

EVALUATING EMOTIONAL INTELLIGENCE AND RESILIENCY OUTCOMES OF  
SCHOOL-AGED CHILDREN IN A SOCIAL AND EMOTIONAL LEARNING PROGRAM

by

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## Abstract

A school-based social emotional learning (SEL) program based on cognitive-behavioural principles is currently used in western Canadian schools; however, research on its benefits to child participants is limited. This controlled study reports on data collected from 152 grade three and four students; 70 students participated in the evidence-based program, *FRIENDS for Life* for Children (*FRIENDS*; Barrett, 2004) and 82 students were in the control group. All participants were assessed for emotional intelligence (EI) and resiliency at 3 time points: immediately before the start of the program (Time 1), immediately following the end of the program (Time 2), and at 3-months follow-up (Time 3). Resiliency is defined as an ability to deal effectively with difficulties or adversity and resist environmental risk experiences (Rutter, 2006). Assessments included two child-report measures (*Strengths and Difficulties Questionnaire* – Student Report; *Emotional Quotient Inventory – Youth Version*), two parent-report measures (*Behavior Assessment System for Children* – Parent Rating Scales; *Social Competence Scale* – Parent Version) and one teacher-report measure (*Strengths and Difficulties Questionnaire* – Teacher Report). Teachers in the intervention group also completed a *FRIENDS* fidelity checklist. Data were analyzed using between-groups independent samples *t*-tests and five separate within-group 2 x 3 MANOVAs. Results indicate that between-groups scores (*FRIENDS* vs. Control) did not statistically differ at any assessment period on any measure, but that within-group scores from children who participated in the program showed statistically significant increases on the *Emotional Quotient Inventory – Youth Version* Total EQ subscale (Time 1 vs. Time 2, and Time 1 vs. Time 3) and the *Social Competence Scale – Parent Version* Total Score (Time 1 vs. Time 3) over time. These increases suggest that children who participated in *FRIENDS* self-reported increased intrapersonal and interpersonal skills, adaptability, and stress management abilities

over time, and that parents of children in *FRIENDS* reported increased social skills and emotion regulation abilities in their children over time. Teachers did not report observing differences in their students over time.

## **Preface**

This research was approved by the University of British Columbia's Behavioural Research Ethics Board. The Certificate Number of the Ethics Certificate obtained was H10- 01065.

This research was also approved by the specific school district of implementation, the School District Research & Evaluation Department, number RES201011\_56.

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## **Glossary of Terms**

Emotional Intelligence (EI): “an array of emotional, personal, and social abilities that [affect] one’s overall ability to effectively cope with daily demands and pressures” (Bar-On, 2000, p. 373)

Resiliency: “relative resistance to environmental risk experiences, or the overcoming of stress or adversity” (Rutter, 2006, p. 2)

Early Effortful Control: the “[ability] to focus or shift attention as needed” (Spinrad et al., 2006, p. 498)

Executive Functioning: “cognitive control, maintenance of behavior toward a goal, and adjustment of behavior to context demands” (Martel et al., 2007, p. 541)

Social and Emotional Learning: “the process of acquiring and effectively applying the knowledge, attitudes, and skills necessary to recognize and manage emotions; developing caring and concern for others; making responsible decisions; establishing positive relationships; and handling challenging situations capably” (Zins & Elias, 2007, p. 234)

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## **1 Introduction**

Counselling psychologists work with clients to address a spectrum of mental health issues. Epidemiologic research has found that 74% of adults diagnosed with a mental health disorder met diagnostic criteria before the age of 18 (Kim-Cohen et al., 2003), suggesting that most adults who are coping with mental illness have been doing so for the majority of their lives. A lifetime of coping with mental health problems can be debilitating both to a client's life and to the lives of his or her family. When treatment is sought, it can be expensive and time-consuming. Universal, school-based, early intervention and preventive programs for school-aged children are an easily accessible approach to effectively promoting mental health throughout the lifespan (Cardemil, Reivich, & Seligman, 2002; Lowry-Webster, Barrett, & Dadds, 2001; Lowry-Webster, Barrett, & Lock, 2003; Liddle and Macmillan, 2010; Masia-Warner et al., 2005). A primary objective of many of these programs is to increase participants' social and emotional skills (CASEL, 2011b), and they are thus often referred to as Social and Emotional Learning (SEL) programs.

SEL is a broad construct, and includes programs focused on the prevention and early intervention of various childhood mental health concerns (e.g., anxiety, depression). These programs aim to target the prevalence of emotional disturbances amongst youth (Farrell & Barrett, 2007), and to provide youth with the tools needed to develop cognitive, affective, and behavioural skills that will allow them to cope with stress and negative influences (Graczyk et al., 2000).

SEL programs vary in terms of quality, scope, and effectiveness, and choosing which program to implement in a school district can be a difficult task (Graczyk et al., 2000). Program evaluations that research indicators of program effectiveness, including fulfillment of objectives

and increases in SEL outcomes for participants, help policymakers determine which programs to implement in their school districts to best serve their students' needs (Graczyk et al., 2000).

Therefore, program evaluators hoping to generate useful results would be wise to conduct studies that ask the following research questions: 1) Does the SEL program fulfill its stated objectives, and 2) What effect does the program have on SEL outcomes for child participants?

Evaluations of SEL programs have found that these programs significantly increase levels of early effortful control, positive social behaviour, self-regulatory skills, emotion recognition, and empathy amongst child participants (Cardemil, Reivich, & Seligman, 2002; Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Masia-Warner et al., 2005; Santos, Chartier, Whalen, Chateau, & Boyd 2011; Schonert-Reichl & Stewart Lawlor, 2010; Ulutaş & Ömeroğlu, 2007). Researchers (Eisenberg et al, 1997; Spinrad et al., 2006) have found that the above named factors are positively correlated with the constructs of: 1) emotional intelligence (EI), defined as various abilities that allow one to cope with everyday stressors (Bar-On, 2000), and 2) resiliency, defined as an ability to deal effectively with difficulties or adversity (Rutter, 2006). A child who participates in a SEL program has the opportunity to learn social and emotional skills that foster emotional competency, allowing him or her to cope effectively with daily stressors and demonstrate properties of resiliency (Saarni, 2000).

The following study evaluates the program *FRIENDS for Life* for Children (*FRIENDS*; Barrett, 2004). *FRIENDS* is grounded in cognitive-behavioural therapy (CBT) principles, and claims to promote self-esteem, problem-solving skills, self-expression, and improve peer relationships (Australian Academic Press, 2007; British Columbia Ministry of Child and Family Development, 2007), constructs positively correlated with EI and resiliency (Eisenberg et al., 1997; Spinrad et al., 2006). Although *FRIENDS* is being implemented in many school districts,

studies researching its effectiveness are limited (Briesch, Sanetti, & Briesch, 2010; Fisak, Richard, & Mann, 2011). Additionally, *FRIENDS* has not been evaluated for EI and resiliency outcomes.

## **1.1 Research Problem**

### **1.1.1 Personal Costs and Limitations of Low Emotional Intelligence and Resiliency**

Researchers worldwide have documented the significant rates of childhood mental health disorders, the most prevalent being anxiety disorders and depression (Chavira, Stein, Bailey, & Stein, 2004; Merikangas et al., 2010). Some hypothesized causes (Greenberg et al., 2003) for these high rates of childhood mental health disorders include: increases in economic and social pressures on the family; the weakening of community institutions designed to foster children's emotional, social, and moral development; and easier access to media that promotes health-damaging behaviours. Regardless of the cause, with such high prevalence of childhood emotional disturbances, youth are prone to encounter negative consequences and social problems including: extreme poverty; increased use of tobacco; drug and substance abuse; teenage pregnancy; violent offences; adolescent suicide; social withdrawal; attention and cognitive issues; higher rates of depression; lower academic achievement; school avoidance; and impaired family cohesion and functioning (Goleman, 1995; Ost & Treffers, 2001).

Goleman (1995) suggests that professionals who work with youth should “follow the logic of prevention, offering our children the skills for facing life that will increase their chance of avoiding any and all of these fates” (p. 256). One posited method for teaching children these skills is school-based, early intervention and preventive SEL programs, designed to improve social and emotional competencies. One such program, *FRIENDS*, may ideally serve to promote emotional and social learning within children, and in turn, lifelong mental health resilience. If



youth are able to develop intrapersonal and interpersonal competencies early in life, it is less likely that they will enter adolescence and adulthood with emotional and social intelligence deficits (Goleman, 1995), shielding them from potentially devastating and debilitating outcomes.

Opponents of SEL programs include educators, administrators, and parents who argue that teaching children emotional and social skills during school hours encroaches on valuable time needed for academic subjects, or that it is not the responsibility of the classroom teacher to teach children these skills, but rather that of the parent or a school counsellor (Elias, Bruene-Butler, Blum, & Schuyler, 2000); however, it may not be realistic to expect that all children will learn skills of emotional competence outside of a classroom setting. However, effective collaboration from parents concerning emotional and social skills may not be an option for many children, since many parents themselves are deficient in these skills (Elias, Bruene-Butler, Blum, & Schuyler, 2000). School-based SEL programs are one solution to the uncertainty of social and emotional learning in the home. These programs can be universally delivered to children and offer them an opportunity to learn and improve emotional and social competency skills (Goleman, 1995).

The British Columbia Ministries of Health Services and Child and Family Development (2010) acknowledge, in their joint publication *Healthy Minds, Healthy People: A Ten-Year Plan to Address Mental Health and Substance Use in British Columbia*, that the development of social and emotional skills during childhood increases resiliency, and decreases the risk of developing mental health and substance use problems later in life. Both ministries recognize that universal, school-based programs, such as *FRIENDS*, “promote social-emotional, cognitive development, and resilience in children, youth, and families” (p. 14), and are a feasible and effective way of addressing social and emotional developmental deficits.

### 1.1.2 Limitations of *FRIENDS* Research

According to the promotional literature (Australian Academic Press, 2007; British Columbia Ministry of Child and Family Development, 2007), the *FRIENDS* program's objectives are to help children deal with difficulties, recognize signs of anxiety, learn relaxation techniques, think positively, problem solve, use peer support, resolve conflict, and be emotionally resilient. Previous outcome studies have evaluated the program's effect on participants amongst a variety of factors (Barrett, Farrell, Ollendick, & Dadds, 2006; Liddle & Macmillan, 2010; Lowry-Webster, Barrett, & Dadds, 2001; Lowry-Webster, Barrett, & Lock, 2003; Miller et al., 2011; Rose, Miller, & Martinez, 2009). Researchers who have analyzed multiple evaluations of *FRIENDS* conclude that there are two major limitations in the literature: 1) the majority of studies have been conducted with Australian populations, and 2) the majority of studies have used only child-report measures (Briesch, Sanetti, & Briesch, 2010; Fisak, Richard, & Mann, 2011). Of the 18 *FRIENDS* evaluations that Fisak and colleagues (2011) examined, 11 (61%) were conducted with Australian populations and 16 (89%) used only child-report measures; of the 14 evaluations Briesch and colleagues (2010) examined, 7 (50%) were conducted with Australian populations and 11 (79%) used only child-report measures.

There are no references in the *FRIENDS* literature with respect to EI or resiliency outcomes, which are broad measures of emotional competence that may be more representative of a community sample of children and more consistent with public school tasks. A research study that addresses social and emotional skills may provide empirical support for *FRIENDS*, supporting the British Columbian Ministries of Health Services and Child and Family Development's (2010) initiative to increase its use in schools to "improve health and educational

outcomes, and encourage the development of lifelong skills, attitudes and health behaviours” (p.14).

### **1.1.3 Overview of the Research Problem**

Research on the prevalence of childhood mental health disorders indicates that rates are alarmingly high. Some evidence demonstrates that teaching children skills of emotional competence early in life, similar to other lifelong skills of reading and writing, enhances outcomes on a variety of factors. One program (*FRIENDS*), currently being implemented in western Canadian schools, has not yet been evaluated for some of these outcomes related to emotional competence in a Canadian context. Mixed results from other studies around the world indicate a need to continue to evaluate SEL programming in local contexts.

## **1.2 Purpose of Study**

The purpose of this study is to research the effect that a SEL program, the *FRIENDS for Life* for Children program, has on levels of emotional intelligence and resiliency in a group of school-aged children. The study uses data from a group of grade three and four students attending eight public schools in the western Canada. *FRIENDS* is offered throughout the province, paid for by the Ministries of Child and Family Development and Education.

## **1.3 Significance of Study**

Results from this study demonstrate the effect on levels of both EI and resiliency within a non-clinical group of grade three and four children in an urban school district, following implementation of the *FRIENDS* program.

## **1.4 Theoretical Perspectives**

The following study is guided by two theoretical perspectives drawn from the discipline of counselling psychology: 1) cognitive-behavioural therapy, and 2) school-based, preventive, social emotional learning programs. These theories informed the study's research questions, hypotheses, and method.

