal consistency (Table 11). Similar to the help seeking scale, however, the internal consistency of the attitude subscale was in the questionable range. An examination of the scale in greater detail revealed similar issues and, therefore, for the remaining analyses, the first item from the attitude subscale served as the measure of the construct (i.e., makes things better/worse).

Table 11.

Mean, standard deviations, and psychometric properties of the subscales of the TPB measure assessing intervention behaviour at Time 1.

Variable	N	M	SD	α	Range		Skew
					Potential	Actual	
Intention	609	3.88	1.75	.95	1-7	1-7	0.85
Attitude	609	4.33	1.32	.63	1-7	1-7	1.96
Subjective norms	609	4.11	1.69	.93	1-7	1-7	0.86
PBC	609	4.37	1.61	.82	1-7	1-7	0.96

Note: N=number of participants, M=Mean, SD=Standard deviation, α =Cronbach's alpha

Overall, the TPB Measure of Reactions to Bullying demonstrated good to excellent internal consistency on both measures of help seeking and intervention behaviours. However, an examination of both the correlation tables and the Cronbach's alphas for the attitudes scale for both behaviours revealed low internal consistency and content validity. As such, the following

analyses will utilize a single item as a measure of attitude towards both help seeking and intervention behaviour.

Relationship between Gender, Grade, and TPB constructs

Since previous research suggests a relationship between demographic variables and the likelihood of seeking help for bullying or intervening in bullying situations (Hazler et al., 1991; Menesini, et al., 1996; Rigby, 1997; Salmivalli 2001b), analyses were conducted to determine whether these factors were related to the TPB constructs in the current study.

Prior to the application of parametric statistics, the distributions of the dependent variables were examined. Within the measure of help seeking behaviours, normal distributions were determined for the variables assessing subjective norms, perceived behavioural control, and attitude. The variables of intentions and behaviours were skewed in the expected direction. Within the measure of intervention behaviours, normal distributions were determined for the three TPB determinants. The variable assessing intervention behaviour at Time 2 was skewed in the expected direction. While a non-normal distribution on the variables assessing behaviours was expected due to the low frequency of victimization and witnessing bullying and thereby less opportunity to engage in help seeking or intervention behaviours, these variables were transformed using the inverse transformation.

A MANOVA was conducted to determine whether there was a significant effect of gender on the TPB variables, namely attitude, perceived behavioural control, subjective norms, intention, and behaviour for both help seeking and intervention behaviours. The results indicated that male participants had more positive attitudes towards intervening in bully/victim problems compared to female participants, $F(1, 607) = 4.61, p = .032$. Conversely, female participants were more likely to endorse greater subjective norms ($F(1, 607) = 14.03, p < .001$) and intentions ($F(1, 607) = 6.78, p = .009$) regarding help seeking behaviours compared to their male peers. There was a non-significant effect of gender on self-reported help seeking behaviours ($F(1, 607)$

= 0.31, $p = .577$) and intervention behaviours $F(1, 607) = 2.38, p = .123$). The remaining effects across both intervention and help seeking behaviours were non-significant.

To evaluate the relationship between grade and the TPB variables for help seeking and intervention behaviours, a MANOVA was conducted with grade as the independent variable and the TPB constructs serving as the dependent variables. For the variables assessing intervention, there was a significant relationship between grade and self-reported intervention behaviours at Time 2, $F(3, 605) = 2.75, p = .042$. Since the test of homogeneity of variances was non-significant ($F(3, 605) = 0.35, p = .787$) and a large sample size was used, Tukey's post hoc test was used to understand those effects. The results indicated that participants in Grade 9 were significantly less likely to have reported intervening in a bully/victim problem than those in Grade 11. For help seeking, there was a significant relationship between grade and help seeking intentions, $F(3, 605) = 2.82, p = .038$. Levene's test of homogeneity of variances emerged as significant ($F(3, 605) = 3.56, p = .014$) and therefore Dunnett's C post hoc test was used to explore these differences. The results suggested that participants in Grade 12 reported a greater intention to seek help for bullying compared to those students in Grade 11. The remaining grade relationships emerged as non-significant.

Testing the Theory of Planned Behaviour

The following sections present the results from the multiple regression analyses to assess the robustness of the TPB model in separately predicting help seeking and intervention intentions and behaviours.

Predicting Victim Help Seeking Intentions and Behaviours

Predicting victim help seeking intentions. To test the hypothesis that help seeking intentions are predicted by attitudes towards help seeking, subjective norms about help seeking, and perceived behavioural control over help seeking, correlational, and multiple regression

analyses were conducted. For the current analyses, a significance level was set at $p < .01$. One multivariate outlier was removed from the analyses.

Pearson's correlational analyses were conducted to explore the relationship between intentions and each of the three TPB constructs and the results are summarized below in Table 12. Upon inspection, the most significant correlations with intentions were subjective norms, followed by perceived behavioural control, and then attitude. The correlations varied from moderate $r_s(608) = .32, p < .001$ to strong $r_s(608) = .72, p < .001$. Additionally, the three constructs were significantly correlated with each other ($p < .001$) as hypothesized by the TPB model.

Table 12.

Summary of intercorrelations of TPB Help Seeking variables (N=608)

Variable	1	2	3	4
1. Intention	1.0			
2. Attitude†	.46**	1.0		
3. Subjective norms	.72**	.34**	1.0	
4. Perceived Behavioural Control	.51**	.32**	.49**	1.0

** $p < .001$

† Single item measure

Multicollinearity was assessed by examining the tolerance value, which indicates the degree to which one predictor can be predicted by other predictors in the model, and the variance inflation factors, which assesses whether a strong linear association exists between the predictor and the remaining predictors. Within the context of examining a model, the presence of multicollinearity may impair the ability to determine the effect of individual predictors on the criterion variable. Furthermore, multicollinearity may result in an inflation of standard errors for the involved variables, inflate any biases, and result in an over-fitting of the regression model (Tabachnick & Fidell, 2007). An examination of these two methods suggested no issue with multicollinearity.

Multiple regression analyses were then conducted to predict help seeking intention from one's attitudes, social norms, and perceived behavioural control as measured at Time 1. In the

current analyses, help seeking intention served as criterion variable while the three TPB antecedents served as the predictor variables. The predictor variables were entered in a non-ordered, simultaneous fashion. Table 13 displays the unstandardized regression coefficients (B) and the standard error ($SE\ B$), the standardized regression coefficient (β), and the semipartial correlations (sr). The results indicated that together, attitudes, social norms and perceived behavioural control accounted for more than half of the variability (59%) in intentions ($R^2 = .59$, adjusted $R^2 = .59$, $F(3, 604) = 286.33$, $p < .001$).

As summarized in Table 13, each predictor variable significantly predicted help seeking intentions. Indeed, examining whether each individual predictor makes a significant contribution to the prediction equation revealed that they all do; perceived behavioural control ($t(607) = 5.25$, $p < .001$), subjective norms ($t(607) = 18.54$, $p < .001$), and attitudes ($t(607) = 7.41$, $p < .001$). The patterns of results revealed that the more positive attitudes towards help seeking, the larger the perception of social pressure to seek help, and the greater the perceived ability to engage in help seeking, the more participants felt they could engage in this behaviour.

Table 13.

Predictors of Help Seeking Intentions

	Intention to Seek Help			
	B	$SE\ B$	β	sr
Constant	-0.84**	0.17		
PBC	0.21**	0.04	.16	.14
Subjective Norms	0.60**	0.03	.57	.49
Attitude	0.22**	0.03	.21	.19

** $p < .001$

The semipartial correlations, which represent the correlations between the predictor and criterion variables while partialling out the effects of the remaining predictors in the regression equation from the predictor but not from the criterion variable, were then assessed. Examining the squared semipartial correlation (sr^2), which represents the amount that R^2 is reduced if the variable is removed and the proportion of the criterion variance associated uniquely with the

predictor, is a useful tool for determining the importance of each predictor (Green & Salkind, 2005; Tabachnick & Fidell, 2007). Since the criterion variables were correlated with each others, the values of the semipartial correlations did not add up to the multiple R^2 . The squared semipartial correlation indicated that 29% of the variance in R^2 represented the shared variance that is contributed to R^2 by the three variables. Examining the individual squared semipartial correlations suggested that subjective norms explain 24% of the variance in intentions, while attitude explained 4% and PBC explained 2%. Between these three variables, subjective norms appeared to be the most important predictor, as indicated by the squared semipartial correlations. However, due to the correlated nature of the three predictor variables, judgements about the relative importance of the three predictors were difficult to make.

Predicting victim help seeking behaviour. According to the TPB model, both one's intentions and perceived behavioural control regarding help seeking are hypothesized to contribute a significant amount of variance in self-reported help seeking behaviour. In order to test this hypothesis, the variable help seeking behaviour, as measured at Time 2, and the variables of intention and PBC, as measured at Time 1, were examined. A subset of the original sample, who reported having had the opportunity of engaging in help seeking behaviour by virtue of having been bullied in the previous month, was used in the current analyses. The sample for these analyses consisted of 224 participants with a mean age of 15.91 years ($SD = 1.02$) and 50% self identified as female. Chi-Square analyses were conducted with group membership in the subsample as the independent variable and being involved in bully/victim problems, grade, and gender serving as the dependent variables. The results suggested that those participants who reported having been bullied in the past month were also more likely to report a history of being victimized ($\chi^2=.28.89, p<.001$), bullying others ($\chi^2=.10.04, p=.002$), and witnessing bullying ($\chi^2=.15.73, p<.001$). No significant relationships were found between group

membership and grade or gender. For the current analyses, one multivariate outlier was removed.

Logistic regression analyses were conducted to examine whether the TPB variables of intention and perceived behavioural control would account for a significant amount of variance in help seeking behaviours. Due to the non-normality of the measure of help seeking behaviour, the variable was dichotomized into (0=no sought help, 1=sought help). Logistic regressions allow for the prediction of a discrete outcome such as group membership and make no assumptions about the distribution of the predictor variables (Tabachnick and Fidell, 2007).

A test of the full model with the two predictors against a constant-only model was not statistically significant, $\chi^2 (2, N= 224) = 0.96$, $p = .620$, indicating that intention and perceived behavioural control, as a set, did not reliably distinguish between those participants who sought help and those that did not. Table 14 displays the unstandardized regression coefficients (B), Wald statistics, odds ratios, and 95% confidence intervals for each of the predictors. As can be expected, examining the Wald statistic suggested that neither predictor reliably predicted whether or not a participant sought help in response to being bullied. Thus, the TPB model predicting help seeking behaviour was not supported in the current analysis.

Table 14.

Logistic Regression Analysis of Help Seeking Behaviour as a Function of Help Seeking Intentions and Perceived Behavioural Control (PBC)

Variables	B	Wald Chi-Square	Odds Ratios	95% Confidence Interval for Odds Ratio	
				<i>Lower</i>	<i>Upper</i>
Intention	0.08	0.89	1.09	0.92	1.29
PBC	-0.03	0.09	0.97	0.78	1.20
Constant	-0.52	1.67	0.60		

** $p < .001$

Summary. Overall, the results lend support for the hypothesis that the TPB specific cognitions would account for a significant amount of variance in help seeking intentions. Taken

together and examined individually, attitude, subjective norms, and perceived behavioural control contributed a significant amount of variance in intentions. Subjective norms emerged as a particularly strong predictor. With regard to help seeking behaviours, the results do not support the utility of the TPB model. Logistic regression analyses suggested that intentions and perceived behavioural control could not reliably distinguish those participants who sought help for bullying and those who did not.

Predicting Bystander Intervention Intentions and Behaviours

Predicting bystander intervention intentions. The second behavioural response to bullying examined within the context of the TPB model was intervention responses, defined as asserting oneself to defend a victimized peer. Using data collected at Time 1, it was hypothesized that the variables attitudes, social norms, and perceived behavioural control would account for a significant amount of variance in intervention intention. For these analyses, eight multivariate outliers were removed.

Table 15.

Summary of intercorrelations of TPB Assert Self variables (N=601)

Variable	1	2	3	4
1. Intention	1.0			
2. Attitude†	.49**	1.0		
3. Subjective norms	.73**	.37**	1.0	
4. Perceived Behavioural Control	.72**	.44**	.67**	1.0

** $p < .000$

† Single item measure

Pearson correlations were completed on the relevant variables and the results are summarized in Table 15. Significant correlations were found between the three independent variables and the dependent variable. The correlations with intentions ranged from the moderate range, $r_s(601) = .49, p < .001$, to the strong range, $r_s(601) = .73, p < .001$. The results revealed that the antecedent variables were strongly related to intervention intentions and that positive attitudes towards intervention behaviours, perceived pressure from important others, and the

perception that one can engage in these behaviours were related to an intention to assert oneself. Additionally, the three independent variables were significantly and positively associated with each other, which is consistent with the TPB model.

Following the correlational analyses, multiple regression analyses were completed to determine whether intervention intentions may be predicted from one's attitudes, subjective norms, and perceived behavioural control. The predictor variables of attitudes, social norms, and perceived behavioural control were entered simultaneously into a multiple regression and intervention intentions served as the criterion variable. Table 16 presents the unstandardized regression coefficients (*B*) and the standard error (*SE B*), the standardized regression coefficient (β), and the semipartial correlations (*sr*).

Table 16.

Predictors of Intervention Intentions

	Intention to Intervene			
	<i>B</i>	<i>SE B</i>	β	<i>sr</i>
Constant	-0.36*	0.14		
PBC	0.39**	0.04	.36	.26
Subjective Norms	0.44**	0.03	.42	.31
Attitude	0.18**	0.03	.17	.15

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

The results indicated that the predictor variables of attitudes, social norms, and perceived behavioural control explained a significant amount of variance in intervention intentions ($R^2 = .65$, adjusted $R^2 = .65$, $F(3, 597)$, $p < .001$). Indeed, the three situation-specific cognitions contributed to 65% of the variance in intervention intentions. Overall, the results suggested that the more one's attitude towards intervention is positive, the greater one feels able to intervene, and the more that a social circle encourages intervening, the greater the intention to intervene in a bully/victim problem.

Examining the individual contributions of the predictor variables, all three contributed a significant amount of variance to the prediction equations. The results were as follows:

subjective norms, $t(597) = 12.93, p = <.001$, attitudes, $t(597) = 6.38, p = <.001$, and perceived behavioural control, $t(597) = 10.64, p = <.001$.

An examination of the squared semipartial correlations suggested that subjective norms was a more important predictor compared to attitudes and perceived behavioural control as it explained 10% of the unique variance in intentions compared to 2% and 7% respectively when all the predictors are entered into the equation. However, due to the high correlations amongst the predictor variables, judgements about the relative importance of these variables were difficult.

Predicting bystander intervention behaviour. The second hypothesis with regard to intervention behaviours posits that intention to intervene and perceived behavioural control would account for a significant amount of variance in intervention behaviours. This hypothesis was tested using cross-sectional and short-term longitudinal data with the measurement of behaviour completed at Time 2. Only those participants who indicated that they had in fact witnessed bullying in the previous month were included in the current analyses. As such, 339 participants who reported that they had witnessed a bullying incident were included in the current sample. In the current sample, participants reported a mean age of 15.88 years ($SD = 0.99$) and 51% self identified as female. Chi-square analyses examining the relationship between group membership on frequency of involvement in bully/victim problems, grade, and gender were conducted. The results suggested that those participants who had witnessed bullying in the previous month were also more likely to have been victimized ($\chi^2=4.89, p=.027$), bullied others ($\chi^2=7.38, p=.007$), and witnessed bullying ($\chi^2=29.85, p<.001$). No significant relationships between group membership and grade or gender were found. For these current analyses, two multivariate outliers were removed

Logistic regression analyses were conducted to examine whether the TPB variables of intention and perceived behavioural control would account for a significant amount of variance

in intervention behaviours. Due to the non-normality of the measure of intervention behaviour, the variable was dichotomized into (0=no intervene, 1=intervene). Logistic regressions allow for the prediction of a discrete outcome such as group membership and have no assumptions about the distribution of the predictor variables (Tabachnick and Fidell, 2007).

A test of the full model with the two predictors against a constant-only model was statistically significant, $\chi^2 (2, N= 339) = 21.18$, $p < .001$ indicating that intention and perceived behavioural control, as a set, did reliably distinguish between those participants who intervened in a bully/victim problem and those that did not. However, classification was unimpressive, with 44% of those who did not intervene and 75% of those who did intervene correctly predicted, for an overall success rate of 62%.

Table 17.

Logistic Regression Analysis of Intervention Behaviour as a Function of Intervention Intentions and Perceived Behavioural Control (PBC)

Variables	B	Wald Chi-Square	Odds Ratios	95% Confidence Interval for Odds Ratio	
				Lower	Upper
Intention	0.24	7.85*	1.27	1.07	1.50
PBC	0.10	1.13	1.10	0.92	1.32
Constant	-1.15	10.60*	0.32		

* $p < .05$, ** $p < .001$

Table 17 displays regression coefficients, Wald statistics, odds ratios, and 95% confidence intervals for each of the predictors. According to the Wald criterion, only intention reliably predicted intervention behaviour, $\chi^2 (2, N= 339) = 7.85$, $p = .005$. Since the coefficients (B) were in log-units and are therefore difficult to interpret, the odds ratio was examined to clarify the relationship between the predictor and criterion variables. An odds ratio of 1.27 for intention suggested some change in the likelihood of intervening in bully/victim problems on the basis on a one-unit change in intention.

Summary. Overall, the results provided support for the utility of the TPB model in predicting intervention intentions and behaviours. Taken together and examined individually, attitude, subjective norms, and perceived behavioural control accounted for a significant amount of variance in intervention intentions. With regard to behaviours, only intentions individually predicted actual, self-reported intervention behaviours. Conversely, perceived behavioural control did not emerge as an individual predictor of behaviours.

Path analyses

In order to examine the full TPB model, path analyses examining each type of behaviour were conducted. Path analysis is an appropriate and commonly employed statistical method for assessing the fit between a pre-specified causal model and the observed set of correlations between variables in the model (Garson, 2004; Stage, Carter, & Nora, 2004). In this form of analyses, the goal is to provide estimates of both the magnitude and significance of the hypothesized causal connections among all the sets of variables in the path diagrams.

Many researchers have used path analyses in empirical investigations as it allows them to examine both direct and indirect, or mediating, effects simultaneously within the context of multiple independent and dependent variables (Stage et al., 2004). As such, it allows for the decomposition of the relationships among all the variables. Additionally, the analyses allow for the testing of hypothesized relationships within a theoretical model and for the examination of how well the model fits the information from the correlation matrices (Hu & Bentler, 1999).

Following the recommendations set out by Hu and Bentler (1999) and Kline (2005), a number of goodness of fit indices were used in the present analyses, including indices of absolute fit, indices of relative (incremental) fit, and indices of fit with a penalty for lack of parsimony. These indices included the traditional chi-square model test, which tests the null hypothesis that the overidentified (reduced) model fits the data just as well as the just-identified (full, saturated) model (Kenny, 2003; Stage et al., 2004). A non-significant result on this test suggests that the

model is a good fit to the data; however this test is often seen as yielding too many Type 1 errors, particularly with sample sizes above 200 (Kenny, 2003).

Within the incremental fit indices, the Bentler-Bonett Index or Normed Fit Index (NFI) is commonly used and values above .95 signify a good fitting model while values in between .90 and .95 are deemed acceptable or marginal. However, with the large number of parameters in the current model, the Tucker-Lewis Index (TLI) or Non-normed Fit Index (NNFI) is generally recommended as it takes into consideration the number of parameters (Kenny, 2003). The interpretation of results is the same as the NFI.

Lastly, the root mean square error of approximation (RMSEA), an absolute measure of fit, is another commonly reported goodness of fit index. This measure assesses how well the proposed model, with unknown but optimally chosen parameter estimates, fits the population covariance matrix (Hooper, Coughlan, & Mullen, 2008). Despite its popularity, some limitations have been noted. Recently, Kenny and colleagues (2011) suggested that RMSEA values are overestimated in models with smaller samples and very small degrees of freedom. In terms of guidelines for interpretation, since the original development of the RMSEA, the proposed cut-offs have varied considerably over time. While some researchers have suggested cut-off scores of 0.05, others have posited that a cut-off of 0.08 signifies an acceptable or mediocre fit (Hu & Bentler, 1999; MacCallum, Browne, & Sugawara, 1996; Stage et al., 2004). Then again, Browne and Cudeck (1993) have noted that a RMSEA greater than 0.10 indicates a poor-fitting model.

