The Role of Students' Strengths in the Experiences and Effects of Bullying on Peer

Relationships, Academic Achievement, and Behavioural and Emotional Functioning

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Abstract

The purpose of this study was to examine the role of strengths in youth as they are related to psychosocial outcomes, particularly in the context of bullying experiences. An understanding of the roles of both overall strengths and specific strength subdomains was desired. This study also sought to provide support for the validity of the Strengths Assessment Inventory. Participants were 263 students (112 males) recruited from grade 7 and 8 classes. Participants completed a brief demographic questionnaire, a modified version of the Children's Social Desirability Scale, the Revised Olweus Bully-Victim Questionnaire, the Strengths Assessment Inventory, the Behavioral and Emotional Rating Scale, the Achenbach System of Empirically Based Assessment – Youth Self-Report, and the Friendship Quality Questionnaire. Academic achievement data was collected from report card grades. Results indicated that both overall strengths and specific constellations of strengths predicted psychosocial functioning. In addition, specific strengths were identified as predictors of bullying and victimization. Of note, while having more strengths in some domains predicted more positive psychosocial outcomes and reduced rates of bullying and victimization, having more strengths in other domains predicted more negative psychosocial outcomes and increased rates of both bullying and victimization. No significant moderation effects between overall strengths, bullying, and victimization were identified. These results support the validity and utility of the Strength Assessment Inventory as a comprehensive measure of strengths. In addition, these results highlight the need to take a dynamic, comprehensive, and developmental approach to the understanding of strengths. Moreover, these results highlight the importance of focusing on strengths in both research and clinical practice to promote the well-being of youth and to reduce bullying.

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Table of Contents

List of Tables

List of Appendices

Note. Due to the author's request, a copy of the Revised Olweus Bully/Victim Questionnaire (OBVQ; Olweus, 1996) could not be included in this document.

The Role of Students' Strengths in the Experiences and Effects of Bullying on Peer

Relationships, Academic Achievement, and Behavioural and Emotional Functioning

Positive youth development and positive psychology movements in the mental health,

social services, and education fields have created a burgeoning interest in the strengths, or

positive characteristics, of individuals. These strengths are believed to be central to the well-

being of youth, including both the ability to survive adversity, minimizing negative psychosocial

outcomes, as well as promoting personal growth and thriving (Park, 2004; Park & Peterson,

2008). Indeed, a substantial emerging literature base has identified that strengths are

significantly related to positive psychosocial functioning and the overall well-being of youth

(Donnon & Hammond, 2007; Epstein, Mooney, Ryser, & Pierce, 2004; Leffert, Benson, Scales,

Sharma, Drake, & Blyth, 1998; Markstrom & Marshall, 2007; Murphey, Lamonda, Carney, &

Duncan, 2004; Oman, Vesely, McLeroy, Harris-Wyatt, Aspy, Rodine, & Marshall, 2002; Park &

Peterson, 2006; Scales, Benson, Leffert, & Blyth, 2000). The understanding of strengths is

complicated by the multitude of models related to this field of research, which have both

similarities and meaningful differences. Clarity is needed in the definition and meaning of

strengths within the literature, which can be achieved through research that compares and

contrasts strengths-based models. Therefore, it is necessary to continue to build upon this

emerging knowledge and further develop the current understanding of strengths, as this will

assist in fostering both individual strengths and the well-being of youth.

One arena in which the concept of strength may be better understood is in the dual

applications to bullying and psychosocial functioning. With respect to bullying, the value of

studying strengths in this context has been noted in the recent onset of strength-based approaches

to bullying prevention and intervention (Donnon & Hammond, 2007; Farmer, Farmer, Estell, &

Hutchins, 2007; Goldstein & Brooks, 2007; Rosenberg & Knox, 2005; Ungar, 2006). However, to date, much of the research focus has been on identifying both the risk factors for and negative consequences of bullying. This literature has established that involvement in bullying, as a bully, a victim, or both, has been related to many negative psychosocial outcomes, including increased depression and anxiety (e.g. Davidson & Demaray, 2007; Holt & Espelage, 2007; Srabstein, McCarter, Shao, & Huang, 2006), externalizing behaviours (e.g. Davidson & Demaray, 2007; Haynie, Nansel, Eitel, Crump, Saylor, Yu, & Simons-Morton, 2001; Srabstein & Piazza, 2008), and poor interpersonal (e.g. Marini, Dane, Bosacki, & YLC-CURA, 2006; Olthof & Goossens, 2008; Veenstra, Lindenberg, Oldehinkel, De Winter, Verhulst, & Ormel, 2005) and school functioning (e.g. Haynie et al., 2001; Srabstein & Piazza, 2008; Veenstra et al., 2005). Unfortunately, these negative effects of bullying experiences are not restricted to childhood and adolescence, as they persist into adulthood, causing long lasting difficulties for these individuals (Klomek, et al., 2008; Ledley, Storch, Coles, Heimberg, Moser, & Bravata, 2006; Sourander et al., 2007). Thus, it is critical that the problems of bullying are well understood so that appropriate intervention and prevention programs may be developed to promote better psychological functioning for youth both now and in their futures.

However, there has been comparatively little research towards identifying the positive characteristics, or personal strengths, that foster well-being and may reduce the likelihood of becoming involved in bullying incidents or minimize the negative consequences of bullying when it does occur. Some recent research has taken a comprehensive strength-based approach to understanding resilience in adolescents' bullying experiences, which identified that youth with more strengths overall were less likely to be bullies or victims of bullying (Donnon, 2010; Donnon & Hammond, 2007). This research represents an important step in the bullying

literature. However, the importance of strength characteristics in this context requires further in depth exploration. Moreover, the further clarification and theoretical expansion of the concept of strengths, as well as its relationship to psychosocial functioning, is needed, which is the focus of this dissertation.

Therefore, the primary purpose of this study was to enhance the current understanding of the role of students' strengths in relation to psychosocial outcomes, both in general and within the context of bullying experiences. Strengths, however, have been conceptualized in different forms. This is embodied and operationalized in two separate measures of strengths. In the first, the Behavioural and Emotional Rating Scale (BERS-2; Epstein, 2004), strengths are conceptualized as abstract constructs described with titles such as intrapersonal, affective, or interpersonal strengths. In the second, the Strength Assessment Inventory (SAI; Rawana & Brownlee, 2009b), strengths are conceptualized as concrete, contextual, and experiential competencies and characteristics reflected in day-to-day functioning. This study also sought to examine and compare the differences between the SAI and the BERS-2 to achieve an enhanced understanding of the concept of strengths. In addition, strengths were considered as potential protective factors, or moderators, that may buffer against the negative psychosocial effects of bullying and victimization experiences. This introduction provides the grounding for exploring these potential relationships from the current literature on the theoretical and empirical understanding of strength characteristics in youth, the relationships between strengths and well-being, and the experiences and effects of involvement in bullying experiences. Thus, this introduction begins by considering strength-based approaches as a foundation for providing a more holistic understanding of the experiences of youth, based on theory, assessment measures, and evidence supporting the role of strengths in promoting well-being. The introduction will

continue by discussing strengths in the context of bullying experiences, followed by a definition and description of the problem of bullying experiences for youth.

Strength-Based Approaches

In recent years there has been a paradigm shift occurring in the mental health, social services, and education fields that reflects a move away from deficit-based or problem-oriented views of human functioning and psychopathology towards a more holistic promotion of optimal development and well-being, which is the target of strength-based approaches (Epstein, 1999; Norrish & Vella-Brodrick, 2009; Park & Peterson, 2008; Seligman & Csikszentmihalyi, 2000). Within the mental health field, this movement has been observed in the flourishing area of positive psychology, which includes both prevention and intervention approaches designed to move all individuals towards improved well-being and optimal functioning, instead of just focusing on reducing psychopathological symptoms in individuals meeting criteria for a diagnosis, as is traditional in psychological practice (Norrish & Vella-Brodrick, 2009; Park & Peterson, 2008; Seligman & Csikszentmihalyi, 2000). Within education and school psychology, this paradigm shift has been reflected in the emergence of research and programming targeting "positive youth development" (Amodeo & Collins, 2007). Positive youth development theory is grounded in the idea that human development is plastic, with growth resulting from interactions between an individual and their surroundings so as to improve the well-being of both, meaning that this development can be guided towards promoting desirable outcomes and not just preventing or reducing undesirable ones (Lerner, Almerigi, Theokas, & Lerner, 2005). That is, this movement considers that there is more to being happy and healthy individuals than the absence of problems in one's life and further promotes and supports the achievement of an optimal state of well-being for all youth.

One aspect of this positive psychology and positive youth development movement has been a burgeoning interest in the strengths, or positive characteristics, of individuals. Although strengths have sometimes been measured as an absence of dysfunction or psychopathology, this is a clearly limited and unbalanced approach, with the underlying implication that youth with mental disorders cannot have strengths (Walrath, Mandell, Holden, & Santiago, 2004). That is, if strengths and dysfunction are considered to be two ends of single continuum of behavioural and emotional functioning, youth who experience significant psychopathology would theoretically have no strengths. However, one fundamental premise of strength-based approaches is that all youth, regardless of dysfunction, have strengths (Benson & Scales, 2009; Epstein, 1998; Epstein et al., 2004; Norrish & Vella-Brodrick, 2009; Park & Peterson, 2008). In fact, it has also been demonstrated that positive characteristics, or strengths, can be protective buffers as they actually interact with risk characteristics to change the relationships between these risk factors and psychosocial outcomes for youth (Pollard, Hawkins, & Arthur, 1999). Thus, strengths and dysfunction cannot be considered to exist on a continuum. The complex picture of both difficulties and strengths should be considered when understanding and working with youth.

Models of Strengths

There has been an explosion of theory and research focusing on the positive or strength characteristics of youth in the past decade. This has resulted in the formulation of a variety of models of strengths, including the Developmental Assets model (Benson & Scales, 2009; Edwards, Mumford, & Serra-Roldan, 2007a; Edwards, Mumford, Shillingford, & Serra-Roldan, 2007b; Leffert et al., 1998; Scales et al., 2000), the Youth Resiliency model (Donnon, 2010; Donnon & Hammond, 2007), the Values in Action model (Park, 2004; Park & Peterson, 2006;

Park & Peterson, 2008; Park, Peterson, & Seligman, 2004), Epstein's model of strength-based

assessment (Epstein, 1998; Epstein, 1999; Epstein et al., 2004; Epstein & Sharma, 1998), and the

Strength, Assessment, and Treatment Model (Rawana & Brownlee, 2009a). These models are

presented together briefly for clarity and comparison in Table 1. Each of these models proposes

a set of strengths deemed important by the researchers, which is tied into a survey instrument

that can be used to assess strengths in youth.   There is currently no one model that dominates the

literature on strengths in youth and there are many remarkable similarities across models,

suggesting an emerging consensus regarding the particular strength characteristics that are

relevant to the development and well-being of youth (Murphey et al., 2004). There are

nevertheless subtle differences between current strength-based frameworks.

Although all of these models are strength-based in nature, two of these models are based

in resiliency theory (Donnon, 2010; Donnon & Hammond, 2007; Edwards et al., 2007a; Edwards

et al., 2007b; Leffert et al., 1998; Scales et al., 2000). The Developmental Assets model

incorporates 40 assets into 8 categories, including support, empowerment, boundaries and

expectations, constructive use of time, commitment to learning, positive values, social

competencies, and positive identity (Benson & Scales, 2009; Edwards et al., 2007a; Edwards et

al., 2007b; Leffert et al., 1998; Scales et al., 2000). These assets have been defined as "important

relationships, skills, opportunities and values that help guide individuals away from risk

behaviours, foster resilience and promote thriving" (Scales, Benson, Roehlkepartain, Sesma, &

van Dulmen, 2006, p.693). However, it is notable that these assets have also been referred to as

environmental and intrapersonal strengths thereby reflecting both internal and external assets

(Edwards et al., 2007a).

Alternatively, the Youth Resiliency model includes a list of 31 developmental strengths that includes family, peer, community, school, cultural, self-control, empowerment, self-concept, and social sensitivity factors (Donnon, 2010; Donnon & Hammond, 2007). Although these models describe positive characteristics and supports, called assets or strengths, within different overall frameworks, there are underlying similarities, including a notable overlap in the specific asset or strength items considered on the respective measures. In addition, both models reflect a combination of internal strengths, reflecting personality characteristics and attributes of the individual, and external strengths, reflecting environmental or systems characteristics, as important to understanding youth (Benson & Scales, 2009; Donnon, 2010; Donnon & Hammond, 2007; Edwards et al., 2007a; Edwards et al., 2007b; Leffert et al., 1998; Scales et al., 2000).

Moreover, as noted above, these two models are both based in resiliency theory, which specifically focuses on the role of positive characteristics as they are accessed and developed in times of adversity to overcome difficulties and promote personal growth (Donnon & Hammond, 2007; Edwards et al., 2007a; Edwards et al., 2007b; Leffert et al., 1998; Richardson, 2002). In fact, this fundamental need to survive adversity has been hypothesized as the reason underlying the development of strengths (Richardson, 2002). Thus, in this resiliency context, strengths are considered to be protective factors that mitigate risk or promote resiliency (Donnon, 2010; Donnon & Hammond, 2007; Edwards et al., 2007a; Edwards et al., 2007b; Leffert et al., 1998; Pollard et al., 1999). It is notable that many authors have discussed resiliency and strength-based approaches as if they are interchangeable (e.g. Donnon, 2010; Donnon & Hammond, 2007; Edwards et al., 2007a; Richardson, 2002; Ungar, 2006). Indeed, when one looks closely, there is remarkable overlap in both the general theory and specific factors being considered across these

frameworks. That is, these models maintain a similar focus on fostering well-being in youth, while considering similar strengths, such as those related to intrapersonal, family, school, and peer functioning. Moreover, while some authors chose to closely stick to one term for positive characteristics and supports, such as assets (e.g. Leffert et al., 1998; Scales et al., 2000), many others use the terms of strengths, assets, and resiliency factors interchangeably (e.g. Donnon, 2010; Donnon & Hammond, 2007; Edwards et al., 2007a; Ungar, 2006), creating a lack of clarity and consistency that makes distinguishing between strength-based and resiliency models a difficult, if not impossible, task.

However, theoretically, strength-based approaches go beyond resiliency frameworks as they are not limited to conditions of actual or potential adversity. Instead, strength-based approaches are relevant to all youth, promoting optimal functioning regardless of initial dysfunction or adversity (Epstein, 1998; Epstein et al., 2004; Park & Peterson, 2008; Rawana & Brownlee, 2009a). Thus, resiliency-based models of strengths capture only one aspect of what a strength-based approach may encompass, as strengths exist regardless of the presence of adverse or stressful life events. More specifically, strengths should be present in all youth, regardless of their involvement in bullying experiences. That is, strengths are at the core of positive youth development, which involves a youth's ability to survive adversity, minimizing mental and physical health problems, while more generally promoting personal growth and well-being (Park, 2004; Park & Peterson, 2008). Thus, there is a need to move beyond resilience theories to consider broader models of strengths (Rawana & Brownlee, 2009a).

Thus, although the strength-based models describe similar fundamental strength characteristics for youth, there are differences in their overall theoretical frameworks. These similarities and differences become apparent when one examines the assessment tools associated

with each theoretical model. In both frameworks there are similarities in the internal strengths

described, however the resiliency models also focus on external factors as strengths. While the

benefits of the external strengths that are also included in resiliency models are undeniable,

internal strengths are both more accessible and more amenable to change for youth. That is,

youth have the capability to change their own thoughts, emotions and behaviours, and can

therefore develop their internal strengths. However, it is far more difficult for youth to make

changes to their external strengths, such as characteristics of their families, peers, schools, and

communities. Therefore, a focus on internal strengths may provide more relevant information

for the adults and service providers who work directly with youth.

One model of strengths that embodies the positive youth development perspective is the

Values in Action model. This model focuses on internal strengths, including 24 character

strengths that are encompassed by the 6 virtues of wisdom, courage, humanity, justice,

temperance, and transcendence (Park, 2004; Park & Peterson, 2006; Park & Peterson, 2008; Park

et al., 2004). The constituent character strengths are conceptualized as the psychological

processes or mechanisms that define the higher-order virtues, which are manifest in an

individual's thoughts, emotions, and behaviours   (Park, 2004; Park & Peterson, 2006; Park &

Peterson, 2008; Park et al., 2004). The Values in Action model differs from the other strength-

based models presented here in that it focuses more on abstract moral characteristics and less on

the concrete daily behaviours and experiences of youth.

In contrast, Epstein and Sharma (1998) used a more concrete, but broad, definition of

strengths, suggesting that they are:

Emotional and behavioural skills, competencies, and characteristics that create a sense of

personal accomplishment; contribute to satisfying relationships with family members,

peers and adults; enhance one's ability to deal with adversity and stress; and promote

one's personal, social, and academic development. (p. 3)

Based on this definition, strengths were represented by five interpersonal and emotional

categories some of which are quite abstract: interpersonal strength, family involvement,

intrapersonal strength, school functioning, and affective strength (Epstein, 1999, Epstein et al.,

2004; Epstein & Sharma, 1998). Interpersonal strengths reflect the youth's ability to regulate

emotions and behaviours within social contexts. Family involvement refers to the youth's

involvement and relationships with family members. Intrapersonal strengths include the youth's

sense of competence and outlook on life. School functioning refers to the youth's competence at

school and on school related tasks. Finally, affective strengths reflect the youth's ability to

express emotions and accept caring gestures from others. Notably, Epstein's model primarily

reflects internal emotional and behavioural strengths of the youth, consistent with the

conceptualization of strengths as "emotional and behavioural skills, competencies, and

characteristics" (Epstein and Sharma, 1998, p.3), while excluding external protective factors.

This model was selected for inclusion in the current study due to its representation of internal

strengths that capture important but relatively limited aspects of a child's emotional and

behavioural functioning.

The Strength, Assessment, and Treatment model (Rawana & Brownlee, 2009a) has also

been included in this study due to its contextual and developmental focus and, therefore, its

greater breadth of strengths considered. This model defines strengths broadly as "developed

competencies and characteristics that [are] valued both by the individual and society and [are]

embedded in culture" (Rawana & Brownlee, 2009a, p. 256). These strengths are conceptualized

as reflecting two broad domains, Contextual and Developmental, which each consist of five

domains of functioning and reflect the emerging and developing salience of particular strengths. The Contextual domain consists of the Peers, Family/Home, School, Employment, and Community strengths (Rawana & Brownlee, 2009a). Peer strengths reflect the youth's engagement in positive relationships and activities with peers, as well as the ability to manage conflict. Family strengths reflect the youth's sense of cohesion, support, and involvement within the home, as well as their compliance with family norms and expectations. School strengths include feelings of academic competence, school engagement, and functional academic behaviours. Employment strengths refer to the youth's set career goals and ability to behave responsibly within the workplace. Finally, community strengths reflect the youth's involvement in activities as well as a sense of belonging to the community. The Developmental domain consists of the Personality, Personal and Physical Care, Spiritual and Cultural, Leisure and Recreation, and Personal Goals strengths (Rawana & Brownlee, 2009a). Personality strengths are thought to reflect the youth's perception of traits such as humour and creativity, as well as self-efficacy and outlook on life. Personal and physical care strengths refer to basic hygiene and health maintenance, such as nutrition and exercise. Spiritual and cultural strengths reflect the youth's cultural identity and spiritual beliefs. Leisure and recreation strengths include the youth's involvement in pro-social extracurricular activities and hobbies. Finally, strengths related to personal goals reflect the youth's motivation and competence regarding the ability to meet goals in the future. Therefore, the Strength, Assessment, and Treatment model is very comprehensive, designed to reflect all areas of everyday functioning (Rawana & Brownlee, 2009a). Clearly there are both similarities and differences between the existing models of strengths. However, further clarification of these similarities and differences is needed in order to further the current understanding and application of strengths-based models. Thus, this study

sought to evaluate the relative utility of using two different models of strengths in understanding the psychosocial functioning of youth.

Strengths Assessment

A critical aspect of strength-based models is the assessment of strengths. Indeed, each of the theoretical models discussed above were created through the development of an assessment tool. Therefore, the similarities and differences between the theoretical underpinnings of these models are most easily understood through an examination of the associated measures. Relevant to the models considered in this study, there are notable differences in the development of Epstein's Behavioral and Emotional Rating Scale (BERS-2; 2004) compared to Rawana and Brownlee's Strength Assessment Inventory (SAI; Rawana & Brownlee, 2009b).

It is evident in Epstein's (1999) description of the BERS development process that the goal was to produce a concise assessment measure that would be useful in identifying children with and without strengths. This tool was designed for use in developing academic programming for children as well as for use as an outcome measure to document a student's progress. To accomplish these objectives, the BERS was developed using an empirical approach to test construction. That is, the initial item pool for the BERS was established by asking parents and professionals to create lists of behaviours and emotions that demonstrated children's strengths. This item pool was whittled down through rankings by professionals and then statistical analysis. Of note, a key analysis focused on the ability of items to discriminate between children who had serious emotional disturbance and those who did not, so that non-discriminating items were deleted from the item pool. Further refinement of the item pool occurred via factor analysis, which also identified the five BERS scales. These five scales served as a prototype for the final published version of the BERS as well as for the second

edition, the BERS-2, which included the youth and parent report forms that have been standardized using large samples (Epstein et al., 2004). Therefore, the focus of the BERS-2 is clearly assessment-based, with a greater focus on identification than on treatment and other forms of programming, though its prescribed uses include both purposes. In addition, the BERS was originally constructed under the premise that children experiencing a high degree of psychological symptoms should have fewer strengths. Potential strengths that were equally held by youth with and without these difficulties were discarded as not relevant or useful in the assessment process. This suggests that, in addition to measuring strengths, a key purpose of the BERS is to identify children who may be in distress. Indeed, research has indicated that the BERS is useful in making this distinction (Reid, Epstein, Pastor, & Ryser, 2000). In addition, this item selection process instills a flavour of resilience theory in the content of the BERS, suggesting that the strengths that are most relevant to youth are those associated with a reduced likelihood of psychopathology. Therefore, the trade-off for having such a concise and useful assessment tool is that the BERS-2 may exclude some strengths that are relevant to the lives of children and adolescents.

In contrast, the theoretical background of the SAI is grounded in the use of strengths in social work practice, with a focus on relevance to treatment. That is, any strength is considered valuable as it may be used to promote self-development and problem resolution when working with youth (Rawana & Brownlee, 2009a). To achieve this objective the SAI was initially constructed using a rational approach to test construction, though it was later extended to included empirically derived scales (Rawana & Brownlee, 2009b). That is, the items on the SAI were initially generated in an attempt to expand upon the strength assessment component of the provincially adopted Risk and Needs Assessment (RNA) used with young offenders. The first

six scales developed for the SAI were closely related to areas of risk assessed in the RNA. These

items were refined and additional items were selected in discussion with youth, probation

officers, community leaders, clinicians, parents, and other professionals working with youth.

This process resulted in the compilation of the 10 content scales included in the current SAI,

making it a comprehensive measure of strengths (Rawana & Brownlee, 2009b). It is interesting

to note a high degree of similarity between the original content and later empirical scales of the

SAI. That is, the later factor analyses confirmed the original rational structure of the SAI, with

the addition of the empirical scales providing an enriched interpretation of strengths. Of note,

the SAI has not been standardized, as comparison to a reference group is not relevant to the

underlying purpose of strengths assessment in this model. Thus, the SAI was designed to be a

comprehensive measure of strengths, with applications in promoting the growth and

development of youth. The benefits of assessing this wide range of strengths were recently

demonstrated in a comparison of the SAI and the BERS-2, which found that the SAI was better

able to predict symptoms of psychopathology on all but one subscale of a broad measure of

psychopathology (Franks, Teatero, Brazeau, Rawana, & Brownlee, 2010). The current study

sought to expand upon these findings through the use of the SAI and BERS-2, with the larger

goal of furthering the understanding of models of strengths in the context of psychosocial

functioning. However, regardless of the specific model under consideration or the tool used to

assess strengths, the underlying theory and value in understanding strengths is that they are

necessary for optimal well-being in all youth.

Strengths and Psychosocial Outcomes

Indeed, there is a great deal of value in adopting a strength-based approach, as strengths

have been clearly and consistently related to both a reduction in negative psychosocial factors

and an increase in positive factors for youth. Current research has identified that youth with

more strengths are more likely to engage in an array of positive or pro-social behaviours, such as

volunteering (Donnon & Hammond, 2007), helping others (Scales et al., 2000), engaging in

physical activity (Donnon & Hammond, 2007; Murphey et al., 2004; Scales et al., 2000), eating

a healthy diet (Donnon & Hammond, 2007; Scales et al., 2000), and using seatbelts and bicycle

helmets (Murphey et al., 2004). These youth are also better able to delay gratification (Donnon

& Hammond, 2007; Scales et al., 2000), are more likely to value diversity (Scales et al., 2000)

and demonstrate leadership (Park & Peterson, 2006; Scales et al., 2000). They are also more

likely to participate in spiritual or faith activities (Donnon & Hammond, 2007). Having a greater

number of strengths is also associated with higher school achievement (Donnon & Hammond,

2007; Park & Peterson, 2006; Scales et al., 2000; Scales et al., 2006), more positive coping skills

(Markstrom & Marshall, 2007; Scales et al., 2000), better social skills (Epstein et al., 2004),

higher self-esteem (Markstrom & Marshall, 2007), and a more positive self-concept (Rawana &

Brownlee, 2009b). Youth with more strengths also tend to have higher life satisfaction and

report being happier (Gillham et al., 2011). These findings support the need to understand and

foster strengths in youth to improve and promote positive psychosocial outcomes and well-being.

Moreover, these findings of increasingly positive outcomes for youth who possess more strength

characteristics provide support for the perspective that a focus on strengths and well-being

involves more than an absence of psychopathology and dysfunction.