### **1.4.1 Cognitive-behavioural Therapy**

*FRIENDS* is grounded in the principles of cognitive-behavioural therapy (CBT), a theoretical orientation that posits that individuals interpret and experience life events through cognitive, affective, motivational, and behavioural responses (Beck & Weishaar, 2008). CBT combines cognitive interventions that work to restructure negative or maladaptive thoughts, and behavioural interventions that teach clients useful skills and techniques to cope with everyday stressors. The *FRIENDS* protocol includes the following CBT principles: information giving (teaching children that cognitions and affect are interrelated, psychoeducation regarding the physiological symptoms of anxiety), goal setting, cognitive restructuring (red vs. green thoughts), role-playing activities, relaxation training (progressive muscle relaxation), and homework (for skill-reinforcement). CBT's theory of change assumes that by challenging and modifying dysfunctional or maladaptive assumptions, one can produce effective cognitive, emotional, and behavioural changes in his or her life, but to ensure that this change is maintained one must experience emotional arousal within a real-world setting (Beck & Weishaar, 2008). *FRIENDS* is presented in a real-world setting (school) where children have the opportunity to test new learning (e.g., alternate cognitions, relaxation techniques) in response to daily difficulties.

### **1.4.2 School-based, Preventive, Social Emotional Learning Programs**

School-based, preventive programs focus on the preservation of mental health and the promotion of positive development and emotional wellness throughout the lifespan, and offer a service that meets the changing needs of students (Adelman & Taylor, 2000). *FRIENDS*, an early intervention and preventive program focused on promoting healthy emotional and social development and reducing anxious symptoms in children, is offered in an universal, school-based setting, increasing its accessibility to children.

Many school-based, preventive programs are designed to increase participants' social emotional learning (SEL) outcomes. SEL is defined as the process of learning and applying the knowledge and skills needed to recognize and manage emotions, care for others, make responsible decisions, develop positive relationships, and cope with difficulties (Zins & Elias, 2007). SEL programming offers children opportunities to experience developmentally appropriate prosocial interactions with both peers and adults, build social and emotional skills, and receive rewards for implementing these skills.

In *Safe and Sound: An Educational Leader's Guide to Evidence-Based Social and Emotional Learning (SEL) Programs* (2003), the Collaborative for Academic, Social, and Emotional Learning (CASEL) summarizes its recommendations for effective SEL programming into 10 guidelines: 1) a basis in theory and research, 2) the application of SEL skills to everyday life, 3) the ability to create a connection from student to school, 4) the use of developmentally and culturally appropriate materials, 5) a connection to academic curricula, 6) the ability to enhance academic achievement, 7) the involvement of school, family, and community, 8) the establishment of organizational supports and policies, 9) an opportunity for staff development and support, and 10) a consideration of implementation and sustainability issues. When delivered

in the most ideal manner, the *FRIENDS* program appears to support all of these guidelines.

## **1.5 Research Questions**

The study addresses the following research questions:

- 1) What effect does a social and emotional learning program, *FRIENDS*, have on levels of emotional intelligence and resiliency in a group of grade three and four students over the course of one academic school year?
- 2) How are levels of emotional intelligence and levels of resiliency related?

## **1.6 Hypotheses**

The study's hypotheses are:

- 1) Children who participate in the *FRIENDS for Life* program will have statistically higher scores at post-test (Time 2) and at 3-month follow-up (Time 3) on subscales related to EI and resiliency than children who do not participate in *FRIENDS*.
- 2) Children who participate in the *FRIENDS for Life* program will have statistically significant increases on scores related to EI and resiliency over time.
- 3) The degree of magnitude of correlations between child-, parent-, and teacher-report measures will be small.

## **2 Literature Review**

### **2.1 Introduction**

What is it that allows some children to thrive and develop into successful adults? Resiliency, defined as “relative resistance to environmental risk experiences, or the overcoming of stress or adversity” (Rutter, 2006, p. 2), has been both suggested and evaluated as a preventive quality that helps individuals to cope with and endure adversity. Researchers have found many factors that promote resiliency, ranging from those that are unalterable (e.g., parental monitoring and interactions, family cohesion, attending a safe school, low levels of crime in the community) to those that can be altered through intervention (e.g., self-regulatory skills, positive self-esteem, higher levels of empathy, early effortful control, executive functioning). Many of these alterable factors are associated with components of emotional intelligence (EI), defined as “an array of emotional, personal, and social abilities that [affect] one’s overall ability to effectively cope with daily demands and pressures” (Bar-On, 2000, p. 373). Educators and counsellors may promote resiliency by intervening at the individual level and promoting EI. One way that EI can be fostered is through the implementation of school-based SEL programs such as *FRIENDS*. Early indication is that teaching social and emotional skills to children may prevent the development of mental health problems later in life (Goleman, 1995).

### **2.2 Emotional Intelligence**

The concept of emotional intelligence gained popularity in the 1990s in part due to Daniel Goleman’s seminal book, *Emotional Intelligence* (1995). Although many models and definitions for EI exist, this study operates from Bar-On’s (1997; 2000) model and definition, which informed the design of the *Emotional Quotient Inventory: Youth Version Short*, a measure

used in this study. In turn, Bar-On's model and definition of EI was guided by Mayer and Salovey's (1995) conceptualization of EI as "the capacity to process emotional information accurately and efficiently, including that information relevant to the recognition, construction, and regulation of emotion in oneself and others" (p. 197). Bar-On (1997) claims that emotionally intelligent individuals possess the abilities to: recognize and express their emotions, self-actualize, understand how others feel, make and maintain fulfilling interpersonal relationships, problem-solve, and are generally optimistic, flexible, and realistic. The Bar-On model (2000b), and the *Emotional Quotient Inventory – Youth Version Short*, view EI as being comprised of abilities within four domains: Intrapersonal, Interpersonal, Adaptability, and Stress Management. Each of these domains consists of EI components including: emotional self-awareness, assertiveness, self-regard, self-actualization, independence, empathy, social responsibility, interpersonal relationships, stress tolerance, impulse control, reality testing, flexibility, and problem solving. Bar-On (2000b) argues that EI develops and changes throughout the lifespan, and can be improved via training programs and psychotherapeutic interventions; therefore, the argument can be made that EI is not a static trait, but rather a flexible quality that can be influenced by intervention efforts such as SEL programming.

Lower levels of EI are associated with higher rates of mental health and social problems including anxiety, depression, eating disorders, drug and substance abuse, social withdrawal, attention and cognitive issues, aggression, difficulty adjusting to other individuals who employ different emotional models, and difficulty adjusting to unfamiliar and distressing emotional events (Goleman, 1995; Mayer & Salovey, 1995). The persistent nature of poor EI is also troublesome, since children who have low EI are likely to develop into adults with low EI (Goleman, 1995).



One key method of learning positive emotionality and possibly improving levels of EI is to spend time with others who model high levels of EI (Mayer & Salovey, 1995). However, some children do not have the opportunity to observe high levels of EI in the home, or may not see frequent displays of EI. Empirical research with child participants has shown that levels of trait EI and prosocial behaviours can be positively influenced through early intervention efforts (Kelly, Longbottom, Potts, & Williamson, 2004; Ulutaş & Ömeroğlu, 2007). These trends have also been observed amongst adults who participated in a 2.5 hour-long group EI training program; participants showed improvements in emotion recognition, emotion management skills, and trait EI levels up to 6-months follow-up (Nelis, Quoidbach, Mikolajczak, & Hansenne, 2009).

School-based SEL programs provide children with an opportunity to learn valuable social and emotional skills, such as problem solving, self-expression, positive thinking, how to build positive relationships with peers and adults, and how to cope with difficulties. Goleman (2004) states that the best SEL programs teach children specific skills like self-awareness, self-management, empathy, perspective taking, and cooperation – “[in short], they [teach] lessons in emotional intelligence” (p. vii).

### **2.3 Resiliency**

Traditionally, resiliency has been defined in relation to risk, and has been considered relevant only to individuals deemed ‘at-risk’ due to underlying fundamental, individual, familial, or community factors. One who emerges from adverse life conditions and thrives either academically, emotionally, or socially, is thought to have ‘beaten the odds’ and possess an innate capacity for resiliency. However, all individuals will at some point face difficulties and challenges, regardless of whether they were deemed ‘at-risk’ during childhood. Developing and

strengthening resiliency and its related factors may be beneficial, regardless of the probability of future adverse life events. Researchers have found that resiliency is not a unique or rare trait possessed by the few, but rather it is ordinary and arises from normal human adaptive processes (Masten, 2001; Werner & Smith, 2001). Rutter (2006) suggests it is better to consider resiliency as a flexible process rather than a fixed trait. Certain genetic and environmental factors can either promote or hinder the development of resiliency, but research indicates that particular factors related to resiliency are alterable through early intervention efforts (Cardemil, Reivich, & Seligman, 2002; Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Kelly, Longbottom, Potts, & Williamson, 2004; Liddle & Macmillan, 2010; Santos, Chartier, Whalen, Chateau, & Boyd, 2011; Ulutaş & Ömeroğlu, 2007).

Researchers have determined multiple factors or “asset-risk variables” (Masten, 2001, p. 230) that serve to either promote or hinder the development of resiliency in children. These factors can be categorized as fundamental, familial, community, or individual. Fundamental factors are unalterable traits, including gender, age, and ethnicity. Researchers have found that being female and being Caucasian are two fundamental factors associated with higher levels of resiliency (DuMont, Widom, & Czaja, 2007; Tiet et al., 2001).

Familial factors are typically beyond the child’s influence. Some familial factors that have been found to promote resiliency amongst children include having higher levels of parental monitoring, sustained parent-infant interactions, family cohesion, the absence of maternal psychopathology, fewer adverse life events, more adults living in the home, and the presence of religiosity in the home (Prevatt, 2003; Tiet et al., 1998; Tiet et al., 2001; Werner & Smith, 2001).

Community factors that promote resiliency include attending a safe school, having nurturing teachers, the availability of social clubs, the availability of outreach services, the

availability of psychoeducational materials and resources, and low levels of crime in the community (DuMont, Widom, & Czaja, 2007; Howard & Johnson, 2000; Place, Reynolds, Cousins, & O'Neill, 2002). Much like fundamental and familial factors, community factors are typically beyond the control of the child.

Individual factors that promote resiliency are more flexible than fundamental, familial, and community factors, indicating that it is within the capacity of educators, parents, or children themselves to alter them. These factors include the possession of self-regulatory skills, emotion regulation, positive self-esteem, positive self-perceptions, greater conscientiousness, higher levels of empathy, higher educational aspirations, better physical health, early effortful control, and executive functioning (Buckner, Mezzacappa, & Beardslee, 2003; Cicchetti & Rogosch, 1997; Gurthrie et al., 1997; Martel et al., 2007; Masten, 2001; Spinrad et al., 2006; Tiet et al., 2001). Researchers have also found that resiliency itself is resilient: if one is a highly resilient child, one is more likely to be a highly resilient adolescent and adult (DuMont, Widom, & Czaja, 2007). Many of these individual resiliency factors are also factors associated with EI, including: self-regulatory skills, emotion recognition, positive self-esteem, higher levels of empathy, and early effortful control. Therefore, one can argue that both parents and educators can help to foster EI and resiliency in children by intervening at the individual level and attempting to alter these individual factors.

Factors that have been found to hinder the development of resiliency in children can also be categorized as either fundamental, familial, community, or individual. Two fundamental factors found to hinder resiliency are being male and being African American (Lansford et al., 2006). Familial factors that hinder resiliency development include being harshly disciplined, family stress, family conflict, parental psychopathology, low socioeconomic status, low parental

monitoring, and parental substance abuse (Caspi, Moffit, Polo-Thomas, & Taylor, 2007; Prevatt, 2003). Living in an area with high levels of crime is one community factor that hinders the development of resiliency (Jaffee, Caspi, Moffit, Polo-Thomas, & Taylor, 2007). One individual factor that hinders resiliency is having low early social intelligence (Lansford et al., 2006).

### **2.3.1 Correlational Analyses of Resiliency and Emotional Intelligence Factors**

Resiliency is related to a number of individual factors, many of which are also EI factors, and researchers have empirically assessed these relationships. Spinrad and colleagues (2006) looked at the relationship between resiliency and emotion regulation in a group of 214 children ( $M$  age = 12.0 years). Children and their parents completed the same paper and pencil measures two years apart; measures were designed to assess children's effortful control, impulsivity, socially appropriate behaviour, adult-rated popularity, persistence, and resiliency. Resiliency was measured using modified parent- and teacher-versions of the Block Q-Sort (Block & Block, 1980). Researchers found that resiliency had a moderate positive correlation to socially appropriate behaviour and adult-rated popularity,  $r = .24$  and  $.37$  respectively. Children's resiliency levels at Time 1 were moderately positively correlated with positive social development, and moderately positively correlated with adult-rated popularity at Time 2,  $r = .28$ . The researchers also found that early effortful control at Time 1 was a predictor of resiliency at Time 2.