As noted above, path analyses are a useful tool; however, a number of criticisms and limitations have been raised (Everitt & Dunn, 1991; Lea, 1997). One major limitation raised by researchers has been that causal inferences cannot be made since the analyses are based on correlational relationships (Everitt & Dunn, 1991; Lea, 1997). As such, theoretical knowledge of the model is critical in the use of path analyses and caution must be used in the interpretation of results.

Full versus Reduced Model of Behaviour

In the current analyses, the plausibility and robustness of the TPB model in predicting and explaining frequency of seeking help for oneself or intervening in a bully/victim problem on behalf of a bullied peer was assessed using two versions of the TPB model, namely a simplified version of the model that assesses the TPB antecedents and intentions at Time 1 as well as a full version that assesses all the TPB constructs at both time points.

A simplified version of the model, which includes the measure of TPB antecedents at Time 1 and of behaviour at Time 2, was examined first (see Figure 6). According to the TPB, one's attitudes, subjective norms, and PBC at Time 1 are hypothesized to predict one's intention to engage in a specific behaviour at some point in the future. One's behaviour, as measured at Time 2, is hypothesized to be predicted by one's previously assessed intention and PBC. In the literature, researchers examining the utility of the TPB measure have traditionally examined the robustness of this simplified model in explaining a variety of behaviours (Ingram, Cope, Harju, & Wuensch, 2000; Marcoux & Shope, 1997).

Subsequently, I examined a full version of the TPB model (see Figure 8) which includes measures of the TPB antecedents and intentions at both Time 1 and at Time 2. According to Fishbein and Ajzen (1975), the variables in the TPB model are proposed to hold stable across the time points when the amount of time between the administrations of the measures is limited. As such, attitudes, subjective norms, PBC, and intentions at Time 1 were proposed to affect behaviours through their respective measures at Time 2. This premise is the basis for the boundary condition stating that the time frame between measurements of intentions and behaviours should be limited. Since the goal of the current analyses is exploratory in nature, this full test of the model was conducted. Reinecke, Schmidt, and Ajzen (1996) utilized a similar expanded model in examining condom use in adolescents.

The rationale for examining two models in this study was twofold. First, the use of the simplified model was consistent with one used in the literature examining the application of the TPB model. Second, given that this study is the first to apply the TPB to help seeking and intervention behaviours in response to bullying, it was important to examine the broader range of variables to ensure a comprehensive test of the model.

In sum, both the simplified and full models were examined using path analyses for each of the behaviours assessed. Following the analyses, I compared the models using various comparative indices to determine which emerged as a better fit to the data.

Path Analyses examining Victim Help Seeking Behaviours

The following sections present the results from the path analyses examining the robustness of the TPB model in explaining and predicting help seeking behaviour. First, the path analysis results from the simplified or reduced model of the TPB are discussed followed by the results from the full TPB model. Lastly, a comparison of the two models is presented using comparative fit indices. The current analysis used only complete cases from those participants who reported having been bullied in the previous month ($n=224$), thereby providing them with the opportunity to engage in the behaviour in question.

Reduced TPB Model of Victim Help Seeking Behaviours

The reduced model, examining the simplified version of Ajzen's TPB model, was first examined. The input diagram is located in Figure 6. Within this model, I hypothesized that the measures of attitudes, subjective norms, and perceived behavioural control would predict intentions at Time 1. Moreover, intentions and perceived behavioural control at Time 1 were hypothesized to predict the measure of behaviour at Time 2, which denoted the percentage of time that help was sought in the previous month in response to bullying. Maximum likelihood (ML) estimation was employed to estimate this model using the Analysis of Moment Structures (AMOS) statistical program. This method maximizes the likelihood that obtained values of the

criterion variable will be correctly predicted (Tabachnick & Fidell, 2007). Please note that this was the original model and not a reduced model recomputed with non-significant relationships removed. Univariate and multivariate normality was assessed and seven multivariate outliers were removed, resulting in a final sample size of 217. According to Bentler and Chou (1987), a sample size of 75 would have been sufficient for a model with 15 parameters.

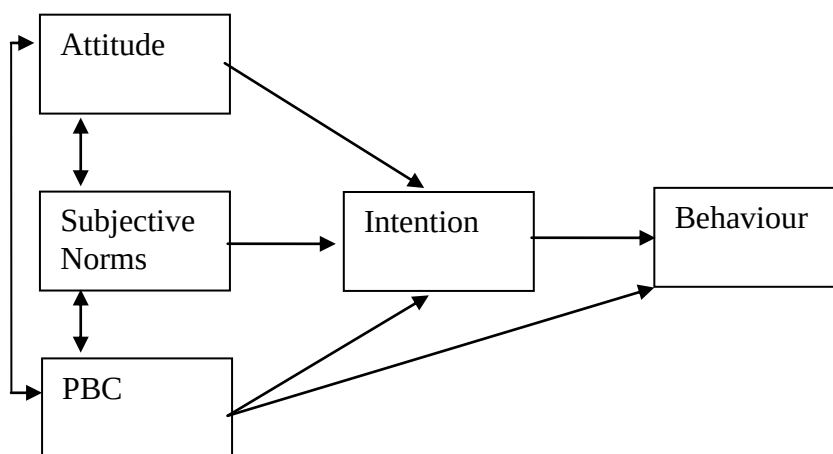


Figure 6. Reduced TPB input path model examining help seeking behaviours

Model estimation. An examination of the overall model fit yielded consistent results. The χ^2 test generated a value of 3.68 which, evaluated with 2 degrees of freedom, had a corresponding p-value of $p = .159$. The non-significant result indicated that the model was a good fit for the data. Given that sample sizes above 200 generally yield significant results (Kenny, 2003), the results were strong. An examination of additional indices suggested good fit (NFI = 0.99, TLI = 0.97). Lastly, a RMSEA value of .062 (CI = 0.00, 0.062) indicated a good fit according to MacCallum, Browne, and Sugawara (1996). Similarly, a p of Close Fit (PCLOSE), which emerged as non significant, suggested that the fit of the model is “close” to 0.05, providing further support for the model.

Direct and indirect effects. The path diagram, displayed in Figure 7, displays the standardized and unstandardized (in brackets) coefficients for the partial TPB model examining help seeking intentions and behaviours.

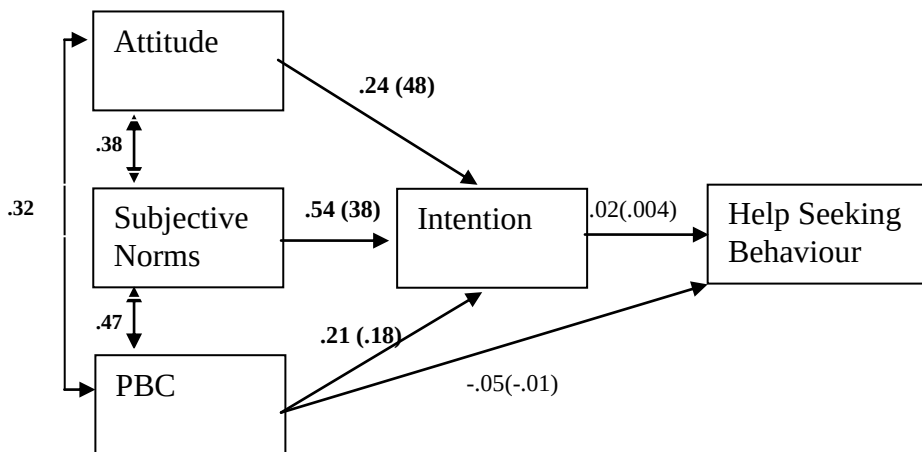


Figure 7. Final reduced model with standardized (and unstandardized) coefficients of help seeking behaviour. Note: Bold indicates statistically significant at $p < .05$. Fit indices: RMSEA = .062, Tucker Lewis Index = 0.97

Table 18 provides an overview of direct and indirect effects on intention and behaviour. An examination of the path coefficients from the predictor or exogenous variables to intention suggested that attitudes ($\beta = 0.24$, $t = 5.19$, $p < .001$), subjective norms ($\beta = 0.54$, $t = 10.94$, $p < .001$), and perceived behavioural control ($\beta = 0.21$, $t = 4.45$, $p < .001$) were significant. Together, the exogenous variables accounted for 63% of the variance in intentions as measured at Time 1 ($R^2 = .62$, $p < .001$).

In the examination of help seeking behaviours, intention ($\beta = 0.02$, $t = 0.22$, $p = .824$) and PBC ($\beta = -0.05$, $t = -0.61$, $p = .540$) emerged as non-significant. The negative relationship between PBC and behaviour may suggest that the model was not a good fit for the data. However, the results were consistent with the correlational analyses which determined that greater PBC was associated with less likelihood of seeking help.

Table 18.

Decomposition of Effects from Path Analysis examining help seeking - simplified model

Effect	Unstandardized coefficient	SE	Standardized coefficient	T	R ²
Attitude 1	.48	.09	.24	5.19***	.62
Subjective Norms 1	.38	.03	.54	10.94***	
PBC 1 on Intention 1	.18	.04	.21	4.45***	
Intention 1	.004	.02	.02	.22	.00
PBC 1 on Behaviour	-.01	.02	-.05	-.61	
	Attitude 1	SN 1	PBC 1	Intention 2	PBC 2
Standardized direct effects					
Intention 1	.24	.54	.21	.00	.00
Behaviour	.00	.00	.00	.02	-.05
Standardized indirect effects					
Behaviour	.00	.01	.00	.00	.00

*** $p < .001$, * $p < .01$, $p < .05$

The significance of the indirect effects was estimated using the bootstrapping method set at 1000 iterations as suggested by Kline (1998) to determine confidence intervals. The indirect effects of the three Time 1 TPB antecedents, attitude (0.00, CI -.012, .016), subjective norms (0.04, CI -.009, .012), and PBC (-0.04, CI -.005, .006) on help seeking behaviour through intention, were non-significant.

In sum, the results suggest that the overall model is a good fit for the data despite the fact that the direct effects of intentions and PBC emerged as non significant. As a result, the hypothesized indirect effects of the TPB antecedents on behaviour through intentions were not significant.

Full TPB Model of Victim Help Seeking Behaviours

Using Time 1 and Time 2 data, a second, expanded TPB model was then examined. The input diagram, located in Figure 8, delineates the causal connections that were hypothesized and the literature examining the TPB. The use of an expanded model served as another method with which to explore the applicability of the TPB in examining help seeking behaviours. Based on the research, it was hypothesized that the antecedents in Time 1 would account for a significant amount of variance in intentions at Time1. Second, it was hypothesized that intentions and PBC, as measured at Time 2, would account for a significant amount of variance in behaviours.

Additionally, it was hypothesized that the three TPB antecedents of attitudes, subjective norms, and perceived behavioural control would remain stable across time points since the data was collected within a span of one month. The presumption of stability across time points is a basic assumption of Ajzen's TPB model (Fishbein & Ajzen, 1975). Indeed it is recommended that time points be kept short in order to ensure stability of factors across time (Randall & Wolff, 1994). Lastly, I hypothesized that the effects of the three exogenous variables on behaviour will be mediated by the corresponding variables and intentions at Time 2.

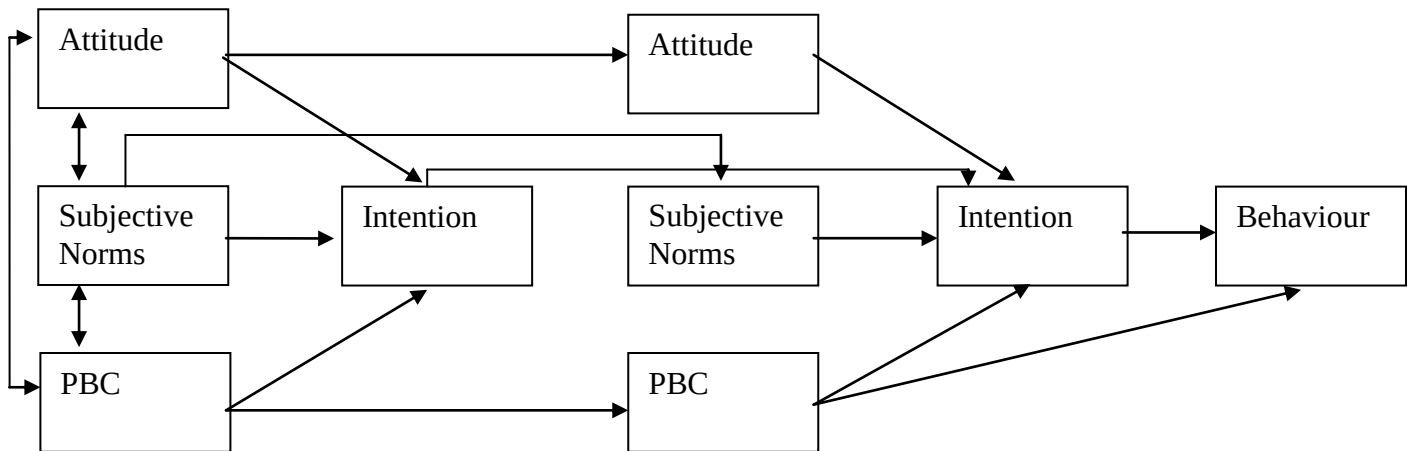


Figure 8. Full TPB input path model examining help seeking behaviours

Maximum likelihood (ML) estimation was employed to estimate this model using the AMOS statistical program. Univariate and multivariate normality was assessed and four multivariate outliers were removed from the path analysis, resulting in a final sample size of 220. According to Bentler & Chou (1987), the recommended ration of cases to parameters is 5 to 1. With 34 parameters in the current model, a minimum sample size would be 170 to ensure accuracy and stability of the path analyses. Due to the inability to correlate endogenous variables in path analysis, the error terms on the Time 2 TPB antecedents were correlated to account for the hypothesized relationship among them.

Model estimation. An examination of the overall model fit yielded mixed results. The χ^2 test generated a value of 47.26 which, evaluated with 17 degrees of freedom, had a corresponding p-value of $p < .001$. The significant result indicated that the null hypothesis can be rejected and that the model is not good fit to the data. However, according to Kenny (2003), the chi-square measure is almost always statistically significant in sample sizes that are greater than 200. As such, an examination of additional indices was warranted. As recommended by Kenny (2003) and Stage and colleagues (2004), the Normed Fit Index (NFI), Tucker-Lewis Index (TLI), and the root mean square error of approximation (RMSEA) were examined. The two incremental fit indices, NFI (0.94) and TLI (0.91) suggested an acceptable or marginal fit. Conversely, a RMSEA value of .090 (CI = 0.06, 0.12) indicated a poor fitting model. While these results may be inflated by a lower sample size, further examination of the p of Close Fit (PCLOSE), which emerged as significant, suggested that the model's fit was worse than close fitting and that the RMSEA was likely to be greater than .05.

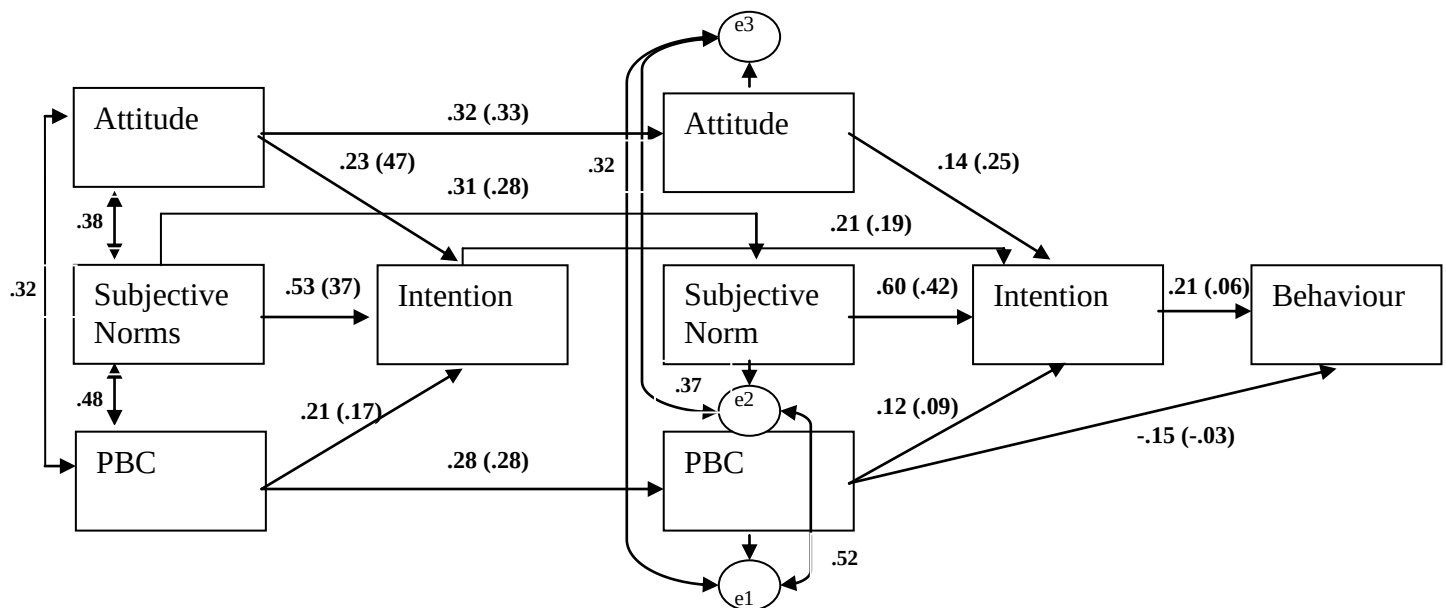


Figure 9. Final full model with standardized (and unstandardized) coefficients help seeking.

Note: Bold indicates statistically significant. Fit indices: RMSEA = .090, Tucker Lewis Index = 0.91

Direct and indirect effects. The path diagram, displayed in Figure 9, displays the standardized and unstandardized (in brackets) coefficients for the TPB model examining help seeking intentions and behaviours.

Table 19 provides an overview of direct and indirect effects on intention and behaviour. An examination of the path coefficients from the predictor variables to intention suggested that attitudes ($\beta = 0.23$, $t = 5.09$, $p < .001$), subjective norms ($\beta = 0.53$, $t = 10.66$, $p < .001$), and perceived behavioural control ($\beta = 0.21$, $t = 4.38$, $p < .001$) were significant. Together, the exogenous variables accounted for 62% of the variance in intentions as measured at Time 1 ($R^2 = .62$, $p = .002$). Although all three TPB antecedents at Time 1 were significant predictors of intention, the effect of subjective norms on intentions was stronger than the effects of the other predictors.

Table 19.

<i>Decomposition of Effects from Path Analysis examining help seeking - full model</i>					
Effect	Unstandardized coefficient	SE	Standardized coefficient	T	R ²
Attitude 1	.47	.09	.23	5.09***	.62***
Subjective Norms 1	.37	.04	.53	10.66***	
PBC 1 on Intention 1	.17	.04	.21	4.38***	
Attitude 1 on Attitude 2	.33	.06	.32	5.38***	.10***
SN 1 on SN 2	.28	.05	.31	5.73***	.10**
PBC 1 on PBC 2	.28	.06	.28	4.97***	.08**
Intention 1 on Intention 2	.19	.04	.21	5.15***	.65**
Intention 2	.06	.02	.21	5.563**	.03**
PBC 2 on Behaviour	-.03	.02	-.15	-2.0*	
	Attitude 1	SN 1	PBC 1	Intention 2	PBC 2
Standardized direct effects					
Intention 1	.23	.53	.21	.00	.00
Behaviour	.00	.00	.00	.21	-.15
Standardized indirect effects					
Behaviour	.01	.04	-.04	.00	.00

*** $p < .001$, * $p < .01$, * $p < .05$

Compared to intentions, the results for help seeking behaviours emerged as more complex. Intention ($\beta = 0.21$, $t = 5.56$, $p = .010$) and PBC ($\beta = -0.15$, $t = -2.00$, $p = .046$) were both significant predictors of help seeking behaviours but explained only 3% of the variance, leaving

much variance unexplained. Furthermore, an examination of the regression equations revealed the PBC had a negative coefficient when it was entered into the equation, which suggested that, as help seeking behaviour increases, PBC decreases. The negative correlation between PBC and behaviour, however, was consistent with the results from the Spearman's correlations and the logistic regression analyses.