However, as one component of well-being is related to the absence of psychopathology

and dysfunction, it is also important to note that increased strengths are related to reductions in

these negative experiences. That is, it has been consistently found that youth with higher levels

of strengths are less likely to abuse alcohol and drugs (Donnon & Hammond, 2007; Leffert et al.,

1998; Murphey et al., 2004; Oman et al., 2002; Pollard et al., 1999), have difficulties at school (Donnon & Hammond, 2007; Leffert et al., 1998), engage in sexual activity (Leffert et al., 1998; Murphey et al., 2004; Oman et al., 2002), gamble (Donnon & Hammond, 2007; Leffert et al., 1998), engage in vandalism or theft (Donnon & Hammond, 2007), carry a weapon (Donnon, 2010; Donnon & Hammond, 2007; Oman et al., 2002), and have involvement with the legal system (Oman et al., 2002). Research has also identified that students with more strengths have fewer disciplinary referrals for verbal and physical aggression and oppositional-defiant behaviours at school (Albrecht & Braaten, 2008). In addition, students with more strengths engage in less physical fighting (Aspy, Oman, Vesely, McLeroy, Rodine, & Marshall, 2004; Benson & Scales, 2009; Donnon, 2010; Leffert et al., 1998; Murphey et al., 2004; Oman et al., 2002). Youth with greater strengths are also less likely to experience symptoms of both internalizing and externalizing psychopathology (Epstein et al., 2004; Franks et al., 2010; Park & Peterson, 2006; Rawana & Brownlee, 2009b; Reid et al., 2000), and are less likely to specifically report symptoms of depression (Gillham et al., 2011) and suicidal ideation (Leffert et al., 1998; Murphey et al., 2004). Moreover, youth with greater strengths experience less functional impairment (Naglieri, Goldstein, & LeBuffe, 2010; Walrath et al., 2004) and less severe symptoms (Benner, Beaudoin, Mooney, Uhing, & Pierce, 2008) even when clinically significant symptoms are present. However, it should be noted that even youth with severe emotional and behavioural difficulties report having a variety of strength characteristics (Reid et al., 2000; Walrath et al., 2004), supporting the premise that all youth have strengths. Overall, these findings indicate the value of understanding the role of strengths, given the substantial decrease in negative outcomes and increase in positive outcomes that is noted when then number of strengths increases.

Specific Strengths and Psychosocial Outcomes

Recent research has gone beyond looking at strengths as a unitary construct to explore which different areas of strengths are most relevant to specific areas of functioning. This is a step forward in the understanding of strengths that provides a basis for the understanding of the relative contributions and interactions between specific strengths. For example, recent research has identified that certain strengths can have negative effects, when considered independently from other strengths (Franks et al., 2010; Gillham et al., 2011). This finding highlights the importance of examining specific domains of strengths, as these negative effects are likely to be masked when only an overall strengths score is used. In addition, it is important to consider interactions between strengths because some strengths may need to be developed in the context of other strengths in order to produce positive outcomes (Biswas-Diener, Kashda, & Minhas, 2011; Gillham et al., 2011). Therefore, it is critical to examine specific strength domains as this will help in the development of targeted strength-based interventions for youth and, therefore, in the promotion of positive psychosocial outcomes.

Indeed, research examining well-being in youth identified that life satisfaction was related to "strengths of the heart", particularly hope, love, gratitude, and zest (Park & Peterson, 2006). Similarly, a further study identified that life satisfaction was predicted primarily by high levels of transcendence strengths, such as hope, gratitude, and finding meaning in life (Gillham et al., 2011). In addition, happiness was also predicted by these same transcendence strengths, such as hope, gratitude, and finding meaning in life, but also by low levels of leadership strengths, including courage, perspective, and humour (Gillham et al., 2011). That is, having more leadership strengths may result in diminished feelings of happiness, perhaps because, when considered independently of other strengths, leadership strengths may reflect some potential for

social discord through providing guidance and direction to others, if these opportunities are not appropriately used. This is notable, given that key strengths relevant to well-being include those related to feeling positively connected to others as well as to greater causes and ideals.

Specific areas of strengths are also related to different types of psychosocial difficulties. For example, lower levels of overall internalizing symptoms have been predicted by strengths of hope, zest, and leadership (Park & Peterson, 2006). Moreover, lower levels of depression were predicted primarily by high levels of other-directed strengths, such as forgiveness, kindness, fairness, and teamwork (Gillham et al., 2011). Other research has also found that lower levels of depression and suicidal ideation were related to strengths of positive identity, sense of purpose, self-esteem, positive peer influence, safety, and interpersonal competence (Leffert et al., 1998). With regards to the SAI, a recent study found that having fewer symptoms of depression was predicted by greater strengths of functional classroom behaviour, sense of well-being, and health consciousness, as well as to lower levels of creativity strengths (Franks et al., 2010). In addition, lower rates of generalized anxiety were predicted by greater strengths in the areas of competent coping skills, sense of well-being, and health consciousness, as well as to lower level of creativity strengths (Franks et al., 2010). Thus, strengths related to a positive outlook on life, a positive connection to others, a positive view of oneself, conscientiousness, and strong coping skills appear as critical themes in predicting internalizing symptoms. However, creativity strengths appear to be related to increased internalizing distress, consistent with some current theories of mood disorders.

A somewhat different constellation of strengths have been identified as predictors of externalizing symptoms. In one study, lower levels of externalizing symptoms were predicted by strengths of persistence, authenticity, prudence, and love (Park & Peterson, 2006). In another

study, lower levels of antisocial behaviour were related to strengths of positive peer influence,

restraint, school engagement, time spent at home, resistance skills, and peaceful conflict

resolution (Leffert et al., 1998). Furthermore, lower levels of violence have also been related to

strengths of positive peer influence, peaceful conflict resolution, school engagement, and safety

(Leffert et al., 1998). Lower rates of physical fighting have also been related to strengths of

higher grades at school, talking to parents about school, involvement in school decision making,

volunteering in the community, and feeling valued in the community (Murphey et al., 2004).

Another study also related lower rates of physical fighting to strengths of family communication

and responsible decision making for all youth, as well as positive peer role models for girls

(Aspy et al., 2004). With regard to the SAI, a recent study determined that fewer symptoms of

conduct disorder were related to having more strengths related to functional classroom behaviour

and pro-social attitude, but fewer strengths related to activity engagement and peer

connectedness (Franks et al., 2010). In addition, having fewer symptoms of oppositional defiant

disorder was related to greater strengths in the areas of competent coping skills, commitment to

family values, functional classroom behaviour, sense of well-being, and pro-social attitude, but

fewer strengths related to optimism for the future and community engagement (Franks et al.,

2010). To summarize, a pattern emerges throughout these results indicating that, in the context

of externalizing behaviours, critical strengths are related to being able to regulate one's

behaviour appropriately, engaging in conscientious and pro-social behaviours, and having

positive and caring connections to others. However, strengths related to engagement in

extracurricular activities, particularly sports, and to having connections with peers may also be

risk factors for externalizing behaviours. One reason for this may be that these activities provide

opportunities for youth to develop relationships with peers who are similarly inclined towards externalizing behaviours (Gardner, Roth, & Brooks-Gunn, 2009).

Academic achievement has also been related to a constellation of specific strengths. In one study, academic achievement was related to strengths of perseverance, fairness, gratitude, honesty, hope, and perspective (Park & Peterson, 2006). In another study, academic achievement was related to strengths related to responsibility, including school engagement, positive peer influences, restraint, time spent at home, peaceful conflict resolution, as well as to strengths related to connection to community, including involvement in youth programs, participation in religious community, service to others, creative activities, and reading for pleasure (Scales et al., 2006). In another study, self-reported grades were related to strengths of achievement motivation and school engagement (Scales et al., 2000). In addition, lower levels of school difficulties have been related to strengths of achievement motivation, positive peer influence, school engagement, involvement in youth programs, and time spent at home (Leffert et al., 1998). Clearly strengths related to positive functioning and engagement in the school setting are related to better academic achievement. In addition, it appears that involvement in leisure activities, positive connections to others, self-regulation, and conscientiousness emerge as important areas of strength predicting success in the academic domain.

In addition, social skills have been predicted by a variety of strengths, including those that focus on cooperation, assertion, empathy, and self-control (Park & Peterson, 2006). Moreover, popularity was predicted by a subset of these strengths, including leadership, fairness, self-regulation, prudence, and forgiveness (Park & Peterson, 2006). Thus, initial evidence suggests that strengths related to self-regulation, caring about others, and treating others and oneself with respect are essential to social success.

Thus, there is an emerging body of evidence that supports the exploration and understanding of specific strengths within the context of psychosocial outcomes. However, given the wide range of theoretical models used in the aforementioned studies and the ensuing differences in the specific strengths described, it is difficult to establish a clear understanding of which strengths are particularly relevant. Substantial additional research is needed to promote the current understanding of the roles of specific strengths in psychosocial functioning. A comprehensive assessment of strengths is critical to the development of this research, as it should also allow for further examination of strengths that may not be beneficial in particular contexts. Indeed, the current understanding of youth's strengths is in its infancy. Therefore, this study aimed to provide additional insight into the roles and relevance of strengths with regard to a variety of psychosocial outcomes and also in the context of bullying experiences, a critical issue in the lives of many youth.

A Strengths-Based Approach to Bullying

To date, very little research has been completed that explores the bullying experiences of youth within a comprehensive strength-based framework. Bullying is a serious problem plaguing educational systems across the globe and influencing the lives of many young people. An understanding of students' strengths, especially as they relate to bullying, is critical in the development of appropriate intervention and prevention programming and to promoting the well-being of youth. Recent Canadian studies, using the Youth Resiliency framework, identified that increasing levels of strengths were related to a decreasing likelihood of both being a bully and being bullied (Donnon, 2010; Donnon & Hammond, 2007). That is, Donnon (2010) found that youth with the least strengths were between 3 and 5 times more likely to bully others and also 1.4 times more likely to be the victims of bullying than those with the most strengths. Similarly,

Donnon and Hammond (2007) found that youth with the least strengths were more than twice as likely to be victims of bullying and also 10 to 40 times as likely to bully others at a very high frequency compared to youth with the most strengths. With regard to specific strengths, another study also identified that higher levels of personality and school strengths were related to lower rates of victimization (Anderson, 2006). Thus, there is initial evidence for a relationship between involvement in bullying experiences and the strength characteristics of youth, both overall and especially within the intrapersonal and school domains. Furthermore, when interpreting the aforementioned results, Donnon (2010) proposed a protective-protective model of resiliency. This model implies that increasing strengths should moderate the effects of bullying experiences, though this has not been tested. However, there has been some research that has explored a variety of individual protective factors in relation to bullying experiences. This research may be informative to the current and future exploration of the role of strengths in these experiences and is therefore discussed below. However, before examining the link between strengths and bullying experiences, it is necessary to define and establish an understanding of the bullying problem.

Definition of Bullying

The most commonly used and foundational definition of bullying was provided by Olweus (1993), who defined bullying as repeated deliberate aggressive acts that are physical, verbal, or indirect in nature and which involve an imbalance of power, such that it is difficult for the victim to defend him or herself. Interestingly, these components are common themes that emerged when children, parents, and educators define bullying (Mishna, Pepler, & Wiener, 2006). However, a common definition of bullying has not been consistently applied across research studies. This inconsistency, as reflected in the assessment of bullying, has been referred

to as the "Achilles heel" of bullying research (Aalsma & Brown, 2008). Similarly, while individuals may provide a consistent definition of bullying, there is often a lack of agreement as to whether or not particular incidents should be classified as bullying (Mishna et al., 2006). In addition, not all bullying research reflects all forms of bullying, with some reflecting a heavier focus on direct forms of bullying, such as physical and verbal aggression, while minimizing or excluding the indirect or relational forms of bullying, such as social exclusion (e.g. Andreou, Vlachou, & Didaskalou, 2005; Cassidy & Taylor, 2005; Hodges, Boivin, Vitaro, & Bukowski, 1999; Kaloyirou & Lindsay, 2008; Mouttapa, Valente, Gallaher, Rohrback, & Unger, 2004; Stein, Dukes, & Warren, 2007; Wei, Jonson-Reid, & Tsao, 2007; Yang, Kim, Kim, Shin, & Yoon, 2006). These differences in definitions are important to keep in mind as the definition of bullying used in a given study may influence the nature and meaning of the results found. For the purposes of this study, Olweus' standardized definition of bullying and the Revised Olweus Bully/Victim Questionnaire (Olweus, 1996) was used, as this is the most established, clear, and comprehensive tool available. In addition, as Olweus' definition of bullying converges with the inherent understanding of bullying of youth, this definition and tool are important to the relevance of the current study within the existing bullying research base.

The Occurrence of Bully, Victim, and Bully-Victim Roles

Youth may be involved in bullying experiences over time as a bully, a victim, or as a bully-victim. Bully-victims, also referred to as aggressive victims, are those youth who are victims in some incidents and bullies in others. Across studies, reported prevalence rates for overall bullying of others are highly variable, ranging from 1.3% to 61% (Nguy & Hunt, 2004; Wong, Lok, Lo, & Ma, 2008). Reported prevalence rates for being a victim of bullying are also highly variable across studies, ranging from 2.6% to 100% (Kepeneki & Cinkir, 2006; Volk,

Craig, Boyce, & King, 2006). Prevalence rates of bully-victims also vary widely, with reports

ranging from 0.9% to 18.2% (Volk et al., 2006; Woods & White, 2005). There are likely several

influential factors responsible for this vast degree of variation. One factor that influences the

reported prevalence rates is the definition of bullying and the frequency of reported incidents

considered necessary to categorize a student as a bully or a victim, from one incident ever to

once or more per week. The type of bullying considered, such as verbal, physical, or relational, is

also an influential factor, as different types of bullying occur at different frequencies (Atria,

Strohmeier, & Spiel, 2007; Beran & Violato, 2004; Hunter & Boyle, 2002; Jolliffe & Farrington,

2006; Kepenekci & Cinkir, 2006; Monks, Ortega-Ruiz, & Rodriguez-Hidalgo, 2008; Ndetei et

al., 2007; Sapouna, 2008; Wong et al., 2008). For example, verbal bullying is consistently

reported as the most frequent type of bullying experience by both bullies and victims (Beran &

Violato, 2004; Hunter & Boyle, 2002; Jolliffe & Farrington, 2006; Monks et al., 2008; Sapouna,

2008; Wong et al., 2008). Nonetheless, it is clear that a substantial proportion of youth around

the world have bullied other students, been bullied themselves, or both. Thus, bullying is a

serious and unfortunately common problem for youth, necessitating comprehensive study and

understanding to effectively address it.

Gender Differences in the Prevalence of Bullying Experiences

There are also gender differences that influence the aforementioned prevalence rates.

While the findings of specific studies are inconsistent with respect to gender differences in

bullying experience, a pattern has emerged. That is, it appears that boys are overall more likely

to be involved in bullying experiences, particularly as a bully (Kert, Codding, Tyron, & Shiyko,

2009; Pepler, Craig, Connolly, Yuile, McMaster, & Jiang, 2006; Scheithauer, Hayer, Petermann,

& Jugert, 2006; Scholte, Engels, Overbeek, de Kemp, & Haselager, 2007; Solberg, Olweus, &

Endresen, 2007; Undheim & Sund, 2010; Vaillancourt et al., 2010; Veenstra et al., 2005; Wei et al., 2007), bully-victim (Scheithauer et al., 2006; Solberg et al., 2007; Veenstra et al., 2005), or victim of physical bullying (Ando, Asakura, & Simons-Morton, 2005; Baldry & Winkel, 2004; Carbone-Lopez, Esbensen & Brick, 2010; Cullerton-Sen & Crick, 2005; Dempsey, Fireman, & Wang, 2006; Kepeneki & Cinkir, 2006; Monks et al., 2008; Scheithauer et al., 2006; Undheim & Sund, 2010; Wei et al., 2007; Wong et al., 2008). In contrast, girls may be more likely to be victimized (Houbre, Tarquinio, Thuillier, & Hergott, 2006; Ivarsson, Broberg, Arvidsson, & Gillberg, 2005; Kristensen & Smith, 2003; Olthof & Goossens, 2008; Srabstein et al., 2006; Vaillancourt et al., 2010; Veenstra et al., 2005; Volk et al., 2006; Wei et al., 2007), particularly from indirect relational bullying (Andreou et al., 2005; Carbone-Lopez et al., 2010; Cullerton-Sen & Crick, 2005; Dao et al., 2006; Dempsey et al., 2006; Ndetei et al., 2007; Sapouna, 2008). It is obvious that gender is a critical factor that must be accounted for in the analyses of any study that will meaningfully contribute to the understanding of students' bullying experiences. Thus, the current study examined the role of gender to determine if there are any differences between boys and girls in their bullying experiences, strengths, and psychosocial outcomes.

Differences in the Prevalence of Bullying Experiences amongst Ethnic Groups

Another important demographic characteristic that must be considered when discussing the bullying experiences of children and youth is their ethnic background. However, the results of North American studies examining differences in the bullying experiences of different ethnic groups have been largely inconsistent. That is, no clear patterns have emerged across these studies regarding the relative prevalence of bullies, victims, and bully-victims in Caucasian, Black, Hispanic, Asian, and Aboriginal populations (Holt & Espelage, 2007; Mouttapa et al., 2004; Peskin, Tortolero, Markham, Addy, & Baumler, 2006; Sawyer, Bradshaw, & O'Brennan,

2008; Spriggs, Iannotti, Nansel, & Haynie, 2007; Srabstein et al., 2006; Srabstein & Piazza, 2008; Stein et al., 2007; Unnever, 2005). Only one study has included a sufficient sample to examine the relative prevalence of bullying in the Native American population, with the finding that these youth were more likely than average to be bully-victims (Srabstein & Piazza, 2008). It would be extremely premature to draw conclusions about this population based on the results of one study. However, given that 14.7% of youth aged 10 to 14 years in Thunder Bay, where the current study was undertaken, identify as Aboriginal (Statistics Canada, 2006), the potential for differences between the non-Aboriginal and Aboriginal sub-populations are of interest, and were therefore considered in this study. Moreover, the current study considered the ethnic backgrounds of all participants as a potentially influential factor in the understanding of bullying experiences, strengths, and psychosocial outcomes.

Age-Related Patterns and the Stability of Bullying Experiences

It is clear that many students are indeed involved in bullying experiences at some point during childhood or adolescence. However, these experiences are not stable over the course of these years. Children and preadolescents report higher rates of being bullied overall than do adolescents (Barker, Arseneault, Brendgen, Fontaine, & Maughan, 2008; Camodeca, Goossens, Terwogt, & Schuengel, 2002; Chapell, Hasselman, Kitchin, Lomon, MacIver, & Sarullo, 2006; Due et al., 2005; Hanish & Guerra, 2004; Kristensen & Smith, 2003; Liang, Flisher, & Lombard, 2007; Monks et al., 2008; Sapouna, 2008; Scheithauer et al., 2006; Skues, Cunningham, & Pokharel, 2005; Solberg et al., 2007; Srabstein et al., 2006; Srabstein & Piazza, 2008; Vaillancourt et al., 2010). This has been identified across physical, verbal, and relational forms of bullying (Monks et al., 2008). In addition, victimization experiences appear to increase across the middle and later years of elementary school (Dill, Vernberg, Fonagy, Twemlow, & Gamm,

2004; Hanish & Guerra, 2004; Haynie et al., 2001) and then to peak around grade 8 and 9 (Jankauskiene, Kardelis, Sukys, & Kardeliene, 2008; Peskin, Tortolero, & Markham, 2006; Srabstein et al., 2006). Similarly, bullying behaviours tend to increase with age particularly in the late elementary and early high school years (Chapell et al., 2006; Haynie et al., 2001; Kristensen & Smith, 2003; Pepler et al., 2006; Rigby, 2005; Solberg et al., 2007), and particularly for verbal and relational forms of bullying (Chapell et al., 2006). A peak in bullying behaviours has also been noted particularly around the grade 8 and 9 years (Jankauskiene et al., 2008; Pepler et al., 2006; Peskin et al., 2006; Scheithauer et al., 2006; Srabstein et al., 2006; Srabstein & Piazza, 2008), with a decline in bullying behaviour in the later years of high school (Barker et al., 2008; Jankauskiene et al., 2008; Pepler, Jiang, Craig, & Connolly, 2008; Peskin et al., 2006). For students in the dual role of bully-victim, many studies have suggested that involvement in bullying experiences decreases with age (Camodeca et al., 2002; Hanish & Guerra, 2004; Liang et al., 2007; Kristensen & Smith, 2003; Solberg et al., 2007; Srabstein et al., 2006), whereas others have not found a change in the prevalence of bully-victims over time (Peskin et al., 2006). To summarize, the late elementary and early high school years are a time when bullying experiences of any type are particularly prevalent. Thus, the current study explored the bullying experiences of youth in grades 7 and 8, given that this is such a high risk period for involvement in bullying experiences.

Internalizing Psychological Risk Factors and Effects of Bullying Experiences

There are many psychosocial risks associated with involvement in bullying experiences during childhood and adolescence. One subgroup of these risks falls under the umbrella of internalizing psychological problems, which are depressive and anxious symptoms. Children and adolescents who are victims of bullying tend to have greater internalizing problems overall

compared to youth who are not bullied (Baldry, 2004; Baldry & Winkel, 2004; Bollmer, Milich, Harris, & Maras, 2005; Cook, Williams, Guerra, Kim, & Sadek, 2010; Davidson & Demaray, 2007; Due et al., 2005; Hodges et al., 1999; Johnson, Thompson, Wilkinson, Walsh, Balding, & Wright, 2002; Kepenekci & Cinkir, 2006; Smith, Talamelli, Cowie, Naylor, & Chauhan, 2004; Srabstein et al., 2006; Undheim & Sund, 2010), as well as those who are bullies (Estévez, Murgui, & Musitu, 2009; Haynie et al., 2001; Holt & Espelage, 2007). More specifically, victims have been noted to have higher levels of overall anxiety than do both youth who are not involved in bullying experiences (Beran & Violato, 2004; Fekkes, Pijpers, Fredriks, Vogels, & Verloove-Vanhorick, 2006; Goldbaum, Craig, Pepler, & Connolly, 2003; Holt & Espelage, 2007; Wilson, Parry, Nettelbeck, & Bell, 2003; Yang et al., 2006) and bullies (Holt & Espelage, 2007; Wilson et al., 2003). In addition, victims also score higher on measures of depression than do youth who are not bullied (Estévez et al., 2009; Fekkes et al., 2006; Haynie et al., 2001; Holt & Espelage, 2007; Hunter, Boyle, & Warden, 2007; Klomek, Marrocco, Kleinman, Scholfeld, & Gould, 2007; Marini et al., 2006; Seals & Young, 2003; Toblin, Schwartz, Gorman, & Abou-ezzeddine, 2005; Vaillancourt, Duku, Decatanzaro, Macmillan, Muir, & Schmidt, 2008; van Hoof, Raaijmakers, van Beek, Hale, & Aleva, 2008; Yang et al., 2006), as well as those who are bullies (Estévez et al., 2009; Haynie et al., 2001; Holt & Espelage, 2007; Marini et al., 2006). Therefore, there is substantial evidence that victims of bullying experience more symptoms of depression and anxiety than do their peers who are not victims. Research supports that these internalizing symptoms are both a negative outcome of bullying (Fekkes et al., 2006; Goldbaum et al., 2003; Gunther, Drukker, Feron, & van Os, 2007; Reijntjes, Kamphuis, Prinzie & Telch, 2010; Smith et al., 2004) and a risk factor for future bullying (Fekkes et al., 2006; Goldbaum et al., 2003; Mills, Guerin, Lynch, Daly, & Fitzpatrick, 2004; Reijntjes et al, 2010).

However, increased levels of internalizing symptoms are not exclusive to youth who are only victims of bullying. Bully-victims have been found to fare the worst, experiencing greater symptoms of depression than youth who are not involved in bullying experiences (Estévez et al., 2009; Haynie et al., 2001; Holt & Espelage, 2007; Ivarsson et al., 2005; Marini et al., 2006; Srabstein et al., 2006; Toblin et al., 2005), as well as those who are only bullies (Estévez et al., 2009; Haynie et al., 2001; Holt & Espelage, 2007; Srabstein et al., 2006; Toblin et al., 2005) or only victims (Haynie et al., 2001; Srabstein et al., 2006). Bully-victims have also been shown to have greater anxiety or nervousness compared to uninvolved youth (Cook et al., 2010; Srabstein et al., 2006; Wilson et al., 2003), bullies (Srabstein et al., 2006; Wilson et al., 2003), and victims (Srabstein et al., 2006). However, bully-victims have not been consistently found to differ from youth who are only victims on overall levels of internalizing symptoms (Holt & Espelage, 2007; Marini et al., 2006; Toblin et al., 2005; Wilson et al., 2003). These findings suggest that it is the experience of victimization that is most strongly related to the presence of internalizing symptoms, regardless of whether or the youth are themselves bullies.

Nonetheless, bullying others has also been related to overall internalizing symptoms when compared to uninvolved youth in some studies (Davidson & Demaray, 2007; Srabstein et al., 2006; Undheim & Sund, 2010), although not all studies have found this relationship (Bollmer et al., 2005; Cook et al., 2010; Ivarsson et al., 2005; Kim, Leventhal, Koh, Hubbard, & Boyce, 2006; Peskin et al., 2007). In particular, some studies have shown that bullying others is related to higher levels of depressive symptoms (Coolidge, DenBoer, & Segal, 2004; Haynie et al., 2001; Holt & Espelage, 2007; Klomek et al., 2007; Roland, 2002; Seals & Young, 2003; van Hoof et al., 2008; Yang et al., 2006). However, bullies tend to demonstrate less depressive symptoms than do youth who are victims of bullying (Estévez et al., 2009; Haynie et al., 2001;

Holt & Espelage, 2007) or bully-victims (Estévez et al., 2009; Haynie et al., 2001; Holt &

Espelage, 2007). Indeed, this relationship between bullying and internalizing symptoms is often

reported to be only weakly significant (Cook et al., 2010; Roland, 2002; Srabstein et al., 2006;

van Hoof et al., 2008). In fact, one study found that the relationship between depression and

bullying was entirely mediated by victimization experiences (van Hoof et al., 2008). This may

help to explain the weaker and less frequent findings of these internalizing symptoms in bullies,

as many studies examine bullying and victimization as continuous and independent variables.

Thus, these studies would not account for the proportion of youth who are bully-victims, for

whom victimization experiences may be more related to internalizing symptoms. Nonetheless,

some youth who engage in bullying behaviours also experience significant internalizing

symptoms, though to a lesser degree than youth who are victims and bully-victims. Therefore,

involvement in bullying experiences, particularly as a victim or bully-victim and to a lesser

degree for bullies, is related to experiences of internalizing symptoms, such as depression and

anxiety. Thus, it was necessary for the current study to address the broad range of internalizing

symptoms experienced by youth who are bullies and victims as an important psychosocial

outcome.

Externalizing Psychological Risk Factors and Effects of Bullying Experiences

Another set of psychological factors that are clearly related to bullying experiences fall

under the broad umbrella of externalizing symptoms. That is, overall externalizing behavioural

problems have been consistently reported to be higher in bullies and bully-victims compared to

youth who are not involved in bullying (Bollmer et al., 2005; Cook et al., 2010; Davidson &

Demaray, 2007; Haynie et al., 2001; Houbre et al., 2006; Ivarsson et al., 2005; Kim et al., 2006;

Undheim & Sund, 2010; Yang et al., 2006). Increased bullying behaviour has also been related

to higher rates of Oppositional Defiant Disorder and Conduct Disorder (Coolidge et al., 2004; Kokkinos & Panayiotou, 2004), for both bullies and bully-victims when compared to victims and uninvolved youth (Kokkinos & Panayiotou, 2004). Furthermore, bullies and bully-victims have been found to be highly similar in their delinquent behaviours, including violent, antisocial, risky, and criminal behaviours, with a higher frequency of these behaviours than youth who are not involved in bullying experiences (Barker et al., 2008; Donnon & Hammond, 2007; Dukes, Stein, & Zane, 2009; Ivarsson et al., 2005; Liang et al., 2007; Srabstein & Piazza, 2008; Undheim & Sund, 2010). However, some studies have indicated that bully-victims are actually the most at-risk group for these externalizing symptoms, displaying more behavioural problems overall that youth who are only bullies (Haynie et al., 2001; Houbre et al., 2006; Ivarsson et al., 2005; Stein et al., 2007). Given that bullying itself can be considered as an externalizing behavioural problem, it is perhaps unsurprising that youth who engage in bullying also display higher rates of other externalizing and delinquent behaviours.