Eisenberg and colleagues (1997) observed a group of 199 children from Kindergarten to grade 3 to assess the relationship between resiliency and the EI factors of prosocial behaviour and emotion regulation. Parents and teachers completed paper and pencil measures twice over the course of one school year to assess children's regulation, emotionality, social functioning, and resiliency. The researchers found that resiliency is moderately positively correlated with social status, socially appropriate behaviour, and attentional control,  $r = .43$ ,  $.38$ , and  $.30$

respectively; resiliency had a low negative correlation with regulation,  $r = -.10$ , which the authors claim is a surprising result.

In summary, both Spinrad and colleagues (2006) and Eisenberg and colleagues (1997) found moderately positive correlations between factors associated with EI (effortful control, attentional control, socially appropriate behaviour, positive social development) and resiliency. To impact both levels of EI and resiliency, an intervention should target key factors associated with both constructs, such as early effortful control, positive social behaviour, self-regulatory skills, emotion recognition, and empathy. School-based SEL programs are interventions designed to affect positive change amongst these and other related factors.

## **2.4 Social and Emotional Learning Programs**

Social and Emotional Learning (SEL) programs are designed to teach the “fundamental skills for life effectiveness” (CASEL, 2011b), including, but not limited to: emotion recognition and management, developing care for others, establishing positive relationships, making responsible decisions, and effectively dealing with difficulties. According to the Collaborative for Academic, Social, and Emotional Learning (CASEL), a not-for-profit organization that focuses on advancing the evidence-base of SEL programming, there are five core social and emotional competencies: 1) self-awareness, 2) self-management, 3) social awareness, 4) relationship skills, and 5) responsible decision-making (CASEL, 2011a). The Collaborative offers standards of a socially and emotionally competent school-aged child. They opine that a competently self-aware child can recognize and label his or her emotions; a child with competent self-management skills can understand the concept and process of goal setting; a competently socially aware child can identify cues that will tell him or her how others are feeling; a child with competent relationship skills can identify ways of establishing and maintaining friendships; and a

child who can competently make responsible decisions can identify the decisions that he or she makes on a daily basis (CASEL, 2011a).

Quantitative outcome data from SEL program evaluations indicate that children who participate in SEL programs show statistically significant increases in self-esteem, emotional self-awareness, emotion-management skills, empathy, positive social behaviour, optimism, positive cognitions, attention and concentration, particular SEL skills, attitudes, academic achievement, and school success, as well as statistically significant decreases in internalizing problems (anxious and depressive symptoms), negative cognitions, and aggressive behaviours (Cardemil, Reivich, & Seligman, 2002; Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Goleman, 1995; Masia-Warner et al., 2005; Santos, Chartier, Whalen, Chateau, & Boyd 2011; Schonert-Reichl & Stewart Lawlor, 2010; Ulutaş & Ömeroğlu, 2007; Zins, Weissberg, Wang, & Walberg, 2004). Qualitative outcome data indicate that SEL participants are more cooperative and less aggressive in a school setting, and that the programming is well received by teachers, students, and school staff (Kelly, Longbottom, Potts, & Williamson, 2004). SEL programs promote prosocial behaviour and emotion regulation (Kelly, Longbottom, Potts, & Williamson, 2004; Ulutaş & Ömeroğlu, 2007), both of which are individual factors found to foster resiliency in children.

SEL programs vary in terms of theoretical orientation. While some programs are based in empathy training and mindfulness (e.g., Roots of Empathy, Gordon, 2005; MindUP<sup>TM</sup>; Hawn Foundation, 2003), others are based on cognitive-behavioural principles (e.g., Penn Resiliency Program, Cardemil, Reivich, & Seligman, 1997; Promoting Alternative Thinking Strategies, Kusché & Greenberg, 1994; Skills for Academic and Social Success, Masia et al., 1999), including the *FRIENDS for Life* for Children program (Barrett, 2004).

### **2.4.1 *FRIENDS for Life for Children***

*FRIENDS for Life for Children* (Barrett, 2004) is a school-based program, developed on the principles of cognitive-behavioural therapy (CBT). *FRIENDS for Life for Children* is designed to teach 7- to 11-year-old children relaxation techniques, positive thinking, problem solving skills, emotional resilience, conflict resolution skills, how to use peer support, and how to deal with difficulties. The program is structured into 10 weekly classroom sessions, and is typically delivered by the classroom teacher. Additionally, *FRIENDS* programs exist for children aged 4- to 6-years (*Fun FRIENDS*) and 12- to 16-years (*FRIENDS for Youth*).

Empirical clinical studies have shown that CBT is effective at reducing anxiety symptoms and disorders within youth, and that these reductions are maintained over time (In-Albon & Schneider, 2007). A longitudinal study that followed 52 children aged 8- to 15-years, who had been diagnosed with an anxiety disorder and undergone CBT treatment, found that nearly 86% of participants still no longer met diagnostic criteria for an anxiety disorder at 6-years follow-up (Barrett, Duffy, Dadds, & Rapee, 2001). Additionally, the use of CBT to treat anxiety disorders does not cause adverse side effects or withdrawal problems (unlike some pharmaceutical treatments), shows low rates of relapse, and can help to improve self-esteem and a sense of agency within participants (Miller, 2008).

Barrett and colleagues have published a greater number of randomized control trials of the *FRIENDS* program than any other research team. Evaluations of *FRIENDS* include studies that research its effect on levels of anxiety symptoms, self-esteem, and social skills.

#### **2.4.1.1 Evaluations of *FRIENDS***

Evaluations of the *FRIENDS* program have been conducted in both school and clinical settings, using samples from both clinical (hospital or outpatient) and non-clinical (community)

populations of children. In one school-based evaluation of *FRIENDS* (Lowry-Webster, Barrett, & Dadds, 2001), researchers randomly assigned 594 9- to 12-year-old Australian children to either a *FRIENDS* or a control group. Outcome data from child-report measures show that children who participated in *FRIENDS* reported fewer anxious symptoms at post-test than children in the control group,  $t(545) = 6.59, p < .05$ . Intervention gains were maintained at 12-months follow-up for all children who participated in *FRIENDS*,  $F(1, 468) = 7.10, p < .05, \eta^2 = .02$  (Lowry-Webster, Barrett, & Lock, 2003), and at 24-months follow-up for females who participated in *FRIENDS* (Barrett, Farrell, Ollendick, & Dadds, 2006); however, by 36-months follow-up these gains were no longer maintained (Barrett, Farrell, Ollendick, & Dadds, 2006). The authors suggest that exposing children to *FRIENDS* skills and concepts throughout the school years might help to maintain reductions in anxious symptoms. Another school-based evaluation of *FRIENDS* (Essau, Conradt, Sasagawa, & Ollendick, 2012) evaluated 638 German children, aged 9- to 12-years-old, using measures of anxiety, depression, social and adaptive functioning, coping strategies, social skills, and perfectionism. *FRIENDS* was administered to 47% of study participants by clinical child psychology graduate students, not classroom teachers. When compared to control participants at 12-months follow-up, children in the intervention group showed statistically significant decreases in anxious symptoms,  $F(3, 648) = 17.03, p < .001$ , depressive symptoms,  $F(3, 720) = 17.61, p < .001$ , and perfectionism scores,  $F(3, 681) = 9.54, p < .001$ .

Liddle and Macmillan (2010) conducted an evaluation of a school-based, targeted version of *FRIENDS*, delivered by educational psychologists. Participants included 58 Scottish children, aged 8- to 14- years, showing signs of anxiety, low mood, or low self-esteem as indicated by their classroom teacher, but who did not necessarily meet diagnostic criteria for an anxiety



disorder. The evaluation did not include a control group for comparison. Researchers found that program participants had significant decreases in anxious symptoms post-test including: fewer panic attacks, fewer agoraphobic symptoms, fewer separation anxiety symptoms, and less obsessive-compulsive thinking,  $F(1, 25) = 13.38, p = .01$ . Results at post-test also indicate statistically significant reductions in low mood,  $F(1, 25) = 11.77, p = .002$ , increases in self-esteem,  $F(1, 25) = 17.33, p = .0001$ , and improvements in social skills,  $F(1, 25) = 6.37, p = .018$ . Another team of researchers evaluated 18 Norwegian children diagnosed with an affective disorder, aged 7–12 years, who participated in *FRIENDS* in a clinical-setting (Martinsen, Aalberg, Gere, & Neumer, 2009). The evaluation did not include a control group for comparison. The researchers found a 33% reduction in diagnoses post-test, with the greatest change observed amongst children suffering from separation anxiety disorder or depression; however, child-report data on depressive symptoms did not reflect this reduction in symptoms. Parent-report data suggest that although parents were satisfied with the *FRIENDS* program itself, they were less satisfied with its success at reducing their children's symptoms.

Two research teams have conducted analyses of multiple evaluations of the *FRIENDS* program. Briesch, Sanetti, and Briesch (2010) compiled data from 14 evaluations of *FRIENDS*, which included 1,800 child participants, ranging in age from 6- to 19-years residing in Australia, Canada, England, Scotland, and the United States. Effect sizes ranged from .16–1.00 across all studies and the researchers concluded that the program has a generally positive effect on participant outcomes. Children diagnosed with an anxiety disorder or identified as 'at-risk' prior to *FRIENDS* participation showed larger effect sizes at post-test,  $ES = .84$  and  $.44$  respectively, than non-anxious children,  $ES = .24$ . Briesch and colleagues concluded that *FRIENDS* is "a promising intervention for the treatment of anxiety in school-based settings" (p. 163). Fisak,

Richard, and Mann (2011) conducted a meta-analysis of 35 evaluations of child and adolescent anxiety prevention programs, 18 of which were evaluations of *FRIENDS*. At post-test, the weighted overall effect size was .18, which was statistically significant,  $Z = 7.31, p < .001$ ; although the authors concede that this is a small effect size, they argue that it is comparable to effect sizes found for depression preventive programs. The effect size for evaluations that collected 6-months follow-up data was .23, which was statistically significant,  $Z = 6.10, p < .001$ . The researchers did not find a statistically significant difference between effect sizes of universal and targeted programs,  $Q_{\text{between}}(1) = 1.56, p = .21$ , but they did find that effect sizes of *FRIENDS* were significantly larger than effect sizes of other programs, *FRIENDS*  $d = .25, Z = 6.90, p < .001$ ; not *FRIENDS*  $d = .11, Z = 3.24, p < .001$ . The authors conclude that anxiety prevention programs, such as *FRIENDS*, are a promising approach for reducing rates of childhood anxiety disorders.

In contrast to the evaluations detailed above, three separate evaluations of *FRIENDS* conducted with Canadian students in school-settings elicited less favourable results. Participants in the first evaluation (Rose, Miller, & Martinez, 2009) included 52 grade 4 students (*FRIENDS*  $n = 26$ , Control  $n = 26$ ). The program was delivered universally to students in the intervention group, and these children reported lower rates of anxiety post-test; however statistically significant intervention effects were not found. The researchers received positive evaluations of the program from both child participants and their parents. The second evaluation (Miller et al., 2011), also of an universal delivery of *FRIENDS*, examined 253 children in grades 4–6 (*FRIENDS*  $n = 141$ , Attention-Control  $n = 112$ ). Once again, no intervention effect was found and reductions in anxious symptoms were not statistically significant. The third evaluation examined a targeted version of *FRIENDS* (Miller et al., 2011). Children in grades 4–6 were pre-screened ( $N$

= 998) and only those who had elevated levels of self-reported anxiety received the program ( $N = 191$ ; *FRIENDS*  $n = 65$ , Attention-Control  $n = 126$ ). As with the universal intervention groups, the targeted intervention group showed neither treatment effects nor statistically significant decreases in anxiety levels post-test. In the second and third evaluations, researchers found that an attention-control group activity (story-telling) was as effective as *FRIENDS* at reducing levels of anxiety.