Examining the direct effects of the TPB antecedents at Time 1 on their corresponding measures at Time 2 yielded significant results. These outcomes suggested that the TPB variables were stable across the month long time delay between the two data collection points. However, an examination of the squared multiple correlations suggested that the TPB antecedents at Time 1 accounted for only a small proportion of the variance in their corresponding measures at Time 2 and there was large amount of variance that remained unexplained. Intentions at Time 1, however, accounted for 65% of the variance in intentions at Time 2, which suggested that this factor is relatively stable over time.

The significance of the indirect effects was estimated using the bootstrapping method as suggested by Kline (1998) to determine confidence intervals. The indirect effects of the three Time 1 TPB antecedents, attitude (.011, CI -.013, .024) subjective norms (.043, CI -.005, .022) and PBC (-.035, CI -.018, .003) on help seeking behaviour, were non-significant.

In sum, despite the findings that the majority of the hypothesized paths were significant, the model was not an adequate fit for the data according to the fit indices. Examination of the individual paths indicated that these results were consistent with the multiple regression analyses reported earlier, which showed that attitudes, subjective norms, and PBC accounted for a significant amount of variance in one's intention to seek help. However, inconsistent with the previously reported results from the logistic regression, intention and PBC accounted for a small, but significant, amount of variance in behaviors.

Comparison Between the TPB Models of Help Seeking

An examination of the two models of help seeking behaviours revealed not unexpected differences. Since models tend to be penalized for increasing complexity and parameters, simpler models tend to provide a better fit to the data (Kenny, 2003). As expected, the reduced TPB model, excluding the measures of the TPB antecedents at Time 2, provided a better fit for the data. A comparison of the Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC), which are comparative measures of fit (Kenny, 2003), suggested that the simplified model (AIC= 29.679 and BIC=73.617) was a better fit compared to the extended model (AIC 103.264 and BIC = 198.286). However, both the AIC and the BIC penalize for increasing numbers of parameters and for greater sample sizes (Kenny, 2003).

Path Analyses examining Bystander Intervention Behaviours

The following sections present the results from the path analyses examining the robustness of the TPB model in explaining and predicting intervention behaviour. First, the path analysis results from the simplified model of the TPB are discussed followed by the results from the full TPB model. Lastly, a comparison of the two models is presented using comparative fit indices. The current analyses used only complete cases and those participants who reported having witnessed bullying in the previous month, thereby providing them with the opportunity to engage in the behaviour in question (n=339).

Reduced TPB Model of Bystander Intervention Behaviours

A reduced model, examining the simplified version of Ajzen's TPB model predicting intervention behaviour, was first examined. The corresponding input diagram is located in Figure 10. Within this model, it was hypothesized that the measures of attitudes, subjective norms, and perceived behavioural control at Time 1 would account for a significant amount of variance in intentions at Time 1. Secondly, following the Ajzen's TPB model, it was hypothesized that intentions and perceived behavioural control at Time 1 would account for a

significant amount of variance in the measure of behaviour at Time 2, as defined as the percentage of time that the participant intervened in a bully/victim problem.

Maximum likelihood (ML) estimation was employed to estimate this model using the AMOS statistical program. Univariate and multivariate normality was assessed and seven multivariate outliers were removed, resulting in a final sample size of 332. Similar to the reduced model examining help seeking, a sample size of 75 was deemed to be sufficient for a model with 15 parameters (Bentler & Chou, 1987).

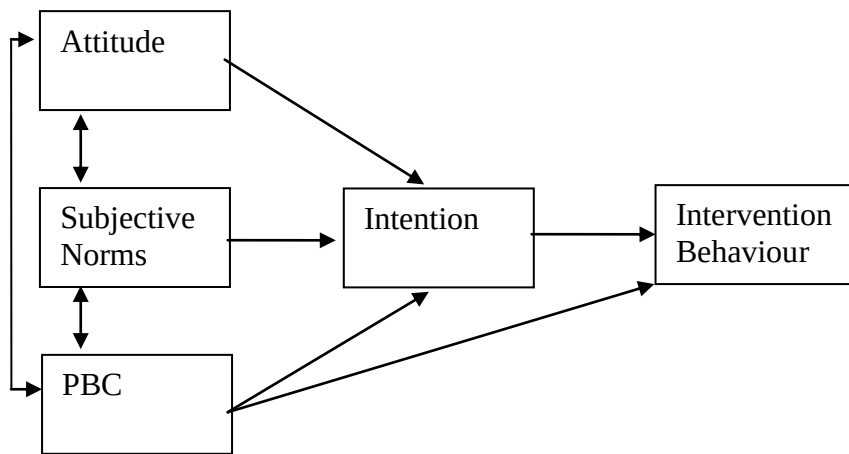


Figure 10. Reduced TPB input path model examining intervention behaviours

Model estimation. An examination of the overall model fit provided some evidence that the model was a good fit for the data. The χ^2 test yielded a value of 6.92 which, evaluated with 2 degrees of freedom, had a corresponding p-value of $p=.031$. While the significance level may have been considered as significant, given that large sample sizes generally results in a significant result, the data supported the examination of additional fit indices. An inspection of the additional indices revealed mixed results. The incremental fit indices suggested a good fit (NFI = 0.99, TLI = 0.94). However, a RMSEA value of .088 (CI = 0.022, 0.163) indicated a poor fit according to MacCallum, Browne, and Sugawara (1996). As it is possible that the low number of degrees of freedom artificially inflated the RMSEA value (Kenny, 2003; Kenny,

Kaniskan, & McCoach, 2011), an examination of the p of Close fit was warranted. The p of Close Fit (PCLOSE), which assesses the likelihood that the RMSEA is below 0.05, emerged as non-significant, suggesting that the fit of the model is “close” to 0.05 and therefore providing support for the model.

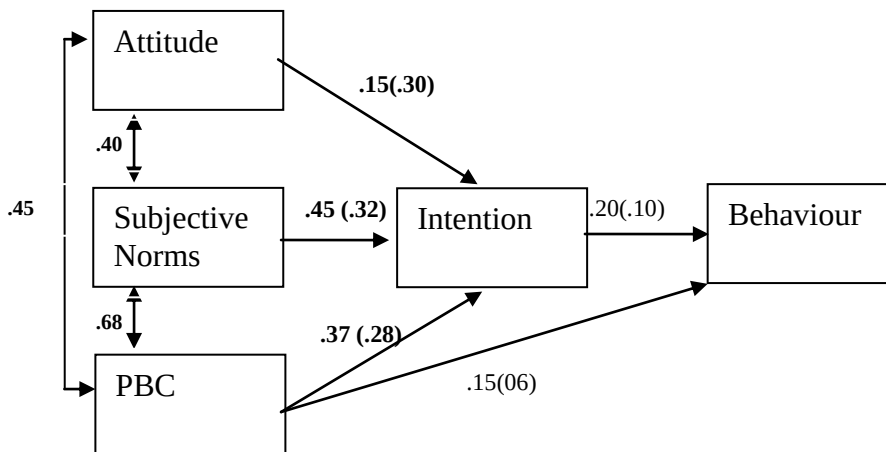


Figure 11. Final reduced model with standardized (and unstandardized) coefficients of intervention behaviour. *Note:* Bold indicates statistically significant. Fit indices: RMSEA = .088, Tucker Lewis Index = 0.95

Direct and indirect effects. The path diagram, displayed in Figure 11, provides the standardized and unstandardized (in brackets) coefficients for the TPB model examining intervention intentions and behaviours. Table 20 provides an overview of direct and indirect effects on intervention intention and behaviour. An examination of the path coefficients from the predictor variables to intention suggested that attitudes ($\beta = 0.15$, $t = 4.23$, $p < .000$), subjective norms ($\beta = 0.45$, $t = 10.65$, $p < .000$), and perceived behavioural control ($\beta = 0.37$, $t = 8.63$, $p < .000$) were significant. Together, the exogenous variables accounted for 70% of the variance in intentions as measured at Time 1 ($R^2 = .70$).

In the examination of intervention behaviours, intention and PBC accounted for a significant amount of variance in the criterion variable ($R^2 = .10$). Individually, intentions ($\beta = 0.19$, $t = 2.41$, $p = .016$) emerged as significant at the $p < .05$ level, suggesting that this variable

contributed a significant amount of variance to intervention behaviours. However, PBC ($\beta = 0.15$, $t = 1.87$, $p = .061$) emerged as non-significant.

Table 20.

<i>Decomposition of Effects from Path Analysis examining intervention</i>					
Effect	Unstandardized coefficient	SE	Standardized coefficient	T	R ²
Attitude 1	.30	.07	.15	4.23***	.70***
Subjective Norms 1	.32	.03	.45	10.65***	
PBC 1 on Intention 1	.28	.03	.37	4.23***	
Intention 1	.10	.04	.19	2.407*	.10*
PBC 1 on Behaviour	.06	.03	.15	1.871	
	Attitude 1	SN 1	PBC 1	Intention 2	PBC 2
Standardized direct effects					
Intention 1	.15	.45	.37	.00	.00
Behaviour	.00	.00	.00	.19	.15
Standardized indirect effects					
Behaviour	.03	.09	.07	.00	.00

*** $p < .000$, * $p < .01$, * $p < .05$

To further examine the utility of the TPB model in explaining intervention behaviours, the hypothesized indirect effects of the three TPB antecedents were examined using the bootstrapping method set at 1000 iterations as suggested by Kline (1998) to determine confidence intervals. The results indicated that the indirect effects of Time 1 TPB antecedents, attitude (.03, CI .007, .058), subjective norms (.09, CI .010, .023), and PBC (.07, CI .008, .023) on intervention behaviour through intention, all emerged as significant.

In sum, the reduced model provided a good fit for the data according to multiple fit indicators. The RMSEA criterion, however, did not suggest a good fit. An examination of the direct effects suggested that the predictor variables did account for a significant amount of variance in the criterion variables. Additionally, indirect effects of the three TPB antecedents on behaviours through intentions also emerged as significant providing, further strengthening the utility of the TPB model in examining this behaviour.

Full TPB model of Bystander Intervention Behaviours

The hypothesized input diagram for examining the full or expanded TPB model for intervention behaviours using Time 1 and Time 2 data is located in Figure 12. Based on the research examining intervention behaviours and the TPB, it was first hypothesized that the three antecedents of attitude, subjective norms, and PBC, would contribute a significant amount of variance in intentions to intervene at Time 1. Second, it was hypothesized that intentions and PBC at Time 1 will contribute a significant amount of variance in the measure of behaviours at Time 2. Thirdly, it was hypothesized that the effects of the three exogenous variables on behaviour will be mediated by the corresponding variables and intentions at Time 2. Fourth, it was posited that the TPB variables of attitude, subjective norms, PBC, and intentions would remain stable across Time 1 and Time 2.

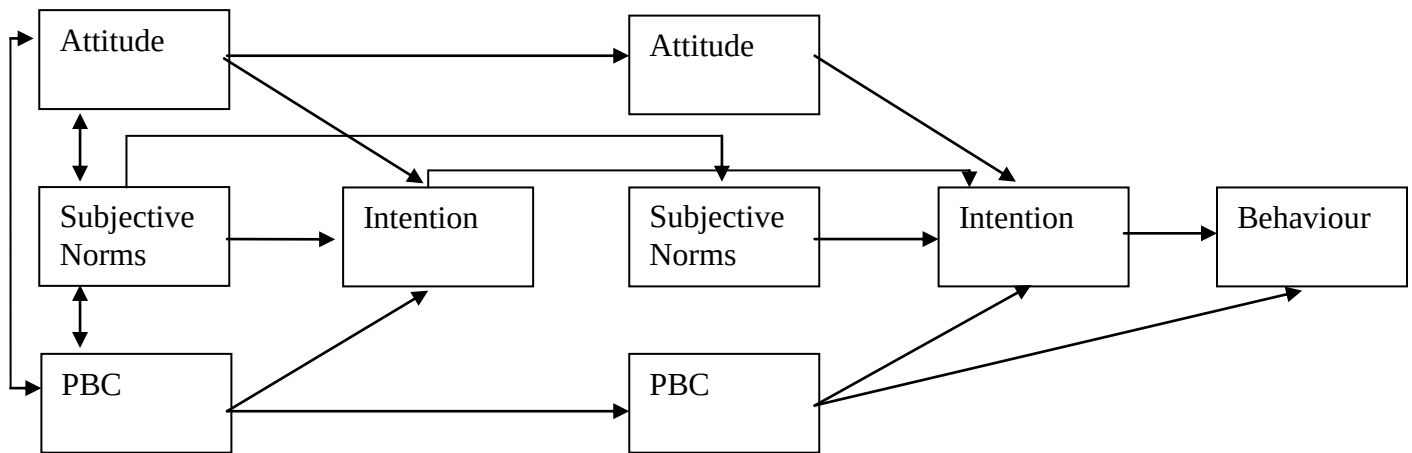


Figure 12. Full TPB input path model examining intervention behaviours

For the current analyses, maximum likelihood (ML) estimation was employed to estimate this model using the AMOS statistical program. The assumptions were verified using SPSS and the AMOS program. Univariate and multivariate normality was assessed and, by consulting the Mahalanobis distances, 21 multivariate outliers were removed from the path analysis, resulting in a final sample size of 318. Following the guidelines set forth in Bentler & Chou (1987), a

minimum sample of size of 170 would be required for the current analyses. Since these analyses represented an initial examination of the TPB model with regard to these behaviours, the full model was analysed. Similar to the help seeking model, the error terms on the Time 2 TPB antecedents were correlated to account for the hypothesized relationship among them.

Model estimation. An examination of the overall model fit using the chi-square statistic suggested that the model was not a good fit for the data ($\chi^2 = 54.60, p < .001$). However, similar to the help seeking model, a significant result was expected due to the large sample size (Kenny, 2003; Tabachnick & Fidell, 2007). As such, an examination of the goodness of fit indices was warranted.

The results from the recommended indices (Kenny, 2003; Stage et al., 2004) indicated that the model was generally a good fit for the data (NFI = .967, TLI = .951). However, the RMSEA was above the recommended cut-off of .08 (RMSEA = .084, CI = .059, .109) which suggested a poor fit to the data. While some researchers have suggested a cut –off of 0.10 to determine model fit, MacCallum, Browne, and Sugawara (1996) have used 0.01, 0.05, and 0.08 to indicate excellent, good, and mediocre fit respectively. Further examination of the p of Close Fit (PCLOSE), which emerged as significant, suggested that the model's fit was worse than close fitting and that the RMSEA was likely to be greater than .05.

Direct and indirect effects. The path diagram, displayed in Figure 13, displays the standardized and unstandardized (in parentheses) coefficients for the TPB model examining intervention intentions and behaviours.

Table 21 provides an overview of direct and indirect effects on intention and behaviour. An examination of the path coefficients from the predictor variables to intention showed that attitudes ($\beta = 0.13, t = 3.70, p < .001$), subjective norms ($\beta = 0.44, t = 10.19, p < .001$), and perceived behavioural control ($\beta = 0.40, t = 9.19, p < .001$) were significant predictors of intention at Time 1. Together, the exogenous variables accounted for 69% of the variance in intentions as

measured at Time 1 ($R^2 = .685$). Although all three TPB antecedents at Time 1 were significant predictors of intention, the effects of subjective norms and perceived behavioural control on intentions were both stronger than the effects of individual attitudes towards this behaviour.

In the examination of help seeking behaviours, intention ($\beta = 0.27, t = 3.23, p < .001$) emerged as a significant predictor while PBC ($\beta = 0.11, t = 1.33, p = .183$) failed to reach significance. Together, these variables accounted for 17% of the variance in self-reported behaviours ($R^2 = .17$).

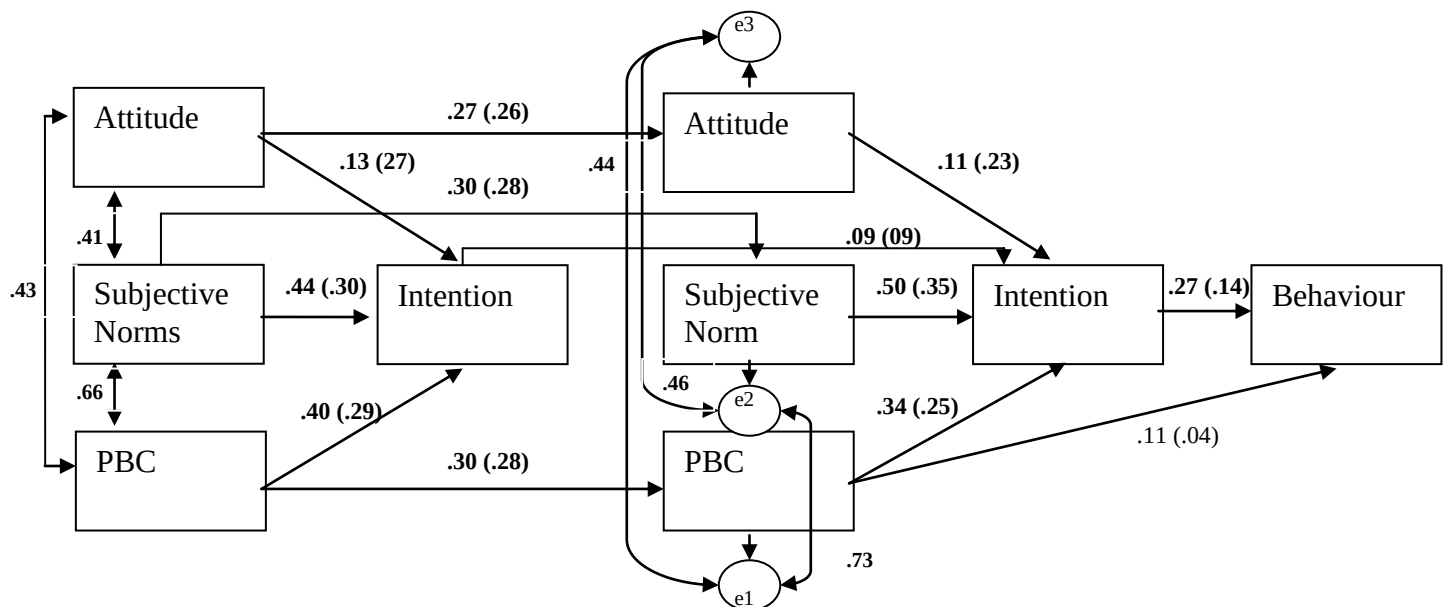


Figure 13. Final full model with standardized (and unstandardized) coefficients of intervention behaviours. *Note:* Bold indicates statistically significant. Fit indices: RMSEA = .084, Tucker Lewis Index = 0.95

Examining the stability of the three TPB antecedents and intentions across the two time points suggests that Time 2 variables were indeed predicted by the corresponding variables at Time 1. However variability in the amount of variance accounted for was evident suggesting that these factors can indeed vary over the course of a month. For example, attitude as measured at time 1 only accounted for 7% of the variance in attitude at time 2. Conversely, intentions at time 1 accounted for 75.5% of the variance in intentions at the second time point.

Table 21.

<i>Decomposition of Effects from Path Analysis examining intervention</i>					
Effect	Unstandardized coefficient	SE	Standardized coefficient	T	R ²
Attitude 1	.272	.074	.131	3.700***	.685***
Subjective Norms 1	.303	.030	.435	10.186***	
PBC 1 on Intention 1	.291	.032	.398	9.189***	
Attitude 1 on Attitude 2	.261	.047	.266	5.538***	.071***
SN 1 on SN 2	.282	.038	.297	7.416***	.088***
PBC 1 on PBC 2	.283	.038	.299	7.384***	.089***
Intention 1 on Intention 2	.093	.027	.096	3.370***	.755***
Intention 2	.143	.044	.266	3.231**	.173***
PBC 2 on Behaviour	.043	.032	.107	1.333	
	Attitude 1	SN 1	PBC 1	Intention 2	PBC 2
Standardized direct effects					
Intention 1	.131	.435	.398	.000	.000
Behaviour	.000	.000	.000	.266	.107
Standardized indirect effects					
Behaviour	.029	.110	.124	.000	.091

*** $p < .000$, * $p < .01$

Using the bootstrapping method available through the AMOS statistical analyses program to obtain confidence intervals as recommended by Klein (2005), the significance of the indirect effects were estimated. The indirect effects of the three time 1 TPB antecedents, attitude (.029 CI .011, .058) subjective norms (.11, CI .019, .061) and PBC (.12, CI .025, .070) on help seeking behaviour emerged as significant.