However, some research has indicated that victims of bullying may also display some overall externalizing behavioural difficulties at a higher rate than youth who are not involved in bullying experiences (Cook et al., 2010; Davidson & Demaray, 2007; Dukes et al., 2009; Haynie et al., 2001; Hodges et al., 1999; Houbre et al., 2006; Johnson et al., 2002; Undheim & Sund, 2010; Yang et al., 2006), though not every study has found these differences (Ivarsson et al., 2005; Kim et al., 2006). Other studies have also indicated that victims may also be more likely to engage in delinquent behaviours, including violent, antisocial, and risky behaviours, as compared to uninvolved youth (Carbone-Lopez et al., 2010; Dukes et al., 2009; Liang et al., 2007; Smith et al., 2004; Srabstein & Piazza, 2008; Undheim & Sund, 2010), but they are less likely to do so than bullies (Liang et al., 2007; Srabstein & Piazza, 2008; Undheim & Sund,

2010). This pattern is also true for oppositional defiant behaviours (Kokkinos & Panayiotou, 2004), but perhaps not for more severe conduct problems (Gunther et al., 2007). Thus, victims of bullying also have a higher tendency to engage in some externalizing and delinquent behaviours compared to youth who are not involved in bullying experiences, but to a lesser degree than youth who bully others. Externalizing behaviours are clearly a problem for bullies, bully-victims, and victims. These aggressive and externalizing behaviours are likely to be both a cause and a consequence of bullying behaviours (Kim et al., 2006). In addition, levels of aggression and bullying others have been reported to increase or decrease when a youth's experiences of victimization increase or decrease respectively (Goldbaum et al., 2003). The sum of these findings suggests a cyclical developmental pathway in which bullying and victimization experiences lead to increased experiences of aggression and other externalizing symptoms, which in turn lead to increased involvement in bullying. Thus, the current study addressed the wide range of externalizing behaviours that are experienced by bullies, bully-victims, and victims as another critical psychosocial outcome.

Interpersonal Risk Factors and Effects of Bullying Experiences

Peer relationships are another important aspect of childhood and adolescence that are detrimentally influenced by bullying experiences. Bully-victims have once again been found to be the most disadvantaged in this domain as they experience greater social difficulties, have fewer friends, and are disliked and rejected by peers more than youth who are not involved in bullying experiences (Cook et al., 2010; Houbre, et al., 2006; Kim et al., 2006; Marini et al., 2006; Shin, 2010; Toblin et al., 2005; Warden & Mackinnon, 2003; Wilson et al., 2003), those who are bullies (Houbre et al., 2006; Kim et al., 2006; Marini et al., 2006; Shin, 2010; Toblin et al., 2005; Unnever, 2005; Warden & Mackinnon, 2003; Wilson et al., 2003), and those who are

victims (Houbre et al., 2006; Shin, 2010; Toblin et al., 2005; Warden & Mackinnon, 2003; Wilson et al., 2003). Children and adolescents who are victims of bullying have also consistently been found to experience more social difficulties and experience lower peer acceptance and greater peer rejection than youth who are not bullied (Cook et al., 2010; de Bruyn, Cillessen, & Wissink, 2010; Dill et al., 2004; Fox & Boulton, 2005; Goldbaum et al., 2003; Johnson et al., 2002; Kim et al., 2006; Marini et al., 2006; Olthof & Goossens, 2008; Schafer, Korn, Brodbeck, Wolke, & Schulz, 2005; Scheithauer et al., 2006; Sentse, Scholte, Salmivalli, & Voeten, 2007; Smith et al., 2004; Strohmeier, Spiel, & Gradinger, 2008; Toblin et al., 2005; Undheim & Sund, 2010; Veenstra et al., 2005; Warden & Mackinnon, 2003). Some research also indicates that these victimized youth also tend to have fewer friends than their uninvolved peers (Beran & Violato, 2004; Pellegrini, Bartini, & Brooks, 1999; Shin, 2010; Yang et al., 2006). Moreover, the friends they do have are more likely to be victims themselves (Shin, 2010). In addition, some studies have also identified that the quality of friendships is lower for youth who are victims (Bollmer et al., 2005; Goldbaum et al., 2003; Shin, 2010), though others have not (Hodges et al., 1999; Smith et al., 2004). Clearly, victims of bullying, regardless of whether they themselves are bullies, suffer from poor interpersonal relationships with their peers. These peer difficulties are likely to be both a cause (Goldbaum et al., 2003; Kim et al., 2006) and a consequence (Dill et al., 2004; Goldbaum et al., 2003; Kim et al., 2006; Smith et al., 2004) of victimization.

The picture of peer difficulties is less clear for children and adolescents who are bullies. There is a substantial body of research indicating that bullies also have more social difficulties and experience more peer rejection than their peers who are not involved in bullying experiences (Cook et al., 2010; de Bruyn et al., 2010; Dijkstra, Lindenberg, & Veenstra, 2008; Kim et al.,

2006; Olthof & Goossens, 2008; Undheim & Sund, 2010; Veenstra et al., 2005; Warden & Mackinnon, 2003). In addition, some studies have identified that bullies may also have fewer close friends than uninvolved peers (Ando et al., 2005; Yang et al., 2006). However, not all studies suggest that bullies experience these social difficulties (Houbre et al., 2006; Ivarsson et al., 2005; Scheithauer et al., 2006; Strohmeier et al., 2008; Toblin et al., 2005). It is also interesting to note a trend across these studies, though imperfect, in which the studies with significant findings tend to use peer reports of likability or rejection, while studies with non-significant findings tend to use self-reports. Thus, it is possible that youth who bully others may have difficulty accurately assessing their social status.

Interestingly, there are also social status differences amongst bullies, with some bullies being more popular, socially intelligent, and relationally aggressive, while some others are moderately popular, and still others are low in both social intelligence and popularity (Peeters, Cillessen & Scholte, 2010). Other research has supported the idea that youth who are both popular and disliked are the most likely to be bullies (de Bruyn et al., 2010; Witvliet, Olthof, Hoeksma, Goossens, Smits, & Koot, 2009). Interestingly, the theory behind these findings is that the function of bullying within popular youth is to maintain social dominance, which is reflected in ratings of popularity (de Bruyn et al., 2010; Peeters et al., 2010; Witvliet et al., 2009). Thus, there is significant variability in the social status of bullies. Another possible explanation for these inconsistent findings is that youth who bully others have more friendships with other youth who also display antisocial behaviours, including bullying (Ando et al., 2005; Cook et al., 2010; Haynie et al., 2001; Ma, Phelps, Lerner, & Lerner, 2009a; Mouttapa et al., 2004; Pellegrini et al., 1999; Shin, 2010; Volk et al., 2006; Witvliet et al., 2009), which may also be true for those who are bully-victims (Haynie et al., 2001; Shin, 2010). Thus, these youth

would be less likely to be rejected by their peer group based on their bullying behaviours. The effect of a group norm for bullying others has also been identified in other studies, such that in school classes where bullying behaviours are more frequent, and thus more normative, bullies are less rejected and more accepted by their peers (Dijkstra et al., 2008; Sentse et al., 2007). Although the causal relationship between bullying others and peer difficulties has not been directly addressed in these studies, the social dominance and group norm effects for this behaviour are strongly suggestive that the social difficulties experienced by some bullies are likely both caused and perpetuated by their peers' reactions to this negative behaviour.

Clearly, difficulties in peer relationships are likely to be an important psychosocial factor related to involvement in bullying experiences for many youth, whether they are bullies, victims, or both. More specifically, it appears that both the quality of existing friendships and the occurrence of negative peer interactions, or rejections, experienced by these youth are critical to an understanding of their bullying experiences. Therefore, these two aspects of peer relationships were assessed in the current study as a broad framework for understanding bullying experiences was developed and explored.

Academic Achievement and Bullying Experiences

Another important psychosocial factor related to involvement in bullying experiences is the academic achievement of youth. That is, students who are victims of bullying have been found to have lower academic achievement relative to students who are not bullied (Beran, Hughes, & Lupart, 2008; Holt, Finkelhor, & Kantor, 2007; Lee & Cornell, 2010; Toblin et al., 2005; Veenstra et al., 2005; Yang et al., 2006), though not all studies have found this result (Cook et al., 2010; Ma et al., 2009a; Ma, Phelps, Lerner, & Lerner, 2009b; Srabstein & Piazza, 2008). Interestingly, victims who have high teacher support or low peer support tend to have

better academic outcomes relative to students who are not bullied as well as to victims with either low teacher support or high peer support (Ma et al., 2009a). Thus, there is a subset of victims who do achieve higher grades than other peers. In addition, academic achievement has also usually been found to be poorer in students who are bullies relative to uninvolved youth (Lee & Cornell, 2010; Ma et al., 2009a; Ma et al., 2009b; Srabstein & Piazza, 2008; Veenstra et al., 2005; Yang et al., 2006), though again not all studies have identified this as a significant result (Cook et al., 2010; Toblin et al., 2005). Moreover, students who are bully-victims have again been found to have the poorest level of academic functioning relative to all other youth (Cook et al., 2010; Dukes et al., 2009; Srabstein & Piazza, 2008; Toblin et al., 2005; Veenstra et al., 2005). Thus, it is quite clear that being involved in bullying experiences, as a bully, a victim, or both, is often related to poorer academic achievement. Thus, school grades, as an indicator of academic functioning, are another important psychosocial factor relevant to developing an understanding of bullying experiences, and as such were included in the current study.

Overall, the numerous findings discussed above highlight the vast extent of the negative impact of involvement in bullying, including social difficulties, impairment in school functioning, and externalizing and internalizing psychological difficulties. The approach underlying this bullying research is consistent with a deficit-based perspective, emphasizing risk factors and pathological outcomes. However, this perspective is limited as it does not allow for a holistic understanding of the experiences of youth who are involved in bullying incidents. To achieve this holistic perspective, there is also a clear need for identifying the role of strengths as potential protective factors that could be developed and used to promote more positive experiences for these youth. In addition, developing an understanding of the strengths of youth involved in bullying experiences may also provide a more accurate and holistic picture of well-

being in these youth. Thus, it is relevant to consider the relationship between strengths and

bullying behaviours. Notably, many of these negative outcomes of bullying experiences were

also discussed above as factors related to lower levels of strengths. Thus, this raises a critical

question with regards to the interplay between bullying experiences, strengths, and psychosocial

outcomes, which is the focus of the current study.

Protective Factors Related to Bullying

        While there has been a very limited amount of research into the relationship between

strengths and bullying, there has been some research exploring a variety of individual protective

factors in relation to bullying experiences, which may be informative to the current and future

exploration of the role of strengths in these experiences. One way of looking at protective

factors, which has been used in the literature, is as the absence of risk factors. For example,

Goldbaum and colleagues (2003) took this approach and described low levels of anxiety and

aggression, as well as high quality friendships, as protective factors against being a victim of

bullying. Similarly, Cunningham (2007) described high levels of bonding to school as a

protective factor, given that youth with low levels of bonding were more likely to be involved in

bullying experiences. A comparable spin could be used to interpret the results of any of the

studies of risk factors for bullying experiences discussed above, to suggest that adequate peer

relationships, social skills, and academic achievement, as well as low levels of externalizing and

internalizing psychopathology are all protective factors. However, it should be clear that this

method of interpreting results is not consistent with a strength-based approach, as strengths

reflect more than the absence of dysfunction (Epstein, 1998; Epstein et al., 2004; Park &

Peterson, 2008; Walrath et al., 2004). Thus, while having adequate skills and low

psychopathology may indeed be "protective" in adverse circumstances, these qualities are not necessarily strengths in and of themselves.

Other studies have examined specific positive characteristics of individuals or their interpersonal and environmental contexts in relation to bullying experiences. Overall, these findings are consistent with the aforementioned findings that youth involved in bullying experience lower levels of strengths. In addition, some of these studies suggest that various positive characteristics and supports, which are potential strengths, can moderate the effects of bullying experiences. For example, positive social relationships are considered to be amongst the important strengths in all of the models discussed above (Donnon & Hammond, 2007; Edwards et al., 2007a; Edwards et al., 2007b; Epstein, 1999, Epstein et al., 2004; Epstein & Sharma, 1998; Leffert et al., 1998; Park, 2004; Park & Peterson, 2006; Park & Peterson, 2008; Park et al., 2004; Scales et al., 2000). These relationships with family members, peers, and other adults are likely to reflect both external and internal strengths. Thus, it is unsurprising that there are a number of studies that suggest that social support, in the form of close, reciprocated friendships, reduces a youth's likelihood of both being bullied (Bollmer et al., 2005; Goldbaum et al., 2003; Hodges et al., 1999; Pellegrini et al., 1999; Warden & Mackinnon, 2003) and being a bully (Bollmer et al., 2005; Warden & Mackinnon, 2003). In addition, strong familial support has also been identified as important for youth involved in bullying experiences (Baldry, 2004; Davidson & Demaray, 2007; Flouri & Buchanan, 2003). Thus, having positive relationships with one's family and peers, which may reflect interpersonal strengths, is important in minimizing one's involvement in bullying experiences.

Moreover, these various social supports may buffer against the negative effects of being bullied. That is, one study found that internalizing distress was moderated by high parental

support for girls and high supports at school for boys who were victims (Davidson & Demaray, 2007). Other research has also identified positive parental relationships as a buffer for the effects of bullying and victimization for internalizing symptoms, including withdrawn behaviours, somatic complaints, anxiety and depression for youth (Baldry, 2004). Social support from family has also been found to moderate the relationship between victimization experiences on suicidal ideation (Bonanno & Hymel, 2010). With regard to peer supports, one study found that youth reports of high quality, protective friendships moderated the effects of victimization on internalizing problems, while having a best friend eliminated the relationship between victimization experiences and both internalizing and externalizing difficulties (Hodges et al., 1999). Yet another study also identified that the level of peer support that was perceived by youth who were victims, bullies, and bully-victims also moderated the levels of anxiety and depression experienced, such that moderate levels of peer support were related to the lowest number of symptoms experienced (Holt & Espelage, 2007). Interestingly, for bully-victims, the highest level of perceived peer support was related to having the most internalizing symptoms, while for bullies, the lowest level or perceived peer support was related to having the most internalizing symptoms, suggesting that peer support may have different meanings for each group (Holt & Espelage, 2007). However, another study did not find that close peer relationships provided a buffer between being bullied and internalizing symptoms, though it was found that youth who had high quality friendships and high levels of externalizing symptoms were less likely to bully other youth (Bollmer et al., 2005). One possible explanation for this difference in findings is that the Bollmer and colleagues (2005) study used a parent report of internalizing and externalizing symptoms, which may not be as accurate a reflection of the experiences of these youth when compared to the self-report measures used in many of the other

studies. Nonetheless, these results highlight the need for additional research to clarify the role of interpersonal strengths as they affect the experiences of youth who bully and are bullied, as these strengths are of clear importance to the well-being of these youth.

Another, more specific, potential strength that has been related to bullying experiences is problem solving skills. Having better problem solving skills has been related to a reduced likelihood of being a bully (Baldry & Farrington, 2005) or a victim (Baldry & Farrington, 2005; Cassidy & Taylor, 2005). In fact, problem solving style was found to influence the overall levels of psychological distress experienced by youth who were victims of bullying (Cassidy & Taylor, 2005), suggesting a possible mediation effect for this strength. However, it should be noted that not all studies have identified problem solving skills as beneficial, with one study finding these skills as detrimental, increasing risk for peer rejection in victimized youth (Kochenderfer-Ladd & Skinner, 2002). One possible explanation for these differences in findings is that the former studies examined the use of these skills in adolescents aged 12 to 15 years (Cassidy & Taylor, 2005) and 14 to 19 years (Baldry & Farrington, 2005), while the latter study examined these skills in children aged 9 and 10 years (Kochenderfer-Ladd & Skinner, 2002). It is possible that these skills are more highly developed, and thus more effective as strengths, in older youth Nonetheless, problem solving skills are an exemplar of how specific strengths may influence the experiences of youth who are bullied or bully others.

Other individual characteristics that have been linked to bullying experiences include hope (You, Furlong, Felix, Sharkey, Tanigawa, & Green, 2008) and optimism (Cassidy & Taylor, 2005). These findings indicate that youth who are victims of bullying reported having lower levels of both hope (You et al., 2008) and optimism (Cassidy & Taylor, 2005), which is perhaps unsurprising, given the overall level of psychological distress experienced by victims,

described above, and the possibility that their victimization experiences may be ongoing.

However, it is important to note that the effect of hope on youth reports of school connectedness

and life satisfaction was significantly greater for youth who were victims compared to those who

were not (You et al., 2008). Similarly, the degree of optimism expressed was found to influence

the overall levels of psychological distress experienced by youth who were victims of bullying

(Cassidy & Taylor, 2005). Thus, hope and optimism were found to buffer against the effects of

being bullied on these psychosocial outcome variables. In another study, the relationship

between victimization and depressive symptoms was also found to be partially mediated by the

youths' sense of personal identity, which reflected their perceptions of personal characteristics

and experiences of competence, inhibition, feelings, and interpersonal behaviour (van Hoof et

al., 2008). Hope, optimism, and a strong sense of personal identity may reflect particular

intrapersonal or personality strengths, once again highlighting the importance of considering the

role of strengths as an important influence on the psychosocial outcomes experienced by youth

who are bullies, victims, and bully-victims.

The existing literature supports a need to examine the role of strengths when

understanding the experiences of youth, particularly for those who are bullies and victims of

bullying. That is, particular strengths, especially in the intrapersonal, family, peer, and school

domains, are related to bullying experiences. There is emerging evidence to support the role of

specific strengths as moderators of the psychosocial outcomes related to bullying experiences.

Exploring the role of strengths in relation to psychosocial outcomes, such as peer functioning,

academic achievement, and behavioural and emotional difficulties, may be critical to fostering

optimal well-being in these youth. In addition, this knowledge will also be critical for the

development and provision of effective bullying prevention and intervention programming.

However, there has not been a comprehensive examination of strengths as protective factors within a structured strength-based framework. While the approach of considering specific strengths as individual protective factors has been invaluable to the foundation of a knowledge base, a comprehensive examination of the role of strengths is necessary to substantially further the current understanding of bullying experiences.

Objectives and Hypotheses of the Current Study

Therefore, the primary objective of this study was to explore the role of strengths as they are related to the psychosocial variables of peer functioning, academic achievement, and externalizing and internalizing psychological symptoms, both in general and specifically within the context of bullying experiences. An understanding of the role of both overall strengths and specific areas of strength, as related to these variables, was desired. Through these analyses, this study also sought to provide support for the validity of the Strengths Assessment Inventory (SAI; Rawana & Brownlee, 2009b) as a comprehensive and useful measure of strengths for youth. Another critical focus of the analyses was to examine the role of strengths as a potential moderator of the aforementioned negative psychosocial outcomes that result from involvement in bullying. Therefore, in line with these objectives and the existing literature base, as discussed above, the hypotheses of the current study were as follows:

(1) Students who reported higher strengths overall would also report lower levels of internalizing and externalizing symptoms, fewer peer difficulties, higher friendship quality, and higher academic functioning.

(2) Specific strength constellations would predict functioning on the psychosocial outcome variables. The following patterns were predicted:

    i.   Fewer internalizing symptoms would be predicted by greater strengths in the domains of personality, peer relationships, school, and health consciousness, as well as fewer strengths in the creativity domain.

    ii.   Fewer externalizing symptoms would be predicted by greater strengths in the domains of peer relationships, school functioning, and personality, as well as fewer strengths related to activity engagement.

    iii.   Fewer social problems and improved friendship quality would be predicted by greater strengths in the domains of peer relationships and personality.

    iv.   Improved academic achievement would be predicted by greater strengths in the domains of school functioning, involvement in both community and leisure activities, as well as peer relationships.

(3) The Strength Assessment Inventory (SAI; Rawana & Brownlee, 2009b) would be a better predictor of internalizing and externalizing symptoms, peer relationships, social problems, and academic achievement, when compared to the Behavioral and Emotional Rating Scale (BERS-2; Epstein, 2004), due to the greater breadth of content in the SAI.

(4) Youth with higher levels of strengths would be less likely to engage in bullying behaviours or be the victim of bullying.

(5) Specific strength constellations would be relevant as predictors of bullying behaviours and victimization. In particular, lower rates of bullying behaviours may be predicted by greater strengths in the domains of peer relationships, personality, and school functioning, as these areas have been related to positive peer interactions and aggressive behaviours in past research. In addition, lower rates of victimization may be predicted by personality and school functioning strengths.

(6) Students who reported more frequent bullying behaviours and victimization experiences

would also report greater internalizing psychological distress and externalizing behaviours,

more social difficulties with peers, poorer quality of friendships, and poorer academic

functioning.

(7) Self-reported strengths would moderate the relationships between bullying experiences and

psychosocial outcomes. That is, strengths would act as a buffer, with greater strengths

reducing the negative outcomes related to peer relationships, academic functioning, and

externalizing and internalizing symptoms for youth who reported higher levels of both

bullying behaviours and victimization experiences.

Methods

Participants

In total, 263 participants were recruited from grade 7 and 8 classes at 10 local public

elementary schools. No specific inclusion or exclusion criteria were used to determine a

student's eligibility for participation, provided that appropriate parental consent and student

assent were obtained. This sample consisted of 112 boys (42.6%) and 151 girls (57.4%).

Participants' ages ranged from 11 to 15 years old ($M = 12.91$, $SD = .70$), with 137 (52.1%)

participants in grade 7 and 126 (47.9%) in grade 8. With regards to ethnicity, 228 (86.7%)

participants reported that they were of Caucasian background, 18 (6.8%) reported that they were

of Aboriginal descent, and the remainder either reported other minority status (4.9%) or did not

report their ethnic background (1.5%). In addition, half (131) of the participants attended urban

elementary schools, while the other half (132) attended rural elementary schools.

Measures

Demographic information. A short demographic questionnaire, created for the purposes of this study, was used to collect information regarding gender, age, ethnic background, and relevant school information, such as school and grade currently attending (see Appendix K).

Social desirability. A short form of the Children's Social Desirability Scale (CSDS; Crandall, Crandall, & Katovsky, 1965), as modified by Baxter, Smith, Litaker, Baglio, Guinn, & Schaffer (2004), was used to assess for possible response styles that may raise concerns regarding the accuracy and validity of youth self-reports (see Appendix L). That is, it is possible that some youth may have a tendency to underreport their bullying experiences and any negative psychosocial outcomes or to exaggerate their strengths so as to present themselves in a more socially acceptable manner. Thus, assessing for socially desirability provided data so that the effects of response style could be considered in data analyses.

The shortened version of the CSDS consists of 14 yes or no items, with higher scores representing a tendency towards the use of a social desirability response style. Each item requires the youth to either endorse or not endorse behaviours that they "always" or "never" do. These 14 items were selected for inclusion in the short form due to high factor loadings on the original CSDS scale, so that the short form measures the same construct as the original (Baxter et al., 2004). The one month test-retest reliability of the short form of the CSDS was reported at .83 (Baxter et al., 2004). No other information regarding the psychometric properties of the short form is available. However, the original CSDS has demonstrated adequate split half reliability, between .82 and .95, one month test-retest reliability between .85 and .90, and convergent validity with other prominent measures of social desirability designed for adults (Paulhus, 1991).

Bullying experiences. The Revised Olweus Bully/Victim Questionnaire (OBVQ; Olweus, 1996) was used to assess participants' experiences of bullying other youth and being bullied. The OBVQ was designed for use by students in grades 3 to 12. A comprehensive and age-appropriate definition of bullying was provided to students at the beginning of the questionnaire. The OBVQ includes 40 items that assess physical, verbal, indirect, and other forms of bullying and victimization, as well as information regarding where bullying occurs, attitudes towards bullying, and the role and responses of the social environment to bullying. Of the 40 items, ten items assess the frequency of being a victim and another ten assess the frequency of being a bully. These items are rated on a 5-point Likert-style scale, with higher scores indicating more frequent bullying and victimization experiences. Although the OBVQ has been extensively used in research, published studies examining the psychometric properties of this measure have been limited. However, one recent study examined the 16 key behavioural items assessing frequency of victimization and bullying and determined that these items, aggregated into separate bullying and victimization scales, reported that the OBVQ demonstrated high internal consistency, but could also be used to identify youth experiences of physical, verbal, and indirect forms of bullying experiences, when used with 11 and 12 year old youth (Kyriakides, Kaloyirou, & Lindsay, 2006). In addition, Olweus (2006) has commented on a substantial body of unpublished data collected from the use of the OBVQ, which suggest that it has good internal consistency (.80 and higher), test-retest reliability, and validity, based on moderate correlations (.40 to .60) with peer reports of bullying and victimization.

Strengths. The Strength Assessment Inventory (SAI; Rawana & Brownlee, 2009b), was used to assess psychological strengths in this study (see Appendix M). The SAI is a broad measure of youth strengths, assessing strengths in the domains of Home, School, Friends,

Personality, Leisure Activities, Cleanliness and Health, Faith and Culture, Goals and Dreams, Community Involvement, Employment and Dating Relationships. A Total Strengths composite may be calculated, which sums nine of the above strength domains, excluding Employment and Dating Relationships. In addition, 12 empirical scales, derived from factor analyses can also be calculated, which are: Competent Coping Skills, Commitment to Family Values, Optimism for the Future, Community Engagement, Functional Classroom Behaviour, Creativity, Sense of Well-Being, Health Consciousness, Pro-Social Attitude, Activity Engagement, Respect for Own Culture, and Peer Connectedness. The SAI is a self-report measure for youth aged 9 to 19 years, consisting of 124 items. Each item is scored on a 3-point Likert-style scale as youth select if each statement is 'not at all', 'sometimes', or 'almost always' true, with higher scores reflecting greater strengths. A 'does not apply' response option is also available for each item. Recent data has indicated that the SAI has adequate internal consistency, ranging from .72 to .85 across the 11 domain scales, and at .96 for the Total Strengths score (Rawana & Brownlee, 2009b). The one to two week test-retest reliability for the SAI was determined to range from .58 to .82 for the domain scales, with the exception of the Dating Relationships domain which was poor at .14. The test-retest reliability of the Total Strengths composite was good at .86 (Rawana & Brownlee, 2009b). The validity of the SAI has been established through positive relationships with the BERS-2 (Anderson, 2006; Rawana & Brownlee, 2009b) and negative correlations with various measures of psychological and behavioural problems (Anderson, 2006; Cartwright, 2002; Pye, 2006; Rawana & Brownlee, 2009b).