#### **2.4.1.2 Overview of *FRIENDS* Evaluations**

The *FRIENDS* program is primarily designed to reduce anxious symptoms in its participants, and the majority of evaluations of the program have researched this type of outcome data. However, since many evaluations of the program are conducted with non-clinical samples, most children who participate in these studies do not have elevated levels of anxiety at pre-test. Therefore, statistically significant intervention effects of *FRIENDS* on anxious symptoms may not be observed at post-test (Miller et al., 2011; Rose, Miller, & Martinez, 2009). However, even when a targeted population of high-anxiety children received the program and were evaluated for reductions in anxious symptoms, statistically significant results were not found (Miller et al., 2011). Nonetheless, other researchers who have studied *FRIENDS* in both school- and clinical-settings have found statistically significant decreases in anxious symptoms (e. g., panic attacks, agoraphobia, separation anxiety, obsessive-compulsive thinking, low mood, perfectionism) and depressive symptoms, as well as statistically significant increases in self-esteem and social skills (Barrett, Farrell, Ollendick, & Dadds, 2006; Briesch, Sanetti, & Briesch, 2010; Essau, Conradt, Sasagawa, & Ollendick, 2012; Fisak, Richard, & Mann, 2011; Liddle & Macmillan, 2010; Lowry-Webster, Barrett, & Dadds, 2001; Lowry-Webster, Barrett, & Lock, 2003; Martinsen, Aalberg, Gere, & Neumer, 2009). The program has also received positive evaluations from

students, parents, and teachers (Martinsen, Aalberg, Gere, & Neumer, 2009; Rose, Miller, & Martinez, 2009). The purpose of the following *FRIENDS* evaluation is to examine children's self-report changes in EI and resiliency with a non-clinical sample of children.

#### **2.4.2 SEL Program Fidelity**

Recent research on SEL program fidelity has found that good fidelity may improve program outcomes, whereas poor fidelity may decrease program effectiveness (Elliott & Mihalic, 2004). Additionally, researchers have found that the quality of program fidelity is significantly positively correlated with students' academic performance (Dix, Slee, Lawson, & Keeves, 2012). Researchers have used various methods for measuring program fidelity, and have determined numerous factors that affect it.

Domitrovich and Greenberg (2000) evaluated 34 SEL programs to examine how program fidelity was or was not being addressed; program fidelity was evaluated in relation to adherence (to protocol), dosage (number of sessions), quality of delivery, participant responsiveness, and program differentiation. The authors found that the content and structure of interventions, the relationship between implementers and participants, and system-level variables affect program fidelity. They argue for five reasons as to why researchers should conduct program evaluations: 1) to find out what occurred during an intervention, 2) to establish the internal validity of a program, 3) to understand internal dynamics, 4) for feedback, and 5) to advance knowledge for future programs.

Durlak and DuPre (2008) conducted a meta-analysis of 59 studies to assess the impact of fidelity on program outcomes, and identify factors that affect it. Much as Domitrovich and Greenberg (2000), they conceptualized implementation in terms of dosage and quality. Durlak and DuPre found that effective implementation is associated with better program outcome data.

Factors that affect program fidelity as determined by Durlak and DuPre include: characteristics of innovations, individuals and communities, prevention delivery, and support systems.

Ransford and colleagues (2009) researched a group of 133 elementary school teachers to examine their experiences of burnout and efficacy, their perceptions of curriculum supports, and program fidelity using paper and pen measures. The researchers found that teachers' experiences and perceptions of supports were associated with fidelity. Teacher burnout was negatively associated, and efficacy was positively associated with program fidelity. Higher perceptions of curriculum support were also associated with better fidelity. Additionally, individual and organizational factors, teacher age (older teachers positively associated with implementation), and grade level of participants (higher grade level negatively associated with implementation) affected program fidelity.

In a meta-analysis of 213 SEL program evaluations, Durlak and colleagues (2011) found that evaluations that reported 'no problems' or did not mention any problems with program fidelity elicited significant outcomes in all six of their outcome categories (SEL skills, attitudes, positive social behaviour, academic performance, conduct problems, emotional distress), 'No problems'  $ESs = .27-.86, p \leq .05$ ; 'Not mentioned'  $ESs = .17-.58, p \leq .05$ . Alternatively, studies that reported problems with fidelity elicited significant outcomes in only two categories: attitudes and conduct problems,  $ESs = .19$  and  $.15, ps \leq .05$ . Examples of problems to program fidelity include staff omitting certain parts of the program, and unexpected events that altered the delivery of the program.

In summary, factors that have been found to affect SEL program fidelity include: the content and structure of interventions, the characteristics of innovations, the relationship between implementers and participants, individuals and communities, system-level or organizational

variables, prevention delivery and support systems, teachers' experiences and perceptions of support, teacher perceived efficacy and burnout, teacher age, and grade level of participants (Domitrovich & Greenberg, 2000; Durlak & DuPre, 2008; Ransford, Greenberg, Domitrovich, Small, & Jacobson, 2009). Additionally, when fidelity is not problematic, the research suggests that there is a greater chance that all intended SEL outcomes will be achieved (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). Results imply that program fidelity largely affects SEL program outcomes, and should be taken into consideration by researchers who evaluate these interventions.

## **2.5 Multiple-Informant Method**

Although the use of a multiple-informant method (e.g., child self-report, parent-report, teacher-report, observer-report) to assess children's behaviour provides the greatest amount of information about the child and his or her family (Grills & Ollendick, 2003), low correlations between measures and low concordance between informant groups are not unusual. Rather than interpreting these low correlations as unreliability between informants, researchers (Achenbach, McConaughy, & Howell, 1987; Renk, 2005) suggest that results from diverse informants may be observations of different behaviours in various environments (home, school). Therefore, these separate accounts are not only valid, but are necessary in order to obtain a 'complete' picture of the child's behaviour. Low correlations and concordance between informant groups may be considered a major strength of a study (Renk, 2005), and confirmation that one informant group cannot substitute for another (Achenbach, McConaughy, & Howell, 1987).

Research on multi-informant data suggests that lower concordance rates occur more often between informant groups in relation to children's internalizing disorders, such as anxiety or depression, and higher rates of concordance are found in relation to children's externalizing

disorders, such as attention-deficit/hyperactivity disorder or oppositional defiant disorder (Grills & Ollendick, 2003; Rapee, Barrett, Dadds, & Evans, 1994; Schniering Hudson, & Rapee, 2000). Research specifically on multi-informant assessment of children's social and emotional competence found that children identified as socially competent by their teachers were more likely to act socially with their teachers and prosocially with their peers, and children identified as emotionally competent by their teachers were more likely to actively engage in the classroom (Humphries, Keenan, & Wakschlag, 2012).

## **2.6 Summary of the Literature**

A review of the literature on EI and resiliency reveals that many of the individual factors that promote resiliency are also factors of EI, including: self-regulatory skills, emotion regulation, ego resilience, ego overcontrol, emotional maturity, positive self-esteem, higher levels of empathy, early effortful control, and executive functioning (Buckner, Mezzacappa, & Beardslee, 2003; Cicchetti & Rogosch, 1997; Gurthrie et al., 1997; Kelly, Longbottom, Potts, & Williamson, 2004; Martel et al., 2007; Spinrad et al., 2006; Tiet et al., 2001). Researchers have conducted analyses in order to assess which aspects of EI are correlated with resiliency, and have found that such factors as effortful control, attentional control, socially appropriate behaviour, and positive social development have moderate, but positive, correlations with resiliency (Eisenberg et al., 1997; Spinrad et al., 2006). Authorities in the fields of EI and resiliency argue that both constructs are flexible qualities rather than static traits (Bar-On, 2000b; Rutter, 2006); therefore, levels of EI and resiliency factors may be positively affected via early intervention and preventive methods, including school-based, SEL programming.

The objective of SEL programs is to increase participants' competencies in five domains: 1) self-awareness, 2) self-management, 3) social awareness, 4) relationship skills, and 5)

responsible decision-making (CASEL, 2011a). *FRIENDS for Life* for Children aims to teach children how to manage anxious symptoms and improve social skills. Evaluations of the program have found statistically significant decreases in anxious and depressive symptoms and statistically significant increases in self-esteem and social skills amongst child participants (Barrett, Farrell, Ollendick, & Dadds, 2006; Briesch, Sanetti, & Briesch, 2010; Essau, Conradt, Sasagawa, & Ollendick, 2012; Fisak, Richard, & Mann, 2011; Liddle & Macmillan, 2010; Lowry-Webster, Barrett, & Dadds, 2001; Lowry-Webster, Barrett, & Lock, 2003; Martinsen, Aalberg, Gere, & Neumer, 2009). Previous evaluations have not measured possible EI and resiliency outcomes amongst child participants.



### **3 Methodology**

This chapter reviews the study's method, including: the ethical approval process, participant recruitment, details of participant demographics and attrition, the procedure, an outline of the *FRIENDS* protocol and objectives, and details of the measures and subscales used, including their psychometric properties.

#### **3.1 Introduction**

A quasi-experimental, non-randomized, controlled study design was used to research EI and resiliency levels of children participating in the *FRIENDS* program. Children were enrolled in public schools in one school district in western Canada. Classroom teachers delivered the program over one school year.

#### **3.2 Ethics Application and Recruitment**

The Manager of the *FRIENDS for Life* Program for the Ministry of Children and Family Development (MCFD) supported this study by recommending a Behaviour Specialist and *FRIENDS* District Liaison who assisted with recruitment within a specific school district.

Ethical approval was received from the school district in July 2011 and from the University Ethics Board (BREB) in August 2011. The school district liaison contacted eligible teachers in the school district by e-mail to recruit schools for the study. Eight teachers expressed interest, and were asked to give their consent to participate (see Appendix A).

#### **3.3 Participants**

The recruited students were enrolled in eight classes in eight schools in an urban school district. Four classes from four schools implemented *FRIENDS* in their curricula. Parental consent forms were distributed to 203 students (see Appendix B), of which 152 parents of

students agreed to participate. These forms were returned in sealed envelopes and given to teachers. Consent forms were also collected from teachers ( $N = 8$ ). Students with parental consent to participate included 152 children: 70 intervention (46%) and 82 control participants (54%); 78 males (51%) and 74 females (49%); 17 grade 3 (11%) and 135 grade 4 (89%) students; and 3 children aged 7-years (2%), 36 children aged 8-years (24%), and 113 aged 9-years (74%),  $M$  age = 8.72-years.

A post-hoc power calculation was conducted using an alpha level of .05, a Cohen's  $d$  effect size of .285 (the mathematical average of all effect sizes calculated in this study, see Table 9), with the total sample of 152 participants. These parameters suggest a possible power value of .45. For program evaluation studies of this nature, a larger power value is ideal, but various constraints (e.g., time, funding, resources, research personnel) limited the number of participants that could be reasonably managed for this project.

Participant attrition occurred at Time 2 ( $n = 4$ , 2 due to their leaving the school, 2 due to parents' withdrawal of consent) and at Time 3 ( $n = 1$ , due to parent's withdrawal of consent). One child was gained at Time 3 after recovering a consent form, which had been misplaced since Time 1. Children in the intervention group without consent participated in the *FRIENDS* program, but no data were collected from them ( $n = 29$ ). The attrition of participants from consent distribution to final data analysis is outlined in Figure 1.

### **3.4 Procedure**

Students, teachers, and parents completed paper and pencil measures at three time points: immediately before the implementation of the *FRIENDS* program (Time 1), following completion of the program (Time 2), and at 3-months follow-up (Time 3).