Overall, the results from the path analysis were mixed. The incremental fit indices provided some support that the TPB model was a good fit to the data. However, the comparative fit index, the RMSEA, determined that the model was not a good fit to the data as the indicator fell just above MacCallum and colleagues (1996) limit signifying a “mediocre fit”. An examination of the direct effects was consistent with those results from the multiple and regression analyses in determining that the hypothesized predictors accounted for a significant amount of variance in the criterion variables. An analysis of the indirect effects further supported

the use of the TPB model in that the three TPB antecedents influenced intervention behaviour through intention.

Comparison Between the TPB Models of Intervention

Overall, the results supported the fit of the data in both the extended and the simplified TPB model examining intervention behaviours. A comparison of the Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC), suggests that the simplified model (AIC=29.679, BIC=73.617) is a better fit compared to the extended model (AIC=110.60, BIC = 215.939). However, as noted above, both comparison incidences of fit penalize for increasing numbers of parameters and for greater complexity (Kenny, 2003).

Study 2 Results

In Study 1, the TPB antecedents accounted for a significant amount of variance in intentions thereby providing support for the use of the model in examining help seeking and intervention intentions. The goal of Study 2 was to replicate the results with a second sample of students using cross-sectional data. Additionally, the goal was to explore the relationship between school climate and reactions to bullying situations and to examine whether the three TPB antecedents of attitudes, subjective norms, and perceived behavioural control mediated the relationship between school climate and intentions in youths who are victimized and who witness bullying.

Preliminary Analyses

A total of 121 participants registered on the Yoomagazine website to complete the measures and provided their consent. However, only 113 participants completed the study measures. Prior to analysis, the variables relevant to the current study (i.e., demographic information, frequency of bullying, victimization, and witnessing bullying, school climate measures, and the TPB constructs) were screened for data entry errors, missing values, normality, homoscedasticity, and homogeneity of variances following the guidelines set out in

Tabachnik and Fidell (2007) in SPSS version 19. The data entry was verified by conducting frequency analyses on all the pertinent variables to ascertain whether the values fell within the appropriate ranges. Since the data were entered directly by the participant through the online data collection tool, no data entry errors were found. An analysis of the missing data was then conducted and results indicated that 0.26% of the data were missing. Given the small percentage of missing values and the small sample size, a single imputation of missing values was performed using the SPSS version 19.0 statistical analysis software.

The data were then examined for univariate outliers and assessed for normality following the guidelines set out in Tabachnick and Fidell (2007). Examination of Z scores revealed no univariate outliers on measures assessing the frequency of bully/victim problems or on the measures of TPB variables. The distribution of the variables was then assessed. On two measures of assessing the frequency of being bullied and bullying others, a skewed distribution was found. To address this, a log transformation was administered to the variable assessing the frequency of having been bullied. Conversely, the severe skewness of the variable of frequency of bullying others could not be rectified through the use of a transformation and therefore it was dichotomized. On the TPB measures, normal distributions were found on the relevant study variables.

An examination of multivariate outliers for each of the proposed regression models revealed a number of cases such that the probability of obtaining the Mahalanobis distance was less than 0.001. Due to the limited sample size, it was decided to not to eliminate these cases from the data set but simply to remove them from the corresponding regression analyses. The final dataset contained variables that had distributions that were appropriate for subsequent statistical analyses. Additionally, alpha levels were set at 0.05 for the subsequent statistical tests.

Frequency of Involvement in Bully/Victim Problems

To better describe our sample, frequencies of victimization, bullying others, and witnessing bullying in the previous four weeks were calculated using the Revised Olweus Bully/Victim Questionnaire (ROBVQ). The frequencies of being exposed to these incidents are located in Table 22.

The results suggest that a large number of students have been involved in bully victim situations in the past month in either the role of bullying others, being victimized, or having witnessed bullying. Specifically, almost half of the sample (45%) reported having been victimized at least once in the month prior to data collection with three-quarters of those youth reportedly bullied on a chronic basis (Dubé, et al., 2005). The frequencies of victimization are higher than those reported by Beran (2008) using a Canadian similar age group. With regard to bullying behaviour, one in three students admitted to bullying others at least once a month and smaller proportions reported being involved in bullying their peers on a more frequent basis. The results are consistent with those found by Craig (2004) using Canadian data. In terms of witnessing bullying at school, three quarters of students reported having been witness to some form of bullying at school with one fifth serving as bystanders to bullying multiple times a week.

Table 22.

Percentage of participants reported being involved in a bully/victim problem in previous month (N=113)

Type of exposure	Frequency (%)				
	Never in the last 4 weeks	1 time in the last 4 weeks	2 or 3 times in the last 4 weeks	About once a week	Two or more times a week
Victimized	55	12	13	5	14
Bullied others	66	20	7	3	4
Witnessed bullying	27	20	25	7	21

An examination of the relationship between gender and frequency of bullying was then conducted as much research has suggested that bullying tends to occur with greater frequency among boys compared to girls (Carney & Merrell, 2001). In the examination of gender,

MANOVAs were conducted with the continuous variables of frequency of victimization and witnessing bullying. These results suggested no significant relationship between gender and the frequency of being a bystander to bullying ($F(1, 111) = 3.00, p = .086$) or frequency of being bullied ($F(1, 111) = 0.18, p = .669$). Examining the frequency of bullying others using a chi-square test due to the dichotomous nature of the dependent variable revealed non-significant results as well ($\chi^2 = 1.27, p = .260$).

To further understand the form of bullying that the participants reported, the frequency of being victimized, bullying others, and witnessing bullying was assessed by type of bullying behaviour which included the following: physical, verbal, social, electronic, and racial bullying. The results are summarized below in Table 23.

Table 23.

Frequencies of types of bully/victim problems

Variable	Frequency (%)				
	Never in the last 4 weeks	1 time in the last 4 weeks	2 or 3 times in the last 4 weeks	About once a week	Two or more times a week
Type of Victimization					
Physical	72	17	8	1	1
Verbal	51	23	10	4	12
Social	64	20	8	0	9
Electronic	77	15	4	2	2
Racial/Ethnic/Religious	89	8	1	1	1
Type of Bullying					
Physical	76	19	4	2	0
Verbal	66	20	6	4	3
Social	83	8	3	5	1
Electronic	83	11	3	3	1
Racial/Ethnic/Religious	94	3	1	2	1
Type Bullying Witnessed					
Physical	38	29	18	7	8
Verbal	27	26	21	11	16
Social	35	26	19	8	12
Electronic	62	20	9	6	3
Racial/Ethnic/Religious	70	15	4	5	5

Consistent with literature, verbal and social bullying were the most frequently experienced forms of bullying (Fekkes, Pijpers, & Verloove-Vanhorick, 2004; Rivers & Smith, 1994). Interestingly, participants reported engaging in greater frequency of physical (24%) and verbal bullying (34%) compared to social bullying (17%). Concerning witnessing bullying behaviours, one quarter of students reported having witnessed verbal bullying at least once a week at school while one in five reportedly witnessed social bullying within the same time frame. Overall, the results suggest that the majority of participants have been exposed to bully/victim problems in one of the roles of victim, bully, or bystander.

School Climate and Stigma Scale

Preliminary investigations on internal consistency and factor structure of the School Climate and Stigma scale were then conducted. While the small sample size in the current study served as a limiting factor to the interpretation of exploratory factor analysis (Comrey & Lee, 1992; Tabachnick & Fidell, 2007), analyses of the factor structure, inter-item correlations, and distribution of responses suggested that a number of items should be removed from the measure. As such, 23 items of the original 45 were retained from the measure, forming five subscales, and are presented in Table 24.

The Cronbach's alpha for the total scale was .90, indicating a satisfactory level of internal consistency. Using the guidelines set forth by George and Mallery (2003), the internal consistencies for the five subscales ranged from unacceptable for the Stigma scale ($\alpha = .44$) to acceptable for the Supportive Environment Scale ($\alpha = .77$). As such, only the total scale score will be used in the remainder of the analyses. Correlations between the individual items and the subscales with the total school climate score all emerged as significant.

Table 24.

Correlations of items from the School Climate and Stigma Scale with total score and corresponding alpha level

	Correlation total	α level
Total	1.0	.90
Supportive environment	.90**	.77
Teachers praise students when they do well in class	.52**	
Students treat each other with respect and fairness	.55**	
Teachers at this school treat students with respect and fairness	.69**	
Teachers help students catch up when they fall behind	.74**	
Teachers care about me as a person	.76**	
School structure/order	.81**	.60
Students are well behaved at this school	.57**	
Students feel safe at school during the day	.40**	
When students act up or misbehave, teachers will do something about it	.55**	
Rules and consequences are clearly explained so students know and understand them	.67**	
Engagement/Cooperation	.89**	.76
Students enjoy learning at this school	.64**	
This school places more importance on cooperation rather than competition	.53**	
Students here are interested in being involved in sports, clubs, or other school activities	.65**	
Students feel like they are an important part of their school	.74**	
Students are proud of this school	.64**	
Stigma	.35**	.44
Students with mental health problems in my school are made fun of, ignored, or treated badly	.34**	
If I had a mental health problem, I would be worried about being treated badly by students and/or teachers in my school	.22**	
Help Seeking	.80**	.71
Students are able to ask a teacher for help if they have a problem with another student	.65**	
I feel comfortable talking to at least one teacher, guidance counselor or staff member about a personal problem (e.g. feeling depressed, stressed out or suicidal)	.57**	
Students are comfortable telling a teachers or staff about potential violence	.72**	
Autonomy	.77**	.58
Students are given a say in the creation of school rules	.51**	
Students help decide how class time is spent	.41**	
Students are allowed and encouraged to express their ideas as long as it is done in a respectful manner	.65**	
Students are given a say in what material they learn in class or what courses to take	.47**	

$p < .000$

To assess content validity, correlation coefficients were computed among the total school climate score and the TPB variables measures of help seeking and intervention behaviours.

Using the Bonferroni approach to control for Type I error across the eight correlations, a p value of less than .006 ($.05/8 = .006$) was required for significance. Overall, the results of the Pearson's correlational analyses, as denoted in Table 25, demonstrated that all eight correlations were statistically significant and ranged from $r(113) = .28, p < .001$ with intervention intentions to $r(113) = .61, p < .001$ with help seeking PBC and intentions. In general, the results suggested that a more positive school climate was associated with more positive attitudes, subjective

norms, perceived behavioural control, and intentions associated with both intervention and help seeking behaviours.

Table 25.

Bivariate correlations among the total school climate score and the TPB variables for help seeking and intervention behaviours (N=113)

	Attitude	Help Seeking			Attitude	Intervention		
		Subjective norms	PBC	Intention		Subjective Norms	PBC	Intention
Total School climate score	.53**	.45**	.61**	.61**	.39**	.32**	.36**	.28**

** $p < .001$

TPB Measures of Responses to Bullying

Since the TPB measure was constructed for the current study following Ajzen's (2003) guidelines to assess help seeking and intervention behaviours in reaction to bully/victim problems, the psychometric properties were assessed to determine the internal consistency of the measure. To assess the internal consistency of the measure Pearson's product-moment correlations and Cronbach's alpha levels were computed. Due to the exploratory nature of the current analyses, corrections for controlling Type I error across correlations, such as the Bonferroni approach, were not used.

Overall, the results of the Pearson's correlational analyses, displayed in Table 26 demonstrated that 54 of 55 correlations were significant on the TPB Measure of Responses to Bullying assessing help seeking. In examining the individual correlations, there were moderate to strong positive correlations between the items on the intentions, perceived behavioural control, subjective norms, and attitudes (Att1 only). Conversely, the strengths of the correlations between the second and third items of the attitudes subscale and the items of the remaining subscales were generally weak or moderate. Furthermore, the correlation coefficients among the two attitude items (Att 2 and Att3) and the remaining items were negative which was unexpected. In general, the results suggested that those items on the attitudes subscales were not correlated with the remaining items.

Table 26.

Pearson's Correlations Among Items on TPB Measure of Reactions to Bullying - Help seeking

Latent Variable	Item	1	2	3	4	5	6	7	8	9	10	11
Intention	Int1	1.0										
	Int2	.86**	1.0									
Attitude	Att1	.53**	.58**	1.0								
	Att2	-.34**	-.32*	-.47**	1.0							
	Att3	-.41**	-.39**	-.51**	.88**	1.0						
Subjective norms	SN1	.71**	.72**	.41**	-.19*	-.22*	1.0					
	SN2	.68**	.69**	.41**	-.19*	-.21*	.76**	1.0				
	SN3	.59**	.59**	.41**	-.19*	-.23*	.70**	.86**	1.0			
PBC	PBC1	.75**	.80**	.49**	-.27*	-.33*	.73**	.74**	.65**	1.0		
	PBC2	.66**	.73**	.45**	-.16	-.29*	.51**	.44**	.46**	.65**	1.0	
	PBC3	.56**	.55*	.39*	-.25*	-.29*	.60**	.63**	.61**	.61**	.50**	1.0
	Mean	4.36	4.32	3.89	3.07	3.29	4.62	4.73	4.64	4.80	4.37	4.90
	SD	2.00	1.98	2.20	2.11	2.17	1.73	1.79	1.89	1.91	2.01	1.84

** $p < .001$, * $p < .05$

Table 27.

Pearson's Correlations Among Items on TPB Measure of Reactions to Bullying – Assert self

Latent Variable	Item	1	2	3	4	5	6	7	8	9	10	11
Intention	Int1	1.0										
	Int2	.79**	1.0									
Attitude	Att1	.28*	.30*	1.0								
	Att2	-.29*	-.30*	-.46**	1.0							
	Att3	-.22*	-.15	-.30*	.70**	1.0						
Subjective norms	SN1	.81**	.75**	.25*	-.27*	-.19*	1.0					
	SN2	.83**	.82**	.36**	-.33**	-.14	.86**	1.0				
	SN3	.72**	.79**	.32*	-.28*	-.16	.80**	.82**	1.0			
PBC	PBC1	.76**	.86**	.32**	-.30*	-.12	.75**	.85**	.76**	1.0		
	PBC2	.64**	.74**	.22*	-.29*	-.12	.65**	.69**	.69**	.73**	1.0	
	PBC3	.67**	.79*	.26*	-.21*	-.17	.67**	.66**	.76**	.73**	.76**	1.0
	Mean	4.59	4.58	3.50	3.52	3.23	4.73	4.58	4.73	4.72	4.48	4.79
	SD	1.56	1.47	2.08	2.12	1.95	1.51	1.62	1.58	1.52	1.52	1.59

** $p < .000$, * $p < .05$

In examining the inter-item correlations among the items on the TPB Measure of Reactions to Bullying – Assert Self, the majority of the correlations were significant and showed relationships in the moderate range (see Table 27). However, similar to the help seeking version of the measure, the correlations between the second and third item of the attitude subscale (Att2

and Att3) and the remaining items tended to be lower, non-significant, and in the reversed direction.

The means, standard deviations, and Cronbach's alphas for the three subscales of the TPB Measures of Reaction to Bullying - Help Seeking and Assert self behaviors are located in Table 28 and 29. Overall, the results showed that the subscales of the subscales of the two TPB measures had good to excellent internal consistency. However, on both versions of the measure, the attitudes subscale had an unacceptable level of internal consistency, indicating that it was not an adequate measure of the latent variable of attitudes. Following the guidelines set out in Ajzen (2003), the attitudes subscale was designed with reversed items to prevent acquiescence bias (i.e., the tendency to response positively to items). Yet it was possible that the current sample did not take note of the change in direction after the first item and responded in the same manner in the remaining items. As such, due to the low Cronbach's alphas for the attitudes subscale, a single item measure of attitudes was used in the remaining analyses. While it is generally discouraged to use a single item measure of a psychological construct, some researchers have promoted it as an effective method for assessing global constructs (e.g., quality of life:

Table 28.

Psychometric Properties of the TPB Measure of Reactions to Bullying – Help seeking

Variable	N	M	SD	α	Range		Skew
					Potential	Actual	
Intention	113	4.34	1.92	.92	1-7	1-7	-1.01
Attitude	113	3.42	1.20	-.13	1-7	1-7	0.40
Subjective norms	113	4.66	1.66	.91	1-7	1-7	-1.69
PBC	113	4.69	1.63	.81	1-7	1-7	-2.23

Note: N=number of participants, M=Mean, SD=Standard deviation, α =cronbach alpha

Zimmerman, Ruggero, Chelminski, Young, Posternak, Friedman, et al. 2006), when holistic impressions are desired (Youngblut & Casper, 1993), or when multiple-item instruments are not suitable due to limited resources (Cunney & Perri, 1991). Nevertheless, due to the low

reliability of using single-item measures, consideration should be taken when interpreting the current results.

Table 29.

Psychometric Properties of the TPB Measure of Reactions to Bullying – Assert self

Variable	N	M	SD	α	Range		Skew
					Potential	Actual	
Intention	113	4.59	1.43	.88	1-7	1-7	-0.10
Attitude	113	3.41	1.15	-.08	1-7	1-6	1.66
Subjective norms	113	4.68	1.47	.93	1-7	1-7	0.15
PBC	113	4.66	1.40	.90	1-7	1-7	-0.68

Note: N=number of participants, M=Mean, SD=Standard deviation, α =cronbach alpha

Testing the Theory of Planned Behaviour

The following sections present the results from the multiple regression analyses to assess the robustness of the TPB model in separately predicting help seeking and intervention intentions using cross-sectional data. Since multivariate outliers may significantly influence the outcomes of multiple regression analyses, in each test of a model the multivariate outliers that were noted during the screening process were removed from the analyses.

Predicting victim help seeking intentions. To test the hypothesis that help seeking intentions are predicted by attitudes towards help seeking, subjective norms about help seeking, and perceived behavioural control over help seeking, correlational and multiple regression analyses were conducted. Of note, two multivariate outliers were removed from the following analyses.

To assess whether the TPB constructs of attitudes, subjective norms, or perceived behavioural control were valid predictors of intentions, intercorrelation matrices were derived for the TPB constructs. Bonferroni corrections were employed to control for Type I error in the 6 correlations and a p value was set for less than .008 ($.05/6 = .008$) for significance to be obtained. The results of the correlations are presented in Table 30 and indicated that all 6 correlations were statistically significant and were greater than or equal to $r(111) = .44, p < .001$. In general, the

results indicated that the three TPB constructs were positively and significantly associated with intentions and that greater scores in those domains were associated with greater help seeking intentions. High levels of intercorrelations between attitudes, subjective norms, and perceived behavioural control were not surprising given that, while conceptually independent, the determinants have been found to be significantly correlated with each other (Ajzen, 1991).

Table 30.

Summary of intercorrelations of TPB Help Seeking variables (N=112)

Variable	1	2	3	4
1. Intention	1.0			
2. Attitude†	.58**	1.0		
3. Subjective norms	.74**	.44**	1.0	
4. Perceived Behavioural Control	.83**	.54**	.76**	1.0

** $p < .001$

† Single item measure

A multiple regression analysis was then conducted to test the hypothesis that attitudes, subjective norms, and perceived behavioural control would account for a significant amount of variance in help seeking intentions. Multicollinearity was first assessed due to the high correlations among the subscales. A review of the tolerance levels and variance inflation factor revealed no significant issues with multicollinearity.

The three variables were entered simultaneously into the analysis as the predictor variables while intentions served as the criterion variable. The results from the analysis are summarized in Table 31 and include the unstandardized regression coefficients (B) and the standard error ($SE\ B$), the standardized regression coefficient (β), zero-order correlations (r), and the semipartial correlations (sr).

The regression equation with the three TPB constructs was significant and accounted for 77% (adjusted 77%) of the variance in intentions ($R^2 = .77$, adjusted $R^2 = .77$, $F(3, 107)$, $p < .001$). An examination of the individual predictor variables suggested that subjective norms did not make a significant contribution to the prediction equation ($t(107) = .41$, $p = 0.68$). However,

attitude ($t(107) = .2.60, p = 0.011$), and perceived behavioural control ($t(107) = 8.90, p < .001$) individually did contribute a significant amount of variance to intentions.

Table 31.