In addition, the Behavioural and Emotional Rating Scale – Second Edition (BERS-2; Epstein, 2004) was also included in this study to assess strengths. The Youth Rating Scale (YRS) of the BERS-2 is a well-established, standardized, and frequently used self-report

measure of the strengths of youth aged 11 to 18 years (see Appendix N). It is composed of 57

items, which are rated on a 4-point Likert-style scale reflecting if the statement is 'not at all like',

'not much like', 'like', or 'very much like' the student based on their self-perceptions over the

past 3 months. Higher scores reflect greater strengths. Items load onto the five strength scales of

Interpersonal Strength, Family Involvement, Intrapersonal Strength, School Functioning, and

Affective Functioning. An overall measure of strengths, the Strength Index, and a supplemental

scale of Career Strength can also be calculated. The YRS has been reported to have good

reliability, with internal consistency ranging from .79 to .88 across the scales and at .95 for the

Strength Index (Epstein, 2004). Test-retest reliability of the YRS was also reported to be good,

ranging from .84 to .91 across all composite scores (Epstein, 2004). The YRS has also been

shown to have good validity, based upon its ability to distinguish between youth who have been

identified with behavioural and emotional disturbances and those who have not, as well as its

negative correlations with self-report measures of psychological difficulties and social skills

(Epstein, 2004).

Behavioural and emotional functioning. A modified version of the Youth Self Report

(YSR) form of the Achenbach System of Empirically Based Assessment (ASEBA; Achenbach &

Rescorla, 2001) was used to assess the levels of internalizing and externalizing distress

experienced by participants (see Appendix O). The YSR is a standardized 112 item self-report

measure of the psychological functioning of youth aged 11 to 18 years. The modified version of

the YSR used in this study maintained the full complement of items, but excluded the additional

questions that can be used to collect information about hobbies, activities, peers, family, and

academics. When completing the YSR, youth are required to indicate a response on a 3-point

Likert-style scale, indicating whether each item is 'not true', 'somewhat or sometimes true', or

'very true or often true' based on their personal experiences over the past 6 months. These responses are summed to create scores on a variety of subscales, including Anxious/Depressed, Withdrawn/ Depressed, Somatic Complaints, Social Problems, Thought Problems, Attention Problems, Rule Breaking Behaviour, and Aggressive Behaviour. In addition, overall scores are calculated for both Externalizing Problems and Internalizing Problems, which were used in the current study as indicators of behavioural and emotional difficulties respectively. Higher scores on these scales indicate increased levels of behavioural and emotional difficulties. The Externalizing Problems and Internalizing Problems scales have demonstrated good reliability, with internal consistency coefficients of .90 for both and test-retest reliability reported at .89 and .80 respectively after one week (Achenbach & Rescorla, 2001). The validity of these scales has been demonstrated through their ability to distinguish between clinically referred and non-referred youth (Achenbach & Rescorla, 2001). Overall, the YSR scales have also been shown to have high levels of convergence with diagnoses identified in structured interviews (Doyle, Mick, & Biederman, 2007). In addition, the YSR has been shown to be meaningful for use with youth across diverse populations (Ivanova et al., 2007).

Peer relationships. Two aspects of peer relationships were assessed in this study. First, the overall level of social problems experienced by these youth was assessed using the Social Problems scale of the Youth Self Report form of the Achenbach System of Empirically Based Assessment (ASEBA; Achenbach & Rescorla, 2001). The social problems scale consists of 11 items that are indicators of social difficulties experienced by youth, including preferring to spend time with younger children, loneliness, jealousy, dependency on adults, being teased, and being disliked. Each item is scored on a 3-point Likert-style scale, indicating whether each item is 'not true', 'somewhat or sometimes true', or 'very true or often true' based on their personal

experiences over the past 6 months. The reliability of this scale is adequate with both an internal

consistency and one week test-retest reliability of .74 (Achenbach & Rescorla, 2001). Evidence

for the validity of this scale has been indicated by its ability to distinguish between clinically

referred and non-referred youth and its moderate correlation with a social withdrawal scale on

another measure of psychological functioning in youth (Achenbach & Rescorla, 2001). This

scale has been used frequently in bullying research to assess social difficulties in youth.

In addition, a measure of friendship quality, the Friendship Quality Questionnaire (FQQ;

Parker & Asher, 1993) was used (see Appendix P). The FQQ is a 40 item measure designed to

assess the quality of a youth's relationship with the specific peer identified as a best friend. Each

item is rated on a 5-point Likert-style scale, with responses ranging from "not at all true" to

"really true". Responses are tallied into six scales, each one reflecting a different aspect of

friendships, including Validation and Caring, Conflict Resolution, Conflict and Betrayal, Help

and Guidance, Companionship and Recreation, and Intimate Exchange. Higher scores on these

scales generally indicate a stronger, more positive friendship, with the exception of the Conflict

and Betrayal Scale, on which higher scores reflect greater conflict within the relationship. The

FQQ has been used to assess the quality of friendships in both children and young adolescents in

a variety of research studies, which have helped to establish the psychometric properties of this

instrument.   The internal consistency across the six component scales of the FQQ has been

established to range between .73 and .90 in one study (Parker & Asher, 1993) and .74 and .92 in

another (Simpkins, Parke, Flyr, & Wild, 2006). The validity of the FQQ was established based

upon findings supporting the relationships between ratings of friendship quality, loneliness,

social dissatisfaction, and peer acceptance (Parker & Asher, 1993; Liu & Hong-Li, 2009). Test-

retest reliability after two weeks was reported at .75 (Furman, 1996). Moreover, youth reports of

friendship quality using the FQQ have been found to be significantly correlated with the friendship quality rating of their reciprocating best friends (Simpkins et al., 2006).

Academic achievement. Participants' report cards from the previous term were examined to measure academic achievement as assessed by classroom teachers. The overall average grade was calculated for each student using percentage grades across all academic subjects (excluding gym, music, visual art, and drama).

Procedure

After approval was received from research ethics committees at both the university and public school board, principals at local public schools with grade 7 and 8 classes were invited to include their school in the study. Informed consent to participate was required from both school principals and classroom teachers, as data collection occurred during regular class time. For all grade 7 and 8 classes with principal and teacher consent, the primary researcher visited the classroom during school hours to briefly present the study and to provide research packages that were sent home to parents and guardians. Each package contained a letter providing detailed information about the study as well as an informed consent form. Parents and guardians wishing to have their child participate in the study returned the signed consent form to the school. Class pizza parties were used as an incentive to promote the return of consent forms to the school, regardless of whether or not permission to participate was given. Response rates for returned consent forms were highly variable both between and within schools.

The researcher returned to each classroom for data collection twice during the regular school day. The two data collection sessions were between one to seven days apart. Two data collections sessions were required as it was determined that there were too many questionnaires for students to complete them reasonably in one sitting and to accommodate classroom

schedules. At the start of the first data collection session, the study was explained again to students who had received parental consent to participate. Students were then invited to either sign an assent form indicating their willingness to participate or to decline to participate. Students who assented to participate completed the demographic questionnaire, the SAI, the BERS-2, the FQQ, the OBVQ, the ASEBA, and the modified CSDS, in randomized order. Students were assured that their responses would be kept both confidential and anonymous. The researcher subsequently accessed the participating students' report card information, as stored in their Ontario Student Records, to collect information regarding academic achievement.

Results

Data Management

Total score calculations. Total scores and subscales scores were calculated for each survey, using combinations of variables identified in the appropriate test manuals. As a rule, proration was used to account for missing data, so long as a minimum of 75% of the items loading onto that scale had valid responses. However, given a substantial quantity of missing data, the actual sample size used in many of the analyses described below was well below the 263 total participants. Reasons for missing data included absence on the second day of data collection, skipped pages within a questionnaire, the choice to not answer specific questions, and frequent use of the "does not apply" option on the Strength Assessment Inventory. Notably, the use of this response option resulted in the exclusion of the Faith and Culture subscale from the calculation of the Total Strengths score, as many participants chose to answer "does not apply" rather than "never" in response to questions about religious and cultural practices. The mean scores, standard deviations, and range of scores for each of the key variables in this study are reported in Table 2.

Bullying and victimization variables. As the Olweus Bully/Victim Questionnaire (OBVQ) does not prescribe a particular method for creating variables to represent bullying and victimization, a variety of methods were examined prior to selecting the optimal method for analyzing the data in this study. First, a choice was made to use a composite of specific behavioural items, which encompasses physical, verbal, social, and electronic bullying and victimization experiences, rather than the single item questions (i.e. how often have you been bullied/taken part in bullying). Previous research has suggested that behavioural composites are a more sensitive measure of bullying experiences (Sawyer et al., 2008; Vaillancourt et al., 2010). Second, the decision was made to evaluate bullying and victimization as continuous rather than categorical variables, due to the limited number of students reporting high frequencies of these experiences (see Table 3). Previous research has demonstrated that there are meaningful group distinctions between each level of bullying or victimization reported on the OBVQ (Solberg & Olweus, 2003). Thus, valuable information could be lost if these variables were split into dichotomous categories. Bullying and victimization variables were therefore created as continuous variables by calculating the mean scores across the nine specific behavioural items for each bullying and victimization experiences (items 25 to 32a and 5 to 12a respectively). Finally, in order to examine the experiences of participants who reported high levels of both bullying and victimization, the interaction term for these variables (bullying × victimization) was created and included in the main analyses of this study. As per the recommendations of Aiken and West (1996), the bullying and victimization variables were centered prior to calculating the interaction term.

Skewness and kurtosis. The normality of all variables was examined. For variables with significant skewness and/or kurtosis, square root, inverse, and logarithm transformations of

the data were considered to minimize these values. Square root transformations provided the best approximation of normality for the bullying and victimization composites, as well as the internalizing, externalizing, and social problems scores. These transformed variables were used in all subsequent analyses.

Multivariate Outliers. The data was screened for multivariate outliers using the complete regression model, described below, for each of the five outcome variables as well as a random number variable. Based on these multiple regression analyses, Mahalanobis' distance was found to be extremely elevated for one case, suggesting a possible multivariate outlier. This case was a 13 year old girl in grade 7 at a rural elementary school. This participant reported the highest level of bullying behaviour based on the square root transformed average behavioural measure of bullying (score = 1.49), reflecting physical, verbal, indirect, and electronic forms of bullying occurring at least once a week. This participant also reported a high degree of victimization based on the square root transformed average behavioural measure of victimization (score = 1.15). She also reported a low level of strengths overall (score = 110.59). Notably, a closer examination of this participant's responses on the OBVQ identified large discrepancies in various items assessing bullying behaviour and victimization. Thus, the validity of this participant's responses is strongly questionable. The inclusion of this case in the analyses would alter the results of this study. As it is highly unlikely that this case is truly representative of this study's target population, this case was dropped from further analyses and is not included in the results described below. Further examination for possible multivariate outliers was conducted following the exclusion of the aforementioned case. While Mahalanobis' distance was significantly elevated for several other cases, none of these cases were as extreme as the aforementioned case, and the removal of these cases could not be justified. Moreover, the

removal of these cases could not produce stable results for the hypothesized model, suggesting

that these cases should remain in the dataset.

Correlations

Bivariate correlations between the key variables in this study were examined (Table 4).

Most of the correlations were significant at the $p < .05$ level. However, friendship quality was

not significantly correlated with victimization experiences, bullying behaviours, social problems,

or internalizing problems. Reports of both victimization experiences and bullying behaviours

were positively correlated with reports of social problems, internalizing symptoms, and

externalizing symptoms, but were negatively correlated with strengths and grades. In contrast,

self-reported strengths were negatively correlated with reports of social problems, internalizing

symptoms, and externalizing symptoms, but positively correlated with grades and reported

friendship quality. Correlations between specific strengths, as measured by the BERS-2

subscales and both the content and empirical scales of the SAI, were also examined (Table 5).

Overall, these scales were highly correlated with one another.

Social Desirability

As all variables included in this study, with the exception of grades, were based on self-

report measures, it was deemed important to include a measure of social desirability in this

study. Scores on the social desirability measure were significantly correlated with self-reports of

victimization experiences, $r(240) = -.30, p < .001$, bullying behaviours, $r(233) = -.43, p < .001$,

strengths, $r(213) = .46, p < .001$, social problems, $r(242) = -.39, p < .001$, internalizing

symptoms, $r(231) = -.28, p < .001$, externalizing symptoms, $r(242) = -.59, p < .001$, and

friendship quality, $r(216) = .21, p = .001$. Of note, social desirability was also significantly

correlated with average grades, $r(239) = .18, p < .01$, which may suggest that social desirability

is reflected not only in test response style but also in students' behaviour at school. These results

highlight the importance of including social desirability in subsequent analyses.

Demographic Differences on Key Variables

When ethnicity was coded for Caucasian versus ethnic minority, only internalizing

symptoms emerged as significantly different between groups, $F(1, 230) = 5.61$, $p = .02$, with

Caucasian participants reporting fewer symptoms ($M = 2.70$, $SD = 1.30$) than those from other

ethnic groups ($M = 3.33$, $SD = 1.13$). However, the difference between these two groups also

approached significance for externalizing symptoms, $F(1, 241) = 3.44$, $p = .07$, with Caucasian

participants reporting fewer symptoms ($M = 2.67$, $SD = 1.27$) than those from other ethnic

groups ($M = 3.13$, $SD = 1.14$). Differences based on participant ethnicity were also examined by

separating those reporting Aboriginal heritage and those reporting other minority heritage.

Notably, these analyses again identified a significant difference between groups with regard to

internalizing symptoms, $F(2, 229) = 3.11$, $p < .05$. Fisher's LSD post hoc testing revealed that

Caucasian participants ($M = 2.70$, $SD = 1.30$) reported significantly fewer symptoms than those

of Aboriginal heritage ($M = 3.49$, $SD = 1.26$), $p = .02$, while the symptoms of participants from

other ethnic backgrounds did not differ significantly from either group ($M = 3.08$, $SD = 0.89$). In

addition, an overall effect approaching significance was again identified with regard to

externalizing behaviours, $F(2, 240) = 2.76$, $p = .07$. Once again, Fisher's LSD post hoc testing

revealed that Caucasian participants ($M = 2.67$, $SD = 1.27$) reported significantly fewer

symptoms than those of Aboriginal heritage ($M = 3.41$, $SD = 1.07$), $p = .02$, while the symptoms

of participants from other ethnic backgrounds did not differ significantly from either group ($M = 2.73$, $SD = 1.15$). Finally, this set of analyses revealed a third significant difference between

ethnic groups for academic performance, $F(2, 250) = 5.13$, $p < .01$. Fischer's LSD post hoc

testing identified that participants of Aboriginal heritage (M = 70.96, SD = 5.35) had significantly lower grades when compared to both participants of Caucasian background (M = 75.27, SD = 6.48), p = .01, and those from other minority groups (M = 78.57, SD = 8.18), p < .01. In addition, the difference between Caucasian participants and those of non-Aboriginal minority heritage approached significance, p =.08.

Several significant gender differences were also found. First, girls (M = 168.42, SD = 22.22) reported having higher levels of strengths overall compared to boys (M = 159.99, SD = 25.87), $F(1, 227)$ = 7.02, p < .01. Second, girls (M = 76.58, SD = 6.44) were identified as having significantly higher grades compared to boys (M = 73.48, SD = 6.58), $F(1, 255)$ = 14.25, p < .001. Third, girls (M = 124.35, SD = 19.82) also reported that their friendships were significantly more positive than did boys (M = 102.02, SD = 22.90), $F(1, 231)$ = 63.01, p < .001. Finally, a significant gender difference was noted for internalizing symptoms, $F(1, 233)$ = 4.45, p = .04, with girls (M = 2.92, SD = 1.31) reporting more symptoms than boys (M = 2.56, SD = 1.25). However, there were no significant differences found on any of the key variables based on the age or grade of participants.

Internalizing Symptoms

It was hypothesized that higher rates of internalizing symptoms would be related to higher rates of both bullying and victimization, as well as to lower levels of strengths. Indeed, correlations provided initial support for this hypothesis (see Table 4). Furthermore, it was hypothesized that strengths would moderate the effects of bullying and victimization on internalizing symptoms. To further examine these hypotheses, a stepwise multiple regression was conducted, with internalizing symptoms as the dependent variable. The Aiken and West (1996) methods for addressing moderation effects within multiple regression analyses was used.

Therefore, the bullying, victimization, and strengths variable were all centred in preparation for these analyses. The first step of this regression controlled for the effects of social desirability, gender, age, and ethnicity, $\Delta R^2 = .11$, $F(4, 189) = 5.96$, $p < .001$. Of these variables, social desirability ($\beta = -.25$, $p < .001$), gender ($\beta = .18$, $p = .01$), and ethnicity ($\beta = .15$, $p = .04$) emerged as significant predictors of internalizing symptoms. In the second step of the regression, strengths, bullying, and victimization were added which significantly improved the overall prediction of internalizing symptoms, $\Delta R^2 = .32$, $F(3, 186) = 34.45$, $p < .001$. However, only strengths ($\beta = -.27$, $p < .001$) and victimization ($\beta = .52$, $p < .001$) were significant unique predictors, while bullying was not ($\beta = -.05$, $p = .46$). A third step was added, which included the interaction term for bullying × victimization, but did not significantly improve the prediction of internalizing symptoms, $\Delta R^2 < .01$, $F(1, 185) = 1.45$, $p = .23$. To examine the moderation hypothesis, the interaction terms for strengths × bullying and strengths × victimization were added in a fourth step for the regression, which also did not significantly improve the prediction of internalizing symptoms, $\Delta R^2 < .01$, $F(2, 183) = 0.77$, $p = .46$. Finally, the interaction term for strengths × bullying × victimization was included in a fifth step of the regression, which once again did not significantly contribute to the prediction of internalizing symptoms, $\Delta R^2 < .01$, $F(1, 182) = 0.12$, $p = .73$. Thus, the final version of this model included only the first two steps of the regression (see Table 6). These results indicate that both higher levels of strengths and lower rates of victimization are associated with lower rates of internalizing symptoms, consistent with the hypotheses of this study. However, in contrast to the hypotheses of this study, bullying was not found to be associated with internalizing symptoms and no moderation effects were identified.

Due to the significant amount of missing data in this study, one-way ANOVAs were

conducted to compare the participants who were included vs. excluded in the analysis predicting

internalizing symptoms on the study's key variables. Only average grades were identified as

significantly different, $F(1, 255) = 4.71$, $p = .03$, such that participants included in this analysis

had significantly higher grades ($M = 75.80$, $SD = 6.39$) than those excluded from this analysis ($M

= 73.74$, $SD = 7.26$). This finding may indicate a limitation in the generalizability of these

results.

Externalizing Symptoms

It was also hypothesized that higher rates of externalizing symptoms would be related to

higher rates of both bullying and victimization, as well as to lower levels of strengths. Indeed,

correlations provided initial support for this hypothesis (see Table 4). Furthermore, it was

hypothesized that strengths would moderate the effects of bullying and victimization on

externalizing symptoms. To further examine these hypotheses, a stepwise multiple regression

was conducted, with externalizing symptoms as the dependent variable. The first step of this

regression controlled for the effects of social desirability, gender, age, and ethnicity, $\Delta R^2 = .31$,

$F(4, 198) = 22.18$, $p < .001$. Of these variables, only social desirability ($\beta = -.55$, $p < .001$)

emerged as a significant predictor of externalizing symptoms. In the second step of the

regression, strengths ($\beta = -.33$, $p < .001$), bullying ($\beta = .20$, $p = .001$), and victimization ($\beta = .18$

$p < .01$) each emerged as significant unique predictors of externalizing symptoms, $\Delta R^2 = .18$,

$F(3, 195) = 22.30$, $p < .001$. A third step was added to the regression, which included the

interaction term for bullying $\times$ victimization, but did not significantly improve the prediction of

externalizing symptoms, $\Delta R^2 < .01$, $F(1, 194) = 1.23$, $p = .27$. To examine the moderation

hypothesis, the interaction terms for strengths $\times$ bullying and strengths $\times$ victimization were

added in a fourth step for the regression, which also did not significantly improve the prediction

of externalizing symptoms, $\Delta R^2 < .01$, $F(2, 192) = 0.23$, $p = .75$. Finally, the interaction term for

strengths × bullying × victimization was included in a fifth step of the regression, which once

again did not significantly contribute to the prediction of externalizing symptoms, $\Delta R^2 < .01$,

$F(1, 191) = 1.71$, $p = .19$. Thus, the final version of this model included only the first two steps

of the regression (see Table 6). These results indicate that higher levels of strengths and lower

rates of both bullying and victimization are associated with lower rates of externalizing

symptoms, consistent with the hypotheses of this study. However, in contrast to the hypotheses

of this study, there were no significant moderation effects identified.

Due to the significant amount of missing data in this study, one-way ANOVAs were

conducted to compare the participants who were included vs. excluded in the analysis predicting

externalizing symptoms on the study's key variables. As the included sample was the same as

that of the analysis of strengths predicting bullying noted above, the same differences were

noted. That is, age was found to be significantly different, $F(1, 254) = 4.13$, $p = .04$, with

participants included in the analysis ($M = 12.96$, $SD = 0.71$) being slightly older than those who

were not included ($M = 12.74$, $SD = 0.66$). However, when the age range was restricted to 12 to

14 years, there was no longer a significant age difference between those included and those not

included in the analysis, $F(1, 252) = 2.75$, $p = .10$. Thus, it is also unlikely that this is a

meaningful difference. In addition, it was also identified that participants who were included in

this analysis had significantly higher average grades ($M = 75.75$, $SD = 6.40$) than those

participants not included in the analysis ($M = 73.60$, $SD = 7.34$), $F(1, 255) = 4.59$, $p = .03$, which

may indicate a limitation in the generalizability of these results.

Social Problems

It was also hypothesized that higher rates of social problems would be related to higher rates of both bullying and victimization, as well as to lower levels of strengths. Indeed, correlations provided initial support for this hypothesis (see Table 4). Furthermore, it was hypothesized that strengths would moderate the effects of bullying and victimization on social problems. To further examine these hypotheses, a stepwise multiple regression was conducted, with social problems as the dependent variable. The first step of this regression controlled for the effects of social desirability, gender, age, and ethnicity, $\Delta R^2 = .15$, $F(4, 198) = 8.81$, $p < .001$. Of these variables, only social desirability ($\beta = -.38$, $p < .001$) emerged as a significant predictor of social problems. In the second step of the regression, strengths, bullying, and victimization were added, which significantly improved the overall prediction of social problems, $\Delta R^2 = .24$, $F(3, 195) = 25.74$, $p < .001$. However, only strengths ($\beta = -.33$, $p < .001$) and victimization ($\beta = .40$, $p < .001$) were significant unique predictors, while bullying was not ($\beta = -.05$, $p = .44$). A third step was added to the regression, which included the interaction term for bullying $\times$ victimization, but this did not significantly improve the prediction of social problems, $\Delta R^2 < .01$, $F(1, 194) = 0.65$, $p = .42$. To examine the moderation hypothesis, the interaction terms for strengths $\times$ bullying and strengths $\times$ victimization were added in a fourth step for the regression, which also did not significantly improve the prediction of social problems, $\Delta R^2 < .01$, $F(2, 192) = 0.84$, $p = .43$. Finally, the interaction term for strengths $\times$ bullying $\times$ victimization was included in a fifth step of the regression, which once again did not significantly contribute to the prediction of social problems, $\Delta R^2 < .01$, $F(1, 191) = 0.21$, $p = .65$. Thus, the final version of this model included only the first two steps of the regression (see Table 6). These results indicate that higher levels of strengths and lower rates of victimization are associated with lower rates of

social problems, consistent with the hypotheses of this study. However, contrary to the hypotheses of this study, bullying was not significantly associated with social problems. In addition, there were no significant moderation effects identified.

Interestingly, it was noted that in the second step of this regression, the effect for gender as a unique predictor of social problems began to approach significance ($\beta = .11, p = .06$). Thus, post hoc analyses were conducted to examine a possible interaction between gender and bullying, victimization, and strengths. Visual inspection of graphs examining these potential interactions identified a possible moderation effect for gender on the relationship between bullying and social problems, such that increased bullying behaviour was associated with increased social problems for girls, whereas this relationship did not hold for boys. The stepwise multiple regression model predicting social problems was then replicated with the addition of the bullying $\times$ gender term in the third step of the regression. This addition increased the predictive power of the third step, though it did not achieve statistical significance, $\Delta R^2 = .02, F(2, 193) = 2.61, p = .08$. Nonetheless, the bullying $\times$ gender term was identified as a significant unique predictor of social problems ($\beta = -.40, p = .03$). The inclusion of this interaction term in the model did not significantly alter the outcome for the fourth, $\Delta R^2 = .01, F(2, 191) = 1.60, p = .20$, or fifth, $\Delta R^2 < .01, F(1, 190) = 0.42, p = .52$, steps of the regression. However, it is interesting to note that in the fourth step of this version of the model, the strengths $\times$ bullying term began to approach significance as unique predictor of social problems ($\beta = .12, p = .08$).

As above, one-way ANOVAs were conducted to compare the participants who were included vs. excluded in the analysis predicting social problems on the study's key variables, due to the significant amount of missing data in this study. As the included sample was the same as that of the analyses for predictions of bullying and externalizing problems noted above, the same

differences were noted here. That is, age was found to be significantly different, $F(1, 254) =$ 4.13, $p = .04$, with participants included in the analysis ($M = 12.96$, $SD = 0.71$) being slightly older than those who were not included ($M = 12.74$, $SD = 0.66$). However, when the age range was restricted to 12 to 14 years, there was no longer a significant age difference between those included and those not included in the analysis, $F(1, 252) = 2.75$, $p = .10$. Thus, it remains unlikely that this is a meaningful difference. In addition, it was also identified that participants who were included in this analysis had significantly higher average grades ($M = 75.75$, $SD = 6.40$) than those participants not included in the analysis ($M = 73.60$, $SD = 7.34$), $F(1, 255) = 4.59$, $p = .03$, which may indicate a limitation in the generalizability of these results.