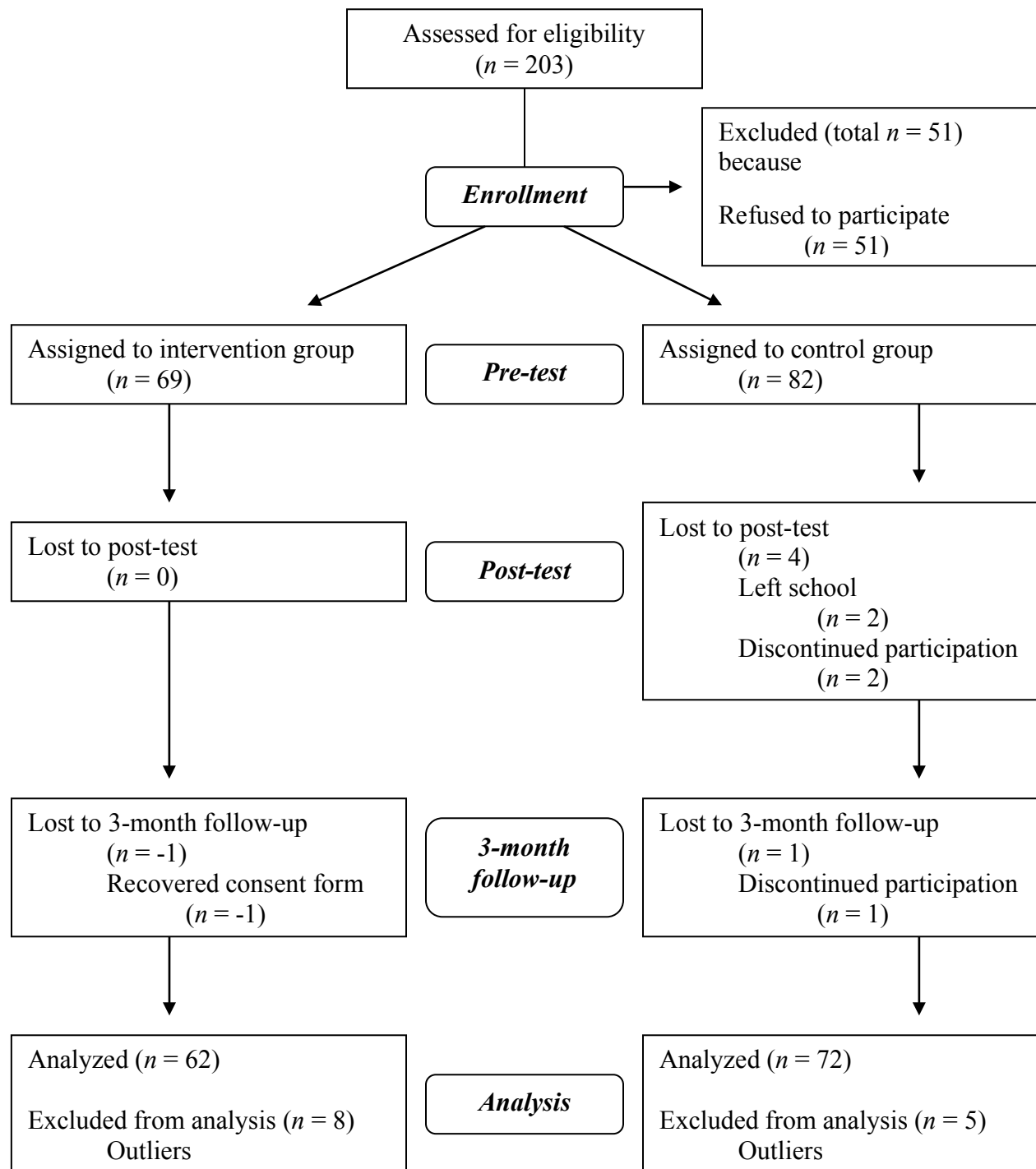


Figure 1. Participant consort flowchart illustrating attrition of child participants from consent to final data analysis.

This researcher visited all 8 classrooms within 2 weeks to explain the study's procedure to students, teachers, and school personnel. At this time, parental consent forms were distributed to students, who were asked to return forms to their classroom teachers in sealed envelopes.

During Time 1 data collection visits, parental consent forms were collected. The researcher delivered an assent script (see Appendix C) to children who had parental consent to participate in the study. All children with parental consent assented to participation and completed assessments. Students completed assessments on their own but were instructed to raise their hand if they did not understand a particular word or question. Students who did not have parental consent completed other schoolwork or read silently. Teachers were provided with a package of teacher measures and a self-addressed stamped envelope in order to return their measures within 2 weeks to the university research office. Parent measures were sent home with students in unsealed envelopes and contained labels that instructed parents how to complete the measures, and to return the measures in the envelope, sealed, to their child's teacher. Teachers in the intervention group were provided with a *FRIENDS* Fidelity Checklist to measure how the protocol was being delivered in each class, and to compare how uniformly the protocol was being implemented across classes in the intervention group (see Appendix D).

Time 2 data collection occurred 15-19 weeks following Time 1, from late January to early March 2012, longer than initially planned (10 weeks) due to December holidays, teachers requiring more time to complete the *FRIENDS* protocol, and Teachers' Federation job action. Time 2 assessments were conducted in the same manner as at Time 1. *FRIENDS* Fidelity Checklists were collected from teachers in the intervention group. Only one of the four classes in the intervention group had not completed the *FRIENDS* program by Time 2; this teacher required more time to complete the program due to various interruptions in her classroom.

Time 3 data collection occurred from late April to early June 2012. Assessments were conducted in the same manner as at Times 1 and 2, except parent measures were not collected from teachers during a subsequent visit, but rather returned via mail along with teacher measures.

At the end of data collection, child participants were compensated with a pizza party, and parents and teachers were offered a free lecture on childhood mental health issues in their community by this researcher. Additionally, teachers received low value gift cards for their participation.

### **3.5 *FRIENDS* Protocol and Objectives**

The *FRIENDS for Life* program is to be implemented over 10 weeks, with each session delivered in a one-hour lesson once per week. However, all teachers in the intervention group required longer than 10 weeks to complete the program, and often delivered one session in two or three shorter lessons over the week. Table 1 outlines the objectives of each session.

In Session #1, *Introduction to the Group*, the teacher introduces the *FRIENDS* program to the class, and discusses the rationale for using the program in the classroom. The teacher gives a brief overview of the program, group norms, confidentiality, and the concept of coping with worry.

In Session #2, *Introduction to Feelings*, participants learn about how feelings can be conveyed through facial expression and body language, and that people convey the same feeling in different ways. Participants learn the distinctions and links between feelings, thoughts, and behaviours.

In Session #3, *Learning to Feel Confident and Brave – Steps 1 & 2*, participants learn that *FRIENDS* is an acronym for 7 steps (Step 1: ‘Feelings’, Step 2: ‘Remember to Relax’, Step 3: ‘I can do it!’, Step 4: ‘Explore Solutions and Coping Step Plans’, Step 5: ‘Now reward yourself!’

Table 1

*FRIENDS Session Objectives*

| Session | <i>FRIENDS for Life</i> for Children Objectives  |
|---------|--|
| 1       | <ul style="list-style-type: none"> <li>• Working in groups; feeling confident and brave</li> <li>• Getting to know one another and interacting</li> <li>• Understanding and accepting differences</li> <li>• Goal setting</li> <li>• Identifying happy experiences</li> </ul>  |
| 2       | <ul style="list-style-type: none"> <li>• Understanding our own and other people's feelings</li> <li>• Thinking in powerful or helpful ways</li> <li>• Understanding how thoughts and feelings affect behaviour</li> </ul>  |
| 3       | <ul style="list-style-type: none"> <li>• Listening to our body's clues to understand feelings</li> <li>• Different methods of relaxation – progressive muscle relaxation, deep-breathing, using relaxation scripts, the importance of rest and quiet time</li> </ul>   |
| 4       | <ul style="list-style-type: none"> <li>• Exploring what makes us happy</li> <li>• Understanding self talk</li> <li>• Helpful (green) thoughts make us feel strong, brave and happy</li> <li>• Unhelpful (red) thoughts make us feel worried or upset</li> </ul>  |
| 5       | <ul style="list-style-type: none"> <li>• Paying attention to positive thoughts and things</li> <li>• Challenging unhelpful thoughts</li> <li>• Changing unhelpful thoughts into helpful thoughts</li> <li>• Exploring ways to cope</li> <li>• Coping step plans (breaking down difficult things into smaller steps)</li> </ul> |
| 6       | <ul style="list-style-type: none"> <li>• The importance of role models and support teams</li> <li>• 6-stage problem-solving plan (identifying the problem and possible solutions, listing possible consequences, picking the best solution, putting the plan into action, evaluating the results)</li> </ul>                   |
| 7       | <ul style="list-style-type: none"> <li>• Reward ourselves for trying (effort is important)</li> <li>• Thinking like a winner, using humour to deal with different situations</li> </ul>  |
| 8       | <ul style="list-style-type: none"> <li>• Practice the skills learned in <i>FRIENDS</i></li> <li>• Plan ahead for difficult situations</li> <li>• Staying calm</li> <li>• Being confident and brave</li> <li>• Positive affirmations about self</li> </ul>  |
| 9       | <ul style="list-style-type: none"> <li>• Putting it all together</li> <li>• Using the <i>FRIENDS</i> plan to help ourselves and others</li> </ul>  |
| 10      | <ul style="list-style-type: none"> <li>• Preparing for future challenges</li> <li>• Party to celebrate new skills learned</li> </ul>   |

*Note:* Table provided by the BC Ministry of Child and Family Development.

You've done your best!', Step 6: 'Don't forget to practice!', and Step 7: 'Smile! Stay calm for life!'), and focus is placed on the first two steps: learning more about feelings and relaxation techniques.

In Session #4, *Learning to Feel Confident and Brave – Step 3A*, participants are introduced to step 3 and the importance of cognitions by learning about positive self-talk, and helpful and harmful thoughts.

In Session #5, *Learning to Feel Confident and Brave – Steps 3B & 4A*, participants learn about replacing negative thoughts with more positive ones, and create coping plans for dealing with difficulties.

In Session #6, *Learning to Feel Confident and Brave – Step 4B*, participants are encouraged to use social support to help them cope with difficulties, and learn a 6-Block Problem-solving Plan.

In Session #7, *Learning to Feel Confident and Brave – Step 5*, participants review the previous four steps, and learn to reward themselves for their hard work. Participants learn to use empathy when acknowledging the successes of others.

In Session #8, *Learning to Feel Confident and Brave – Steps 6 & 7*, participants learn how to practically apply the *FRIENDS* lessons into real-life situations.

In Session #9, *Using the FRIENDS Plan: Helping Ourselves and Others*, participants continue to learn how to apply the principles they've learned to their lives and assist their classmates with brainstorming ways that the principles can be applied.

In Session #10, *Review and Party*, participants are encouraged to maintain their gains after the program's end, and are congratulated for completing the program. Certificates of completion are awarded and the class has a party to celebrate their achievements.

### 3.6 Measures

The study's multiple informant method required children, parents, and teachers to complete measures at all three assessment periods. Five measures were used including two child-report measures: the *Strengths and Difficulties Questionnaire* – Student Report (SDQ – S11–17; Goodman, 1997) and the *Emotional Quotient Inventory – Youth Version Short* (EQ-i:YV (S); Bar-On & Parker, 2000a), two parent-report measures: the *Behavior Assessment System for Children* – Parent Rating Scales (BASC PRS-C (6–11); Reynolds & Kamphaus, 1992b) and the *Social Competence Scale (Parent Version)* (SCS-P; Conduct Problems Prevention Research Group, 1995), and one teacher-report measure: the *Strengths and Difficulties Questionnaire* – Teacher Report (SDQ – T4–10; Goodman, 1997). Teachers in the intervention group also completed a *FRIENDS* Fidelity Checklist.

All measures were completed in their entirety, but only one subscale from each of the five measures was included in data analyses. These include: the Prosocial Subscale from the SDQ-S and SDQ-T, the Total Emotional Quotient subscale from the EQ-i, the Adaptive Skills composite scale from the BASC, and the Total Score from the SCS-P. These five subscales were chosen due to their ability to: 1) measure the five common factors related to EI and resiliency, and 2) measure if the *FRIENDS* program objectives had been met, as stated in the *FRIENDS* promotional literature (Australian Academic Press, 2007; British Columbia Ministry of Child and Family Development, 2007). Information on what each subscale is designed to measure was obtained from each measure's manual (Bar-On & Parker, 2000b; Corrigan, 2003; Goodman, 1997; Reynolds & Kamphaus, 1992a).

Table 2 presents a comparison of the measurement subscales and the five common factors of EI and resiliency (early effortful control, positive social behaviour, self-regulatory



skills, emotion recognition, and empathy). The table demonstrates that at least one subscale is able to measure at least one common factor.

Table 2

*Comparison of Common Emotional Intelligence and Resiliency Factors with Measurement Subscales*

| Common EI and Resiliency Factors | Measurement Subscales |      |      |       |
|----------------------------------|-----------------------|------|------|-------|
|                                  | SDQ-S/T               | EQ-i | BASC | SCS-P |
| Early effortful control          |                       | ✓    | ✓    |       |
| Positive social behaviour        | ✓                     |      | ✓    | ✓     |
| Self-regulatory skills           |                       | ✓    | ✓    |       |
| Emotion recognition              |                       |      |      | ✓     |
| Empathy                          | ✓                     |      |      |       |

*Note:* SDQ-S/T = *Strengths and Difficulties Questionnaire* – Student/Teacher Report (Prosocial Scale); EQ-i = *Emotional Quotient Inventory* – Youth Version Short (Total EQ); BASC = *Behavior Assessment System for Children* – Parent Rating Scales (Adaptive Skills); SCS-P = *Social Competence Scale (Parent Version)* (Total Score).

Table 3 presents a comparison of the measurement subscales and the *FRIENDS* objectives. The table demonstrates that the subscales are able to measure 10 of the 11 *FRIENDS* objectives, and that the only objective unaccounted for is relaxation techniques. Previous qualitative data show that the majority of children (70%) who participate in *FRIENDS* report that using the coping step plan to calm down, relax, or cope is the best skill they learned, indicating that the *FRIENDS* relaxation techniques are well-retained and perceived as valuable by child participants (Miller, Cortes, Hamill, & Waechtler, in preparation). This finding suggests that *FRIENDS* participants in this evaluation could have also retained relaxation techniques, indicating the fulfillment of this particular objective.