Predictors of Help Seeking Intentions

	Intention to Seek Help				
	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>r</i>	<i>sr</i>
Constant	-.36	0.28			
Attitude	0.12*	0.05	.14	.57	.12
Subjective Norms	0.04	0.09	.03	.72	.02
PBC	0.88**	0.10	.77	.87	.41

** $p < .001$, * $p < .05$

An examination of the zero-order correlations suggested that, when entered as a sole predictor of intentions, attitudes, subjective norms, and perceived behavioural control accounted for a large proportion of the variance in intentions, respectively, 32%, 52%, and 76%. Due to the high degree of correlations amongst the predictor variables, an examination of the amount of unique variance accounted for by each variable in the regression equation was warranted. The square semipartial correlations suggested that perceived behavioural control was the most important factor in predicting intentions as it explained 17% of the unique variance in intentions. Attitudes accounted for only 1% unique variance in intentions.

Overall, the multiple regression results suggested that young peoples' attitudes and perceptions about control over help seeking predicted their intentions to seek help from an adult at school in response to experiencing bully/victim problems.

Predicting bystander intervention intentions. The second hypothesis proposed that attitude, subjective norms, and perceived behavioural control would account for a significant amount of variance in intervention intentions. To test this hypothesis, bivariate correlations and a multiple regression analysis were conducted. Three multivariate outliers were removed from the following analyses.

Table 32 presents the correlations of the TPB Measure of Reactions to Bullying – Assert self. Bonferroni corrections were employed to control for Type I error in the 6 correlations and a p value was set for less than .008 ($.05/6 = .008$) for significance to be obtained. The results of the correlational analyses indicated that all of correlations reached significance and were greater than or equal to $r(110) = .29, p = .001$. The correlations between attitude and both intentions and perceived behavioural control tended to be lower and did not reach significance. These results suggested that higher scores on the subjective norms, and perceived behavioural control were associated with greater intention to intervene in bully/victim problems on behalf of a victimized peer.

Table 32.

Summary of intercorrelations of TPB Assert Self variables (N=110)

Variable	1	2	3	4
1. Intention	1.0			
2. Attitude†	.31*	1.0		
3. Subjective norms	.89**	.33**	1.0	
4. Perceived Behavioural Control	.86**	.29*	.85**	1.0

** $p < .001$, * $p < .01$

† Single item measure

A multiple regression analysis was then conducted using intentions as the criterion variable and attitude, subjective norms, and perceived behavioural control as the predictor variables, which were entered simultaneously into the analysis. Due to the high correlations among the subscales, multicollinearity was assessed by examining the tolerance levels and the variance inflation factor in SPSS. A review of the two indicators revealed no significant issues with multicollinearity.

The results from the analysis are summarized in Table 33 and include the unstandardized regression coefficients (B) and the standard error ($SE B$), the standardized regression coefficient (β), zero-order correlations (r), and the semipartial correlations (sr^2). The results of the analysis suggested that the three TPB constructs accounted for a significant amount of variance in

intervention intentions ($R^2 = .88$, adjusted $R^2 = .88$, $F(3, 106)$, $p < .001$). However, in examining the extent to which each individual variable contributed to the overall intention, attitude did not emerge as a significant predictor ($t(106) = 0.18$, $p = .861$). Conversely, both subjective norms ($t(106) = 8.67$, $p < .001$) and perceived behavioural control ($t(106) = 5.03$, $p < .001$) made significant contributions to the regression equation.

An examination of the zero order correlations suggested that, when entered alone as individual predictors of intentions, subjective norms and perceived behavioural control accounted for a significant amount of variance in intentions. Specifically, the variable subjective norms explained 85% of the variance while perceived behavioural control explained 79%. However, since the variables were correlated, an examination of the square semipartial correlations was warranted to determine the variance that was unique to each predictor in the criterion variable when all the variables are entered into the regression equation. The results indicated that much of the variance in intentions was due to shared variance among the predictor variables. Indeed, the amount of unique variance accounted for by subjective norms emerged as 9% while PBC accounted for only 3% of the variance in intentions. Overall, the multiple regression results suggested that, in youths, the more others close to them want them to intervene and the more one feels able to intervene, the greater the intention to engage in that behaviour.

Table 33.

Predictors of Intervention Intentions

	Intention to Intervene				
	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>r</i>	<i>sr</i>
Constant	0.18	0.17			
PBC	0.36**	0.07	.35	.89	.17
Subjective Norms	0.59**	0.07	.61	.92	.30
Attitude	0.004	0.03	.01	.31	.01

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

Multiple Mediation Background

I hypothesized that the three TPB constructs would mediate the relationship between school climate and intentions with regard to help seeking and intervention behaviours. To assess this hypothesis, the total direct, and single-step indirect effects (specific and total) of school climate on either help seeking or intervention intentions through the three TPB constructs attitude, subjective norms, and perceived behavioural control were examined using the bootstrapping analyses method for estimating direct and indirect with multiple mediators by Preacher, Rucker, and Hayes (2007). This was done using the Macro for SPSS version 19 by Preacher and Hayes (2008). This method calculates the Sobel test for the total and specific indirect effects. It also utilizes bootstrapping and provides users with the percentile based, bias-corrected, and bias-corrected and accelerated bootstrap confidence interval for the indirect effects. The authors have suggested that this method for estimating mediation effects is superior to traditional methods such as the causal steps strategy (Baron & Kenny, 1986) and using only the Sobel test (Sobel, 1986) when using smaller samples. Preacher and colleagues (2007) posited that simply using the Sobel method is inappropriate for smaller sample sizes as it cannot assume a normal sampling distribution in the indirect effects of the causal variable on the outcome variable (Preacher & Hayes, 2008). The concerns noted above have been echoed by others who have discussed many of the limitations associated with the traditional Baron and Kenny (1986) Method (Hayes, 2009; Tabachnick & Fidell, 2007; Zhao, Lynch, & Chen, 2010). The current method utilizes bootstrapping which does not impose the assumption of normality of the sampling distribution, may be used in multiple-mediator models, and has higher power while controlling for Type I error (Preacher & Hayes, 2008). Additionally, the bootstrapping procedures are generally recommended for smaller samples such as the current one (McKinnon, Lockwood, Hoffman, West, & Sheets, 2002; Preacher & Hayes, 2008).

This form of analysis is able to separate the *total effect* (c), namely, the effect of the independent variable on the dependent variable without considering the mediators, into both the *direct effect* (c') and the *indirect effects* (a and b). The direct effect is defined as the effect of the independent variable on the dependent variable while controlling for the mediations (i.e., TPB antecedents), while the indirect effect represents the effect via the mediators in question. Please see Figure 14 below for an illustration.

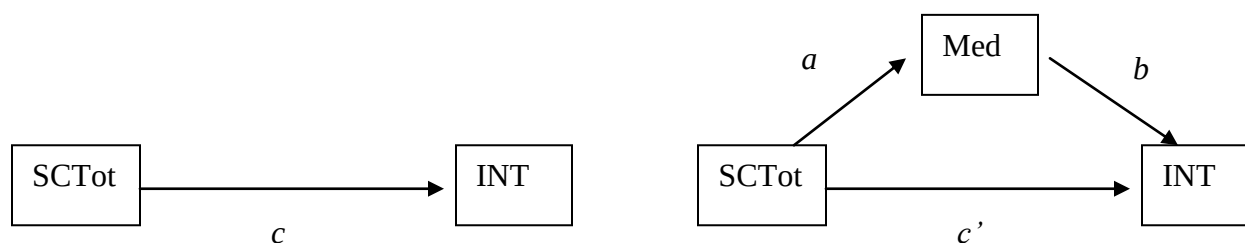


Figure 14. Mediation models

School Climate and Victim Help seeking Intentions

In the first model examining help seeking, intention was entered as the dependent variable, school climate mean score was entered as the predictor variable, and subjective norms, attitudes, and perceived behavioural control were entered as proposed mediators in the SPSS macro created by Preacher and Hayes (2008) for bootstrap analyses with multiple proposed mediators. In our analyses, we used 5000 bootstrap re-samples of the data with replacement as suggested by Preacher and Hayes (2008). Statistical significance was set at $\alpha = .05$ is indicated by the 95% confidence intervals not crossing zero. Standardized and centered scores were used to facilitate interpretation and multivariate outliers were removed from the analyses. In the current analyses, two cases were removed for a total sample size of 111.

Firstly, a significant total effect of school climate on help seeking intentions emerged, $\beta=0.58$, $t=7.72$, $p<.001$, suggesting that an effect existed which may be mediated by the proposed variables. Taken on its own, school climate accounted for 35% of the variance in help seeking intentions ($R^2 = .35$, adjusted $R^2 = .35$, $F(1, 110)$, $p < .001$). When the total effect was

divided into the direct effect of the school climate score and the total indirect effects of all the mediators combined, the direct effect of the school climate score was no longer significant ($\beta=0.10$, $t=1.64$, $p=.105$) suggesting that mediation has occurred. As such, school climate no longer had a significant direct effect on help seeking intentions when the TPB variables were controlled for. According to guidelines set forth by Preacher and Hayes (2008), since the difference between the total effect and the direct effect was not zero, then it was possible to conclude that the effect of school climate was mediated by the three TPB antecedents. Consistently, when examining the indirect effects, as understood to be the effect on school climate on help seeking intentions via the mediators, the results reached significance ($\beta=0.50$, 95% BCa CI .3514, .6129) (see Figure 15 for full mediational model)..

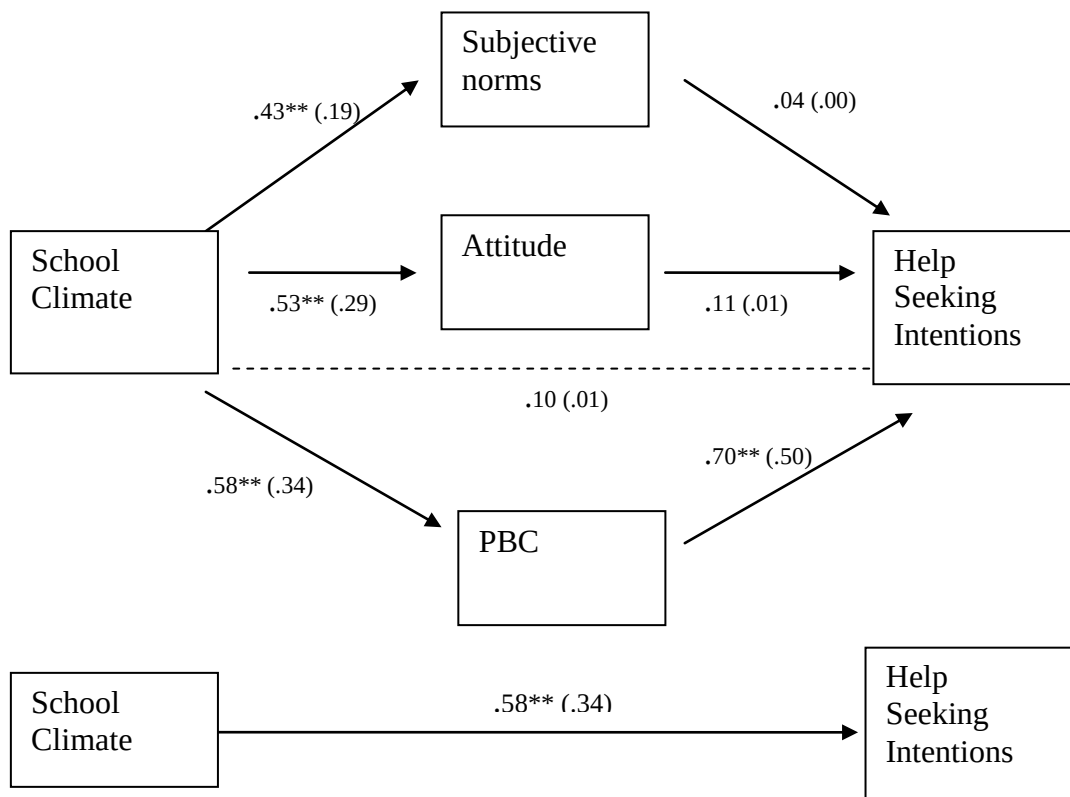


Figure 15. Multiple mediation analysis of school climate and help seeking intentions.
Note: The *bottom* diagram displays the standardized regression coefficients (and the coefficient of determination) illustrating the total effect of school climate on help seeking intentions. The *top* diagram displays the standardized coefficients (and the coefficients of determination) representing the direct effect of school climate and the indirect effect through all the mediators. * $p < .05$; ** $p < .01$

Since an overall indirect effect was determined, the total indirect effect can be further divided into the indirect effects of each of the mediators (see Table 33). The sole mediator that significantly contributed to the indirect effect was perceived behavioural control ($\beta=.41$, 95% BCa CI . 2569, .5806). The remaining mediators did not reach significance: attitude ($\beta=.0588$, 95% BCa CI . -.0036, .1364) and subjective norms ($\beta=.02$, 95% BCa CI . -.0537, .1257). An examination of the contrasts suggested that the indirect effect of PBC was significantly stronger than the indirect effects of attitudes and subjective norms. The results suggest that a more positive school climate seems to enhance the perception that students can ask for help in response to a bully/victim problem.

Table 34.

Mediation of the Effect of School Climate on Help Seeking Intentions through TPB variables

	Point Estimate	Product of Coefficients SE	Z	Percentile 95% CI		Bootstrapping BC 95% CI		BCa 95% CI	
				Lower	Upper	Lower	Upper	Lower	Upper
Indirect Effects									
Attitude	.059	.031	1.901	-.006	.134	-.004	.136	-.006	.134
Subjective norms	.018	.035	0.504	-.058	.119	-.052	.127	-.054	.126
PBC	.412	.075	5.524	.234	.578	.260	.583	.257	.581
TOTAL	.488	.071	6.859	.356	.619	.356	.619	.351	.613
Contrasts									
Attitude vs. Subjective norms	-.041	.046	-0.890	-.150	.088	-.146	.094	-.143	.099
Attitude vs. PBC	.353	.083	4.254	.176	.539	.189	.553	.180	.545
Subjective norms vs. PBC	-.394	.096	-4.108	-.620	-.165	-.637	-.177	-.634	-.175

Note: BC, bias corrected; BCa, bias corrected and accelerated; 5,000 bootstrap samples

Summary. In sum, the results from the mediation analyses suggested that school climate plays an important role in predicting help seeking intentions in response to bullying. However, these effects appeared to be largely mediated by the three TPB antecedents of attitude, subjective norms, and perceived behavioural control. When examined further, PBC emerged as the sole mediator that contributed significantly to the indirect effect on intentions. The results therefore

support the use of the TPB model in examining the effects of external factors, such as school climate, on help seeking intentions.

School Climate and Bystander Intervention Intentions

The second mediation model used intervention behaviours as the dependent variable, mean school climate as the independent variable, and the three TPB antecedents as the mediator variables. The procedure set forth by Preacher and Hayes (2008) for multiple mediation models using their SPSS macro was followed. In the current analyses, 5000 bootstrap resamples of the data with replacement was conducted following the advice of Preacher and Hayes (2008). Statistical significance with alpha at .05 is indicated by the 95% confidence intervals not crossing zero. Standardized and centered scores were used to facilitate interpretation and multivariate outliers were removed from the analyses. In the current analyses, three cases were removed for a total sample size of 110 participants.

First, to determine whether an effect exists between school climate and intervention behaviours, the total effect was calculated and emerged as significant ($\beta=.33$, $t=3.52$, $p<.001$). As such, school climate accounted for a 10% of the variance in intervention intentions ($R^2=.10$, adjusted $R^2=.09$, $F(1, 109)=12.37$, $p<.001$). As noted above, the total effect (i.e., effect of school climate on the outcome variable) may be separated into the *direct effect* and the *indirect effect*. In the current analyses, the direct effect, which examined the effect of the independent variable on the dependent variable while controlling for the mediators, emerged as non significant ($\beta=-.01$, $t=-0.27$, $p=.790$) suggesting that mediation had occurred. When examining the indirect effects, as understood to be the effect of school climate on intervention intentions via the mediators, the results reached significance ($\beta=.34$, 95% BCa CI 0.1392, 0.5358). Since the difference between the total effect and the direct effect was not zero, then it was possible to conclude that the effect of school climate was mediated by the three TPB antecedents (see Figure 16 for full mediational model).

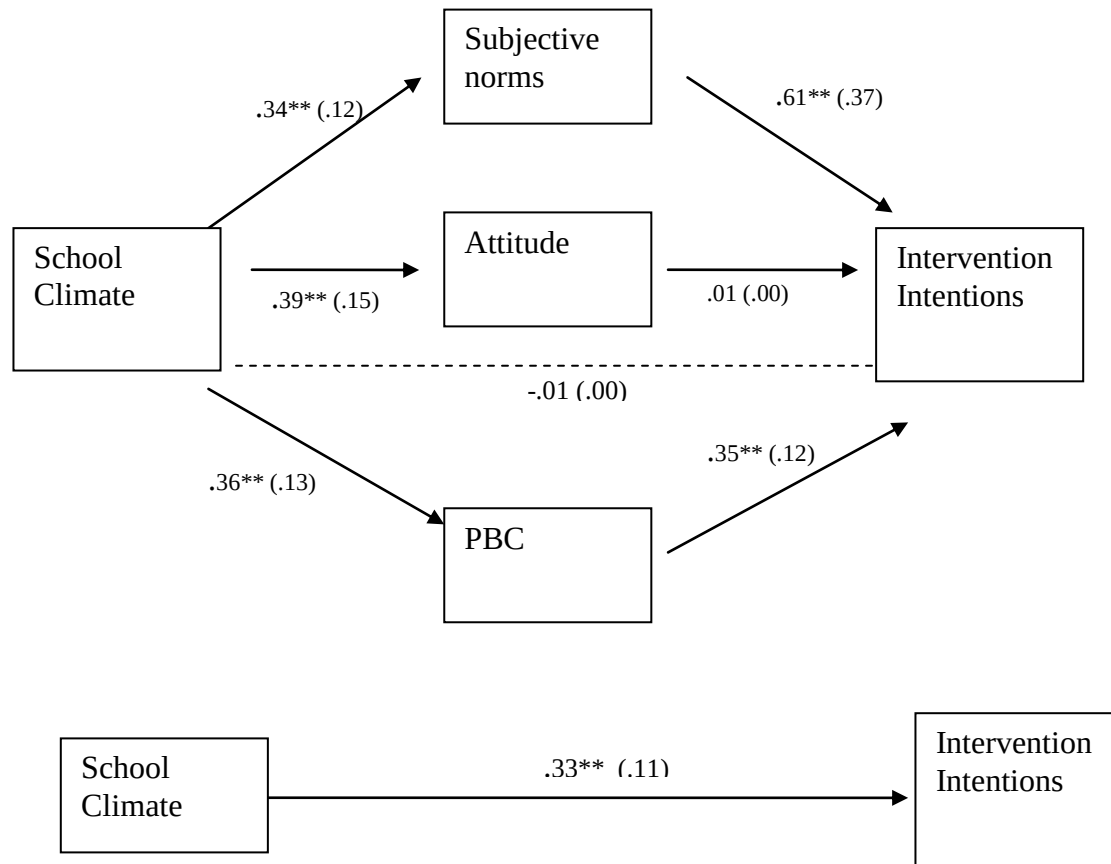


Figure 16. Multiple mediation analysis of school climate and intervention intentions. The *bottom* diagram displays the standardized regression coefficients (and the coefficient of determination) illustrating the total effect of school climate on help seeking intentions. The *top* diagram displays the standardized coefficients (and the coefficients of determination) representing the direct effect of school climate and the indirect effect through all the mediators. * $p < .05$; ** $p < .01$.

The total indirect effect was further divided into the indirect effects of each of the mediators. Table 35 presents the indirect effects, the corresponding confidence intervals to determine significance, and the contrasts to examine which variable served as the stronger mediator of the effect. The two mediators that significantly contributed to the indirect effect were perceived behavioural control ($\beta=.1250$, 95% BCa CI 0.0458, 0.2504) and subjective norms ($\beta=.2087$, 95% BCa CI 0.0819, 0.3694). The remaining mediator, attitude, did not reach significance ($\beta=.0037$, 95% BCa CI -.0231, 0 .0329). An examination of the contrasts suggests

that the indirect effect of PBC and subjective norms were both significantly stronger than the indirect effects of attitudes. The results suggested that a more positive school climate seems to enhance the perception that students can intervene in response to a bully/victim problem and feel a greater sense that this type of behaviour is encouraged.

Table 35.