Friendship Quality

It was hypothesized that higher friendship quality would be related to lower rates of both bullying and victimization, as well as to higher levels of strengths. Notably, friendship quality was significantly correlated with strengths, but not with either bullying or victimization (see Table 4). Furthermore, it was hypothesized that strengths would moderate the effects of bullying and victimization on friendship quality. To further examine these hypotheses, a stepwise multiple regression was conducted, with friendship quality as the dependent variable. The first step of this regression controlled for the effects of social desirability, gender, age, and ethnicity, $\Delta R^2 = .27$, $F(4, 181) = 16.42$, $p < .001$. Social desirability ($\beta = .19$, $p < .01$), gender ($\beta = .43$, $p < .001$), and ethnicity ($\beta = -.13$, $p = .04$) emerged as significant predictors of friendship quality, while the effects of age approached significance ($\beta = -.11$, $p = .09$). In the second step of the regression, strengths, bullying, and victimization were added, significantly improving the overall prediction of friendship quality, $\Delta R^2 = .08$, $F(3, 178) = 7.70$, $p < .001$. However, only strengths ($\beta = .34$, $p < .001$) was a significant unique predictor, while bullying ($\beta = .02$, $p = .76$) and

victimization (β = .06, p = .41) were not. A third step was added, which included the interaction term for bullying × victimization, but did not significantly improve the prediction of friendship quality, ΔR^2 < .01, F(1, 177) = 0.85, p = .36. To examine the moderation hypothesis, the interaction terms for strengths × bullying and strengths × victimization were added in a fourth step for the regression, which also did not significantly improve the prediction of friendship quality, ΔR^2 < .01, F(2, 175) = 0.60, p = .55. Finally, the interaction term for strengths × bullying × victimization was included in a fifth step of the regression, which once again did not significantly contribute to the prediction of friendship quality, ΔR^2 < .01, F(1, 174) = 0.28, p = .60. Thus, the final version of this model included only the first two steps of the regression (see Table 6). These results indicate that higher levels of strengths are related to higher levels of friendship quality, consistent with the hypotheses of this study. However, in contrast to the hypotheses of this study, both bullying and victimization were not found to be associated with friendship quality. Furthermore, there were no significant moderation effects identified.

Due to the significant amount of missing data in this study, one-way ANOVAs were conducted to compare the participants who were included vs. excluded in the analysis predicting friendship quality on the study's key variables. None of these analyses indicated significant differences. Thus, the results of this analysis can be considered representative and generalizable to the larger population of grade 7 and 8 students.

Average Grades

It was hypothesized that higher average grades would be related to lower rates of both bullying and victimization, as well as to higher levels of strengths. Correlations between these variables provided initial support for this hypothesis (see Table 4). Furthermore, it was hypothesized that strengths would moderate the effects of bullying and victimization on average

grades. To further examine these hypotheses, a stepwise multiple regression was conducted, with average grades as the dependent variable. The first step of this regression controlled for the effects of social desirability, gender, age, and ethnicity, $\Delta R^2 = .05$, $F(4, 196) = 2.74$, $p = .03$. Of these variables, only gender ($\beta = .19$, $p < .01$) emerged as a significant predictor of average grades, while the effects of social desirability approached significance ($\beta = .13$, $p = .07$). In the second step of the regression, strengths, bullying, and victimization were added, which significantly improved the overall prediction of average grades, $\Delta R^2 = .15$, $F(3, 193) = 12.28$, $p < .001$. However, only strengths ($\beta = .33$, $p < .001$) and bullying ($\beta = -.24$, $p < .01$) were significant unique predictors, while victimization was not ($\beta = -.05$, $p = .45$). A third step was added, which included the interaction term for bullying × victimization, but did not significantly improve the prediction of average grades, $\Delta R^2 < .01$, $F(1, 192) = 0.25$, $p = .62$. To examine the moderation hypothesis, the interaction terms for strengths × bullying and strengths × victimization were added in a fourth step for the regression, which also did not significantly improve the prediction of average grades, $\Delta R^2 = .02$, $F(2, 190) = 1.94$, $p = .15$. Finally, the interaction term for strengths × bullying × victimization was included in a fifth step of the regression, which once again did not significantly contribute to the prediction of average grades, $\Delta R^2 < .01$, $F(1, 189) = 0.22$, $p = .64$. Thus, the final version of this model included only the first two steps of the regression (see Table 6). These results indicate that both higher levels of strengths and lower rates of bullying are associated with higher average grades, consistent with the hypotheses of this study. However, in contrast to the hypotheses of this study, victimization was not found to be associated with average grades and no moderation effects were identified.

Once again, due to the significant amount of missing data in this study, one-way ANOVAs were conducted to compare the participants who were included vs. excluded in the

analysis predicting average grades on the study's key variables. Interestingly, only average grades were identified as significantly different, $F(1, 255) = 4.59$, $p = .03$, such that participants included in this analysis had significantly higher grades ($M = 75.75$, $SD = 6.40$) than those excluded from this analysis ($M = 73.60$, $SD = 7.34$). This finding may indicate a limitation in the generalizability of these results.

Relative Predictive Abilities of the SAI and BERS-2

It was hypothesized that the Strength Assessment Inventory (SAI) would be a better predictor of psychosocial outcomes, when compared to the Behavioral and Emotional Ratings Scales (BERS-2), due to its greater breadth of content. To test this hypothesis a series of stepwise multiple regressions were conducted, using each of the five psychosocial outcomes as dependent variables. The first step of each regression controlled for the effects of social desirability, age, gender, and ethnicity. In the second step of each regression, the total strength scores from both the SAI and the BERS-2 were added. The results of these analyses are presented in Table 6. Of note, the total scores for the SAI and BERS-2 were significantly correlated, $r(250) = .77$, $p < .001$

Internalizing symptoms. The first step of this regression significantly predicted of internalizing symptoms, $R^2 = .11$, $F(4, 184) = 5.63$, $p < .001$. In the second step of the regression, both the SAI ($\beta = -.19$, $p = .07$) and the BERS-2 ($\beta = -.20$, $p = .06$) approached significance as unique predictors, though together they did predict internalizing symptoms, $\Delta R^2 = .10$, $F(2, 182) = 11.44$, $p < .001$. The SAI uniquely predicted 1.4% of the variance in internalizing symptoms, while the BERS-2 uniquely predicted another 1.6% of the variance.

Externalizing symptoms. The first step of this regression also significantly predicted externalizing symptoms, $R^2 = .31$, $F(4, 193) = 21.53$, $p < .001$. In the second step of the

regression, the SAI (β = -.38, p < .001) was a unique predictor, while the BERS-2 (β = .00, p = .97) was not, ΔR^2 = .11, $F(2, 191)$ = 17.39, p < .001. The SAI uniquely predicted 5.6% of the variance in externalizing symptoms, whereas the BERS-2 did not provide any unique contribution.

Social problems. Similarly, the first step of this regression significantly predicted of social problems, R^2 = .15, $F(4, 193)$ = 8.48, p < .001. In the second step of this regression, the SAI (β = -.39, p < .001) emerged again as a unique predictor, while the BERS-2 (β = -.03, p = .80) did not, ΔR^2 = .12, $F(2, 191)$ = 15.92, p < .001. Once again, the SAI uniquely predicted 5.7% of the variance in social problems, whereas the BERS-2 did not provide any unique contribution.

Friendship quality. Once again, the first step of this regression significantly predicted friendship quality, R^2 = .30, $F(4, 177)$ = 19.34, p < .001. In the second step of this regression, the BERS-2 (β = .27, p < .01) emerged as a unique predictor, while the SAI (β = .10, p = .27) did not, ΔR^2 = .10, $F(2, 175)$ = 13.97, p < .001. The BERS-2 uniquely predicted 3.0% of the variance in friendship quality, whereas the SAI uniquely predicted only 0.4% of the variance.

Average grades. The first step of this regression also significantly predicted average grades, R^2 = .15, $F(4, 191)$ = 2.60, p = .04. In the second step of this regression, the SAI (β = .40, p < .001) also emerged as a unique predictor, while the BERS-2 (β = .00, p = .95) did not, ΔR^2 = .12, $F(2, 189)$ = 13.35, p < .001. The SAI uniquely predicted 6.1% of the variance in average grades, whereas the BERS-2 once again did not provide any unique contribution.

Specific Areas of Strength Predicting Psychosocial Outcomes

One purpose of this study was to explore the relevance of different areas of strength in predicting psychosocial outcomes. To this end, additional stepwise multiple regressions were

conducted, the results of which are presented in Tables 8 through 10. In each regression, the first step controlled for the effects of social desirability, age, gender, and ethnicity.

SAI content scales. The first set of regressions examined the relative roles of the SAI content scales in predicting the five psychosocial outcome variables (see Table 8). Strengths at school ($\beta = -.20$, $p = .03$), strengths during free time ($\beta = .33$, $p < .01$), and strengths from knowing myself ($\beta = -.41$, $p < .001$) all emerged as significant predictors of internalizing symptoms. Similarly, strengths at school ($\beta = -.29$, $p < .001$), strengths during free time ($\beta = .26$, $p < .01$), and strengths from knowing myself ($\beta = -.26$, $p < .01$) also significantly predicted externalizing symptoms. In addition, strengths with friends ($\beta = -.13$, $p = .06$) approached significance as a predictor of externalizing symptoms. Moreover, strengths at school ($\beta = -.19$, $p = .03$), strengths during free time ($\beta = .23$, $p = .02$), and strengths from knowing myself ($\beta = -.31$, $p < .01$) were also significant predictors of social problems. Strengths with friends ($\beta = .35$, $p < .001$) and strengths from goals and dreams ($\beta = .17$, $p = .03$) were both significant predictors of friendship quality. Finally, strengths at school ($\beta = .60$, $p < .001$) emerged as a significant predictor of average grades, while strengths with friends ($\beta = -.15$, $p = .09$) and strengths from keeping clean and healthy ($\beta = -.14$, $p = .08$) approached significance as predictors.

SAI empirical scales. The second set of regressions examined the relative roles of the empirical scales of the SAI in predicting the five psychosocial outcome variables (see Table 9). Competent coping skills ($\beta = -.18$, $p = .04$), creativity ($\beta = .31$, $p < .001$), and sense of well-being ($\beta = -.31$, $p < .001$) all emerged as significant predictors of internalizing symptoms. Competent coping skills ($\beta = -.28$, $p < .001$), functional classroom behaviour ($\beta = -.26$, $p < .001$), creativity ($\beta = .19$, $p < .01$), and pro-social attitude ($\beta = -.16$, $p = .02$) were all significant predictors of externalizing symptoms, while activity engagement ($\beta = .11$, $p = .08$) approached significance as

another predictor. Sense of well-being ($\beta = -.27, p < .01$) and creativity ($\beta = .16, p = .03$)

emerged as significant predictors of social problems, while competent coping skills ($\beta = -.17, p = .06$) approached significance as a third predictor. Optimism for the future ($\beta = .16, p = .03$),

sense of well-being ($\beta = -.24, p < .01$), pro-social attitude ($\beta = .17, p = .03$), activity engagement

($\beta = .16, p = .02$), and peer connectedness ($\beta = .25, p < .001$), were all found to be significant

predictors of friendship quality. Finally, competent coping skills ($\beta = .20, p = .03$), community

engagement ($\beta = .24, p < .01$), functional classroom behaviour ($\beta = .42, p < .001$), creativity ($\beta = -.16, p = .04$), health consciousness ($\beta = -.21, p = .02$), and peer connectedness ($\beta = -.15, p = .05$), all emerged as significant predictors of average grades.

BERS-2 scales. A third set of regressions examined the relative roles of BERS-2 scales

in predicting the five psychosocial outcome variables (see Table 10). Only intrapersonal

strengths were a significant predictor of internalizing symptoms ($\beta = -.32, p < .01$). Both

interpersonal strengths ($\beta = -.23, p < .01$) and school functioning ($\beta = -.19, p = .01$) were

significant predictors of externalizing symptoms. Only intrapersonal strengths ($\beta = -.42, p < .001$) emerged as a significant predictor of social problems. Intrapersonal strengths ($\beta = .18, p = .06$) and affective strengths ($\beta = .18, p = .06$) both approached significance as predictors of

friendship quality. Finally, both school functioning ($\beta = .64, p < .001$) and affective strengths ($\beta = -.19, p = .04$) emerged as significant predictors of average grades.

Strengths, Bullying, and Victimization

It was hypothesized that students who reported higher levels of strengths would be less

likely to report bullying behaviour and victimization experiences. Indeed, small but significant

negative correlations were identified between strengths and both bullying and victimization (see

Table 4). To further examine these relationships, two stepwise multiple regressions were

conducted, with bullying and victimization as the dependent variables (see Table 11). The first step of these regressions controlled for the effects of social desirability, gender, age, and ethnicity. The Total Strengths score was added in the second step of the regressions. Finally, interactions between each of the demographic factors and strengths were also examined in the third step of the regressions.

In the first step of the regression with victimization as the dependent variable, only social desirability ($\beta = -.26$, $p < .001$) emerged as a significant predictor of victimization experiences, $R^2 = .09$, $F(4, 201) = 4.71$, $p = .001$. However, in the second step of the regression, strengths ($\beta = -.12$, $p = .13$) were not found to contribute any additional information to the prediction of victimization, $\Delta R^2 = .01$, $F(1, 200) = 2.28$, $p = .13$. None of the interaction terms emerged as a significant predictors of victimization in the third step of the regression $\Delta R^2 = .01$, $F(3, 197) = 0.57$, $p = .64$. These results are contrary to the hypothesized relationship between strengths and victimization.

Similarly, in the first step of the regression with bullying as the dependent variable, only social desirability ($\beta = -.43$, $p < .001$) emerged as a significant predictor of self-reported bullying behaviour, $R^2 = .18$, $F(4, 198) = 11.02$, $p < .001$. In the second step, strengths ($\beta = -.12$, $p = .12$) did not emerge as a predictor of bullying behaviour, $\Delta R^2 = .01$, $F(1, 197) = 2.50$, $p = .12$. Once again no significant interactions were identified in the third step of the regression, $\Delta R^2 = .01$, $F(3, 194) = 0.83$, $p = .01$. Thus, these results do not support the hypothesized relationship between strengths and bullying behaviours.

However, previous research that has identified a relationship between strengths and bullying and victimization has not included measures of social desirability. Thus, to assist with the interpretation of these results in the context of the existing literature the aforementioned

regression analyses were repeated without the social desirability variable (see 11). As in the previous analyses, none of the demographic factors emerged as predictors of victimization, $\Delta R^2 = .02$, $F(3, 204) = 1.71$, $p = .17$. However, strengths ($\beta = -.22$, $p < .01$) did emerge as a significant predictor of victimization in the second step of the regression, $\Delta R^2 = .05$, $F(1, 203) = 9.76$, $p < .01$. Similarly, the demographic variables did not predict bullying behaviours, $\Delta R^2 = .00$, $F(3, 201) = 0.07$, $p = .98$, but strengths ($\beta = -.28$, $p < .001$) were identified as a significant predictor, $\Delta R^2 = .08$, $F(1\ 200) = 16.22$, $p < .001$. The contrast in these results highlights the importance of including a measure of social desirability in the analyses of this study.

Due to the significant amount of missing data in this study, one-way ANOVAs were conducted to compare the participants who were included vs. excluded in these analyses on the study's key variables. With respect to the analysis examining the relationship between strengths and victimization, only age was significantly different, $F(1, 254) = 4.58$, $p = .03$, with participants included in the analysis ($M = 12.96$, $SD = 0.71$) being slightly older than those who were not included ($M = 12.72$, $SD = 0.64$). However, it is unlikely that this difference is meaningful given the small difference in means and the limited range of age overall of participants included in this study. Notably, when the age range was restricted to 12 to 14 years, which excluded only two cases, there was no longer a significant age difference between those included and those not included in the analysis, $F(1, 252) = 3.10$, $p = .08$.

With respect to the analysis examining the relationship between strengths and bullying, a similar pattern of results was identified with respect to age. That is, age was significantly different, $F(1, 254) = 4.13$, $p = .04$, with participants included in the analysis ($M = 12.96$, $SD = 0.71$) being slightly older than those who were not included ($M = 12.74$, $SD = 0.66$). However, when the age range was restricted to 12 to 14 years, there was no longer a significant age

difference between those included and those not included in the analysis, $F(1, 252) = 2.75$, $p =$ .10. Thus, it is also unlikely that this is a meaningful difference. Notably, it was also identified that participants who were included in the bullying and strengths analysis had significantly higher average grades ($M = 75.75$, $SD = 6.40$) than those participants not included in the analysis ($M = 73.60$, $SD = 7.34$), $F(1, 255) = 4.59$, $p = .03$. This finding may indicate a limitation in the generalizability of these results.

Specific Areas of Strength Predicting Bullying and Victimization

To further examine the role of strengths in the context of bullying experiences, additional stepwise multiple regressions were conducted, the results of which are presented in Tables 12 through 14. In each regression, the first step controlled for the effects of social desirability, age, gender, and ethnicity. In the second step of these regressions the relevant strengths scales from either the SAI or the BERS-2 were added.

   Victimization. From the SAI content scales, both strengths during free time ($\beta = .30$, $p < .01$) and strengths from knowing myself ($\beta = -.26$, $p = .02$) emerged as significant predictors of victimization (see Table 12). Similarly, both creativity ($\beta = .20$, $p = .01$) and sense of well-being ($\beta = -.31$, $p < .001$) were identified as significant predictors of victimization from the SAI empirical scales (see Table 13). When examining the BERS-2 scales, intrapersonal strengths ($\beta = -.28$, $p < .01$) was the only significant predictor of victimization (see Table 14).

   Bullying. None of the SAI content scales significantly predicted bullying behaviours (see Table 12). However, both functional classroom behaviour ($\beta = -.17$, $p = .07$) and pro-social attitude ($\beta = -.18$, $p = .05$) approached significance in predicting bullying behaviours from the SAI empirical scales (see Table 13). With regards to the BERS-2 scales, school functioning ($\beta =$

-.18, p = .04) was identified as a significant predictor of bullying behaviours, while intrapersonal

strengths (β = .17, p = .08) approached significance as a predictor (see Table 14).

Prevalence of Bullying and Victimization

The frequencies for responses to specific items on the Revised Olweus Bully/Victim

Questionnaire (OBVQ) are presented in Table 3, providing a clear picture of the distribution of

participants' responses. In addition, prevalence rates were determined for bullies, victims, and

bully-victims using both the single item and overall behavioural items. Previous research has

indicated that the ideal cut-off on the OBVQ for categorization as a bully, victim, or bully-

victim, from both theoretical and empirical perspectives, is to include those reporting these

experiences two to three times a month or more frequently (Solberg & Olweus, 2003). Thus, this

cut-off was used to establish categories for examining prevalence rates in this study. Based on

single item responses to the questions about bullying others or being bullied in the past 6 months,

30 participants (11.5%) were classified as victims, 6 participants (2.3%) were classified as

bullies, and 3 participants (1.1%) were classified as bully-victims. However, when the same cut-

off was applied to the broader range of behavioural items, 62 participants (23.7%) were

classified as victims, 13 participants (5.0%) were classified as bullies, and 14 participants (5.3%)

were classified as bully-victims.

Types of Bullying and Victimization Experiences

Notably, the most frequent type of victimization experience reported was verbal,

particularly having been called mean names, made fun of, or teased in a hurtful way, with 19.1%

of participants reporting they had been bullied in this way two to three times a month or more

frequently and an additional 25.2% reporting they had been bullied this way once or twice. The

next most frequently reported type of victimization experience was being purposefully left out,

excluded, or ignored, by peers, with 6.8% of participants reporting they had been bullied in this way two to three times a month or more frequently and an additional 19.8% reporting they had been bullied this way once or twice. Similarly, having had lies told or false rumours spread was reported frequently, with 8.0% of participants reporting they had been bullied in this way two to three times a month or more frequently and an additional 22.9% reporting they had been bullied this way once or twice. Notably, having been physically bullied, by being hit, kicked, pushed, or shoved, was also reported by 8.5% of participants as having occurred two to three times a month or more frequently, while only 8.0% reported this occurring once or twice.

A series of one-way ANOVAs were performed to examine any differences in types of victimization experiences reported based on gender, ethnicity, and age. Notably, girls ($M = 0.52$, $SD = 0.94$) reported having been bullied by social exclusion more frequently than boys ($M = 0.28$, $SD = 0.58$), $F(1, 243) = 5.55$, $p = .02$. Girls ($M = 0.41$, $SD = 0.90$) also reported experiencing more bullying with a sexual meaning than boys ($M = 0.17$, $SD = 0.47$), $F(1, 239) = 5.96$, $p = .02$. In addition, there was a trend towards girls ($M = 0.24$, $SD = 0.59$) being more likely to report having been bullied electronically compared to boys ($M = 0.11$, $SD = 0.49$), $F(1, 239) = 3.33$, $p = .07$. Alternatively, boys ($M = 0.56$, $SD = 1.13$) were more likely to report having been bullied physically than girls ($M = 0.21$, $SD = 0.68$), $F(1, 240) = 8.84$, $p < .01$. There was also a trend identified with boys ($M = 0.30$, $SD = 0.85$) being more likely to report having been bullied by racial comments than girls ($M = 0.14$, $SD = 0.58$), $F(1, 240) = 3.19$, $p = .08$.

With regard to ethnicity, minority participants ($M = 0.93$, $SD = 1.25$) reported experiencing more bullying by having lies and rumours spread than did Caucasian participants ($M = 0.40$, $SD = 0.69$), $F(1, 239) = 12.06$, $p = .001$. Minority participants ($M = 0.29$, $SD = 0.60$) also reported more frequent experiences of being threatened or forced into doing things than did

Caucasian participants ($M = 0.11$, $SD = 0.41$), $F(1, 234) = 4.01$, $p = .05$. In addition, there was a trend identified with minority participants ($M = 0.340$, $SD = 0.61$) being more likely to report having had money stolen or belongings damaged compared to Caucasian participants ($M = 0.17$, $SD = 0.50$), $F(1, 236) = 3.07$, $p = .08$.

For analyses related to age, three groups were created reflecting 11 to 12 year olds, 13 year olds, and 14 to 15 year olds, as there was only one 11 and one 15 year old in the sample. A significant effect for age was identified for verbal bullying (i.e. name calling, making fun of, or teasing), $F(2, 236) = 5.14$, $p < .01$. Post hoc analyses using Fischer's LSD test identified that the 11 to 12 year olds ($M = 1.20$, $SD = 1.45$) were significantly more likely to be bullied verbally compared to both 13 year olds ($M = 0.79$, $SD = 1.09$), $p = .02$, and 14 to 15 year olds ($M = 0.52$, $SD = 0.92$), $p < .01$, while these later groups were not significantly different from each other, $p = .19$. Similarly, a significant effect for age was identified for being bullied with racial comments, $F(2, 233) = 5.42$, $p < .01$. Post hoc analyses using Fischer's LSD test identified that the 11 to 12 year olds ($M = 0.45$, $SD = 1.09$) were again significantly more likely to be bullied in this way compared to both 13 year olds ($M = 0.14$, $SD = 0.49$), $p < .01$, and 14 to 15 year olds ($M = 0.06$, $SD = 0.44$), $p < .01$, while these later groups were not significantly different from each other, $p = .53$.

Bullying behaviours were far less frequently reported overall. However, similar to victimization experiences, the most common type of bullying behaviour reported was calling someone mean names, making fun of, or teasing in a hurtful way. This behaviour was reported by 4.6% of participants as having occurred two to three times a month or more frequently, while another 22.1% reported having done so once or twice.

A series of one-way ANOVAs were performed to examine any differences in types of

bullying reported based on gender, ethnicity, and age. Girls ($M = 0.08$, $SD = 0.27$) reported

bullying others electronically more often than did boys ($M = 0.01$, $SD = 0.10$), $F(1, 233) = 5.62$,

$p = .02$. In addition, a trend was noted towards girls ($M = 0.10$, $SD = 0.36$) reporting more

bullying by telling lies and spreading rumours compared to boys ($M = 0.03$, $SD = 0.17$), $F(1,$

$235) = 2.96$, $p = .09$.

With regard to ethnicity, minority participants ($M = 0.14$, $SD = 0.35$) were more likely to

report bullying others electronically than were Caucasian participants ($M = 0.03$, $SD = 0.18$),

$F(1, 229) = 6.07$, $p = .01$. A trend was also identified towards minority participants ($M = 0.28$,

$SD = 0.65$) bullying others more via social exclusion compared to Caucasian participants ($M =$

0.12, $SD = 0.42$), $F(1, 230) = 3.09$, $p = .08$.

Finally, with regard to age, a significant difference was found on reports of bullying

others with a sexual meaning, $F(1, 225) = 3.20$, $p = .04$. Post hoc analyses using Fischer's LSD

test identified that the 14 to 15 year olds ($M = 0.17$, $SD = 0.52$) were more likely to bully others

in this way compared to both 13 year olds ($M = 0.07$, $SD = 0.29$), $p = .07$, and 11 to 12 year olds

($M = 0.02$, $SD = 0.13$), $p = .01$, while these later groups were not significantly different from

each other, $p = .29$. Another age effect was identified for reports of bullying others

electronically, $F(1, 226) = 3.23$, $p = .04$.   Post hoc analyses using Fischer's LSD test identified

that the 13 year olds ($M = 0.08$, $SD = 0.27$) were more likely to bully others in this way

compared to both 14 to 15 year olds ($M = 0.00$, $SD = 0.00$), $p = .03$, and 11 to 12 year olds ($M =$

0.02, $SD = 0.13$), $p = .06$, while these later groups were not significantly different from each

other, $p = .69$.

Discussion

Strengths and Psychosocial Outcomes

It is clear from the results of this study that strengths are an important concept in understanding psychosocial functioning in youth. That is, youth in this study who reported higher levels of strengths also reported fewer internalizing and externalizing symptoms, fewer social problems, higher quality friendships, and higher academic achievement. These findings are consistent with previous research indicating a relationship between strengths and a variety of positive psychosocial outcomes, including higher school achievement (Donnon & Hammond, 2007; Park & Peterson, 2006; Scales et al., 2000; Scales et al., 2006), better social skills (Epstein et al., 2004), and fewer symptoms of internalizing and externalizing psychopathology (Epstein et al., 2004; Park & Peterson, 2006; Rawana & Brownlee, 2009b; Reid et al., 2000). Moreover, these results provide both important replication and extension of the existing literature base. That is, as the area of strengths is still a relatively understudied area, it is important to have additional studies supporting the relationship between strengths and other psychosocial variables, such as symptoms of psychopathology and academic success. In addition, the literature has not clearly established the relationship between overall strengths and peer relationships. However, having positive peer relationships is typically considered to be one area of strength (Donnon & Hammond, 2007; Edwards et al., 2007a; Edwards et al., 2007b; Epstein, 1999, Epstein et al., 2004; Epstein & Sharma, 1998; Leffert et al., 1998; Park, 2004; Park & Peterson, 2006; Park & Peterson, 2008; Park et al., 2004; Scales et al., 2000). Thus, it is not surprising that strengths would be related to positive quality of friendships and fewer social problems in this study. The relationship between strengths and friendship quality is particularly notable because it provides support for the perspective that a focus on strengths and well-being involves more than an

absence of dysfunction. That is, strengths are related not only to an absence of dysfunctional relationships but also to the presence of highly positive friendships.