Table 4 presents a comparison of the *FRIENDS* program's objectives and the five common factors of EI and resiliency. The table demonstrates that every objective is related to at least one of the common factors.

Table 3

*Comparison of FRIENDS Objectives with Measurement Subscales*

| <i>FRIENDS</i> Objectives                             | Measurement Subscales |      |      |       |             |
|---|-----------------------|------|------|-------|-------------|
|   | SDQ-S/T               | EQ-i | BASC | SCS-P | Unaccounted |
| Self-esteem   |                       | ✓    |      |       |             |
| Problem-solving                                       | ✓                     |      |      |       |             |
| Self-expression                                       |                       | ✓    |      |       |             |
| Building positive relationships with peers and adults | ✓                     | ✓    | ✓    | ✓     |             |
| Dealing with difficulties                             | ✓                     | ✓    |      | ✓     |             |
| Recognizing signs of anxiety                          |                       |      | ✓    |       |             |
| Relaxation techniques                                 |                       |      |      |       | ✓           |
| Positive thinking                                     | ✓                     |      |      |       |             |
| Emotional resilience                                  |                       |      |      | ✓     |             |
| Using peer support                                    | ✓                     |      |      | ✓     |             |
| Conflict resolution                                   |                       |      |      | ✓     |             |

*Note:* SDQ-S/T = *Strengths and Difficulties Questionnaire* – Student/Teacher Report (Prosocial Scale); EQ-i = *Emotional Quotient Inventory – Youth Version Short* (Total EQ); BASC = *Behavior Assessment System for Children* – Parent Rating Scales (Adaptive Skills); SCS-P = *Social Competence Scale (Parent Version)* (Total Score).

### 3.6.1 Child-report Measures

Students completed both child-report measures at Times 1, 2, and 3, and before completing them, were instructed to give responses that reflected their most recent behaviour (within the past three months). The measures required approximately 25 minutes of class time to complete. Measures were counterbalanced during distribution, to ensure that approximately half completed the *Strengths and Difficulties Questionnaire* first and half completed the *Emotional Quotient Inventory – Youth Version Short* first.

#### 3.6.1.1 Strengths and Difficulties Questionnaire – Student Report

The *Strengths and Difficulties Questionnaire* – Student Report (SDQ – S11-17; see Appendix E) measures both positive and negative behaviours of 11- to 17-year-old children. Child participants in this study ranged in age from 7- to 10-years, younger than the age group that the SDQ – Student Report is intended; however, this measure is not available in self-report

Table 4

*Comparison of FRIENDS Objectives with Common Emotional Intelligence and Resiliency Factors*

| <i>FRIENDS</i><br>Objectives                                | Common EI and Resiliency Factors |                                 |                               |                        |         |
|---|----------------------------------|---------------------------------|-------------------------------|------------------------|---------|
|   | Early<br>effortful<br>control    | Positive<br>social<br>behaviour | Self-<br>regulatory<br>skills | Emotion<br>recognition | Empathy |
| Self-esteem   |                                  |                                 |                               |                        |         |
| Problem-solving   | ✓                                |                                 | ✓                             |                        |         |
| Self-expression   |                                  |                                 |                               | ✓                      |         |
| Building positive<br>relationships with<br>peers and adults |                                  | ✓                               |                               |                        | ✓       |
| Dealing with<br>difficulties                                | ✓                                | ✓                               | ✓                             |                        |         |
| Recognizing signs<br>of anxiety                             | ✓                                |                                 | ✓                             | ✓                      |         |
| Relaxation<br>techniques                                    |                                  |                                 | ✓                             |                        |         |
| Positive thinking   |                                  |                                 | ✓                             |                        |         |
| Emotional<br>resilience                                     |                                  |                                 | ✓                             | ✓                      |         |
| Using peer<br>support                                       |                                  | ✓                               | ✓                             |                        |         |
| Conflict<br>resolution                                      |                                  | ✓                               | ✓                             |                        |         |

*Note:* *FRIENDS* Objectives obtained from Australian Academic Press (2007) and British Columbia Ministry of Children and Family Development (2007).

versions for younger children. Children were instructed to raise their hand if they did not understand a word or a statement. Most often children inquired about the words “restless” and “fidgeting”, which was defined as an inability to sit still, and the statement: “I am often accused of lying or cheating”, which was paraphrased as ‘Other people often think I am lying or cheating, even if I’m not’.

The SDQ – Student Report contains 25 items grouped into 5 subscales, 4 of which address difficulties (Emotional Symptoms, Conduct Problems, Hyperactivity-Inattention, Peer Relationship Problems), which can be collapsed into one subscale (Total Difficulties), and one

subscale that addresses strengths (Prosocial Behaviour). Measure items offer a behavioural example and ask the child how true it is of him or her on a 3-point Likert scale (0 = not true, 1 = somewhat true, 2 = certainly true). Item examples include: “I worry a lot” (Emotional Symptoms), “I get very angry and often lose my temper” (Conduct Problems), “I am restless, I cannot stay still for long” (Hyperactivity-Inattention), “I would rather be alone than with people of my age” (Peer Relationship Problems), and “I try to be nice to other people. I care about their feelings” (Prosocial Behaviour).

Scores obtained from the Prosocial subscale of the SDQ Student Report were used for data analysis in this study. The Prosocial subscale is an interval scale, with a possible range of raw scores of 0–10. The SDQ’s Prosocial subscale measures the extent to which a child is perceived to be caring, kind, helpful, considerate, and able to share with others; these qualities align with the common EI and resiliency factors of positive social behaviour and empathy (see Table 2). Scores from the Emotional Symptoms, Conduct Problems, Hyperactivity-Inattention, and Peer Relationship Problems subscales were not used for data analysis because they do not positively correspond with common factors of EI and resiliency.

Muris and colleagues (2004) assessed 1,111 8- to 13-year-old Dutch children who completed the SDQ – Student Report. The researchers found the following alpha coefficient values per subscale: .76 (Total Difficulties), .68 (Hyperactivity-Inattention), .63 (Emotional Symptoms), .60 (Prosocial Behaviour), .46 (Conduct Problems), and .41 (Peer Problems). Lauder and colleagues (2009) assessed 1,786 11- to 18-year-old Scottish children who completed the measure and found the following alphas scores per subscale: .72 (Total Difficulties), .70 (Hyperactivity-Inattention), .68 (Prosocial Behaviour), .66 (Emotional Symptoms), .60 (Conduct

Problems), and .56 (Peer Problems). In both studies, alpha coefficient values were highest for the Total Difficulties subscale and lowest for the Peer Problems subscale.

Analysis of the criterion validity of the SDQ – Student Report shows that the measure can significantly distinguish between students with and without behavioural problems, as reported by their teacher, across all subscales,  $ts(437) = 2.1, ps < .05$  (Muris, Meesters, Eijkelenboom, & Vincken, 2004). Analysis for convergent validity against the *Teacher Report Form* (TRF; Achenbach, 1991b) and the *Youth Self-Report* (YSR; Achenbach, 1991c) indicate statistically significant positive correlations between all SDQ difficulties subscales and the YSR externalizing, aggressive behaviour, and delinquent behaviour subscales,  $rs = .14-.61, ps < .05$ , and statistically significant negative correlations between the SDQ Prosocial subscale and the YSR subscales,  $rs = -.27-.32, ps < .05$  (Muris, Meesters, Eijkelenboom, & Vincken, 2004). When compared to the TRF, statistically significant positive correlations were found between the SDQ's Hyperactivity-Inattention and Total Difficulties subscales and the TRF's externalizing, aggressive behaviours, and delinquent behaviours subscales,  $rs = .32-.40, ps < .05$  (Muris, Meesters, Eijkelenboom, & Vincken, 2004).

### **3.6.1.2 Emotional Quotient Inventory – Youth Version Short**

The *Emotional Quotient Inventory – Youth Version Short* (EQ-i: YV (S)) measures emotional intelligence in youth aged 7- to 18-years. The short version of the EQ-i: YV contains 30 items grouped into 5 subscales: Intrapersonal, Interpersonal, Stress Management, Adaptability, and Positive Impression; the total of the first four subscales is the Total EQ (Emotional Quotient) score. The short version of this measure was chosen because it is appropriate for: 1) testing in a group-setting, 2) testing when time is limited, and 3) repeated testing over a period of time (Bar-On & Parker, 2000b).

Similar to the SDQ, EQ-i items offer a behavioural example and ask the respondent how true it is of his or her own behaviour using a 4-point Likert scale [1 = not true of me (never, seldom), 2 = just a little true of me (sometimes), 3 = pretty much true of me (often), 4 = very much true of me (very often)]. Item examples include: “It is easy to tell people how I feel” (Intrapersonal), “I like doing things for others” (Interpersonal), “I get angry easily” (Stress Management), “I am good at solving problems” (Adaptability), and “Nothing bothers me” (Positive Impression). The Intrapersonal subscale contains five related abilities: emotional self-awareness, assertiveness, self-regard, self-actualization, and independence (Bar-On & Parker, 2000b). A high score on the Intrapersonal subscale reflects an ability to understand and communicate one’s emotions (self-expression). The Interpersonal subscale contains three related abilities: empathy, social responsibility, and interpersonal relationships (Bar-On & Parker, 2000b). Scoring high on the Interpersonal subscale indicates an ability to understand and appreciate others’ emotions, and to develop healthy relationships. The Stress Management subscale contains two related abilities: stress tolerance and impulse control (Bar-On & Parker, 2000b). A high score on the Stress Management subscale reflects an ability to stay calm and work well under pressure (emotion regulation). The Adaptability subscale contains three related abilities: reality testing, flexibility, and problem solving (Bar-On & Parker, 2000b). High scorers on the Adaptability subscale will be flexible, realistic, and able to manage change (dealing with difficulties). Scoring high on the Positive Impression subscale indicates that the respondent was attempting to create an overly positive impression of him or herself. Scores for children who had a Positive Impression score of 115 or greater were scaled down, as recommended by the authors (Bar-On & Parker, 2000b).

The authors of the measure suggest that researchers should retest participants with the EQ-i: YV (S) and compare results between assessment periods to scientifically examine any changes in emotional and social skills over time (Bar-On & Parker, 2000b).

Scores from the Total EQ subscale were used for data analysis in this study. Total EQ scores are on an interval scale with a possible range of raw scores of 24–96; however, scores were rescaled so that the range of possible scores would contain a true zero (0–72). Total EQ score reflects the child's intrapersonal and interpersonal skills, adaptability, and stress management abilities; these attributes are related to the common EI and resiliency factors of early effortful control and self-regulatory skills (see Table 2).

Research pertaining to the reliability of the EQ-i: YV (S) has revealed alpha coefficient values across the 5 subscales ranging from .67–.81 for males and .65–.80 for females, aged 7- to 9-years; for both sexes, the Total EQ subscale had the highest reliability scores (Bar-On & Parker, 2000b). Test-retest reliability coefficients for the measure range from .77–.88 with the highest scores on the Stress Management subscale (Bar-On & Parker, 2000b).

Exploratory factor analysis of the EQ-i: YV (S) revealed four valid factors, which closely match four subscales of the measure (Bar-On & Parker, 2000b). Using a principal component analysis with a varimax rotation, the four subscales found were: Adaptability (rotated factor loadings ranging from .60–.77), Stress Management (rotated factor loadings ranging from .60–.79), Intrapersonal (rotated factor loadings ranging from .39–.79), and Interpersonal (rotated factor loadings ranging from .56–.71). A confirmatory factor analysis of the measure, based on a group of 2,380 Hungarian youth,  $M$  age = 17.0 years, suggests that only 24 of the 30 items accurately map on to the five proposed subscales,  $\chi^2(240) = 1,395.7, p < .0001$  (Kun et al., 2012). The authors' findings indicate that the following 6 items do not load on to one of the five

subscales: 2 items belonging to the Intrapersonal scale (“It is hard to talk about my deep feelings” and “I have trouble telling others about my feelings”), 2 items belonging to the Interpersonal scale (“I can tell when one of my close friends is unhappy” and “I know when people are upset, even when they say nothing”), and 2 items from the Positive Impression scale (“I must tell the truth” and “I think I am the best in everything I do”).