Mediation of the Effect of School Climate on Intervention Intentions Through Students Attitude, Subjective Norms, and Perceived Behavioural Control (PBC)

	Point Estimate	Product of Coefficients SE	Z	Percentile 95% CI		Bootstrapping BC 95% CI		BCa 95% CI	
				Lower	Upper	Lower	Upper	Lower	Upper
Indirect Effects									
Attitude	.0037	.0145	.2523	-.0252	.0308	-.0231	.0329	-.0212	.0352
Subjective norms	.2087	.0612	3.4082	.0783	.3575	.0819	.3694	.0818	.3668
PBC	.1250	.0406	3.0786	.0391	.2347	.0458	.2504	.0439	.2442
TOTAL	.3373	.0878	3.8431	.1370	.5332	.1392	.5358	.1370	.5332
Contrasts									
Attitude vs. Subjective norms	.2050	.0635	3.2279	.0757	.3537	.0787	.3595	.0776	.3568
Attitude vs. PBC	.1213	.0428	2.8346	.0290	.2446	.0352	.2560	.0315	.2494
Subjective norms vs. PBC	.0837	.0574	1.4596	-.0453	.2427	-.0364	.2601	-.0334	.2648

Note: BC, bias corrected; BCa, bias corrected and accelerated; 5,000 bootstrap samples

Summary. In sum, the results from the mediation analyses suggested that school climate plays an important role in predicting intervention intentions in response to bullying. Additionally, school climate accounts for a significant amount of variance in the three TPB variables specific to intervention behaviours. As predicted, the effect of school climate on intervention intentions was mediated by the three TPB antecedents. When examining the strengths of the indirect effects, perceived behavioural control and subjective norms both emerged as significant mediators while attitudes failed to reach significant. These results therefore support the use of the TPB model in examining how individual psychological processes mediate the effect of external factors within the school on one's intention to intervene on behalf of a bullied peer.

CHAPTER FIVE

DISCUSSION

Overview

The goal of this dissertation was to examine the social and cognitive determinants of both help seeking and intervention intentions and behaviours in children and adolescents using the empirically validated Theory of Planned Behaviour (TPB). According to the TPB, the most proximal determinant of help seeking or intervention behaviour is one's intention to behave in a specific manner, along with one's perception of control over engaging in the behaviour (Ajzen, 1991). Additionally, one's attitudes about the behaviour, the perceived social pressure from others to engage in the behaviour, and the perception of control over engaging in the behaviour and an evaluation of barriers within the self and the environment are proposed to determine one's intention to seek help or intervene in bully/victim problems. While these behaviours have often been encouraged and promoted in school-based programming, researchers have only begun to examine the determinants of these behaviours in response to bullying. However, a unifying theory of behaviour change has not been deliberately examined. Therefore, in Study 1, I tested the TPB model using short-term longitudinal data from a large sample of secondary school students. Since this was the first test of the TPB model examining help seeking and intervention behaviours in response to bullying, Study 2 was designed to partially replicate the results from the first study using cross-sectional data from a sample of middle school students. To further examine the utility of the model in the context of school bullying, I investigated whether the TPB model would mediate the relationship between environmental factors of school climate and intentions to seek help or intervene in reaction to bullying. I will present and discuss the findings by theme and then discuss the implications of this research for measurement, theory, and policy. Lastly, I will discuss any limitations of the studies as well as directions for future research.

Predictors of Victim Help Seeking Behaviours

Following the TPB model, I examined whether intention and perceived behavioural control specific to seeking help from a school staff in response to bullying would predict self-reported help seeking behaviour over the subsequent month using the short-term longitudinal data from Study 1. This question was examined in a sample of students who reported having been bullied, and therefore had the opportunity to seek help.

Of the original sample of 609 students in Study 1, 224 (36.8%) participants reported that they had been bullied in the previous month and therefore had had the opportunity to seek help for bully/victim problems. However, despite having the opportunity to seek help for bullying, the majority of students (61 %) reported not having sought any help for bullying while one-quarter of students reported having sought help between 1% and 19% of the time. These results demonstrated that help seeking was not a behaviour that participants frequently chose to cope with bullying incidents.

In an effort to understand the predictors of help seeking behaviors within those participants who had the opportunity to seek help by virtue of having been bullied over the previous month, the TPB model was assessed. The results suggested that the link between help seeking intentions, PBC, and behaviours did not emerge as significant. Specifically, intentions and PBC together did not reliably distinguish between those adolescents who had sought help in the previous month in response to bullying and those who had not, thereby questioning the utility of the model in predicting this form of behaviour.

An examination of the results suggests that the TPB model may be insufficient for accounting for self-reported help seeking behaviours in response to bully/victim problems. These results appear to be consistent with previous research on help seeking for mental health difficulties and bullying. Indeed, researchers have found that intentions were not significant predictors of actual, self-reported behaviour for mental health difficulties, suggesting that factors

not accounted for by this construct, such as external barriers, may be significant (Deane, Wilson, & Ciarrochi, 2001; Rickwood et al., 2004). However, the social nature of bullying may also suggest that other factors may be influencing the intention-behaviour relation.

In a recent editorial, Ajzen (2011) reflected on the variability in the intention-behavior correlation. Although strong correlations between the two factors have generally been found, a number of researchers have concluded in their studies that intentions emerged as a poor predictor of behaviors (e.g., Kor & Mullan, 2011). Ajzen (2011) and other researchers, such as Webb and Sheeran (2006), have put forth a number of possibilities for the low predictive validity of intentions in specific situations. Webb and Sheeran (2006) concluded that conceptual factors, measurement factors, and study characteristics may serve as moderators to the intention-behavior relation. Conceptual factors include the degree of volitional control over the behavior such that greater degrees of control would result in a stronger association. Second, Webb and Sheeran (2006), based on the prototype-willingness model (Gibbons, Gerrard, Blanton, & Russell, 1998), have suggested that certain behaviors are more influenced by reasoned and deliberative action and thereby intention (i.e., medical self-examinations). Conversely, some behaviors are more influenced by contextual cues, which may override intentions (i.e., drinking while in a bar). Lastly, Webb and Sheeran (2006) posited that intentions would emerge as a stronger predictor of behavior when the action occurs infrequently, in an unstable environment thereby reducing the effort of habit. In their meta-analysis, Webb and Sheeran concluded that the degree of actual control over the engagement of behavior, influence of social reactions to behaviors, and whether the behavior is habit forming all moderated the intention-behavior relation.

Ajzen (2011) also reaffirmed the centrality of *actual control* over the behavior and that factors beyond an individual's control may reduce the predictive ability of intentions. With the inclusion of the PBC variable into the theoretical model of behaviour, Ajzen (1991) hypothesized that the model would account for those environmental factors which are likely to influence

behaviours. However, Ajzen noted that as external factors or resources varied, or if one had limited knowledge about the behaviour in question, then PBC would exhibit a reduced ability to accurately capture the perception of actual control thereby reducing the model's ability to predict behaviour.

Recently, Ajzen, Brown, and Carvajal (2004) investigated the discrepancy between intentions and behaviors and concluded that individuals construed substantive differences between hypothetical situations in which intentions are assessed and the real situation in which behaviours are expected. Indeed, according to this belief-disparity hypothesis, symbolic representations of situations and the salient beliefs that are activated in hypothetical situations may be quite different than those actually experienced in real life situations (Ajzen & Sexton, 1999). Ajzen and Sexton (1999) proposed that if the salient beliefs in the actual situation are incongruent with those accessed in the hypothetical situation, a discrepancy between intentions and behavior may be seen. Therefore, it appears that beliefs and attitudes are strongly influenced by salient contextual cues as opposed to being invariant across contexts.

Indeed, the experience of affect in youths who are victimized may play an important role in determining which salient beliefs are activated. Ajzen (2011) noted that affect plays an important role in determining one's attitudes towards the object in question which, in turn, influences intentions and behavior. In fact, researchers (i.e., Hunter & Borg, 2006) have examined the role of affect experienced in response to bullying and the specific coping mechanisms utilized. As such, it is possible that the unexpected affect experienced by victimized youths may have influenced the salient behavioural beliefs accessed and therefore reduced the intention- behavior link.

Overall, it is possible that more complex factors associated with help seeking behaviours in response to bullying, such as perceptions about the limited availability of resources in the school, the effects of the power difference or social reaction, alternative salient beliefs, or

emotional responses such as fear of retaliation, may not have been considered in the evaluation of one's intention to engage in help seeking behaviors and led to the intention-behavior discrepancy. While Ajzen himself has suggested that limits to reasoned action may indeed exist, more detailed research on the salient beliefs activated in help seeking scenarios may increase the predictive validity of intentions. Additionally, inquiring about the specific sources that youths may access for help may allow for greater accuracy when assessing how possible it would be for them to actually seek help in response to being bullied.

Predictors of Victim Help Seeking Intentions

With regard to intentions to seek help in response to being bullied, the TPB model was examined using both the short-term longitudinal data from Study 1 and the cross-sectional data from Study 2. The results from both studies provide support for the predictive ability of the three situation-specific cognitions in determining help seeking intentions as proposed by the TPB model. Help seeking related attitudes, subjective norms, and perceived behavioural control were associated with help seeking intentions in the hypothesized ways. Namely, if participants felt that help seeking would be useful, that people important to them would want them to seek help, and if that they could engage in this behaviour, they reported a greater intention to seek help if they were bullied in the next month. Indeed, taken together, these three factors accounted for a significant amount of variance ranging from 59% to 77% in help seeking intentions. While a number of differences do exist between seeking help for bullying and for mental health difficulties (i.e., social pressures, group processes), a comparison between the two literatures is warranted. In the current study, these results were consistent with those found by researchers examining help seeking for mental health difficulties in that one's attitude, perception of pressure from others and of one's own capability to engage in this behaviour were significant factors in determining behaviour (Bayer & Peay, 1997; Kessler et al., 1981; Davidson & Manion, 1996; Rickwood et al., 2004).

When examining the individual contributions of each TPB antecedent in predicting help seeking intentions, a differential pattern emerged from the two samples. In Study 1, examining a large sample of secondary school students, all three TPB antecedents contributed a significant amount of variance individually in intentions. However, subjective norms emerged as the strongest predictor of intentions. As such, it appeared that the perception of pressure from “people important to you” was the most important variable in this model. Conversely, in Study 2, with a smaller sample of younger students, subjective norms did not emerge as a significant predictor when the effects of the two other antecedents were controlled for. However, attitudes and PBC both emerged as significant individual predictors. This differential pattern of results may be due to the younger nature of the sample, the different settings, or the way in which the TPB variables were measured. Ajzen (1991) has noted, and research has supported this notion, that the relative importance of the three variables in predicting intentions and behaviours has been hypothesized to vary according to the individual factors, the nature of the situation, and behaviour in question (Ajzen, 1991; Armitage et al., 1999; Godin & Kok, 1996; Trafimow & Finlay, 1996). It is possible that the difference between the samples may be due to the increasing role that social pressure plays in determining intentions as young people age. However, the high degree of correlations among the TPB variables limits the ability to truly distinguish those factors that are “stronger” versus “weaker” in predicting intentions. As such, further research examining this particular behaviour is required to clarify this issue.

Overall, the combination of internal factors, such as attitude, and external factors, such as PBC and subjective norms, were important in predicting help seeking intentions. Despite the high levels of intercorrelations among variables, subjective norms and PBC emerged as strong predictors of help seeking intentions. These results are consistent with past research finding that the perception of others towards help seeking as well as perceptions of barriers played a central role in determining behaviours (Bayer & Peay, 1997; Froijid et al., 2007; Davidson & Manion,

1996). In particular, Davidson and Manion (1996) emphasized in role of stigma and social encouragement in diminishing or enhancing the likelihood of seeking help.

Overall TPB Model of Help Seeking

The plausibility and robustness of the overall TPB model in predicting and explaining help seeking intentions and behaviours was examined using path analysis and the short-term longitudinal data from Study 1. Two separate TPB models of help seeking were examined. First, the commonly employed reduced model, using the measures of TPB antecedents and intentions from Time 1 and a measure of behaviour from Time 2, was assessed. The results suggested that this simplified model was a good fit for the data. Next, to fully explore the applicability of the TPB to the examination of help seeking behaviours, the full TPB model, including Time 2 measures of attitudes, subjective norms, PBC, and intentions, was assessed. When the full model was examined, the results suggested that the model was not a good fit for the data. Unsurprisingly, since models are statistically penalised for increases in complexity, a comparison of the two models using comparative fit indices showed that the simplified model was a better fit than the full model.

The direct and indirect effects in the two models were also examined using path analysis. In both the simplified and expanded models, the three exogenous factors of attitudes, subjective norms, and PBC emerged as significant predictors of intentions. However, differences emerged in examining the predictors of help seeking behavior. In the reduced model, intention and PBC as measured at Time 1, did not account for account for a significant amount of variance in help seeking behaviour. Yet in the expanded model, intentions and PBC, as measured at Time 2, accounted for a significant, but small, amount of variance in self-reported behaviours. Despite the temporal stability between the measures at Time 1 and Time 2, the results suggested that measures of intentions and PBC were more predictive of behavior when measured at the same time as behaviour. Indeed, Ajzen (1991) has noted that for the model to accurately predict

behavior, intentions and PBC must remain stable between data collections waves. However, intervening events may occur which reduce the ability of intentions and PBC to predict behaviors.

In sum, the results from the path analysis offered some moderate support for the simplified TPB model in explaining help seeking intentions and behavior. However, examining the pattern of direct and indirect effects suggests that the model is stronger at predicting help seeking intentions than at explaining self-reported behaviours. As a result, the data from the current studies did not provide much support for the applicability of the TPB model in the current context in predicting actual behaviors.

Predictors of Bystander Intervention Behaviours

The current study was the first to explicitly examine intervention as a response to bully/victim problems using the theoretical framework set out by Ajzen (1991). Using the TPB model of behaviour, I hypothesized that intentions and PBC would account for a significant amount of variance in self-reported intervention behaviours. To examine this question, the short-term longitudinal data from Study 1 from participants who reported witnessing bullying in the previous month were used.

From the original sample of 609 participants, 339 (56%) students reported that they had witnessed some form of bullying of a peer over the previous month. An examination of the self-reported behaviours of those students who witnessed bullying suggested that over half indicated that they intervened in at least one incident on behalf of a bullied peer, while just under half reported intervening in none of the situations. Indeed, approximately one in five students reported that they intervened in almost half of the bullying incidents that they witnessed. The results suggested that a small sample of students tended to be the most involved in defending their bullied peers. Similarly, Salmivalli and colleagues (1996) concluded that 20% of their

adolescent sample could be labelled as defenders of their peers while the remaining witnesses were equally divided amongst followers and silent bystanders.

The results yielded moderate support for the use of the TPB model in predicting intervention behaviours. Taken together, the two predictor variables did correctly classify those who intervened and those who did not. However, a more detailed examination suggested that this classification rate, while significant, was low. Furthermore, a more detailed examination suggested that only intentions emerged as a significant predictor, while the effect of PBC failed to reach significance.

A number of possible interpretations may be posited to explain the results. First, it is possible that additional factors not captured by the TPB model may be influencing the outcome measure. Researchers have noted that children and youths often overestimate the likelihood that they would intervene in bully/victim problems (Adair, 1999; Rigby, 1996) and it has been posited that either social desirability or an under-appreciation for the mitigating factors within the environment may contribute to the modest association between willingness to intervene and actual behaviours (Rigby & Johnson, 2006). Alternatively, it is possible that one's intentions and perceptions of control may have changed from the first time point to when participants were provided with the opportunity to intervene. Lastly, it is possible that participants may feel capable and willing to intervene when they are faced with clear instances of bullying, such as the physical bullying. However, as the majority of reported bullying was categorized as verbal and social, the uncertainty of whether the situation was "bullying" may have contributed to whether they intervened or remained a silent bystander.

Predictors of Bystander Intervention Intentions

Examining intervention intentions, I hypothesized that the three TPB antecedents would explain a significant amount of variance in intentions to intervene on behalf of a bullied peer. To explore this hypothesis, data from Study 1 and Study 2 were used. The results from both studies

offered support for the plausibility and robustness of the TPB in predicting and explaining intervention intentions. Intervention-related attitudes, subjective norms, and perceived behavioural control were associated with intervention intentions in the hypothesized ways. Indeed, these situation-specific cognitions accounted for 65% to 88% of the variance in participants' intention to intervene on behalf of their peer. These results are consistent with past studies that have examined attitudes towards intervening (Salmivalli & Voeten, 2005), the role of peer expectations (Rigby & Johnson, 2006), and perceived self-efficacy for intervening (Cramer et al., 1988) in predicting the likelihood of standing up for a victimized peer.

In an examination of the relative importance of the individual measures of the TPB antecedents, subjective norms emerged as the strongest individual predictor of intervention intentions. These results are consistent with the literature that suggests that the perception of others, particularly peers, plays a significant role in determining behaviour, particularly in adolescence (Dworetzky, 1995; Logan & King, 2001; Rigby & Johnson, 2006). Indeed, Salmivalli and Voeten (2004) found that group norms about bullying in general explained a significant amount of variance in how students responded to bullying incidents. It is possible that the very public nature of intervention behaviours may increase the importance of subjective norms in predicting these behaviours over and above individual attitudes. Boulton (2012) recently found that witnesses to bully/victim problems tended to perceive risk in intervening on behalf of a bullied peer for fear that they themselves will be targeted (the "associating with victims is risky" effect) and that this influenced the likelihood that they would befriend their bullied peer. As such, whether an individual believes that their classmates will support and agree with their actions and thereby "protect" them from being targeted themselves, may serve as a barrier or a facilitator to engaging in this behaviour. Since this act of "befriending" bullied peers plays a pivotal role in many of the school-based prevention and intervention programs, particularly in the United Kingdom (Cowie et al., 2002), due to the protective nature of

friendships, the impact of subjective norms on this behaviour is especially important (Boulton, Trueman, Chau, Whitehand, & Amatya, 1999).

Overall TPB Model of Intervention

The plausibility and robustness of the overall TPB model in predicting and explaining intervention intentions and behaviours was examined using path analysis and the short-term longitudinal data from Study 1. Similar to the procedures in examining help seeking behaviours, two separate TPB models of intervention were examined. First, a simplified model, consistent with the literature, was examined and the results provided some support for the simplified model being a good fit for the data. Next, the full model was examined but the results were mixed with some fit indices suggesting that the model was a poor fit while others suggested good fit for the data. Consistent with the results from the help seeking behaviours and unsurprisingly given the statistical penalties for increased complexity in models, a comparison of the two models using comparative fit indices suggested that the simplified model was a better fit for the data than the full model.

The path analyses also provided important information on the direct and indirect effects in the two models. First, in both the simplified and expanded models, the three TPB antecedents explained a significant amount of variance in intentions as hypothesized. Second, in both models, intention and PBC also explained a significant amount of variance in self-reported behaviour as measured at Time 2. However, intentions and PBC only accounted for 10%- 17% of the variance in behaviours in the simplified and expanded models respectively, suggesting that much unexplained variance remained. Lastly, the indirect effects of the three TPB situation-specific exogenous variables on behaviour emerged as significant as hypothesized in the theory in both models.

Importantly for theoretical reasons, the proposed temporal stability of the variables over time was assessed using the expanded model and was supported in that the three situation-

specific cognitions and intentions at Time 1 explained a significant amount of variance in their corresponding measures at Time 2. However, while significant, the Time 1 antecedent variables only accounted small amount of variance in their Time 2 counterparts, ranging from 7% - 9%. The measure of Intentions at Time 1, however, appeared to be a stronger predictor of its Time 2 equivalent in that it accounted for 76% of the variance one month later. These results have important theoretical implications which will be discussed below.

Overall, the results from the path analyses offered support for the use of the simplified TPB model in explaining intervention behaviour in adolescents in response to witnessing bullying in schools. However, examining the direct effects of intentions and PBC on behaviour suggest that, while statistically significant, these exogenous variables only accounted for a limited amount of the variance in behaviour. The results suggested that additional variables external to the model may be playing an influential role in determining behaviour. It is also possible that measures of intention and PBC assessed closer in time to the measure of behavior were a more accurate reflection of youths' motivation and perceptions of control over intervening.