Moreover, the results of this study are illuminating with regard to the specific strength domains from the Strength Assessment Inventory (SAI; Rawana & Brownlee, 2009b) that are relevant to different psychosocial outcomes. Greater strengths related to the domains of school and personality were found to predict lower levels of internalizing symptoms, as did strengths related to competent coping skills, which includes self- and emotional regulation skills, and sense of well-being. Similarly, higher levels of intrapersonal strengths on the BERS-2 were predictive of fewer internalizing symptoms. The relationship between internalizing symptoms and personality or intrapersonal strengths is consistent with prior research supporting a link between internalizing symptoms and strengths of hope and zest (Park & Peterson, 2006) as well as positive identity and self-esteem (Leffert et al., 1998). In addition, previous research on the SAI also identified a link between internalizing symptoms and strengths related to sense of well-being and competent coping skills (Franks et al., 2010). These findings are logical as difficulties with self-regulation and poor well-being are commonly inherent to individuals suffering from internalizing symptoms. The importance of school strengths is also a consistent with previous research (Franks et al., 2010) and could provide an important area of focus in assisting youth with internalizing difficulties. In contrast, having greater strengths in the recreation and leisure domain, and particularly creativity strengths, was predictive of higher levels of these symptoms, consistent with prior research on the SAI (Franks et al., 2010). This finding may also support theories of mood disorders that suggest an underlying link between these symptoms and creativity. Interestingly, the current study did not identify a link between peer relationship or interpersonal strengths and internalizing symptoms, which have appeared in other studies

(Gillham et al., 2011; Leffert et al., 1998). However, the specific strengths highlighted in these studies may reflect personality strengths (Gillham et al., 2011) or external strengths related to characteristics of peers (Leffert et al., 1998), when viewed in light of the strengths-based models used in the current study.

Greater strengths in the domains of school and personality also predicted lower levels of externalizing symptoms, as did strengths related to functional classroom behaviour, competent coping skills, and pro-social attitude. There was also a trend towards greater peer relationship strengths predicting fewer externalizing symptoms. Similarly, higher levels of school functioning and interpersonal strengths on the BERS-2 also predicted lower levels of externalizing symptoms. These findings suggest that youth who are motivated and engaged students, have good social skills, demonstrate adequate self-regulation, have a pro-social attitude towards appropriate behaviour, and can engage in conflict resolution are the youth who are least likely to engage in problematic externalizing behaviours. Moreover, these findings are consistent with other studies that have indicated relationships between externalizing symptoms and various interpersonal strengths (Leffert et al., 1998; Park & Peterson, 2006), personality strengths (Franks et al., 2010; Leffert et al., 1998; Park & Peterson, 2006), and school strengths (Franks et al., 2010; Leffert et al., 1998; Murphey et al., 2004). Family strengths were not related to externalizing behaviours in this study, as they have been in previous research (Aspy et al., 2004; Franks et al., 2010; Murphey et al., 2004), which may in part reflect external strength characteristics of the family that were not captured by the measures used here. It was again noted that youth who have greater strengths in the recreation and leisure domain, and particularly in creativity and activity engagement, experience greater externalizing behaviours. Previous research on the SAI has also documented this link between activity engagement and

externalizing symptoms (Franks et al., 2010). Notably, activity engagement strengths are heavily focused on interest and participation in sports, which has previously been related to increased behavioural problems due to opportunities for relationships with delinquent peers (Gardner et al., 2009). However, the explanation for a link between creative pursuits, such as writing, music, art, and cooking, and externalizing symptoms is unclear. Nonetheless, the results of this study indicate that engaging in a variety of leisure activities increases the likelihood that youth will display externalizing behaviours. This finding may highlight the need to consider the effects of particular strengths in the context of interactions with other strengths. Unfortunately this study was not able to address the potential for interactions between strengths domains due to limited power for the relevant statistical analyses.

Greater strengths in the domains of school and personality were also related to lower levels of social problems in this study. In particular, a higher sense of well-being predicted fewer social problems, and there was a trend suggesting that greater coping skills were also predictive of these difficulties. Similarly, greater intrapersonal strengths on the BERS-2 were also related to fewer social problems. These results indicate that, similar to internalizing and externalizing symptoms, youth who are happier, have more self-confidence, and have greater self-regulation skills are less likely to have difficulties with their peers. Indeed, personality strengths have also been related to social functioning in other research (Park & Peterson, 2006), though no such relationship has been previously identified with school strengths. It is possible that these findings may also partially reflect an outcome of peer difficulties, wherein youth experience a poorer sense of well-being and a decreased desire for school engagement as a result of their social difficulties. In addition, greater strengths in the domain of leisure and recreation, and particularly creativity strengths, were also found to predict higher levels of social

difficulties. The reasons for these findings are unclear, but could reflect the high correlation

between social problems and internalizing symptoms in this study. Interestingly, social problems

were not predicted by any measure of interpersonal or peer relationship strengths.

In contrast, greater strengths in peer relationships were related to higher friendship

quality. This finding supports the benefits of having positive peer relationships, and likely

reflects underlying conceptual similarities between peer strengths and friendship quality.

Moreover, this finding highlights the need to consider both overall social problems and the

quality of specific friendships as distinct aspects of social functioning. However, interpersonal

strengths on the BERS-2 were not a significant predictor of friendship quality, which likely

reflects the broader interpersonal contexts and focus on social skills covered by this measure.

Interestingly, there was a trend towards higher intrapersonal and affective strengths on the

BERS-2 predicting friendship quality, suggesting potential social benefits to having self-

confidence, a positive outlook on life, emotional regulation skills, and caring interactions with

others. In addition, higher strengths in the SAI domain of goals and dreams, reflecting optimism

for the future, were also related to more positive friendship quality, as were strengths related to

having a pro-social attitude. Having greater strengths related to activity engagement was also

related to a more positive quality of friendships. It is possible that participation in recreational

activities provides youth with opportunities to develop strong and positive relationships with

peers. Though, as discussed above, this may not always be true. Of note, greater strengths

related to sense of well-being were predictive of poorer quality friendships. The meaning of this

relationship is unclear, particularly given the positive relationships found between friendship

quality and other concepts related to well-being.

Unsurprisingly, higher academic achievement was strongly predicted by having greater strengths in the school domain, and particularly with regard to functional classroom behaviour. Similarly, school functioning strengths on the BERS-2 were also predictive of academic achievement. This finding is consistent with previous research linking academic success and school related strengths (Leffert et al., 1998; Scales et al., 2000; Scales et al., 2006). In addition, greater strengths related to community engagement, which reflects participation and a sense of belonging in one's community, and competent coping skills were also related to higher grades. Similarly, past research has also identified links between academic achievement and engagement in activities within the community (Leffert et al., 1998) and connection to community (Scales et al., 2006), as well as strengths related to appropriate coping skills (Park & Peterson, 2006; Scales et al., 2006). However, greater strengths related to creativity, health consciousness, and peer connectedness were related to lower academic achievement. Similarly, greater affective strengths on the BERS-2 were also predictive of poorer grades. These findings are notably in contrast to the findings of other studies that link positive peer relationships with academic success (Leffert et al., 1998; Scales et al., 2006). However, it is possible that poorer academic functioning could be related to peer relationships if these peers do not value school success or if time spent with peers detracts from functional behaviour in the classroom or time that would be spent on homework and other academically enriching pursuits.

Clearly future research is needed to replicate findings that link specific strengths to particular areas of psychosocial functioning. However, it is encouraging to note that clear patterns are beginning to emerge across studies, particularly given that these studies use a variety of strengths-based models. Nevertheless, these findings support the need for additional research that can examine interactions between specific strengths in relation to psychosocial functioning.

This is particularly important given the numerous findings in which specific strengths were in fact related to poorer psychosocial functioning. Expanding research in this direction is necessary for the development of more complex models of strengths and a more sophisticated use of these strengths in clinical practice (Biswas-Diener et al., 2011; Gillham et al., 2011).

Models of Strengths Assessment

As discussed above, both the Strength Assessment Inventory (SAI; Rawana & Brownlee, 2009b) and the Behavioral and Emotional Rating Scale (BERS-2; Epstein, 2004) were used independently to demonstrate that both overall strengths and specific domains of strengths predict psychosocial functioning. However, another objective of the present study was to compare these two measures in their ability to predict each area of psychosocial functioning. An examination of the results discussed above clearly demonstrates that across each psychosocial variable the SAI provides a greater depth of understanding of these variables than the BERS-2 does. This advantage is primarily related to the comprehensiveness of the SAI, as reflected in the greater number of scales. However, the advantages of the SAI are particularly notable when the empirical scales are considered, reflecting the variety and meaningfulness of underlying concepts measured by these scales.

Moreover, in a direct comparison, the results of this study indicated that the SAI overall strengths score is a stronger predictor of externalizing symptoms, social problems, and academic achievement. However, the BERS-2 overall strengths score was a stronger predictor of friendship quality. The two measures were found to be equivalent predictors of internalizing symptoms. It is interesting to note that the BERS-2 was developed through a process designed to improve its ability to distinguish between youth with psychological disturbances, yet the BERS-2 was only a better predictor of friendship quality, and not psychological symptoms, in this study.

Therefore, these results support the utility of the SAI as a comprehensive measure of strengths. That is, there is a substantial benefit to considering a broader range of strengths, as this provides an enriched understanding of strengths in relation to psychosocial outcomes in youth.

Strengths, Bullying, and Victimization

The results of this study did not support a direct relationship between overall strengths and both bullying behaviours and victimization experiences. This is a notable contrast to previous research which has found that having more strengths is associated strongly with engaging in bullying behaviours, and weakly, but significantly, with victimization experiences in a similarly aged Canadian sample of students (Donnon, 2010; Donnon & Hammond, 2007). However, there are several key differences between this study and the research of Donnon and colleagues, which provide possible explanations for this discrepancy in findings. Some of these differences include the measures used to assess both bullying and strengths, the use of a strengths vs. resiliency conceptualization, the inclusion of both internal and external strengths, and different statistical approaches to determine results. In addition, social desirability was assessed and included in the analyses of the present study, but this factor was neither assessed nor included in the statistical analyses conducted by Donnon and colleagues. This effect of including versus excluding a measure of social desirability was examined in the analyses of the present data. When social desirability was excluded total strengths were related to both bullying and victimization, with higher reports of strengths predicting lower involvement in bullying incidents. The contrast in these findings has important implications for the consideration of social desirability in bullying research, the use of self-report data, and the use of strength-based programing to reduce bullying in schools.

However, it was interesting to note that some specific areas of strengths did predict both victimization and bullying behaviours, even after controlling for the effects of social desirability. One reason for this discrepancy between overall strengths and specific domains of strengths is reflected in the presence of both positive and negative predictors amongst the strength domains. That is, these opposing effects were masked when overall strengths were examined, resulting in the appearance of no relationship between strengths and both bullying and victimization. This finding emphasizes the importance of considering specific strength domains in research rather than focusing on overall strengths.

In particular, having greater strengths in the SAI domain of personality, especially having a positive sense of well-being, was related to lower rates of victimization. Similarly, having greater intrapersonal strengths on the BERS-2 was related to lower rates of victimization. These findings are consistent with previous research using the SAI (Anderson, 2006). The direction of causality within this relationship is unclear, though it may be that youth who are bullied more may experience decreases in well-being, a more negative outlook on life, and poorer overall self-concept than youth who are not as frequently bullied. Alternatively, youth who have fewer of these intrapersonal strengths may be identified by bullies as easy targets. Longitudinal research will be necessary to examine if and how bullying has an impact on strengths over time. Interestingly, having greater strengths in the recreation and leisure domain of the SAI, and particularly creativity strengths, were related to higher rates of victimization. Of note, these same domain of strengths were also related to poorer psychosocial functioning. Further research into the connections between creativity, psychosocial functioning, and bullying is necessary to provide an explanation of this relationship.

With regard to bullying behaviours, having greater school functioning strengths on the BERS-2 was related to fewer bullying behaviours. Similarly, there was a trend towards greater functional classroom behaviour strengths on the SAI predicting low levels of bullying. These findings are consistent with previous research indicating that strengths in the school domain are related to the presence of aggressive and antisocial behaviours (Franks et al., 2010; Leffert et al., 1998; Murphey et al., 2004). This may suggest that fostering school engagement and competence in youth is one way to minimize bullying incidents at school. In addition, there was a logical trend towards having a more pro-social attitude on the SAI and a decreased likelihood of bullying behaviours, indicating that youth who are more likely to engage in appropriate conflict resolution, avoid fighting, and choose pro-social actions are also less likely to bully others. Similarly, previous research has also identified a link between decreased aggressive and antisocial behaviours and both pro-social attitudes (Franks et al., 2010) and peaceful conflict resolution skills (Leffert et al., 1998). Interestingly, there was also a trend toward greater intrapersonal strengths on the BERS-2 predicting higher rates of bullying others. This result may support previous findings that indicate that bullies tend to have high self-esteem and self-confidence (Jankauskiene et al., 2008; Seals & Young, 2003). Therefore, it is critical that future research on the relationships between bullying, victimization, and strengths go beyond a focus on overall strengths to examine the role of specific strengths. Furthermore, it is possible that some of these specific areas of strengths may function as moderators of the effects of bullying and victimization on psychosocial outcomes. Unfortunately, this question could not be adequately addressed within the current study due to the limited number of students who participated.

Bullying and Victimization: Prevalence and Demographic Differences

Overall, the prevalence of bullying (5.0%) and victimization (23.7%) reported by students in this study is within the highly variable range reported in other studies (e.g. Kepeneki & Cinkir, 2006; Nguy & Hunt, 2004; Volk et al., 2006; Wong et al., 2008). In addition, a comparable number of students were also identified as bully-victims (5.3%; Volk et al., 2006; Woods & White, 2005). Furthermore, verbal bullying was the most frequently reported type of bullying experience for both victims and bullies, consistent with previous literature (Beran & Violato, 2004; Hunter & Boyle, 2002; Jolliffe & Farrington, 2006; Monks et al., 2008; Sapouna, 2008; Wong et al., 2008). This consistency with the existing literature supports the generalizability of the results of this study.

In contrast to the typical findings of bullying studies, there were no gender differences in the overall rates of bullying and victimization reported in this study. However, it was identified that girls were more likely to be bullied by means of social exclusion, electronic bullying, and bullying via inappropriate names, comments, or gestures of a sexual nature. These findings are consistent with past research indicating that girls experience higher rates of victimization from relational bullying (Andreou et al., 2005; Carbone-Lopez et al., 2010; Cullerton-Sen & Crick, 2005; Dao et al., 2006; Dempsey et al., 2006; Ndetei et al., 2007; Sapouna, 2008). In contrast, boys were more likely to be bullied physically and with inappropriate racial names or comments. These findings are also consistent with past research indicating that boys are more likely to be the victims of physical bullying (Ando et al., 2005; Andreou et al., 2005; Baldry & Winkel, 2004; Carbone-Lopez et al., 2010; Cullerton-Sen & Crick, 2005; Dao et al., 2006; Dempsey et al., 2006; Kepeneki & Cinkir, 2006; Monks et al., 2008; Ndetei et al., 2007; Scheithauer et al., 2006; Skues et al., 2005; Undheim & Sund, 2010; Vaillancourt et al., 2008; Vuijk, van Lier,

Crijnen, & Huizink, 2007; Wei et al., 2007; Wong et al., 2008). Additionally, girls were more

likely to bully others electronically or by spreading lies and rumours. This is consistent with

some research suggesting that girls are more likely to engage in relational bullying (Dukes et al.,

2009), though not all research supports this difference (Scheithauer et al., 2006; Witvliet et al.,

2009; Wong et al., 2008). Interestingly, girls also reported more total strengths, as well as higher

quality friendships, higher grades, and more internalizing symptoms. These results suggest that

early adolescent girls may have better psychosocial functioning relative to boys, with the

exception of internalizing symptoms, which have been well-established as more prevalent in

post-pubertal females.

Although the range of ages in this study was small, there were some age-related trends

identified in the types of bullying students experienced. That is, younger students, aged 11 to 12

years, were more likely to report being bullied verbally and with inappropriate racial names or

comments. In contrast, older students were more likely to engage in bullying others with

inappropriate names, comments, or gestures of a sexual nature. There was also a trend

suggesting that 13 year olds were more likely to bully others electronically than were younger or

older students, though this result should be interpreted cautiously due to the few students

reporting this behaviour. These findings indicate a subtle shift in the types of bullying

experiences that youth are involved in as they age, which may reflect their overall cognitive and

social maturity.

Of note, students reporting ethnic minority backgrounds were more likely to report being

the victims of having lies or rumours spread, having property damaged or money stolen, and

being threatened or forced to do things. These minority students were also more likely to bully

others by social exclusion and by electronic means. However, no significant differences in

overall bullying and victimization experiences were noted between students from ethnic minority groups and Caucasian students. Previous research has not been able to establish a clear pattern regarding the relative prevalence of bullying and victimization in Caucasian, Black, Hispanic, Aboriginal, and Asian populations (Holt & Espelage, 2007; Mouttapa et al., 2004; Peskin et al., 2006; Sawyer et al., 2008; Spriggs et al., 2007; Srabstein et al., 2006; Srabstein & Piazza, 2008; Stein et al., 2007; Unnever, 2005). Particularly relevant to the population in Thunder Bay, Aboriginal students reported higher rates of internalizing and externalizing symptoms, as well as lower grades. These findings suggest that Aboriginal students are at higher risk for psychosocial difficulties in early adolescence. However, these differences should be interpreted with caution due to the relatively small number of Aboriginal and other minority students included in this study.

Bullying, Victimization and Psychosocial Outcomes

The results of this study clearly indicate that involvement in bullying experiences, as a bully or a victim, is associated with a variety of negative psychosocial outcomes, which is largely consistent with the existing literature. Indeed, as expected, higher reports of victimization experiences predicted higher levels of overall internalizing symptoms (Baldry, 2004; Baldry & Winkel, 2004; Bollmer et al., 2005; Cook et al., 2010; Davidson & Demaray, 2007; Due et al., 2005; Hodges et al., 1999; Johnson et al., 2002; Kepenekci & Cinkir, 2006; Smith et al., 2004; Srabstein et al., 2006). However, higher rates of bullying behaviours did not predict internalizing symptoms, which is consistent with some previous research (Bollmer et al., 2005; Ivarsson et al., 2005; Kim et al., 2006; Peskin et al., 2007), but not all studies (Cook et al., 2010; Davidson & Demaray, 2007; Srabstein et al., 2006). Notably, the relationship between bullying and internalizing symptoms is often reported to be only weakly significant (Cook et al.,

2010; Roland, 2002; Srabstein et al., 2006; van Hoof et al., 2008). This contrast is reflected in the fact that both bullying and victimization were significantly correlated with internalizing problems in this study. Notably, this correlation was much stronger for victimization experiences. Furthermore, it has been suggested that the relationship between depression and bullying may be mediated by victimization experiences (van Hoof et al., 2008). This could potentially explain the non-significant findings in this study, as the effects of both bullying and victimization were examined within the same statistical analyses in this study, whereas many studies examine them separately. Thus, the lack of a predictive effect of bullying behaviours on internalizing symptoms can be attributed to a lack of additional contribution beyond the predictive effects of victimization.

In addition, higher levels of externalizing symptoms were also predicted by higher reports of victimization in this study, consistent with existing research (Cook et al., 2010; Davidson & Demaray, 2007; Haynie et al., 2001; Hodges et al., 1999; Houbre et al., 2006; Johnson et al., 2002; Yang et al., 2006). Similarly, higher reports of bullying behaviours predicted greater levels of externalizing symptoms, as previous research has consistently demonstrated (Bollmer et al., 2005; Cook et al., 2010; Davidson & Demaray, 2007; Haynie et al., 2001; Houbre et al., 2006; Ivarsson et al., 2005; Kim et al., 2006; Yang et al., 2006). Thus, externalizing behaviours are a clear consequence of bullying experiences, whether the youth is a bully or a victim. It is also notable that these effects remained significant after controlling for the large effects of social desirability on externalizing behaviours, a factor not typically included in bullying research, but which is a critical consideration when self-report data is used to assess negative behaviours.

Furthermore, as identified in previous studies, students reporting more frequent victimization also reported experiencing more social difficulties overall (Cook et al., 2010; Dill et al., 2004; Johnson et al., 2002; Kim et al., 2006; Marini et al., 2006; Olthof & Goossens, 2008; Sentse et al., 2007; Smith et al., 2004; Strohmeier et al., 2008; Toblin et al., 2005; Veenstra et al., 2005; Warden & Mackinnon, 2003).   In contrast, bullying behaviour was not found to be predictive of social problems overall. However, gender moderated this relationship, such that, for girls, more frequent bullying behaviour was predictive of increased social problems; whereas this was not true for boys. Notably, previous studies examining this relationship have produced mixed findings, with some indicating higher rates of social problems and peer rejection (Cook et al., 2010; Dijkstra et al., 2008; Kim et al., 2006; Olthof & Goossens, 2008; Veenstra et al., 2005; Warden & Mackinnon, 2003), whereas others do not (Houbre et al., 2006; Ivarsson et al., 2005; Scheithauer et al., 2006; Strohmeier et al., 2008; Toblin et al., 2009). It is possible that gender differences may be a factor underlying some of the variation in these findings, as interactions between gender and bullying are rarely considered in analyses. In addition, while all youth who bully tend to have more aggressive friends (Ando et al., 2005; Haynie et al., 2001; Mouttapa et al., 2004; Pellegrini et al., 1999; Volk et al., 2006), only females who bully receive fewer friendship nominations from peers (Mouttapa et al., 2004). Notably, these female bullies also have higher rates of reciprocated friendships as assessed via peer nominations, suggesting small but cohesive social networks (Mouttapa et al., 2004), which may reflect friendship quality rather than social problems. Interestingly, research has identified a subset of female bullies who are popular, socially skilled, and tend to engage in relational aggression, but who are also the most disliked by peers (Peeters et al., 2010). This suggests that social problems may emerge for girls who use relational and other bullying strategies to attain social dominance within their peer

group. Notably, girls in this study were more likely than boys to report bullying others by social means (e.g. by spreading false rumours, trying to make others dislike the target, or sending hurtful messages by electronic means). Social difficulties are inherent to these behaviours, which are likely another factor underlying the gender difference in the relationships between bullying and social problems. In addition, both this study and previous research (Smith et al., 2004) have identified gender differences with girls reporting higher friendship quality. This may indicate that high quality friendships are more valued and nurtured by girls, such that problems in the more extended peer network are more salient to girls than they are to boys.

However, in contrast to the findings for overall social problems, the quality of friendships with participants' best friends was not related to experiences of victimization or bullying behaviours. Notably, participants' reports of friendship quality were not significantly correlated with bullying behaviours, victimization experiences, or social problems. This contrast between significant social problems and normative friendship quality for bullies and victims has been previously identified (Smith et al., 2004). However, previous research addressing friendship quality in the context of victimization experiences has been mixed, with some studies identifying a significant link (Bollmer et al., 2005; Goldbaum et al., 2003; Shin, 2010), while others have not (Hodges et al., 1999; Smith et al., 2004). Similarly, examinations of friendship quality in bullies have not produced consistent results, with some studies finding a relationship (Bollmer et al., 2005), while others do not (Shin, 2010). Thus, the results of this study are consistent with some research findings, indicating that youth who engage in bullying behaviours or are bullied by others are just as likely as youth not involved in bullying to have at least one positive peer relationship. However, the presence of this positive relationship, which is likely a significant strength for youth, is not indicative of overall social problems in the larger peer network.

Finally, victimization experiences were not found to predict academic achievement in this study. Notably, the existing literature base includes inconsistent findings for these students. That is, some studies have identified that victims typically have lower academic achievement than students who are not bullied (Beran et al., 2008; Holt et al., 2007; Lee & Cornell, 2010; Toblin et al., 2005; Veenstra et al., 2005; Yang et al., 2006), while others have not found evidence of this relationship (Ma et al., 2009a; Ma et al., 2009b; Srabstein & Piazza, 2008), including one meta-analysis (Cook et al., 2010). It is possible that these findings are highly dependent on the research samples, as there is clearly a subset of victims of bullying who have higher academic achievement than both students who are not bullied and some other victims (Ma et al., 2009b). However, this subset may not be adequately captured in all samples. In addition, a recent meta-analysis identified that while victims did not have poorer academic achievement overall, bully-victims experienced a significant degree of difficulties in this area, reflected in a large effect size (Cook et al., 2010). This finding of the poorest academic achievement in bully-victims has been supported by several other studies (Dukes et al., 2009; Srabstein & Piazza, 2008; Toblin et al., 2005; Veenstra et al., 2005). In addition, the results of this study identified a significant relationship between bullying behaviours and poor academic achievement, consistent with the bulk of the existing research (Cook et al., 2010; Haynie et al., 2001; Lee & Cornell, 2010; Ma et al., 2009a; Ma et al., 2009b; Srabstein & Piazza, 2008; Veenstra et al., 2005; Yang et al., 2006). Thus, it seems likely that academic achievement is more strongly influenced by bullying behaviours than victimization experiences.

Strengths as a Moderator

This study provided the first direct examination of the hypothesis that psychological strengths would moderate the negative psychosocial effects of bullying behaviours and victimization

experiences. Previous research has established specific moderators, including positive parental

relationships (Baldry, 2004), high quality and protective friendships (Bollmer et al., 2005;

Hodges et al., 1999), problem-solving skills (Baldry & Farrington, 2005; Cassidy & Taylor,

2005), and optimism (Cassidy & Taylor, 2005). While the moderating effect of strengths on

involvement in bullying has been proposed by others (Donnon, 2010), there has not previously

been a comprehensive examination of the role of strengths within a structured framework. The

results of this study did not support such a moderation model. That is, the overall level of

strengths did not moderate the effects of either bullying behaviours or victimization experiences

for any of the five outcome variables considered. These results suggest that the clear

psychosocial benefits of having more strengths are independent of any bullying or victimization

that students experience. This finding has interesting theoretical implications relevant to the

delineation of strengths versus resilience conceptualizations. That is, these findings support the

foundational premise that strength-based approaches are relevant to all youth for the promotion

of optimal functioning in both the presence and absence of adversity (Epstein, 1998; Epstein et

al., 2004; Park & Peterson, 2008; Rawana & Brownlee, 2009a). Moreover, these findings do not

support a resilience model of strengths, where strengths are more beneficial to youth

experiencing adversity in the form of bullying. However, further research must address the role

of specific strengths as potential moderators of bullying and victimization, as it is possible these

effects may be masked with some strengths contributing positively and other strengths

contributing negatively to the relationship between bullying experiences and psychosocial

outcomes.

It is also interesting to examine these results in the context of an emerging theoretical

shift in the conceptualization of strengths. That is, Biswas-Diener and colleagues (2011)

recently proposed that there is a need to move from an "identify and use" strengths-based

approach to a more dynamic "strengths development" approach. The former approach focuses

on labeling and using existing strengths more, while the latter is a more contextual approach that

focuses on capacity building or understanding how and in which situations a strength could be

used. This contextual and dynamic approach assumes that individuals must learn to cultivate and

apply their strengths effectively, as the simple identification of strengths does not necessarily

promote the appropriate use of an individual's strengths (Biswas-Diener et al., 2011). In regards

to the present study, the "strengths development" approach provides an alternative interpretation

for the non-significant moderation results. That is, in this study students were only asked to

identify their strengths. There was no opportunity for these strengths to be activated or applied

in the context of bullying and victimization experiences. Therefore, it is possible that, when

activated, developed, and appropriately applied in context, strengths may moderate the effects of

bullying and victimization on psychosocial outcomes. However, the design of this study did not

permit the exploration of this interpretation. Thus, future research will need to examine for

moderation effects in the context of strength-based intervention or prevention programs that

include a "strengths development" approach.