Construct validity research comparing the BarOn EQ-i: Youth Version Long Form and the BarOn EQ-i: Adult Version show significant correlations between all subscales, with the following coefficients: .56 (Intrapersonal), .63 (Adaptability), .71 (Interpersonal), .81 (Total EQ), .84 (Stress Management), and .88 (General Mood) (Bar-On & Parker, 2000b). Further construct validity research comparing the 6 subscales of the EQ-i: Youth Version Long Form against the five subscales of the *NEO-Five Factor Inventory* (NEO-FFI; Costa & McCrae, 1992) (Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness) found the following statistically significant correlations,  $p < .05$ : Intrapersonal with Extraversion (.25) and Agreeableness (.20); Interpersonal with Extraversion (.37), Agreeableness (.57), and Conscientiousness (.43); Adaptability with Neuroticism (-.31); Stress Management with Neuroticism (-.43), Extraversion (.22), Agreeableness (.55), and Conscientiousness (.36); Total EQ with Neuroticism (-.40), Extraversion (.32), Agreeableness (.56), and Conscientiousness (.49); and General Mood with Neuroticism (-.44), Extraversion (.37), Agreeableness (.35), and Conscientiousness (.27). None of the EQ-i: YV subscales mapped on to Costa and McCrae’s construct of Openness to Experience (Bar-On & Parker, 2000b).

### **3.6.2 Parent-report Measures**

Parents completed both parent-report measures at Times 1, 2, and 3, and before completing them, were instructed to give responses that reflected their child’s most recent



behaviour (within the past three months) via a label on the exterior of the measures' envelope. The measures require approximately 30 minutes to complete. The order that the two measures were inserted into the envelopes was counterbalanced to ensure that approximately half of parents completed the *Behavior Assessment System for Children – Parent Rating Scales* first and half completed the *Social Competence Scale (Parent Version)* first.

### **3.6.2.1 Behavior Assessment System for Children – Parent Rating Scales**

The *Behavior Assessment System for Children – Parent Rating Scales* (BASC PRS-C; 6–11) measures both adaptive and problem behaviours in children aged 6- to 11-years, as observed by parents in the home and in the community. The BASC is also available in parent-report versions for preschoolers (2.5- to 5-years) and adolescents (12- to 18-years), teacher-report versions for all three age groups, and self-report versions for children and adolescents. Additional BASC scales include a Structured Developmental History and a Student Observation System. Researchers suggest that any of the BASC scales can be used individually or in any combination (Matazow & Kamphaus, 2001).

The BASC PRS-C contains 138 items grouped into 3 Adaptive Skills subscales (Adaptability, Leadership, Social Skills) and 9 Clinical/Problem Behaviour subscales (Aggression, Anxiety, Attention Problems, Atypicality, Conduct Problems, Depression, Hyperactivity, Somatization, Withdrawal). The Clinical/Problem Behaviour subscales are further divided into composite scores for Externalizing Problems (Aggression, Conduct Problems, Hyperactivity), Internalizing Problems (Anxiety, Depression, Somatization), and Other Problems (Atypicality, Withdrawal). Also, 6 subscales compose the Behavioral Symptoms Index (BSI): Aggression, Anxiety, Attention Problems, Atypicality, Depression, and Hyperactivity; the BSI measures the child's overall level of problem behaviours.

One of the recommended uses of the BASC is for program evaluation, since repeated testing can indicate progress within specific behavioural and affective areas, thus identifying strengths and weaknesses of the program in question (Reynolds & Kamphaus, 1992a). The BASC has been used in previous evaluations of *FRIENDS* (Miller et al., 2011), with its Anxiety subscale of particular interest.

BASC items offer a behavioural example and ask the respondent how frequently his or her child exhibits the behaviour using a 4-point Likert scale (0 = never, 1 = sometimes, 2 = often, 3 = almost always). Item examples include: “Adjusts well to new teachers” (Adaptability), “Breaks other children’s things” (Aggression), “Says, ‘I get nervous during tests’ or ‘Tests make me nervous’” (Anxiety), “Gives up easily when learning something new” (Attention Problems), “Eats things that are not food” (Atypicality), “Uses foul language” (Conduct Problems), “Says ‘Nobody likes me’” (Depression), “Climbs on things” (Hyperactivity), “Is usually chosen as a leader” (Leadership), “Volunteers to help with things” (Social Skills), “Complains of pain” (Somatization), and “Is shy with other children” (Withdrawal).

Scores obtained from the Adaptive Skills composite subscale of the BASC PRS-C, a summation of scores from the Adaptability, Leadership, and Social Skills subscales, were used for data analysis. The Adaptive Skills subscale is an interval scale with a possible range of raw scores of 0–96. Scores on the Adaptive Skills subscale reflect a child’s ability to adapt readily to changes in his or her environment; achieve academic, social, or community goals; and interact successfully with peers and adults in a multitude of settings (Reynolds & Kamphaus, 1992a). These traits relate to the common EI and resiliency factors of early effortful control, positive social behaviour, and self-regulatory skills (see Table 2). Scores obtained from the Clinical/Problem Behaviour composite subscale were not used for data analysis in this study

because they do not positively correspond to common factors of EI and resiliency. Scores on the Clinical/Problem Behaviour subscale reflect if a child often feels nervous or worried; is hostile or threatening to others; has difficulty concentrating; behaves in immature or ‘odd’ ways; has a tendency to break rules; often feels unhappy, sad, or stressed; has a tendency to be overactive; complains frequently about minor problems and discomforts; and avoids social contact (Reynolds & Kamphaus, 1992a).

Research on the reliability of the BASC PRS-C has found internal consistency values for the composite scores (Externalizing, Internalizing, Adaptive) ranging from .86–.93 and a value of .92 for the BSI (Reynolds & Kamphaus, 1992a); data indicate that the most reliable scale is Social Skills (.89) and the least reliable is Atypicality (.58). Other psychometric evaluations found test-retest values for the composite scores ranging from .90–.94 and a value of .91 for the BSI; Attention Problems and Conduct Problems have the highest test-retest reliability values (.92 each), whereas Atypicality has the lowest (.77) (Reynolds & Kamphaus, 1992a).

To research the construct validity of the BASC PRS-C, Reynolds and Kamphaus (1992a) used both principal axis and covariance structure analysis methods and found three factors that the subscales validly loaded on to: Externalizing Problems, Internalizing Problems, and Adaptive Skills.

Construct validity research comparing the BASC PRS-C and the *Child Behavior Checklist* (CBCL; Achenbach, 1991a) suggests a high correlation between BASC scales and CBCL scales of similar content (Reynolds & Kamphaus, 1992a). Three separate comparisons of the measures found correlations for the Externalizing composite scales ranging from .71–.84, and correlations for the Internalizing composite scales ranging from .65–.74, thus providing convergent and discriminant support for the construct validity of the BASC PRS-C. High

correlations were also found when comparing the Externalizing Problems scale of the BASC PRS-C and the Conduct Disorder (.78), Learning Problem (.67), and Antisocial (.71) subscales of *Conners' Parent Rating Scales* (CPRS-93; Conners, 1989).

Concurrent validity research found moderate correlations between the BASC PRS-C and the *Personality Inventory for Children-Revised* (PIC-R; Lacahr, 1982) and the *Behavior Rating Profile* (BRP; Brown & Hammill, 1983) (Reynolds & Kamphaus, 1992a).

### **3.6.2.2 Social Competence Scale (Parent Version)**

The *Social Competence Scale (Parent Version)* (SCS-P; see Appendix F) is designed to assess a child's prosocial behaviour, communication skills, and self-control. Its 12 items are grouped into 2 subscales: the Prosocial/Communication Skills Scale, and the Emotional Regulation Skills Scale. The sum of all 12 items is the Social Competence Scale Total Score.

SCS-P items offer a behavioural example and ask the parent how well the statement describes his or her child using a 5-point Likert scale (0 = not at all, 1 = a little, 2 = moderately well, 3 = well, 4 = very well). Item examples include: "Your child is very good at understanding other people's feelings" (Prosocial/Communication Skills Scale), and "Your child can accept things not going his/her way" (Emotional Regulation Skills Scale).

Data from the SCS-P Total Score were used for analysis. The Total Score is an interval scale with a possible range of raw scores of 0–48. The Total Score reflects the child's social skills and emotional regulation abilities; these properties align with the common EI and resiliency factors of positive social behaviour and emotion recognition (see Table 2).

Corrigan (2003) conducted a two-year study to examine the reliability of the SCS-P. Comparing a normative ( $n = 387$ ) and a high-risk ( $n = 155$ ) group of American children, Corrigan found an alpha coefficient score of .84 for the normative group and a score of .77 for

the high-risk group on the Prosocial/Communication Skills Scale, scores of .82 (normative) and .76 (high-risk) on the Emotional Regulation Skills Scale, and scores of .89 (normative) and .85 (high-risk) for the Social Competence Scale Total Score. Gouley and colleagues (2008) also compared a normative sample ( $n = 261$ ) and a high-risk sample ( $n = 99$ ) of American children, and found high alpha coefficient values of .92 (normative) and .87–.91 (high-risk) for the Social Competence Scale Total Score. In both of these studies, the SCS-P was determined to significantly discriminate between normative and high-risk samples. Both studies found significantly higher Social Competence Scale Total Scores amongst the normative samples than the high-risk samples,  $t(425) = -8.13, p < .0001$  (Corrigan, 2003),  $t(349) = -5.12, p < .001$  (Gouley, Brotman, Huang, & Shrout, 2008).

Research conducted by Gouley and colleagues (2008) provides support for the concurrent validity of the SCS-P. They found significant correlations between scores on the SCS-P Total Score and scores on the *Social Skills Rating Scale* (SSRS; Gresham & Elliot, 1990) for children's co-operation, assertion, responsibility, and self-control,  $r_s = .38-.56, p_s < .001$ ; scores on the *Emotion Regulation Checklist* (ERC; Shields & Cicchetti, 1997) for children's emotion regulation,  $r = .38, p < .01$ , and lability/negativity,  $r = -.34, p < .05$ ; scores on the *Penn Interactive Peer Play Scale* (PIPPS; Fantuzzo, Sutto-Smith, Coolahan, Manz, Canning, & Debbam, 1995) for children's peer play interaction,  $r = .63, p < .001$ ; and scores on the *New York Rating Scale* (NYRS; Miller et al., 1995) for children's positive peer relations,  $r = .47, p < .001$ .

### **3.6.3 Teacher-report Measures**

Teachers completed one *Strengths and Difficulties* – Teacher Report measure per participating student at Times 1, 2, and 3; before completing measures, teachers were instructed to give responses that reflected the student's most recent behaviour (within the past three

months). Each measure requires approximately 5 minutes to complete; on average, 19 students per intervention class participated in data collection, indicating that teachers devoted approximately 90 minutes per visit to completing all measures. Additionally, teachers in the intervention group completed a *FRIENDS* Fidelity Checklist, which required approximately 2 minutes per session to complete, therefore requiring 20 minutes total to complete.

### **3.6.3.1 Strengths and Difficulties Questionnaire – Teacher Report**

The *Strengths and Difficulties Questionnaire* – Teacher Report (SDQ – T4–10; see Appendix G) measures both positive and negative behaviours of 4- to 10-year-old children as observed by the classroom teacher. Its items and subscales are identical to the SDQ – Student Report, but it includes a 6-item Impact Supplement in addition to the 25 original items. The Impact Supplement is only completed if the teacher endorses an initial screener question that asks if the student has any difficulties with emotions, concentration, behaviour, or the ability to get along with others. If this screener is endorsed, the teacher completes the remaining five questions, which inquire about the severity and duration of the student’s problem behaviours, his or her level of distress, social impairment, and the burden to the teacher or class as a whole caused by the student’s problem behaviours.

As with the child-report version of the SDQ, scores obtained from the Prosocial subscale only of the teacher-report version of the SDQ were used for data analysis. The Prosocial subscale measures the extent to which a teacher perceives a student to be caring, kind, helpful, considerate, and able to share with others, and aligns with the common EI and resiliency factors of positive social behaviour and empathy (see Table 2).

Research on the reliability of the SDQ-T found coefficient alpha scores for all five subscales ranging from .69–.91 (Hayes, 2007); the highest alpha scores were reported for the

Total Difficulties subscale, and the lowest for the Peer Problems subscale. Another team of researchers found coefficient values ranging from .63–.83 and test-retest values ranging from .72–.85 (Stone, Otten, Engels, Vermulst, & Janssens, 2010).

Research on the concurrent validity of the SDQ-T's Total Difficulties subscale and the CBCL total scale found significant correlations,  $r_s = .68-.87$ ; CBCL subscales included externalizing, attention, internalizing, and social problems (Stone, Otten, Engels, Vermulst, & Janssens, 2010). Sharp and colleagues (2005) found that the SDQ-T has better predictive validity for predicting help-seeking behaviour at 1-year follow-up than the parent-report version.

### **3.6.3.2 *FRIENDS* Fidelity Checklist**

Empirical evidence suggests that fidelity to program protocol and procedures results in better outcomes, and that poor fidelity results in decreased program effectiveness (Elliott & Mihalic, 2004). Considering the potential influence that program fidelity could have on participant outcomes, adherence to the *FRIENDS* protocol was measured using a *FRIENDS* Fidelity Checklist (see Appendix D) provided to teachers in the intervention group prior to the start of the program.