School Climate and Reactions to Bully/Victim Problems

According to Ajzen (Ajzen, 1991; Ajzen & Fishbein, 1980, Fishbein & Azjen, 1975), external factors affect intentions and behaviour through the three TPB variables. However, due to the central role that school climate plays in bullying prevention programs, examining the effect of this construct on TPB variables related to behavioural outcomes was of central importance. In order to understand how this construct influences desired program outcomes, such as increased help seeking and bystander intervention, the goal of Study 2 was to examine whether the TPB antecedents mediated the relationship between overall school climate and help seeking and intervention intentions. Overall, the results supported the important role of school climate in influencing intentions and behaviours through the TPB situation-specific cognitions.

School climate and help seeking behaviours. First, in examining help seeking in response to being bullied, school climate accounted for a significant amount of variance (35%) in help seeking intentions. These results are consistent with past research that highlights the important role that student perceptions of their school environment play in determining their likelihood to seek help for bullying (Eliot et al., 2010; Newman, 2003; Unever & Cornell, 2004).

Second, as hypothesized, school climate explained a significant amount of variance in the three proposed mediators, namely help seeking attitudes, PBC, and subjective norms which showed that modifications in perceptions of school climate may indeed result in changes in these three factors related to help seeking intentions. These results are consistent with past literature linking perceptions of supportive, structured school environments, characterized by student engagement, cooperation, and autonomy with an increasing perception that students can and will seek help for bullying (Newman, 2003; Unever & Cornell, 2004).

Third, in examining the mediation effects, the results indicated that, taken together, the three TPB antecedents of attitude, subjective norms, and PBC mediated the relationship between school climate and help seeking intentions. These findings suggested that the TPB model does account for many of the external factors in the school environment in affecting intentions to seek help for bullying.

Due to the expected correlations amongst the three TPB antecedents and to be able to further understand the link between school climate and help seeking intentions, the effect of each mediator was examined while controlling for the effects of the others. The results indicated that only PBC served as a significant mediator of school climate and help seeking intentions. These results were not unexpected since the variable of PBC is a measure of perceived barriers in the environment and evaluations of self-efficacy. School climates that facilitate help seeking tend to be those in which resources are available and welcoming of this type of behaviour. Indeed, research examining reasons for not seeking help often point to the perception of barriers within

the environment such as feeling that schools are ineffective at helping them or protecting them from retaliation (Cowie & Olafsson, 1999; Rigby & Slee, 1991; Smith & Sharp, 1994).

In sum, the meditational analyses supported the hypothesis that, taken together, the three situation-specific TPB antecedents mediated the relationship between school climate and one's intentions to seek help for bullying. Upon further investigation, it appeared that PBC was the sole individual mediator of this effect.

School climate and intervention behaviours. In examining interventions behaviours, school climate has often been implicated in understanding how children and adolescents respond to bullying. Indeed, the goal of many of the popular programs is to alter the school climate so as to change bystanders' reactions to bullying and encourage them to intervene or seek help from school staff (Orpinas et al., 2003). The results from the current study supported these assertions in finding that school climate accounted for a significant amount of variance (10%) in intervention intentions.

Second, as hypothesized, the results suggested that school climate was significantly associated with the three TPB antecedents of intention. Specifically, a more positive and supportive school climate was associated with more positive attitudes towards intervening, perceived pressure to stand up for one's peer, and motivation to engage in intervention behaviours.

When examined individually, PBC and subjective norms both emerged as significant mediators of school climate on intervention intentions when controlling for the effects of the other antecedents. Past literature has noted that positive school climates are associated with greater perspective taking, feelings of empathy for others, social responsibility, as well as pro-social behaviours (Barr & Higgins-D'Alessandro, 2007; Eisenberg & Fabes, 1990; Galloway & Pong, 2004). In classes defined by greater levels of cooperation, supportiveness, and structure, students may perceive that their peers and teachers expect them to intervene on behalf of their

bullied peer. Additionally, greater sense of autonomy and support derived from the school climate may mediate participants' perceptions of self efficacy in engaging in intervention behaviours and reduce their fear of being targeted themselves. Given that attitudes did not account for a significant amount of variance in intervention intentions on its own, it is unsurprising that it did not emerge as a unique mediator of school climate. It is possible that the single-item measure of attitudes was inadequate to accurately capture participants' attitudes towards intervention intentions.

Summary. This study was the first to integrate the literature on school climate within the context of the TPB model. The inclusion into a well-established model of behaviour further lends support for the essential role of school climate in understanding behavioural responses to bullying in school. It further provides avenues through which the three TPB situation specific cognitions may be enhanced in order to bring about greater intentions to seek help or intervene on behalf of their victimized peer.

Implications

Overall, the results from the current studies provide some preliminary support for the use of the TPB model in understanding the determinants of both help seeking and intervention intentions and behaviours. A number of significant measurement, theoretical, and policy implications that stem from the results will be presented.

Measurement Implications

The results of the current program of research suggest that measurement factors may influence the robustness and utility of the TPB model when examining intentions and behaviours. Specifically, questions about the temporal stability of TPB variables and the use of self-report measures examining this topic and with this population are discussed.

Temporal stability of TPB variables. First, the results from the path analyses raised concerns about the temporal stability of the TPB variables. While the TPB situation-specific cognitions at Time 1 did account for a significant amount of variance in their corresponding measures at Time 2, the high amount of unexplained variance suggests that these factors are not as stable as assumed. Furthermore, the ability of Time 2, but not Time 1, variables of intention and PBC to account for a significant amount of variance in measures of help seeking behavior, raises further questions about the temporal stability of the variables. While the time frame between the two time points was well within the recommendations (Sheeran, 2002), the variability suggests that various factors external to the individual may be contributing to the alteration of cognitions over time. The majority of empirical works examining the TPB model often assess the situation-specific cognitions at one time point and then assess behaviours at another point in the future. However, the results from the path analyses suggest that, to ensure that the constructs are accurately captured, it would be helpful to consider the stability of the TPB antecedents over the course of the empirical investigation when determining the predictors of behaviours. Indeed, Ajzen (1991) has cautioned that these factors must remain stable for the model to accurately capture the data and that the ability to predict behavior decreases as intervening variables external to the model change individuals' intentions and perceptions of control. With the introduction of the belief-disparity hypothesis (Ajzen & Sexton, 1999), suggesting that salient features of the true environment may not be accessed in hypothetical situations, the importance of considering the temporal stability of TPB variables is of central importance. As such, more research on the stability of individual behaviours, specifically in adolescent populations, is warranted.

The assessment of attitudes. Second, the current studies relied on self-report measures that were constructed for the purpose of ascertaining the importance of specific factors in determining intentions and behaviours in response to bully victim problems. However, it is

possible that these perceptions were inaccurate as cognitive biases may have played a significant role in determining how participants responded to the questionnaires. In particular, the measurement of attitudes has been suggested as a domain in which automatic, cognitive strategies may interfere in determining item response (Smith & DeCoster, 1999). According to the dual-process models, individuals process information in two ways: (1) using simple, low-effort, readily applicable decision rules, which are tend to assess 'automatic', 'implicit', or 'spontaneous' information, and (2) in an active and effortful manner, which requires more motivation, time, and cognitive capacity (Fazio, 1990; Smith & DeCoster, 1999). The manner in which attitudes are measured have been implicated in the type of attitude that is assessed, with more direct measures tending to assess automatic attitudes and indirect measures believed to assess more deliberate, thought-out attitudes (Bassili & Brown, 2005). However, more recently, researchers have suggested that distinguishing the attitudes themselves as automatic or deliberate/controlled is more meaningful when seeking to understand individuals' attitudes (Fazio & Olson, 2003; Ranganath, Smith, & Nosek, 2008).

Studies using direct measures have noted that youths hold generally positive attitudes towards seeking help and intervening in bully/victim problems (Rigby & Johnson, 2005). However, a number of studies using additional measures of behaviour including teacher report and peer nominations have concluded that children and youths generally overestimate their own behaviours in response to bullying incidents (Rigby & Johnson, 2005). It is possible that youths hold automatic positive views of seeking help or intervening on behalf of a bullied peer due to concerns about social desirability and acceptability. However, since both actions often involve weighing the positive and potential negative consequences of either behaviour, it is possible that more deliberative attitudes are involved which may not be as positive as the automatic attitudes. This distinction may account for the overestimation of intervention and help seeking in response

to bullying. As such, measurements of direct attitudes about these behaviours may benefit from additional measures of deliberate and controlled attitudes.

Indeed researchers, such as Ajzen (2006), have proposed that predictors ideally be measured directly by asking participants about their overall beliefs and indirectly by examining individuals' beliefs about the consequences of behaviors (behavioural beliefs) and evaluations of these outcomes. The use of elicitation studies would allow researchers to develop measures that tap into the relevant behavioural beliefs for the population and behavior in question. The combination may result in a measure of attitudes that yields a higher predictive validity in intentions and behaviours.

Use of self-report tools in adolescent samples. Third, the current studies raise concerns about the reliability of self-report tools with adolescents in general given the responses on the measure of attitudes and school climate. First, on the measure of attitudes towards both help seeking and intervention behaviours, it appeared that participants in Study 1 overlooked the reversal in the directions of responses. Despite attempts to clarify the items in the second study by changing the spacing and encouraging students to read the questions carefully, participants in Study 2 appeared to fail to notice the reversal. As a consequence, only a single item was used to assess one's attitude which has a number of methodological implications. Second, it is also possible that participants also failed to take note of the reversals in the wording of the questions on the school climate measure and responded in the same direction as the other items. This resulted in items that did not load with the others and their elimination from the tool and subsequent analyses.

While discussions on measurement issues in adolescent populations have generally focused on the dearth of well-validated, developmentally appropriate self-report measures (i.e., Grant, Compas, Thurm, McMahon, & Gipson, 2004), many researchers have questioned the reliability of subject responses as a limitation of studies (Paulhus & Vazire, 2007). Concerns

about the truthfulness and accuracy of self-report data, as well as concerns about over- or under-estimating information due to social desirability have been raised (Brener, Billy, & Grady, 2003; Krosnick, 1991; Krosnick, Narayan, & Smith, 1996). Krosnick (1991) hypothesized that individuals may experience an inclination to ‘satisfice’, defined as a decision making strategy which attempts to meet an acceptable threshold rather than accurately completing the items, which results in cognitive short-cuts when responding. According to Krosnick and colleagues (1996), when completing measures, respondents are required to engage in a number of cognitive tasks: they must interpret the question, retrieve the information from their short- or long-term memory, integrate the information into one response, and correctly report the response. However, Krosnick concluded that when individuals lacked the skills or motivation to respond accurately item or when the items requires significant cognitive effort to respond, they tend to engage in ‘satisficing’ and the quality of the responses are compromised. Indeed, Clancy and Wachsler (1971) concluded that acquiescence due to satisficing may occur when participants are fatigued from answering many questions.

In addition to the cognitive factors noted, environmental, or situational factors may also affect the validity of self-report in adolescent populations. Brener and colleagues (2003) noted that environmental factors may include the effect of the presence of others while completing forms and the perceptions of anonymity and confidentiality. Interestingly, researchers have concluded that the use of a computer may reduce the effects of situational factors as they are perceived as being impersonal, non-judgemental, and provide a greater sense of anonymity and privacy (Tourangeau & Smith, 1996). In support, Vareecken and Maes (2006) found greater social desirability effects when collecting information using traditional paper-and-pencil methods in classrooms versus using the computer. Although some difficulties were observed with the assessment of some constructs, it is not obvious that the fact that information was collected over the internet is the cause of these difficulties.

Theoretical implications

A number of theoretical implications arose from the results of the current set of studies. First, the modest link between attitudes and measures of intentions and behaviours will be discussed. Next, I will review the theoretical implications of the results finding support for the TPB model. The use of a formal model of behaviour and behaviour change in bullying prevention and intervention programs will then be explored. Lastly, I will discuss the importance of using a behavioural model to understand the process through which environmental effects influence behaviour change.

The link between attitudes, intentions, and behaviours. Overall, attitudes towards specific reactions to bully/victim problems were generally associated with behavioural intentions in the expected ways. The belief that seeking help would improve the situation was related to intentions to act in those ways. However, these attitude-intention links were generally modest in both studies. For example, concerning intervention intentions, the results were inconsistent with attitude emerging as the weakest, but significant, predictor of intentions in Study 1 while emerging as non-significant in Study 2. Consistent with the literature, the results from these programs of study provided further evidence supporting a generally weak link between attitudes and behaviours. Indeed, past researchers have found that children and youths hold generally positive attitudes towards help seeking and intervening on behalf of a victimized peer. However, they are unlikely to actually engage in either behaviour, suggesting that factors other than attitudes may influence intentions or behaviours (Rigby & Johnson, 2005). For example, Salmavalli and Voeten (2004) recently found that general attitudes towards bullying were only modestly linked to their self-reported behaviours in response to a bully/victim problem. In examining attitudes with more specificity, Santor and colleagues (2007) determined that help seeking attitudes were not associated with likelihood of seeking help for emotional support or mental health difficulties.

The modest associations between attitudes and intentions may be due to theoretical issues related to the TPB. Based on the research (e.g., Trafimow & Finlay, 1996), Ajzen (1991) agreed that the relative weight of the TPB antecedents on intentions varied depending on the behaviour in question and individual factors. This may be particularly relevant in examining behaviours in children and adolescents for whom the drive to conform to social pressure is more salient compared to adults (Ravis & Sheeran, 2003). Conversely, individually-held attitudes may not be fully formed until later on in adolescence and therefore may be less relevant in predicting behaviours. As such, external factors such as subjective norms and PBC, may play a more significant role in influencing behaviours in these populations compared to internal factors such as attitudes.

The modest results in the current program of research may also be due to measurement issues. According to Ajzen and Fishbein (1980) and the sufficiency assumption, any additional variables not included in the TPB the model were proposed to be fully mediated by the three situation-specific cognitions. Due to measurement issues, a one-item measure of attitudes was used in the studies to determine attitudes which may have resulted in less ability to fully capture participant attitudes. A second possibility for the modest associations between attitudes and intentions may be the presence of attitudinal ambivalence towards the behaviour in question. According to the popular multi-component view of attitudes (Eagly & Chaiken, 1993), attitudes are influenced both by cognitions and affect. Ambivalence can occur when there is competing cognitions or when cognitions and emotions are inconsistent. Furthermore, the importance of the cognitive and affective components are weighed differently depending on the individual (Haddock & Zanna, 2000) or the object/ situation (Kempf, 1999). In the current studies, it is possible that attitudes towards help seeking and intervening in bully/victim included both a cognitive component (i.e., rational belief that it would be a helpful, useful behaviour to engage in) as well as an emotional component. The fear of retribution or of being stigmatized by others

has been found to be a reason why children and youths do not engage in these behaviours (Cowie & Olafsson, 1999; Rigby & Slee, 1991; Smith & Sharp, 1994). As such, the one item measure may not have captured the full range of affective and cognitive components of this construct which may be necessary to improve the predictive ability of attitudes in determining intentions and behaviours.

Importance of TPB variables in responses to bullying. A second theoretical implication arising from the current studies involves the importance of TPB variables in assessing behavioural responses to bullying. The applicability of the TPB model in examining responses to bullying is relatively new and studies have not done so in a systematic fashion. Salmivalli and Voeten (2004) examined the role of attitudes and subjective norms in determining responses to bullying but omitted a measure of PBC. Similarly, Rigby and Johnson (2006), in examining the factors that influenced the likelihood of supporting peers who are victimized, examined normative pressure to help victims, general attitudes towards bullying, and general levels of self-efficacy. However, the use of behaviour-specific items to directly assess the constructs as proposed by Ajzen (1991) has not been conducted. The results from the studies provided preliminary support the use of the TPB model in predicting and explaining both help seeking and intervention intentions. Specifically, the TPB antecedents of attitudes, perceived behavioural control, and subjective norms have been found to significantly predict intentions in both behaviours. The TPB model was also useful in explaining bystander intervention behavior. However, the TPB model was generally unable to explain help seeking behaviors. While a number of possible explanations have been suggested, further investigation into this domain is warranted. Overall, the use of items that adhere to the Theory of Compatibility (Fishbein & Ajzen, 1975) that are assessed at the same level of specificity in terms of action, target, context, and time frame are supported when examining behavioural responses to bullying.

Using formal models of behaviour and behaviour change. A third theoretical implication that the results of the studies suggest is the importance of using formal models of behaviour and behaviour change in designing intervention programs. This is particularly relevant due to the central role that empirical research plays in informing bullying prevention and intervention programs at the school level. Current programs have not yet articulated the manner in which these programs lead to individual behaviour change, which is hypothesized to lead to reductions in the overall rates of bullying and victimization. The lack of a well-established model of behavior and behavior change limits the ability of programs to target determinants that have been linked to the behaviours that researchers, educators, and policy makers hope to change.

The primary goal of school-based prevention and intervention programs is generally to reduce levels of bullying and victimizations within the school population. In order to achieve this goal, participants are taught a variety of skills such as supporting their victimized peers, intervening in bullying situations, and informing appropriate school staff of bullying. For example, the Steps to Respect Program posits that changes in the aforementioned behaviours result in decreased bullying and victimization (Brown, Low, Smith, & Haggerty, 2011). However, the authors of the program and evaluators have not offered any information on the processes through which each of those individual behaviours are changed within the student populations. This paucity in information may reduce the impact of the program on altering the individual program components (i.e., intervention and help seeking skills) and therefore affect the ability of the program to decrease bullying.

Altering the TPB antecedents to behaviour has been found to be a challenging task. Indeed, Hardeman and colleagues (2002) systematically reviewed 24 interventions that were designed using the TPB and found that behaviour change methods used most frequently included persuasion and information, and less often, increasing skills, goal setting, and skill rehearsal.

The authors concluded that interventions often have small or non-significant impacts on the relevant predictors of attitudes, subjective norms, and PBC (Hardeman, et al., 2002).

Despite the challenges, utilizing a formal model of behaviour and behaviour change for each of the skills that programs seek to address would provide a venue through which changes may be instilled. Using behaviour change methods that tap into attitude change, placing an emphasis on subjective norms, and building self efficacy and sense of control over the skills could result in a greater likelihood of altering intentions, and subsequently, behaviours. The results of the current studies provide some preliminary evidence for the use of this model in understanding youths' intentions to behave in a specific manner in response to bullying. While the results have found mixed results as to the predictors of behavior, research with adolescents addressing a number of other behaviours suggests that this area still holds promise (Hagger et al., 2007; Martin, Oliver, & McCaughy, 2007; O'Callaghan & Nausbaum, 2006).

TPB model as a measure of psychological processes. Globally, the results of the study support the use of behavioural models, such as the TPB model, when examining the process through which internal and external factors influence the creation of individuals' intentions and their actual behaviours. Indeed, the question as to what are the psychological mechanisms through which the decision making process influences the intentions and behaviours remains unclear in the literature. Behavioural decision theorists generally focus on the factors that influence the creation of intentions (e.g., Beach, 1993) while psychology researchers typically emphasize the factors that influence the engagement of the behaviour (i.e., Gollwitzer, 1996). A clear understanding of how these processes work together remains an area of future research; however, the TPB model has emerged as one possible behavioural model through which the influences on both intentions and actual behaviours may be examined (Bagozzi, Dholakia, & Basuroy, 2003).

The implications for the use of a behavioural model in examining the psychological process influence the creation of an intention and subsequent behaviours are of great importance in examining responses to bullying. Understanding the internal processes through which individuals arrive at an intention to behave and subsequently engage in the behaviour may provide venues through which intervention programs affect change. Additionally, understanding the process through which the environment may affect these psychological processes may yield even more valuable information for prevention and intervention. The majority of school-based programming addressing bullying seeks to alter the school climate of the school in order to reduce the frequency and severity of bully/victim problems. However, the process through which environmental factors, such as school climate dimensions, alter student behaviours in response to bullying has not been clearly defined. The results of the mediational analyses found that the TPB cognitions mediated the relationship between the measure of school climate and both help seeking and intervention intentions, providing information on the pathways from the external to the internal worlds.

Policy implications

A number of implications for policy regarding addressing bullying in schools in Canada may be derived from the results of these studies. First, I will discuss the continuing prevalence of bullying problems in schools in Canada. Second, I will review separately how the results examining bystander information and help seeking can be understood within the current evidence-based practices used to address bullying.