Social Desirability

A measure of social desirability, the Children's Social Desirability Scale (CSDS; Baxter

et al., 2004; Crandall et al., 1965), was included in this study to assess for possible response

styles that could affect the accuracy and validity of the data and to subsequently control for this

variability in statistical analyses. That is, it was concerning that some youth might demonstrate a

tendency to present themselves in an overly positive or socially acceptable manner, which could

result in underreporting of their bullying experiences and negative psychosocial outcomes or

overestimating their strengths. This concern was validated as higher social desirability scores

were predictive of lower rates of bullying victimization, internalizing and externalizing

symptoms, and social problems, as well as higher reports of friendship quality. In addition,

though the predictive relationship with strengths was not tested, there was a strong positive

correlation between social desirability and strengths. Moreover, the inclusion of social

desirability was seen to significantly alter the results of this study when the relationship between

overall strengths and both bullying and victimization were examined. Thus, it was necessary to

include the measure of social desirability in the analyses of this study.

However, the meaning of social desirability, as measured by the CSDS, is uncertain.

Unfortunately, social desirability has not been frequently examined in research with children and

adolescents. Thus, interpretations related to social desirability must be speculative and cannot be

supported by empirical research. Traditionally, social desirability scales are used to assess

purposeful "faking good" responses in clinical assessments. However, if youth were actively

trying to present themselves in either an overly positive light or with complete honesty, one

might expect a bimodal distribution for social desirability, with peaks at both ends of the

distribution. Interestingly, students' reports on the CSDS were normally distributed in this

sample, which may suggest that social desirability is instead an underlying and possibly

unconscious characteristic of youth, such that the majority of youth tend to present with a

moderate degree of social desirability. Perhaps, then, social desirability is not just a response

style, but is related to other traits of youth, such as conscientiousness, self-concept,

defensiveness, social conformity, or pro-social behaviour and attitudes. This is supported by

research indicating differences in social desirability that reflect two subtypes: self-deception and

other-deception (e.g. Merydith, Prout, & Blaha, 2003). It was interesting to note that, while

social desirability was not predictive of academic achievement, scores on the CSDS were

significantly correlated with average grades. This supports the idea that social desirability may,

in fact, be related to behaving in ways that are more pro-social or conforming towards an ideal.

Thus, social desirability is likely a complex construct that deserves greater attention in research

with youth.

In light of this more complex understanding of social desirability, the significant

relationship between this concept and strengths merits further discussion. Although the CSDS is

designed to assess students' endorsement of extreme statements as true or false (e.g. *always*

listening to parents), it is questionable how students' interpret these statements. That is,

students' may choose to answer items based on what they feel is most reflective of their

experiences and behaviours. For example, students' who believe they usually listen to their

parents may endorse the statement that they always listen to them. Anecdotally, these types of

interpretations were observed in the statements of participants during the data collection for this

study. If students did in fact complete the CSDS in this way, it then seems likely that there is an

underlying concept which both the CSDS and SAI tap into. That is, both measures assess

positive perceptions of one's characteristics and abilities. Notably, scores on the SAI are

significantly correlated with positive self-concept (Rawana & Brownlee, 2009b), which may be a

factor in the conceptual overlap between strengths and social desirability. Nonetheless, these

findings regarding social desirability highlight the importance of including measures of this

concept in research involving children and adolescents, which is not common practice.

Clinical Implications

The results of this study firmly support the necessity of including measures of strengths

in both research and clinical assessments of students' functioning. That is, an assessment of

strengths provides a critical piece of unique information that contributes to the understanding of the strengths of youth, which can then inform treatment or other programing designed to maximize well-being. In particular, this study supports the validity and utility of the Strength Assessment Inventory (SAI; Rawana & Brownlee, 2009b) as a broad measure of strengths. Moreover, the results of this study indicate that the SAI is a stronger predictor of some psychosocial outcomes, particularly externalizing symptoms, social problems, and academic achievement, when compared to another established and commonly used measure of strengths, the Behavioral and Emotional Rating Scale (BERS-2; Epstein, 2004). Furthermore, the results of this study demonstrate the enriched understanding of psychosocial functioning that can be gained when a broad range of strengths are considered, as can be achieved through using the SAI, particularly when both the content and empirical scales are used. That is, the strength of the SAI is in the breadth of content that it includes. Nevertheless, the BERS-2 subscales also provided valuable information in the prediction of psychosocial outcomes, bullying, and victimization. Therefore, it is also a useful tool for measuring strengths, particularly when brevity is necessary in the assessment process.

The results of this study also suggest that strength-based approaches have the potential to provide substantial benefits for youth. If these strength-based programs are successful in developing and expanding the strengths of youth, they may substantially improve the psychosocial functioning of all students, as higher strengths predict lower levels of internalizing and externalizing symptoms, fewer social problems, more positive quality of friendships, and higher academic grades. These strength-based programs can be further informed by the examination of the key strengths that are relevant to psychosocial functioning. That is, the

results of this study suggest that the greatest benefits could be achieved through a focus on developing personality, school, coping skills, and peer relationship strengths.

Given that there were no moderation effects for strengths on bullying and victimization, having higher strengths will be equally beneficial for all students, not just those who are involved in bullying experiences. Thus, the implementation of strength-based approaches should be school-wide and not targeted at specific high-risk students. However, it is possible that the benefits of strengths can be more clearly identified when these strengths are activated in the context of appropriate strength-based programming. It is also possible that such school-wide strength-based programs would have an indirect effect on the prevalence of bullying and victimization overall within the school, as these programs may foster a more positive and pro-social school culture. In addition, while this study did not find a relationship between overall strengths and the occurrence of bullying behaviours and victimization experiences, associations were found with particular areas of strength. For example, bolstering school strengths may help to minimize bullying behaviours, as would fostering pro-social attitudes within a school's culture. However, further research is needed to examine how these strengths can be best used, as well as to address interactions between strength domains and determine the impact of strengths that are in fact related to undesirable bullying behaviour.

Limitations

One limitation of the present study was the large amount of missing data. Reasons for missing data included absence on the second day of data collection, skipped pages within a questionnaire, the choice to not answer specific questions, and frequent use of the "does not apply" option on the Strength Assessment Inventory. Proration was used in the calculation of total and subscale scores on measures, which improved the quantity of data points available for

use in the final analyses, without altering the meaning of the data. The Faith and Culture

subscale from the Strength Assessment Inventory was also dropped from the calculation of the

total strengths score, due to frequent use of the "does not apply" response option, which

substantially increased the number of participants for whom the total score could be calculated.

To assess the impact of missing data on the main analyses of the study, participants included in

each analysis were compared to those who were excluded. Overall, the former group tended to

be slightly older and had slightly higher average grades. However, the age difference identified

was approximately two months, which is unlikely to be meaningful, as age was measured in

whole years and not monthly gradations. With respect to the grades, the difference was

approximately 2%, which may not represent a meaningful difference. However, it is possible

that the results of this study may not completely generalize to students who have a lower average

academic grade.

The generalizability of these results may also be restricted due to the limited diversity of

the participants included in this study. That is, students included in this study were

predominantly of Caucasian background, with only 6.8% of students reporting Aboriginal

heritage. Given the large Aboriginal population in Thunder Bay, where this study was

conducted, as well as the significant differences in bullying experiences and psychosocial

outcomes that were identified for Aboriginal participants, the results of this study may not

accurately reflect the experiences of this population. In addition, the overall participation rate for

students at each of the 10 involved schools was highly variable, with one class having only two

students participate and another having all but two students participate. Therefore, it is possible

that there were self-selection effects, such that students who experienced higher levels of

bullying or greater psychosocial distress did not volunteer to participate in this study.

Another possible limitation in this study is the limited range of bullying and victimization reported. That is, there were only small numbers of participants reporting high levels of each, but particularly so for bullying behaviours. These small numbers made it impossible to conduct meaningful categorical comparisons between bullies, victims, bully-victims, and uninvolved students. However, it is notable that the prevalence of bulling and victimization, established using empirically supported and meaningful cut-offs, were well within the rates established in the current literature. In addition, including the measure of social desirability in the analyses of this study provided a control to mitigate the effects of any underreporting of these experiences in understanding the results of this study.

Another potential limitation of this study was the use of self-report data. While this is common practice, there are also many studies that have used peer nominations to examine bullying and victimization. These two methods can produce very different results (Lee & Cornell, 2010; Strohmeier et al., 2008). Using peer nomination methods may provide more accurate identification of bullies and victims as it minimizes the underreporting effects of socially desirable response styles. However, peer nomination methods are only effective when participation rates are very high within a class, as students who are identified by peers as bullies and victims must be participating in the study to examine outcomes, and it is necessary to have a high response rate to accurately determine which students are bullies and victims (Vaillancourt et al., 2010). As participation rates were variable in this study, self-report was selected as the optimal form of measurement, despite its limitations.

Finally, practicalities dictated that this study consist of cross-sectional data. Thus, it is impossible to truly determine cause and effect relationships amongst the variables in this study. Longitudinal studies have previously determined that there is a reciprocal relationship between

bullying experiences and the psychosocial outcomes considered here (e.g. Kim et al., 2006; Reijntjes et al., 2010). It is likely that there are also reciprocal causal relationships between these variables and self-reported strengths.

Future Directions

It is imperative that future research assess the effects of specific strength domains, as well as interactions amongst strength domains, in relation to psychosocial outcomes and within the context of bullying and victimization. This is particularly important given the numerous findings in which specific strengths were in fact related to poorer psychosocial functioning. Therefore, this research is necessary to improve the current understanding of strengths and to create more sophisticated strengths-based programming (Biswas-Diener et al., 2011; Gillham et al., 2011). In addition, research will be needed to determine if activating and applying strengths, through strength-based intervention and prevention programs, produces different results, in which strengths do moderate the effects of bullying and victimization. Moreover, replication studies should also include peer nomination measures of bullying and victimization. This is particularly important given the significant effects of social desirability identified in this study. Thus, when self-report data is to be used, researchers should be careful to include measures of social desirability in future studies of bullying. Furthermore, longitudinal research is needed to establish any causal relationships between strengths, bullying, victimization, and psychosocial variables. In addition, it was not viable to categorically examine differences between bullies, victims, bully-victims, and uninvolved students. Given consistent findings in the literature that bully-victims experience the most negative psychosocial outcomes, it is highly desirable to understand the importance of strengths for this high-risk group. Future research should also

address types of bullying experiences (e.g. physical vs. verbal vs. relational) to determine if there is an impact of type of bullying on the effects of strengths.

Conclusion

Strengths were demonstrated to provide a unique contribution to the understanding of psychosocial outcomes in youth in the present study. Moreover, support was provided for the use of a comprehensive model of strengths, as captured by the Strengths Assessment Inventory, through direct comparison to another measure of strengths and in the demonstrated utility of the specific strength domains for providing a deeper understanding of psychosocial functioning. Moreover, while overall strengths did not predict bullying and victimization, specific strength domains were identified as key predictors, further supporting the need for a comprehensive model of strengths. Consistent with prior research, bullying behaviours and victimization experiences were related to negative psychosocial outcomes in this study. However, the results of this study did not support moderation relationships between overall strengths and either bullying or victimization on psychosocial outcomes. Thus, consistent with underlying theory, strengths were identified as important for promoting well-being amongst all youth, regardless of whether or not they reported involvement in adverse bullying experiences. Moreover, these results highlight the potential benefits of providing school wide strength-based intervention and prevention programs. However, further research is needed to examine the potential of specific strength domains as moderators of bullying behaviours and victimization experiences.

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Table 1

Comparison of Strength Models

	Developmental Assets	Youth Resiliency	Values in Action	Strength-Based Assessment	Strength, Assessment, and Treatment
Theoretical perspective	Resilience model	Resilience model	Positive youth development model	Strength-based model, assessment focused	Strength-based model, intervention focused
Definition of strengths	Assets are "important relationships, skills, opportunities and values that help guide individuals away from risk behaviours, foster resilience, and promote thriving" (Scales et al., 2006, p.693)	Developmental strengths are "resiliency factors that encourage and enhance the well-being and development of all youth" (Donnon & Hammond, 2007, p.450)	Character strengths are "a family of positive traits reflected in thoughts, feelings, and behaviours" (Park, 2004, p.40)	Strengths are "emotional and behavioural skills, competencies, and characteristics that … enhance one's ability to deal with adversity and stress; and promote one's personal, social, and academic development" (Epstein & Sharma, 1998, p.3)	Strengths are "developed competencies and characteristics that are valued both by the individual and society and are embedded in culture" (Rawana & Brownlee, 2009a, p.256)
Number of strengths included	40 assets in 8 domains	31 developmental strengths in 10 domains	24 character strengths across 6 virtues (domains)	52 strengths in 5 core and 1 supplemental domain	124 strengths in 9 core and 2 supplemental domains
Internal/external strengths	Both internal and external	Both internal and external	Internal only	Internal only	Internal only

	Developmental Assets	Youth Resiliency	Values in Action	Strength-Based Assessment	Strength, Assessment, and Treatment
Domains included:	1. Support 2. Empowerment 3. Boundaries and expectations 4. Constructive use of time 5. Commitment to learning 6. Positive values 7. Social competencies 8. Positive identity	1. Parental support and expectations 2. Peer relationships 3. Community cohesiveness 4. Commitment to learning at school 5. School culture 6. Cultural sensitivity 7. Self-control 8. Empowerment 9. Self-concept 10. Social sensitivity	1. Wisdom and knowledge 2. Courage 3. Humanity 4. Justice 5. Temperance 6. Transcendence	1. Interpersonal 2. Family involvement 3. Intrapersonal 4. School functioning 5. Affective 6. Career (supplemental)	1. Peers 2. Family/home 3. School 4. Community 5. Personality 6. Personal and physical care 7. Spiritual and cultural 8. Leisure and recreation 9. Goals and Dreams 10. Employment (supplemental) 11. Dating relationships (supplemental)
Measurement:	Profiles of Student Life: Attitudes and Behaviors (PSL-AB)	Youth Resiliency: Assessing Developmental Strengths (YR: ADS)	Values in Action Inventory of Strengths for Youth (VIA-Youth)	Behavioral and Emotional Rating Scale, 2nd edition (BERS-2)	Strength Assessment Inventory (SAI)
Sources	Edwards et al., 2007a; Edwards et al., 2007b; Leffert et al., 1998; Scales et al., 2000	Donnon & Hammond, 2007	Park, 2004; Park & Peterson, 2006; Park & Peterson, 2008; Park et al., 2004	Epstein, 1999; Epstein et al., 2004; Epstein & Sharma, 1998	Rawana & Brownlee, 2009a; Rawana & Brownlee, 2009b

Table 2

Sample Characteristics

Measure	N	Mean (*SD*)	Minimum Score	Maximum Score
Bullying Behaviour*	238	0.18 (*0.27*)	0.00	1.12
Victimization Experiences*	245	0.44 (*0.40*)	0.00	1.60
Total Strengths	229	164.74 (*24.19*)	77.37	207.79
Internalizing Problems*	235	2.76 (*1.29*)	0.00	6.48
Externalizing Problems*	247	2.70 (*1.27*)	0.00	6.48
Social Problems*	247	1.61 (*0.93*)	0.00	4.12
Friendship Quality	233	115.15 (*23.80*)	42.00	156.00
Average Grade	257	75.28 (*6.66*)	51.38	91.00
Social Desirability	244	5.24 (*3.29*)	0.00	13.00

*values after square root transformations to minimize skewness and kurtosis are reported

Table 3

Frequency of Bullying Experiences Reported by Participants (N)

	never	once or twice	2-3 times a month	once a week	several times a week
Single Item Report					
Victim	149	49	9	13	12
Bully	160	63	4	4	1
Behaviour Items					
Victim					
Made fun of	128	66	22	9	19
Excluded/ignored	175	52	9	4	5
Hit/kicked/etc.	199	21	7	8	7
Rumours spread	164	60	13	3	5
Property damage	207	27	7	0	1
Threatened	215	21	3	0	1
Racist comments	216	15	2	5	4
Sexual harassment	192	36	4	5	4
Cyber-bullying	210	22	6	2	1
Bully					
Made fun of	167	58	10	1	1
Excluded/ignored	210	23	1	1	1
Hit/kicked/etc.	217	12	3	3	1
Rumours spread	223	13	0	1	0
Property damage	234	1	0	1	0
Threatened	231	4	0	0	0
Racist comments	223	12	0	0	0
Sexual harassment	219	12	2	1	0
Cyber-bullying	224	11	0	0	0

Table 4

Correlations between Variables

Measure	1	2	3	4	5	6	7	8	9
1. Victimization	-	.35**	-.20**	.55**	.00	.39**	.52**	-.21**	-.30**
2. Bullying		-	-.28**	.25**	-.10	.49**	.20**	-.27**	-.43**
3. Total Strengths			-	-.44**	.48**	-.56**	-.36*	.38**	.46**
4. Social Problems				-	-.12	.59**	.68**	-.22**	-.39**
5. Friendship Quality					-	-.16*	-.03	.22**	.21**
6. Externalizing Problems						-	.57**	-.28**	-.59**
7. Internalizing Problems							-	-.13*	-.28**
8. Average Grade								-	.18**
9. Social Desirability									-

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

Table 5

Correlations between Strengths Subscales on the SAI and BERS-2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1. SAH	-	.51	.48	.58	.55	.51	.41	.43	.49	.95	.48	.34	.50	.20	.45	.50	.58	.25	.39	.51	.63	.45	.45	.49
2. SAS		-	.61	.61	.62	.51	.54	.53	.57	.46	.55	.60	.88	.36	.53	.51	.54	.32	.37	.48	.42	.43	.72	.45
3. SFT			-	.58	.56	.48	.69	.49	.49	.42	.53	.73	.48	.66	.42	.50	.51	.60	.30	.47	.42	.43	.49	.48
4. SWF				-	.63	.49	.51	.51	.59	.57	.54	.45	.55	.38	.46	.48	.87	.24	.62	.57	.45	.51	.49	.52
5. SKM					-	.53	.52	.60	.93	.51	.64	.49	.53	.29	.80	.55	.56	.37	.54	.65	.58	.61	.55	.52
6. SKCH						-	.40	.47	.53	.47	.50	.38	.49	.16	.45	.97	.47	.30	.27	.48	.45	.34	.43	.36
7. SBI							-	.51	.47	.37	.54	.89	.35	.38	.37	.44	.45	.37	.31	.40	.42	.47	.39	.43
8. SGD								-	.56	.40	.98	.47	.42	.26	.50	.47	.42	.32	.35	.51	.49	.57	.53	.53
9. CCS									-	.48	.60	.43	.52	.22	.59	.54	.55	.31	.44	.67	.54	.49	.51	.44
10. CFV										-	.44	.28	.47	.21	.39	.46	.58	.17	.37	.48	.55	.36	.39	.42
11. OFF											-	.50	.45	.27	.54	.50	.46	.35	.39	.55	.53	.60	.55	.57
12. CE												-	.35	.33	.41	.44	.34	.47	.29	.35	.40	.45	.41	.41
13. FCB													-	.32	.47	.46	.51	.21	.31	.45	.38	.29	.72	.40
14. CR														-	.09	.17	.37	.09	.07	.29	.12	.13	.28	.27
15. SWB															-	.46	.38	.35	.45	.47	.53	.62	.50	.47
16. HC																-	.44	.36	.27	.47	.46	.35	.42	.36
17. PSA																	-	.11	.33	.60	.46	.43	.50	.47

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
18. AE																		-	.24	.20	.29	.34	.20	.29
19. PC																			-	.28	.26	.45	.22	.33
20. IrS																				-	.67	.63	.62	.68
21. FI																					-	.63	.58	.62
22. IaS																						-	.53	.74
23. SF																							-	.58
24. AS																								-

Note. Correlations in boldface are significant at *p* < .05. SAI Content Scales: SAH = strengths at home; SAS = strengths at school; SFT = strengths during free time; SWF = strengths with friends; SKM = strengths from knowing myself; SKCH = strengths from keeping clean and healthy; SBI = strengths from being involved; SGD = strengths from goals and dreams; SAI Empirical Scales: CCS = competent coping skills; CFV = commitment to family values; OFF = optimism for future; CE = community engagement; FCB = functional classroom behaviour; CR = creativity; SWB = sense of well-being; HC = health consciousness; PSA = pro-social attitude; AE = activity engagement; PC = peer connectedness; BERS-2 Subscales: IrS = interpersonal strengths; FI = family involvement; IaS = intrapersonal strengths; SF = school functioning; AS = affective strengths.

Table 6

Strengths, Bullying, and Victimization Predicting Psychosocial Outcome Variables

Predictor	Internalizing Problems (N = 194)		Externalizing Problems (N = 203)		Social Problems (N = 203)		Friendship Quality (N = 186)		Average Grades (N = 201)	
	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1	.11**		.31**		.15**		.27**		.05*	
Social Desirability		-.25**		-.55**		-.38**		.19**		.13
Age		.08		.06		-.06		-.11		.00
Gender		.18*		.02		.10		.43**		.19**
Ethnicity		.15*		.04		.00		-.13*		.03
Step 2	.32**		.18**		.24**		.08**		.15**	
Social Desirability		-.02		-.28**		-.14*		.06		-.14
Age		.12*		.06		-.03		-.09		.02
Gender		.16**		.05		.11		.37**		.14*
Ethnicity		.11*		.02		-.03		-.11		.05
Strengths		-.27**		-.33**		-.33**		.34**		.33**
Bullying		-.05		.20**		-.05		.02		-.24**
Victimization		.52**		.18**		.40**		.06		-.05

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

Table 7

Relative Predictive Ability of SAI and BERS-2 for Psychosocial Outcome Variables

Measure	Semipartial *r*	*t*(*df*)	*p*
Internalizing Problems (*N* = 189)			
BERS-2	-.13	-1.90 (182)	.06
SAI	-.12	-1.81 (182)	.07
Externalizing Problems (*N* = 198)			
BERS-2	.00	-0.04 (191)	.97
SAI	-.23	-4.20 (191)	<.01
Social Problems (*N* = 198)			
BERS-2	-.02	-0.26 (191)	.80
SAI	-.24	-3.86 (191)	<.01
Friendship Quality (*N* = 182)			
BERS-2	.17	2.96 (175)	<.01
SAI	.06	1.10 (175)	.27
Average Grades (*N* = 196)			
BERS-2	.00	0.07 (189)	.95
SAI	.25	3.73 (189)	<.01

Table 8

SAI Content Scales Predicting Psychosocial Outcome Variables

Predictor	Internalizing Problems (*N* = 198)		Externalizing Problems (*N* = 207)		Social Problems (*N* = 207)		Friendship Quality (*N* = 190)		Average Grades (*N* = 205)	
	ΔR^2	*B*	ΔR^2	*β*	ΔR^2	*β*	ΔR^2	*β*	ΔR^2	*β*
Step 1	.10**		.31**		.14**		.27**		.05*	
CSDS		-.23**		-.55**		-.36**		.17**		.12
Age		.07		.05		-.06		-.11		.00
Gender		.17*		.02		.08		.44**		.19**
Ethnic.		.14*		.04		.00		-.13*		.04
Step 2	.22**		.22**		.18**		.16**		.25**	
CSDS		-.06		-.35**		-.19**		.04		-.02
Age		.07		.03		-.06		-.08		.01
Gender		.10		.01		.07		.35**		.12
Ethnic.		.15*		.05		-.02		-.08		.03
SAH		-.08		-.09		-.03		.09		-.02
SAS		-.20*		-.29**		-.19*		-.13		.60**
SFT		.33**		.26**		.23*		.08		.03
SWF		.08		-.13		-.07		.35**		-.15
SKM		-.41**		-.26**		-.31**		-.07		.09
SKCH		-.11		-.10		.04		-.10		-.14
SBI		-.03		.03		-.03		.08		-.05
SGD		.00		.10		-.10		.17*		.03

Note. SAH = strengths at home; SAS = strengths at school; SFT = strengths during free time; SWF = strengths with friends; SKM = strengths from knowing myself; SKCH = strengths from keeping clean and healthy; SBI = strengths from being involved; SGD = strengths from goals and dreams.