Prevalence of bullying. The results from the current studies suggest that bullying continues to present a significant challenge to schools with a significant proportion of participants reporting having been engaged in a bully/victim incident or having witnessed one in the past month. Self-report measures revealed that one quarter to one half of participants from Study 1 and Study 2, respectively, have been the subjects of bullying at least once while between

one fifth and one third of the samples report having bullied others at least once within the past month. Lastly, more than three-quarters of students reported having witnessed some form of bullying in the past month. These results suggest that participants within the studies are well-versed with the definitions of bullying behaviours. With the recent emphasis on bullying in the media and political sphere, students have become more aware of various forms of bullying behaviours. This increased awareness may help explain the higher self-reports of bully/victim problems compared to other studies (Beran, 2008; Craig, 2004; Nansel et al., 2001; Janosz et al., 2008).

Alarming, a significant proportion of participants reported being bullied on a regular basis, namely, 2 to 3 times a week. In the sample from Study 2, 33% of the participants reported having been subjected to bullying on a regular basis, namely, 2 to 3 times a month. Following the guidelines set forth by Olweus (1993), these students constitute the group who experiences “chronic bullying” and are most at risk of adverse outcomes.

In sum, the rates of bullying in the current samples mirror those found by other researchers. However, due to the nature of the data collection, general comments about the rates of bullying in Canada cannot be made. The current studies utilize samples of convenience which raises questions about self selection into the studies. It is possible that students who were more affected by bully/victim problems or who felt more strongly about intervening in bullying were more likely to complete the measures. Future research would benefit from further examining this question in a more representative sample.

Bystander behaviour and programming. The results also provide some guidance for the improvement of school-based bullying prevention and intervention programs. Currently, the most widely used method involves the implementation of a universal program whereby all members of the system partake in the programming in order to reduce the likelihood of bullying behaviours taking place. Due to the central role of bystanders in maintaining the bullying

behaviours and the social power that they possess to stop the incidents, programs often target the ‘silent majority’ or those who serve as the witnesses to bully/victim problems. The emphasis of many programs is on altering bystander attitudes urging them to adopt more pro-active, pro-victim roles through perspective taking and fostering empathy (Rock, Hammond, & Rasmussen, 2004; Salmivalli, 1999; Salmivalli et al., 1998). However, the modest relationship between attitudes and intentions suggest that focusing on the external factors captured by the constructs of subjective norms and perceived behavioural control may yield more significant and positive outcomes. For example, strengthening students’ perceptions of being able to intervene in bully/victim problems and overcome the perceived barriers in the environment through discussions and role plays specific to this behaviour may be particularly helpful. Similarly, problem solving and social skills strategies specific to standing up for their victimized peer are likely to increase youths’ intentions to engage in this behaviour. Additionally, utilizing the tendency towards conformity that is prevalent in this population by emphasizing the generally positive views of peers towards intervening may increase their intentions, and subsequently their behaviour. Creating a school environment generally intolerant of bullying problems may further reinforce the perception that standing up for peers is desired.

These results support the elements of programs that have been labelled as ‘best practices’ by government organizations and researchers. Indeed, programs that have been found to be the most effective are those that involve the whole school and encourage those students who serve as bystanders to intervene (Farrington & Ttofi, 2009; Brown, Low, Smith, & Haggerty, 2011). According to Whitted and Dupper (2005), at the student-level, best practices include teaching those students who serve as bystanders skills to intervene in bully/victim problems thereby increasing their sense of self-efficacy and control over that behaviour. This practice has been an integral element of the theory of change in the Steps to Respect Bullying Program and research has found that significant reductions in the rate of bullying (Committee for Children, 2001;

Brown, Low, Smith, & Haggerty, 2011). Similarly, encouraging helping behaviour the part of bystanders through role playing skills and watching videos of bullying incidents is an element of the evidence-based Olweus Bullying Prevention Programme (2001).

At the classroom and school level, researchers widely agree that implementing changes that affect the school climate is an effective, evidence-based practice (USDHHS, 2003; Whitted & Dupper, 2005). Due to the view of bullying as a social phenomenon, the emphasis of programs has been on understanding system in which bullying takes place and using the effects of social influence to enlist change. In order to create a caring environment that promotes respectful and helping behaviours, programs involve the creation of class rules against bullying, rewarding pro-social behaviours, and swiftly and consistently punishing bullying behaviours (Olweus, 2001; Rigby et al., 2004). By emphasising the social desirability of engaging in pro-social behaviours, children, and adolescents are encouraged to conform to those behaviours. By including adolescents in the creation of rules and implementation of the program, the programs acknowledge the diminishing influence of adults and growing influences of peer systems as youth age (Mash & Wolf, 2007).

Help seeking and programming. The results from the current study also provide some guidance in developing programming for those individuals who are victimized. For that group of children and youths, the emphasis in programming has been on teaching them new skills, such as assertiveness skills, and encouraging them to adopt safety behaviours, such as traveling in pairs. However, the power differential between those who are victimized and those who bully may preclude the former from engaging in some of these behaviours. As such, universal programs emphasize the importance of seeking help from staff at school for protection (Glover, Gough, Johnson, & Cartwright, 2000). Indeed, results from the current set of studies suggest that focusing on attitudes, subjective norms, and perceived behavioural control in intervention and prevention efforts may increase one's intentions to seek help. However, consistent with past

research (Deane et al., 2001; Rickwood et al., 2004), the current set of studies found only a non association between intentions and PBC and the likelihood of actual help seeking behaviours, suggesting that factors not captured by the TPB model may be significant.

The non-significant relation between intentions, PBC and actual self-reported behaviours suggests that barriers within the individual and the environment may be playing a role in inhibiting help seeking behaviours, whose effects are not captured by the TPB model. Within the individual, researchers have posited numerous barriers to help seeking for mental health issues, such as lack of emotional competence and negative attitudes towards seeking help (Rickwood et al., 2004; Sawyer et al., 2012). Within the environment, past research examining help seeking for bullying suggests that numerous aspects of the school environment and those ‘gate keepers’, individuals who are in the position to provide access, play a pivotal role in youth’s level of comfort for seeking help (Eliot, Cornell, Gregory, & Fan, 2010; Unever & Cornell, 2004). Knowledge about help seeking, including which resources to seek out within the system, one’s beliefs about those specific resources, and the availability of resources may all influence youth’s perceived ability to seek help. Santor and colleagues (2004) concluded that simply having resources available is insufficient for encouraging use and that schools need to actively promote their use so that youths are reminded to seek them out when they are needed. Actively engaging youths, particularly those who have a history of being victimized, may encourage them to seek out help from individuals they know when they require help. Additionally, developing strong, trusting relationships with those gatekeepers may also increase youths’ motivation and perceived ability to seek out help (Rickwood et al., 2004).

Limitations

The current research has a number of positive qualities such a large sample of community based adolescents and a longitudinal design in Study 1. However, it is not without

methodological limitations, which should be considered in the interpretation of results and conclusions.

First, a single item measure of attitudes was used to assess the construct within the TPB model. While the measures were designed to reduce acquiescence bias by including reversed items, participants may not have noticed the reversal in the design used and therefore low Cronbach's alphas were found for these constructs. As such, it was decided that a single item measure would be used to assess attitudes. While single items are commonplace in certain fields (Bergkvist & Rossiter, 2007; Wanous, Reichers, & Hudy, 1997), they have typically been discouraged because they are believed to have unacceptable low reliability and may not be adequate for capturing all the dimensions of a construct. As such, while the content validity was supported by examining the relationship among attitude and the other TPB indicators, the measure may not provide a reliable measure of attitudes. Therefore, future research on developing adequate multi-item measures of attitudes towards help seeking and intervention in response to bully/victim problems in youths is warranted.

Second, the current set of studies utilized a direct measure of TPB to assess help seeking and intervention behaviours. However, an indirect measure of TPB following an elicitation study with the sample population may provide researchers with much information to fully understand the cognitive and social influences on behaviour. For example, greater knowledge of the beliefs individuals hold about the consequences of help seeking or intervening and the perceived barriers in their particular environment would allow for a greater understanding of these behaviors, more precise measurement of the constructs, and more targeted intervention programs.

Third, the study relied solely upon self-report measures in order to assess the frequency of bully/victim problems and the constructs of the TPB variables. While the use of self-report for assessing cognitive constructs, such as perceived self efficacy and attitudes, is normative for

the field, researchers examining overt behavioural responses to bullying and frequency of bullying have suggested that self-report measures be augmented with additional forms of data collection (Craig & Pepler, 1995).

The means of assessing a sensitive issue such as bullying in children and adolescents has been examined in the literature. A variety of methods have been used for assessing bullying in schools, including self-report, teacher and/or peer nomination, interviews, and structured or unstructured observations with advantages and disadvantages of each method have been discussed elsewhere (for a review, see Crothers & Levinson, 2004 and Espelage & Swearer, 2003). Self-report measures, while yielding vast amounts of information for little cost, have been criticized as time-consuming, and providing over- and under-estimations of bullying problems (Chan, Myron, & Crawshaw, 2005; Crothers & Levinson, 2004). Conversely, ethical challenges and empirical limits exist when utilizing peer or teacher nominations since names are required and information about student attitudes and actual behaviours are not collected (Espelage & Swearer, 2003). Peer and teacher nominations have been found to be best at revealing overt, observable bullying but overlook more discrete forms of bullying (e.g., social bullying, bullying via text message or email) (Espelage & Swearer, 2003). Lastly, some researchers have promoted the use of direct observation in determining frequency of bullying (e.g., Craig & Pepler, 1995, 1997). However, direct observations also pose significant ethical and methodological problems (Crothers & Levinson, 2004; Espelage & Swearer, 2003). Given the limitations of each form of data collection, researchers have generally concluded that self-report measures are the most efficient, inexpensive, and least obtrusive method (Espelage & Swearer, 2003). Additionally, many researchers have asserted that the use of anonymous self-report measures yields the most information about bullying in the whole school (Ahmad & Smith, 1990; Olweus, 1993; Whitney & Smith, 1993). Despite these arguments, the results should be interpreted with these limitations in mind.

Fourth, due to the smaller sample size in Study 2, a complete exploration of the factor structure of the School Climate and Stigma Scale was not carried out. Preliminary investigations suggested the elimination of a number of items which required the reduction in the subscales of the measure from the original 13 to six. While the overall coefficient of reliability suggested good internal reliability, the subscales of help seeking and stigma emerged as weaker. Therefore, an examination of the individual effects of the subscales of the measure was not possible. However, the results supported the role of school climate in youths' reactions to bullying suggesting a further venue for research.

Directions for Future Research

This program of research was the first to systematically examine the applicability of the TPB model in understanding and explaining youths' reactions to bullying in schools. Since the results supported the use of this model in explaining both intervention and help seeking intentions, additional research into this domain warranted. The following recommendations for future research are made in consideration of the current results and the existing body of literature.

As noted above, a direct measure of the TPB constructs was used for the current analyses. While many researchers have suggested that this is an adequate, and often very appropriate, measure of the study variables, others, including Ajzen (2001), have suggested using indirect measures as well. The use of indirect measures, devised following elicitation studies, would allow for greater understanding of the behavioural, normative, and control beliefs that determine attitudes, subjective norms, and PBC respectively. This information would be valuable in gaining greater knowledge of the social and cognitive factors that influence the manner in which youths respond to bullying and allow for the development of more effective, targeted programming in order to encourage pro-social behaviours.

Within the domain of help seeking behaviours, many questions remain answered as to the factors that influence whether youths engage in this behaviour or not. While results from the current program of research support the applicability of the TPB model in explaining help seeking intentions, the TPB model was not as useful in understanding actual self-reported behaviours. These results, however, were consistent with the literature on help seeking for mental health difficulties which have found that intentions were generally not predictive of behaviour (Rickwood et al., 2005). Further research using a belief-based measure may yield information on those factors that support or deter this behaviour.

Additional research is required in order to understand the effect of school climate on help seeking and intervention intentions and behaviours. Since school climate plays a central role in bullying prevention and intervention programs, understanding the process through which changes at the systemic level result in changes in behaviours at the individual level is of paramount importance. Understanding the specific dimensions of school climate may also provide additional venues through which certain behaviours may be encouraged.

Conclusion

In sum, the results of this dissertation provided preliminary support for the use of the TPB model in understanding the process which youths engage in when forming intentions to seek help for bullying or intervene in bullying problems in school. Furthermore, the TPB model was robust in explaining and predicting intervention behaviours in youths who are bystanders to bullying. Conversely, the preliminary results suggested that the TPB model was unable to predict help seeking behaviours. Lastly, the TPB variables of attitude, subjective norms, and perceived behavioural control significantly mediated the relationship between school climate and help seeking and intervention intentions.

From a theoretical perspective, the results are significant in advancing our understanding of the social and cognitive determinants of youths' reactions to bullying. The use of a formal

model of behaviour and behaviour change provides the field with unifying theory which is explanatory in nature as opposed to purely descriptive. The focus on developing a theory of each of these behaviours would yield much valuable information on how youths' arrive at the decision to engage in a behaviour or not. In addition, the inclusion of the school climate dimensions in the TPB model provides greater understanding of the psychological process through which external factors influence the forming of intentions.

From a policy perspective, the results suggest clear benefits to applying the model to areas which researchers, educators, and policy makers are trying to change through intervention and prevention programs. Bullying in schools remains a serious problem in schools in Canada and school-based programming is widely used. Knowledge about the cognitions that are strongly predictive of intentions and behaviours would allow for the development of targeted programs which would be more effective at increasing the desired outcomes and, in consequence, reduce the frequency and severity of bullying in our schools.

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Appendix A: Demographic Questionnaire

We want to find out some information about YOU! Please answer the following questions about your life.

1. How old are you? _____

2. I am

- ☐ Male
- ☐ Female

3. I live with:

- ☐ Both natural parents
- ☐ My mother and step-father
- ☐ My father and step-mother
- ☐ My mother only
- ☐ My father only
- ☐ Both parents, joint custody
- ☐ Same sex parents
- ☐ Other, please specify: _____

4. What languages are spoken in your home?

- ☐ English only
- ☐ Both English and another language
- ☐ Almost exclusively another language, little or no English

5. People sometimes identify themselves by ethnicity or race. Check the line that show how you identify yourself.

- ☐ White/Caucasian
- ☐ Black/African Canadian
- ☐ Native Canadian
- ☐ Asian (e.g. Chinese, Japanese, Korean, etc.)
- ☐ South Asian (e.g. East Indian, Pakistani, etc.)
- ☐ Other, please specify

4. For the next questions, write N/A, if it does not apply to you.

- a. What is your father's job? _____
- b. What is your mother's job? _____
- c. What is your step-father's job? _____
- d. What is your step-mother's job? _____

5. Check the boxes below that show the highest level of education completed by each of your parents.

	Mother	Father	Step Mother	Step Father
Grade 8 or less				
Has some high school but did not graduate				
High School Graduate (grade 12 or OAC)				
Community college or technical college				
University graduate				
Post graduate or professional degree (Master's, Ph.D., M.D. etc).				
Don't know				
Doesn't apply to me				
Other, please specify				

6. What is your postal code? _____

Appendix B: TPB Measure of Reaction to Bullying (Santor & Rosval, 2008)

Please answer these questions about SEEKING HELP FOR YOURSELF when you are bullied by others.

Help Seeking is defined as reporting the situation to an adult who can help you deal with the bullying situation such as a teacher, guidance counselor, or other staff

1. When you were bullied in the last month, how often did you seek help from an adult at school?

- | | |
|-----------------------|-----------------------|
| a) I was not bullied | e) 40-59% of the time |
| b) None of the time | f) 60-79% of the time |
| c) 1-19% of the time | g) 80-99% of the time |
| d) 20-39% of the time | h) 100 % of the time |

2. Please rate your answers below using this scale:

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

a) The next time I am bullied, I plan to seek help from an adult at school.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7
b) The next time I am bullied, I know I will seek help from an adult at school.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7
c) When I am being bullied, most people who are important to me think that I should seek help for bullying from an adult at school	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7
d) When I am being bullied, people who are important to me expect that I should seek help from an adult at school.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7
e) When I am being bullied, people who are important to me want me to seek help from an adult at school.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7
f) When I am being bullied, I am confident that I could seek help from an adult at school.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7
g) For me, to seek help from an adult at school when I am being bullied is easy	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7
h) It is mostly up to me whether to seek help from an adult at school when I am being bullied	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7

(Reminder: Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree)

3. Seeking help from an adult at school when I am bullied...

a) Makes things worse	1	2	3	4	5	6	7	Makes things better
b) Is good to do	1	2	3	4	5	6	7	Is bad to do
c) Is useful	1	2	3	4	5	6	7	Is useless

Please answer these questions about ASSERTING YOURSELF when you see someone else get bullied by others.

Asserting yourself refers to taking a stand against the bully, telling them to stop what they are doing

1. When you saw someone else get bullied in the last month, how often did you assert yourself to the bully/bullies?

- | | |
|----------------------------------|-----------------------|
| a) I did not see someone bullied | e) 40-59% of the time |
| b) None of the time | f) 60-79% of the time |
| c) 1-19% of the time | g) 80-99% of the time |
| d) 20-39% of the time | h) 100 % of the time |

2. Please rate your answers below using this scale:

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

a) The next time I see someone being bullied, I plan to assert myself to the bully/bullies	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7
b) The next time I see someone being bullied, I know I will assert myself to the bully	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7
c) When I see someone being bullied, most people who are important to me think that I should assert myself to the bully/bullies	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7
d) When I see someone being bullied, people who are important to me expect that I should assert myself to the bully/bullies	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7
e) When I see someone being bullied, people who are important to me want me to assert myself to the bully/bullies	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7
f) When I see someone being bullied, I am confident that I could assert myself to the bully/bullies	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7
g) For me, to assert myself to the bully/bullies when I see someone being bullied is easy	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7
h) It is mostly up to me whether to assert myself to the bully/bullies when I see someone being bullied	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7

3. When I see someone being bullied, asserting myself to the bully/bullies...

a) Makes things worse	1	2	3	4	5	6	7	Makes things better
b) Is good to do	1	2	3	4	5	6	7	Is bad to do
c) Is useful	1	2	3	4	5	6	7	Is useless

Appendix C: School Climate and Stigma Scale (Santor & Rosval, 2008)

How often are the following **true** about your school? Mark the best answer for each statement

	Never true	Hardly ever true	Sometim es True	Most of the time true	Always true
Students enjoy learning at this school					
This school places more importance on cooperation rather than competition					
Teachers praise students when they do well in class					
Teachers don't really care whether I succeed or not					
Students are encouraged to ask questions when they don't understand the material being taught					
Students treat each other with respect and fairness					
I have seen the sale of drugs on school grounds					
Students are well behaved at this school					
Teachers enforce the class rules					
Students are given a say in the creation of school rules					
Teachers are not open to talking about "personal difficulties"					
Students with mental health problems in my school are made fun of, ignored or treated badly					
Students are motivated to do well in their classes					
Class activities emphasize working together towards a specific goal					
Teachers praise students when they have worked hard at their schoolwork					
Students who belong to different social groups (i.e., cliques) do not get along very well					
I have seen weapons at school					
Students feel safe at school during the day					
Students are given clear instructions about how to do their work in classes					
Students help decide how class time is spent					
Students are able to ask a teacher for help if they have a problem with another student					
If I had a mental health problem, I would be worried about being treated badly by students and/or teachers in my school					
Students here are interested in being involved in sports, clubs, or other school activities					

	Never true	Hardly ever true	Sometimes true	Most of the time true	Always true
Students are more likely to help each other out than to compete in activities (other than sports)					
Teachers praise students who make a meaningful contribution to school life in non-academic areas such as being part of student council or running a school group					
In their classes, students know each other very well					
Students are concerned about gangs at school					
When students act up or misbehave, teachers will do something about it					
Students are given a say in what material they learn in class or what courses to take					
I feel comfortable talking to at least one teacher, guidance counselor or staff member about a personal problem (e.g. feeling depressed, stressed out or suicidal)					
Students would make fun of me if they found out I was close to someone who had a mental illness					
Students feel like they are an important part of their school					
The school places importance on students outperforming others					
Teachers expect every student to do their very best					
Teachers are available outside class to help students out with schoolwork					
Teachers at this school treat students with respect and fairness					
Students in this school are very interested in getting to know other students					
Some students are regularly hassled by other students at school					
Rules and consequences are clearly explained so students know and understand them					
Students are allowed and encouraged to express their ideas as long as it is done in a respectful manner					
Students do their best to keep the school looking good					
Teachers help students catch up when they fall behind					
Teachers care about me as a person					
Students are comfortable telling a teachers or staff about potential violence					
Students are proud of this school					