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

Table 9

SAI Empirical Scales Predicting Psychosocial Outcome Variables

Predictor	Internalizing Problems (N = 194)		Externalizing Problems (N = 201)		Social Problems (N = 201)		Friendship Quality (N = 186)		Average Grades (N = 199)	
	ΔR^2	B	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1	.09**		.30**		.13**		.28**		.05*	
CSDS		-.22**		-.55**		-.35**		.14*		.11
Age		.05		.05		-.08		-.11		-.03
Gender		.17*		.02		.09		.48**		.19**
Ethnic.		.13		.04		-.01		-.08		.08
Step 2	.29**		.26**		.22**		.19**		.23**	
CSDS		-.06		-.30**		-.18**		.05		-.04
Age		.04		.01		-.09		-.09		.01
Gender		.01		-.02		.01		.44**		.12
Ethnic.		.09		.07		-.04		-.05		.03
CCS		-.18*		-.28**		-.17		.01		.20*
CFV		-.03		-.08		-.05		.07		.06
OFF		.03		.06		-.06		.16*		.04
CE		.01		.01		-.06		.08		.24**
FCB		-.12		-.26**		-.07		-.12		.42**
CR		.31**		.19**		.16*		-.01		-.16*
SWB		-.31**		-.08		-.27**		-.24**		-.06
HC		-.09		-.04		-.04		-.03		-.21*
PSA		.07		-.16*		-.03		.17*		.01
AE		.01		.11		.05		.16*		-.04
PC		-.05		.06		-.09		.25**		-.15*

Note. CCS = competent coping skills; CFV = commitment to family values; OFF = optimism for future; CE = community engagement; FCB = functional classroom behaviour; CR = creativity; SWB = sense of well-being; HC = health consciousness; PSA = pro-social attitude; AE = activity engagement; PC = peer connectedness. * $p < .05$ ** $p < .01$

Table 10

BERS-2 Scales Predicting Psychosocial Outcome Variables

Predictor	Internalizing Problems (N = 215)		Externalizing Problems (N = 225)		Social Problems (N = 225)		Friendship Quality (N = 202)		Average Grades (N = 222)	
	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1	.13**		.36**		.17**		.30**		.08**	
CSDS		-.30**		-.59**		-.39**		.15*		.13*
Age		.01		.06		-.08		-.12*		.03
Gender		.16*		-.02		.08		.47**		.24**
Ethnicity		.13*		.05		.01		-.16**		.05
Step 2	.01**		.08**		.11**		.10**		.25**	
CSDS		-.20**		-.43**		-.30**		.05		-.07
Age		.00		.06		-.08		-.12		.07
Gender		.17**		.00		.09		.40**		.25**
Ethnicity		.12*		.06		.00		-.14*		-.01
Interpersonal Strengths		-.03		-.23**		-.02		.14		-.09
Family Involvement		-.07		-.06		.05		-.13		.12
Intrapersonal Strengths		-.32**		.05		-.42**		.18		-.11
School Functioning		.00		-.19*		-.05		-.02		.64**
Affective Strengths		.08		.12		.12		.18		-.19*

* p < .05   ** p < .01

Table 11

Total Strengths Predicting Bullying and Victimization

Predictor	Victimization (with social desirability) (N = 206)		Victimization (without social desirability) (N = 208)		Bullying Behaviour (with social desirability) (N = 203)		Bullying Behaviour (without social desirability) (N = 205)	
	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1	.09**		.02		.18**		.00	
Social Desirability		-.26**		-		-.43**		-
Age		-.10		-.13		.01		.00
Gender		.09		.06		-.01		-.03
Ethnicity		.02		.06		-.03		-.01
Step 2	.01		.05**		.01		.08**	
Social Desirability		-.21**		-		-.38**		-
Age		-.11		-.14*		.01		-.02
Gender		.10		.10		.01		.02
Ethnicity		.02		.05		-.03		-.02
Total Strengths		-.12		-.22**		-.12		-.28**

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

Table 12

SAI Content Scales Predicting Bullying and Victimization

Predictor	Victimization (N = 206)		Bullying Behaviour (N = 203)	
	ΔR^2	β	ΔR^2	β
Step 1	.09**		.18**	
Social Desirability		-.26**		-.45**
Age		.09		-.01
Gender		.02		-.03
Ethnicity		-.10		.01
Step 2	.10**		.04	
Social Desirability		-.21**		-.36**
Age		.02		.00
Gender		.04		-.02
Ethnicity		-.09		-.01
Strengths at Home		.02		-.09
Strengths at School		-.15		-.12
Strengths during Free Time		.30**		.15
Strengths with Friends		.13		-.14
Strengths from Knowing Myself		-.26*		-.03
Strengths from Keeping Clean and Healthy		-.14		.05
Strengths from Being Involved		-.13		-.02
Strengths from Goals and Dreams		.09		.04

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

Table 13

SAI Empirical Scales Predicting Bullying and Victimization

Predictor	Victimization ($N = 200$)		Bullying Behaviour ($N = 197$)	
	ΔR^2	β	ΔR^2	β
Step 1	.08**		.16**	
Social Desirability		-.25**		-.39**
Age		.06		-.02
Gender		.02		-.06
Ethnicity		-.13		.03
Step 2	.14**		.08	
Social Desirability		-.17*		-.26**
Age		-.06		-.01
Gender		-.01		-.05
Ethnicity		-.14		-.02
Competent Coping Skills		-.09		-.05
Commitment to Family Values		-.06		-.12
Optimism for the Future		.13		.00
Community Engagement		-.04		.11
Functional Classroom Behaviour		-.03		-.17
Creativity		.20*		.07
Sense of Well-Being		-.31**		-.02
Health Consciousness		-.11		.08
Pro-social Attitude		.09		-.18
Activity Engagement		.07		.01
Peer Connectedness		.07		.12

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

Table 14

BERS-2 Scales Predicting Bullying and Victimization

Predictor	Victimization (N = 223)		Bullying Behaviour (N = 216)	
	ΔR^2	β	ΔR^2	β
Step 1	.10**		.18**	
Social Desirability		-.28**		-.43**
Age		.08		-.02
Gender		.05		.00
Ethnicity		-.12		.03
Step 2	.04		.04	
Social Desirability		-.25**		-.34**
Age		.07		.01
Gender		.04		.01
Ethnicity		-.12		.03
Interpersonal Strengths		.03		-.14
Family Involvement		.01		.08
Intrapersonal Strengths		-.28**		.17
School Functioning		.01		-.18*
Affective Strengths		.11		-.06

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

Appendix A. Cover letter to Lakehead Public Schools

To the Education Officer:

The purpose of this research study is to explore the role of strengths in the bullying experiences of students. Past research has found that students who are bullies and/or victims often have more social problems, poorer academic achievement, and more behavioural and emotional problems. However, students with more strengths have been found to do better in these areas. We are particularly interested in learning how students' strengths may act as a buffer to reduce negative outcomes from bullying experiences.

This research is important because it will help build our understanding of the strengths and difficulties of students who are bullies, victims, or both. This research may also be used to help develop prevention and intervention programs to help these students reach their potential.

We will be asking students in grades 7 and 8 (with parent/guardian permission) to complete 6 surveys. These surveys ask students about their experiences with bullying, relationships, school, and other thoughts, emotions, and behaviours. Students will complete these surveys during class time. It is expected that students will be able to complete these surveys in 2 sessions lasting approximately 1 hour each. Students' grades will be collected from recent report cards within their Ontario School Records.

Information letters and consent forms for parents/guardians will be handed out by a researcher in the classroom for students to take home. These letters describe the study and invite the parent/ guardian to consent to his/her child's participation in the study. Interested parents/guardians can contact the researchers if they require additional information or clarification. Each class will receive a prize pizza party if at least 80% of the consent forms are returned, regardless of whether or not consent to participate is given.

There are no known physical risks associated with participation in this study. The risk for psychological or emotional discomfort is minimal, and is not greater than that associated with reflection on one's thoughts, feelings, behaviours, and experiences. A researcher will be available while students are completing the surveys to answer any questions about the study.

All information collected will be kept confidential. Information will be held in a secure place at Lakehead University for five years after the study ends. Participation is voluntary, so students can refuse to answer questions or withdraw from the study at any time without consequences.

After the study is completed, participating schools will be provided with a report containing a summary of the results. Interested parents and students will also be provided with this summary if requested. If you have any questions or concerns about this study, please contact me by telephone at (807) 625-5442 or by email at jfranks1@lakeheadu.ca. Further questions or concerns may be directed to Dr. Edward Rawana at (807) 343-8453. You can also contact Lakehead University's Research Ethics Board at (807) 343-8283.

Sincerely,

Jessica Franks, MA, Doctoral Student   Edward Rawana, PhD, Assistant Professor
Dept. of Psychology, Lakehead University Dept. of Psychology, Lakehead University

Appendix B. Consent form for Lakehead Public Schools

My authorized signature on this form indicates that the Lakehead Public School Board agrees to its schools' participation in a study by Jessica Franks and Dr. Edward Rawana. This study will examine students' strengths in relation to bullying experiences and social, academic, emotional, and behavioural functioning. I have read and understand the information letter attached to this consent form and also agree to and understand the following:

1. A researcher will visit selected consenting schools to explain the study to all students in grades 7 and 8 and to hand out information letters about the study and consent forms for the students to take home.
2. A researcher will return to these classes twice to administer the surveys to all students who have received consent from their parent/guardian and who have themselves assented to participate.
3. All surveys will be completed during class time.
4. Participating students' grades will be collected from their Ontario School Record (OSR).
5. All participants are volunteers and can choose not to answer any questions or to withdraw from the study at any time without consequences.
6. There is no anticipated risk of physical or psychological harm to any participants.
7. All information collected will be kept confidential and will not be shared with anyone.
8. The information collected will be stored in a secure place at Lakehead University for five years following the completion of the study, after which it will be destroyed as per university regulations.
9. All participants will remain anonymous in any publication or public presentation of research findings.
10. At my request, I will receive a summary of the group results following the completion of the study.
11. Each classroom with an 80% return rate for consent forms (regardless of whether or not permission to participate is granted) will receive a class prize of a pizza party.

_____

Signature   Date

Appendix C. Cover letter for principals

Dear Principal:

The purpose of this research study is to explore the role of strengths in the bullying experiences of students. Past research has found that students who are bullies and/or victims often have more social problems, poorer academic achievement, and more behavioural and emotional problems. However, students with more strengths have been found to do better in these areas. We are particularly interested in learning how students' strengths may act as a buffer to reduce negative outcomes from bullying experiences.

This research is important because it will help build our understanding of the strengths and difficulties of students who are bullies, victims, or both. This research may also be used to help develop prevention and intervention programs to help these students reach their potential.

We will be asking students in grades 7 and 8 (with parent/guardian permission) to complete 6 surveys. These surveys ask students about their experiences with bullying, relationships, school, and other thoughts, emotions, and behaviours. It is expected that students will be able to complete these surveys in 2 sessions lasting approximately 1 hour each. Students' grades will be collected from recent report cards within their Ontario School Records.

Information letters and consent forms for parents/guardians will be handed out by a researcher in the classroom for students to take home. These letters describe the study and invite the parent/guardian to consent to his/her child's participation in the study. Interested parents/guardians can contact the researchers if they require additional information or clarification. Each class will receive a prize pizza party if at least 80% of the consent forms are returned, regardless of whether or not consent to participate is given.

There are no known physical risks associated with participation in this study. The risk for psychological or emotional discomfort is minimal, and is not greater than that associated with reflection on one's thoughts, feelings, behaviours, and experiences. A researcher will be available while students are completing the surveys to answer any questions about the study.

All information collected will be kept confidential. Information will be held in a secure place at Lakehead University for five years after the study ends. Participation is voluntary, so students can refuse to answer questions or withdraw from the study at any time without consequences.

After the study is completed, participating schools will be provided with a report containing a summary of the results. Interested parents and students will also be provided with this summary if requested. If you have any questions or concerns about this study, please contact me by telephone at (807) 625-5442 or by email at jfranks1@lakeheadu.ca. Further questions or concerns may be directed to Dr. Edward Rawana at (807) 343-8453. You can also contact Lakehead University's Research Ethics Board at (807) 343-8283.

Sincerely,

_____   _____
Jessica Franks, MA, Doctoral Student   Edward Rawana, PhD, Assistant Professor
Dept. of Psychology, Lakehead University   Dept. of Psychology, Lakehead University

Appendix D. Consent form for principals

My signature on this form indicates that I agree to my school's participation in a study by Jessica Franks and Dr. Edward Rawana. This study will examine students' strengths in relation to bullying experiences and social, academic, emotional, and behavioural functioning. I have read and understand the information letter attached to this consent form and also agree to and understand the following:

1. I will distribute information packages about this study to the appropriate grade 7 and 8 teachers in my school.
2. Once classroom teachers have consented, a researcher will visit grade 7 and 8 classes to explain the study to students and to hand out information letters about the study and consent forms for the students to take home.
3. A researcher will return to these classes twice to administer the surveys to all students who have received consent from their parent/guardian and who have themselves assented to participate.
4. All surveys will be completed during class time.
5. Participating students' grades will be collected from their Ontario School Record (OSR).
6. All participants are volunteers and can choose not to answer any questions or to withdraw from the study at any time without consequences.
7. There is no anticipated risk of physical or psychological harm to any participants.
8. All information collected will be kept confidential and will not be shared with anyone.
9. The information collected will be stored in a secure place at Lakehead University for five years following the completion of the study, after which it will be destroyed as per university regulations.
10. All participants will remain anonymous in any publication or public presentation of research findings.
11. At my request, I will receive a summary of the group results following the completion of the study.
12. Each classroom with an 80% return rate for consent forms (regardless of whether or not permission to participate is granted) will receive a class prize of a pizza party.

_____

Signature   Date

Appendix E. Cover letter for teachers

Dear Teacher:

The purpose of this research study is to explore the role of strengths in the bullying experiences of students. Past research has found that students who are bullies and/or victims often have more social problems, poorer academic achievement, and more behavioural and emotional problems. However, students with more strengths have been found to do better in these areas. We are particularly interested in learning how students' strengths may act as a buffer to reduce negative outcomes from bullying experiences.

This research is important because it will help build our understanding of the strengths and difficulties of students who are bullies, victims, or both. This research may also be used to help develop prevention and intervention programs to help these students reach their potential.

We will be asking students in grades 7 and 8 (with parent/guardian permission) to complete 6 surveys. These surveys ask students about their experiences with bullying, relationships, school, and other thoughts, emotions, and behaviours. It is expected that students will be able to complete these surveys in 2 sessions lasting approximately 1 hour each. Students' grades will be collected from recent report cards within their Ontario School Records.

Information letters and consent forms for parents/guardians will be handed out by a researcher in the classroom for students to take home. These letters describe the study and invite the parent/guardian to consent to his/her child's participation in the study. Interested parents/guardians can contact the researchers if they require additional information or clarification. Each class will receive a prize pizza party if at least 80% of the consent forms are returned, regardless of whether or not consent to participate is given.

There are no known physical risks associated with participation in this study. The risk for psychological or emotional discomfort is minimal, and is not greater than that associated with reflection on one's thoughts, feelings, behaviours, and experiences. A researcher will be available while students are completing the surveys to answer any questions about the study.

All information collected will be kept confidential. Information will be held in a secure place at Lakehead University for five years after the study ends. Participation is voluntary, so students can refuse to answer questions or withdraw from the study at any time without consequences.

After the study is completed, participating schools will be provided with a report containing a summary of the results. Interested parents and students will also be provided with this summary if requested. If you have any questions or concerns about this study, please contact me by telephone at (807) 625-5442 or by email at jfranks1@lakeheadu.ca. Further questions or concerns may be directed to Dr. Edward Rawana at (807) 343-8453. You can also contact Lakehead University's Research Ethics Board at (807) 343-8283.

Sincerely,

_____   _____
Jessica Franks, MA, Doctoral Student   Edward Rawana, PhD, Assistant Professor
Dept. of Psychology, Lakehead University   Dept. of Psychology, Lakehead University

Appendix F. Consent form for teachers

My signature on this form indicates that I agree to my class's participation in a study by Jessica Franks and Dr. Edward Rawana. This study will examine students' strengths in relation to bullying experiences and social, academic, emotional, and behavioural functioning. I have read and understand the information letter attached to this consent form and also agree to and understand the following:

1. A researcher will visit my classroom to explain the study to students and to hand out information letters about the study and consent forms for the students to take home.
2. A researcher will return to my classroom twice to administer the surveys to all students who have received consent from their parent/guardian and who have themselves assented to participate.
3. All surveys will be completed during class time.
4. Participating students' grades will be collected from their Ontario School Record (OSR).
5. All participants are volunteers and can choose not to answer any questions or to withdraw from the study at any time without consequences.
6. There is no anticipated risk of physical or psychological harm to any participants.
7. All information collected will be kept confidential and will not be shared with anyone.
8. The information collected will be stored in a secure place at Lakehead University for five years following the completion of the study, after which it will be destroyed as per university regulations.
9. All participants will remain anonymous in any publication or public presentation of research findings.
10. At my request, I will receive a summary of the group results following the completion of the study.
11. Each classroom with an 80% return rate for consent forms (regardless of whether or not permission to participate is granted) will receive a class prize of a pizza party.

_____

Signature   Date

Appendix G. Cover letter for parents/guardians

Dear Parent/Guardian:

The purpose of this research study is to explore the role of strengths in the bullying experiences of students. Past research has found that students who are bullies and/or victims often have more social problems, poorer academic achievement, and more behavioural and emotional problems. However, students with more strengths have been found to do better in these areas. We are particularly interested in learning how students' strengths may act as a buffer to reduce negative outcomes from bullying experiences.

This research is important because it will help build our understanding of the strengths and difficulties of students who are bullies, victims, or both. This research may also be used to help develop prevention and intervention programs to help these students reach their potential.

We will be asking students in grades 7 and 8 (with parent/guardian permission) to complete 6 surveys. These surveys ask students about their experiences with bullying, relationships, school, and other thoughts, emotions, and behaviours. Students will complete these surveys during class time. It is expected that students will be able to complete these surveys in 2 sessions lasting approximately 1 hour each. Students' grades will be collected from recent report cards within their Ontario School Records. **Each class will receive a prize pizza party if at least 80% of the consent forms are returned, whether or not permission to participate is given.**

There are no known physical risks associated with participation in this study. The risk for psychological or emotional discomfort is minimal, and is not greater than that associated with reflection on one's thoughts, feelings, behaviours, and experiences. A researcher will be available while students are completing the surveys to answer any questions about the study.

If you choose to have your child participate in this study, your child will be given the choice to participate by signing an assent form. Participation is voluntary, so students can refuse to answer questions or withdraw from the study at any time without consequences. Your child's name will not be put on any information we collect, so all information will be kept confidential. When we write up reports or give presentations about this study, we will never use your child's name or any other identifying information. Information will be kept in a locked cabinet at Lakehead University for five years after the study ends, and only the researchers will be able to look at it.

If you would like your child to participate, please sign the attached consent form and give it to your child to return to his or her teacher.

If you have any questions or concerns about this study, or if you want a group summary of the results, please contact me by telephone at (807) 625-5442 or by email at jfranks1@lakeheadu.ca. Further questions or concerns may be directed to Dr. Edward Rawana at (807) 343-8453. You can also contact Lakehead University's Research Ethics Board at (807) 343-8283.

Sincerely,

_____   _____
Jessica Franks, MA, Doctoral Student   Edward Rawana, PhD, Assistant Professor
Dept. of Psychology, Lakehead University   Dept. of Psychology, Lakehead University

Appendix H. Consent forms for parents/guardians

My signature on this form indicates that I have read the attached information letter and agree to my child's participation in a study by Jessica Franks and Dr. Edward Rawana. This study will examine students' strengths in relation to bullying experiences and social, academic, emotional, and behavioural functioning. I have read and understand the information letter attached to this consent form and also agree to and understand the following:

1. A researcher has visited my child's classroom to explain the study and provide information letters about the study and consent forms for the students to take home.
2. A researcher will return to my child's classroom twice to administer the surveys to all students who have received consent from their parent/guardian and who have themselves assented to participate.
3. All surveys will be completed during class time.
4. My child's grades will be collected from a recent report card in his or her Ontario School Record (OSR).
5. My child is a volunteer and can choose not to answer any questions or to withdraw from the study at any time without consequences.
6. There is no anticipated risk of physical or psychological harm to my child due to participation in this study.
7. All information collected will be kept confidential and will not be shared with anyone.
8. The information collected will be stored in a secure place at Lakehead University for five years following the completion of the study, after which it will be destroyed as per university regulations.
9. My child will remain anonymous in any publication or public presentation of research findings.
10. At my request, I will receive a summary of the group results after the study is completed.
11. Each classroom with an 80% return rate for consent forms (regardless of whether or not permission to participate is granted) will receive a class prize of a pizza party.

Please check one:

☐ I **agree** to let my child participate in this study.

☐ I **do not agree** to let my child participate in this study.

_____   _____
Parent/Guardian's Name (Please Print)   Child's Name (Please Print)

_____   _____
Signature   Date

Appendix I. Information letter for students

Dear Student:

We are conducting a research study at your school to learn about how students' strengths may help them to be successful and happy in life, especially for students who have been bullied or have bullied other students. This research is important because it will help us to learn more about the strengths and difficulties of students who are involved in bullying and to develop programs that can help students who are bullies and who have been bullied.

We would like you to be a part of this research. We will be asking interested students to complete 6 surveys. These surveys ask students about their experiences with bullying, relationships, school, and other thoughts, emotions, and behaviours. Students will fill out these surveys at school during class time. We will visit your classroom twice to complete these surveys. It will take about 1 hour on each visit to complete the surveys. We will also be looking at your report cards.

Each class will receive a prize pizza party if at least 80% of the consent forms are returned, whether or not permission to participate is given.

There is no expected physical risk to you, if you participate in this study. Most students also do not find the questions in these surveys upsetting. If you choose to participate, you can choose to not answer any questions or to leave the study at any time without consequences.

We will not put your name on any of the surveys, so all the information will be kept private and confidential and no one at the school will know what your answers are. Your information will be kept in a locked cabinet at Lakehead University for five years after the study ends, and only the researchers will be able to look at it. When we write up reports or give presentations about this study, we will never use your name or give any information that would let anyone know your identity.

If you would like to participate, please sign the attached assent form.

If you have any questions or concerns about this study, please ask the researcher visiting your class. If you have questions later, you can contact me by telephone at (807) 625-5442 or by email at jfranks1@lakeheadu.ca. You can also call Dr. Edward Rawana at (807) 343-8453 or Lakehead University's Research Ethics Board at (807) 343-8283.

Thanks for your help!

Sincerely,

_____   _____
Jessica Franks, MA, Doctoral Student   Edward Rawana, PhD, Assistant Professor
Dept. of Psychology, Lakehead University   Dept. of Psychology, Lakehead University

Appendix J. Assent form for students

My signature on this form indicates that I have read the attached information letter and agree to participate in a study by Jessica Franks and Dr. Edward Rawana. This study will examine students' strengths in relation to bullying experiences and social, academic, emotional, and behavioural functioning. I have read and understand the information letter attached to this consent form and also agree to and understand the following:

1. A researcher has visited my classroom to explain the study and answered any questions that I may have about the study.
2. My parent/guardian has signed the consent form to allow me to participate in this study.
3. All surveys will be completed during class time on two different days.
4. My grades will be collected from a recent report card.
5. I am a volunteer and can choose not to answer any questions or to leave the study at any time without consequences.
6. There is no expected risk of physical or psychological harm to me from participating in this study.
7. All information about me will be kept private and confidential and will not be shared with anyone.
8. The information collected will be stored in a secure place at Lakehead University for five years following the completion of the study, after which it will be destroyed as per university regulations.
9. I will be anonymous in any publication or public presentation of research findings.
10. At my request, I will receive a summary of the group results after the study is finished.
11. Each classroom with an 80% return rate for consent forms (whether or not permission to participate is given) will receive a class prize of a pizza party.

_____   _____

Child's Name (please print)   Signature of Child

_____

Date

Appendix K. Demographic questionnaire

Please answer the following questions about yourself. Your answers will help us to learn more about the experiences of students like you. Your answers will <u>NOT</u> be used to identify who you are.

(1) What school do you go to? _____

(2) What grade are you in? (circle one)   7   8

(3) How old are you? _____

(4) What is your gender? (circle one)   male   female

(5) What language(s) does your family speak at home? _____

_____

(6) What is your ethnic background? (check any that describe you)

☐ Aboriginal, Native, or Métis

☐ Asian

☐ Black

☐ Hispanic

☐ White

☐ Other (please describe) _____

Appendix L. Modified Children's Social Desirability Scale

This survey lists a number of experiences that most children have at one time or another. Please read each question carefully. Then circle the answer (YES or NO) that fits best for you.

1. Have you ever felt like saying unkind things to a person?   YES   NO

2. Are you always careful about keeping your clothing neat and your   YES   NO
room picked up?

3. Do you sometimes feel like staying home from school even if you are   YES   NO
not sick

4. Do you ever say anything that makes somebody else feel bad?   YES   NO

5. Are you always polite, even to people who are not very nice?   YES   NO

6. Sometimes do you do things you've been told not to do?   YES   NO

7. Do you always listen to your parents?   YES   NO

8. Do you sometimes wish you could just play around instead of having   YES   NO
to go to school?

9. Have you ever broken a rule?   YES   NO

10. Do you sometimes feel angry when you don't get your way?   YES   NO

11. Do you sometimes feel like making fun of other people?   YES   NO

12. Do you always do the right things?   YES   NO

13. Are there some times when you don't like to do what your parents   YES   NO
tell you?

14. Do you sometimes get mad when people don't do what you want   YES   NO
them to do?

(Crandall, Crandall, & Katovsky, 1965; modified by Baxter, Smith, Litaker, Baglio, Guinn, & Schaffer, 2004)

Appendix M. Strengths Assessment Inventory, Youth Self-Report

Appendix N. Behavioural and Emotional Rating Scale – 2nd Edition, Youth Rating Scale

Appendix O. Achenbach System of Empirically Based Assessment, Youth Self-Report

Appendix P. Friendship Quality Questionnaire

Think about your friendship with your best friend. What is his/her name? _____
Please write your friend's name on the blank lines below. Then pick the answer that best
describes your friendship for each question.

1. _____ and I live really close to each other.
   Not at all true   **A little true**   **Somewhat true**   **Pretty true**   **Really true**
            0   1   2   3   4

2. _____ and I always sit together at lunch.
   Not at all true   **A little true**   **Somewhat true**   **Pretty true**   **Really true**
            0   1   2   3   4

3. _____ and I get mad at each other a lot.
   Not at all true   **A little true**   **Somewhat true**   **Pretty true**   **Really true**
            0   1   2   3   4

4. _____ tells me I'm good at things.
   Not at all true   **A little true**   **Somewhat true**   **Pretty true**   **Really true**
            0   1   2   3   4

5. If other kids were talking behind my back,_____ would always stick up for me.
   Not at all true   **A little true**   **Somewhat true**   **Pretty true**   **Really true**
            0   1   2   3   4

6. _____ and I make each other feel important and special.
   Not at all true   **A little true**   **Somewhat true**   **Pretty true**   **Really true**
            0   1   2   3   4

7. _____ and I always pick each other as partners.
   Not at all true   **A little true**   **Somewhat true**   **Pretty true**   **Really true**
            0   1   2   3   4

8. If _____ hurts my feelings, _____ says "I'm sorry".
   Not at all true   **A little true**   **Somewhat true**   **Pretty true**   **Really true**
            0   1   2   3   4

9. I can think of some times when _____ has said mean things about me to other kids.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

10. I can always count on _____ for good ideas about games to play.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

11. If _____ and I get mad at each other, we always talk about how to get over it.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

12. _____ would still like me even if all the other kids didn't like me.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

13. _____ tells me I'm pretty smart.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

14. _____ and I are always telling each other about our problems.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

15. _____ makes me feel good about my ideas.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

16. When I'm mad about something that happened to me, I can always talk to _____ about it.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

17. _____ and I help each other with chores or other things a lot.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

18. _____ and I do special favors for each other.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

19. _____ and I do fun things together a lot.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

20. _____ and I argue a lot.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

21. I can always count of _____to keep promises.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

22. _____ and I go to each other's house after school and on weekends.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

23. _____ and I always play together at recess.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

24. When I'm having trouble figuring out something, I usually ask _____for help and advice.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

25. _____ and I talk about the things that make us sad.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

26. _____ and I always make up easily when we have a fight.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

27. _____ and I fight.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

28. _____ and I always share things like stickers, toys, and games with each other

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

29. If _____ and I are mad at each other, we always talk about what would help to make us feel better.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

30. If I told _____ a secret, I could trust _____ not to tell anyone else.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

31. _____ and I bug each other.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

32. _____ and I always come up with good ideas on ways to do things.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

33. _____ and I loan each other things all the time.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

34. _____ often helps me with things so I can get done quicker.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

35. _____ and I always get over our arguments really quickly.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

36. _____ and I always count on each other for ideas on how to get things done.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

37. _____ doesn't listen to me.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

38. _____ and I tell each other private things a lot.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

39. _____ and I help each other with schoolwork a lot.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

40. I can think of lots of secrets _____ and I have told each other.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4

41. _____ cares about my feelings.

Not at all true	A little true	Somewhat true	Pretty true	Really true
0	1	2	3	4