The Checklist was based on one created for the *Fun FRIENDS* program provided by MCFD, and modified to follow sessions as outlined in the *FRIENDS for Life* Group Leaders' Manual for Children (Barrett, 2004). For each session, the Checklist asks the teacher to verify which objectives were met, if any supplemental materials were used (songs, storybooks, activities in the Teacher Resource Kit), how many lessons it took to complete the session, and the amount of time required to complete the session. Teachers were instructed to complete the checklist after completing each session. Checklists were collected following program completion.

## 4 Results

This study researched the effect that the *FRIENDS for Life* program has on levels of emotional intelligence and resiliency in a group of grade three and four students over the course of one school year. Two groups of participants (*FRIENDS*, Control) completed measures immediately before the start of the intervention (Time 1), immediately after the end of the intervention (Time 2), and at 3-months follow-up (Time 3). Data were analyzed to determine if groups had significantly different scores at any of the assessment periods (Time 1 *FRIENDS* vs. Time 1 Control; Time 2 *FRIENDS* vs. Time 2 Control; Time 3 *FRIENDS* vs. Time 3 Control), and if groups had significantly different scores over time (Time 1 *FRIENDS* vs. Time 2 *FRIENDS* vs. Time 3 *FRIENDS*; Time 1 Control vs. Time 2 Control vs. Time 3 Control).

### 4.1 Overview of Analyses

Between-groups independent samples *t*-tests were conducted with data at 3 time points between intervention and control groups. Five separate within-group 2 x 3 MANOVAs (for each of the 5 dependent variables) were conducted to determine whether scores increased over time within the intervention and control groups. Pearson correlational analyses were conducted to determine the degree of magnitude and significance of correlations between scores obtained from different informant groups (child vs. parent, child vs. teacher, parent vs. teacher). Cohen's *d* effect sizes were calculated to determine the effect of the *FRIENDS* program on participant outcomes. Cronbach alpha coefficient values were calculated to determine internal consistency of measurement subscales. Lastly, responses obtained from the 4 teachers in the intervention group on the *FRIENDS* Fidelity Checklists were analyzed to determine mean percent compliance of program delivery. Data were analyzed using IBM's Statistical Package for the Social Sciences (SPSS) version 20.



## **4.2 Preliminary Analysis**

### **4.2.1 Missing Data**

If an individual measure was missing 10% or more of item responses it was considered invalid and excluded from analysis. No participants were excluded from overall data analysis due to excluded measures.

For the within-group MANOVAs, comparisons could only be made for participants who had returned measures at all three time points. This resulted in lower sample sizes, and therefore reduced potential power, for these analyses (see Table 10) as data were not collected from all participants at all time points (due to attrition, absence, etc.).

### **4.2.2 Exclusion of Outliers**

The choice to exclude outliers was made under the recommendations of Osborne and Overbay (2004), who claim that the removal of outliers from *t*-tests, analyses of variance, and correlational analyses significantly increases the accuracy of group difference estimates and significantly reduces errors of inference. Outliers were determined using box plots created in SPSS. Any participant whose score fell beyond 1.5 box lengths from either end of the box was considered an outlier and excluded from analyses. For between-groups data, outliers excluded from analyses included 16 scores (SDQ-S  $n = 4$ , EQ-i  $n = 3$ , BASC  $n = 2$ , SCS-P  $n = 6$ , SDQ-T  $n = 1$ ) from 13 participants (intervention  $n = 8$ , control  $n = 5$ ). For within-group data, outliers excluded from analyses included 16 scores (SDQ-S  $n = 3$ , EQ-i  $n = 9$ , BASC  $n = 0$ , SCS-P  $n = 3$ , SDQ-T  $n = 1$ ) from 13 participants (intervention  $n = 8$ , control  $n = 5$ ). All results reported exclude outliers.

### 4.2.3 Internal Consistency of Measurement Subscales

Cronbach alpha coefficient values were calculated to determine the internal consistency or reliability of subscales from all 5 measures at each assessment period (see Table 5).

Table 5

#### *Internal Consistency of Measurement Subscales*

| Subscale                       | Time 1   | Time 2   | Time 3   |
|--------------------------------|----------|----------|----------|
|                                | $\alpha$ | $\alpha$ | $\alpha$ |
| SDQ-S                          |          |          |          |
| Emotional Symptoms             | .656     | .686     | .677     |
| Conduct Problems               | .512     | .565     | .500     |
| Hyperactivity-Inattention      | .561     | .714     | .695     |
| Peer Relationship Problems     | .384     | .479     | .345     |
| Total Difficulties             | .707     | .792     | .788     |
| Prosocial Behaviour            | .529     | .627     | .602     |
| EQ-i                           |          |          |          |
| Intrapersonal                  | .731     | .771     | .836     |
| Interpersonal                  | .748     | .742     | .810     |
| Stress Management              | .752     | .808     | .868     |
| Adaptability                   | .788     | .879     | .863     |
| Total EQ                       | .836     | .887     | .904     |
| BASC                           |          |          |          |
| Externalizing Problems         | .857     | .842     | .836     |
| Internalizing Problems         | .878     | .856     | .863     |
| Other Problems                 | .693     | .618     | .647     |
| Adaptive Skills                | .921     | .945     | .946     |
| SCS-P                          |          |          |          |
| Prosocial/Communication Skills | .838     | .792     | .863     |
| Emotional Regulation Skills    | .787     | .834     | .826     |
| Total Score                    | .892     | .891     | .902     |
| SDQ-T                          |          |          |          |
| Emotional Symptoms             | .856     | .754     | .735     |
| Conduct Problems               | .755     | .617     | .733     |
| Hyperactivity-Inattention      | .851     | .837     | .851     |
| Peer Relationship Problems     | .588     | .678     | .797     |
| Total Difficulties             | .867     | .819     | .853     |
| Prosocial Behaviour            | .814     | .721     | .831     |

*Note:* SDQ-S = *Strengths and Difficulties Questionnaire – Student Report*; EQ-i = *Emotional Quotient Inventory – Youth Version Short*; BASC = *Behavior Assessment System for Children – Parent Rating Scales*; SCS-P = *Social Competence Scale (Parent Version)*; SDQ-T = *Strengths and Difficulties Questionnaire – Teacher Report*.

### 4.3 Descriptive Statistics

#### 4.3.1 Student Characteristics

Demographic data (at Time 1) including participant sex, age, grade, and ethnicity, as determined by languages spoken at home, are displayed in Table 6.

Table 6

*Frequency and Percentages of Student Characteristics at Time 1*

| Characteristic             | <i>FRIENDS</i> |        | Control  |         | Total    |        |
|----------------------------|----------------|--------|----------|---------|----------|--------|
|                            | <i>n</i>       | (%)    | <i>n</i> | (%)     | <i>n</i> | (%)    |
| Sex                        |                |        |          |         |          |        |
| Male                       | 35             | (50.0) | 43       | (52.4)  | 78       | (51.3) |
| Female                     | 35             | (50.0) | 39       | (47.6)  | 74       | (48.7) |
| Age (years)                |                |        |          |         |          |        |
| 7                          | 3              | (4.2)  | 0        | (0.0)   | 3        | (2.0)  |
| 8                          | 23             | (32.9) | 13       | (15.9)  | 36       | (23.7) |
| 9                          | 44             | (62.9) | 69       | (84.1)  | 113      | (74.3) |
| Grade                      |                |        |          |         |          |        |
| 3                          | 17             | (24.3) | 0        | (0.0)   | 17       | (11.1) |
| 4                          | 53             | (75.7) | 82       | (100.0) | 135      | (88.9) |
| Language(s) spoken at home |                |        |          |         |          |        |
| First Language             |                |        |          |         |          |        |
| English                    | 50             | (71.4) | 45       | (54.9)  | 95       | (62.5) |
| South Asian                | 11             | (15.7) | 13       | (15.9)  | 24       | (15.7) |
| East Asian                 | 4              | (5.7)  | 13       | (15.9)  | 17       | (11.2) |
| Southeast Asian            | 1              | (1.4)  | 5        | (6.1)   | 6        | (4.0)  |
| European/Middle Eastern    | 4              | (5.7)  | 1        | (1.2)   | 5        | (3.3)  |
| No response                | 0              | (0.0)  | 5        | (6.1)   | 5        | (3.3)  |
| Second Language            |                |        |          |         |          |        |
| English                    | 6              | (8.6)  | 8        | (9.8)   | 14       | (9.2)  |
| South Asian                | 4              | (5.7)  | 9        | (10.9)  | 13       | (8.5)  |
| East Asian                 | 0              | (0.0)  | 2        | (2.4)   | 2        | (1.3)  |
| European/Middle Eastern    | 2              | (2.9)  | 2        | (2.4)   | 4        | (2.5)  |
| No response                | 58             | (82.9) | 60       | (73.2)  | 118      | (77.6) |

*Note:* South Asian = Punjabi, Gujarati, Urdu, Hindi, Telugu; East Asian = Chinese, Japanese, Korean; Southeast Asian = Vietnamese, Malaysian; European/Middle Eastern = Spanish, German, French, Arabic.

### 4.3.2 Description of Means and Standard Deviations

Table 7 displays the number of returned and valid measures (excluding outliers), means, and standard deviations of raw scores for each of the five subscales of interest, for each assessment period, for both groups.

Table 7

*Sample Sizes, Means, and Standard Deviations of all Returned and Valid Measures*

| Subscale       | Time 1   |          |           | Time 2   |          |           | Time 3   |          |           |
|----------------|----------|----------|-----------|----------|----------|-----------|----------|----------|-----------|
|                | <i>n</i> | <i>M</i> | <i>SD</i> | <i>n</i> | <i>M</i> | <i>SD</i> | <i>n</i> | <i>M</i> | <i>SD</i> |
| <i>FRIENDS</i> |          |          |           |          |          |           |          |          |           |
| SDQ-S          | 63       | 7.75     | 1.88      | 66       | 7.98     | 1.77      | 69       | 8.14     | 1.71      |
| EQ-i           | 62       | 44.23    | 8.46      | 67       | 47.67    | 9.27      | 67       | 48.31    | 10.39     |
| BASC           | 40       | 61.23    | 13.50     | 45       | 62.91    | 13.74     | 60       | 62.57    | 14.89     |
| SCS-P          | 40       | 34.05    | 6.32      | 37       | 34.89    | 5.98      | 51       | 35.80    | 6.81      |
| SDQ-T          | 69       | 7.75     | 2.10      | 68       | 8.37     | 1.77      | 70       | 7.64     | 2.21      |
| Control        |          |          |           |          |          |           |          |          |           |
| SDQ-S          | 73       | 8.16     | 1.56      | 72       | 7.81     | 1.89      | 75       | 7.81     | 1.71      |
| EQ-i           | 74       | 45.57    | 10.25     | 73       | 43.86    | 10.77     | 74       | 44.97    | 9.87      |
| BASC           | 66       | 58.55    | 15.26     | 63       | 56.24    | 15.71     | 61       | 57.59    | 16.55     |
| SCS-P          | 60       | 32.47    | 8.01      | 49       | 31.69    | 7.67      | 56       | 32.21    | 7.68      |
| SDQ-T          | 77       | 7.99     | 1.78      | 77       | 8.06     | 1.79      | 77       | 7.74     | 2.03      |

*Note:* SDQ-S = *Strengths and Difficulties Questionnaire* – Student Report (Prosocial Scale); EQ-i = *Emotional Quotient Inventory – Youth Version Short* (Total EQ); BASC = *Behavior Assessment System for Children* – Parent Rating Scales (Adaptive Skills); SCS-P = *Social Competence Scale (Parent Version)* (Total Score); SDQ-T = *Strengths and Difficulties Questionnaire* – Teacher Report (Prosocial Scale).

### 4.4 Independent Samples *T*-Tests and MANOVA

Independent samples *t*-tests were conducted to compare differences in means between groups (*FRIENDS* vs. Control) at each time point (Time 1, 2, and 3). A one-way ANOVA was not used to compare means since it does not yield any advantages over *t*-tests. As the study included two participant groups (intervention, control), no more than two means were ever compared at once; therefore, the same number of tests would be conducted regardless of method, and the adjusted alpha level after Bonferroni corrections were applied would be the same. Five 2 x 3 MANOVAs were conducted to compare changes in scores within-group over time.

#### 4.4.1 Assumptions of *T*-Tests

In order for this study's between-groups hypothesis testing to be considered valid, three assumptions for *t*-tests had to be met: 1) the observations within- and between-groups had to be independent, 2) the distribution of residuals (error) within-groups had to be normal, and 3) the variances within-groups had to be equal (homogeneity of variances).

The assumption of independence of observations was satisfied by the study's design. Data were collected independently from each group, meaning that all children in each classroom were within the same group (*FRIENDS* or Control), and that child, parent, and teacher participants did not interact with one another.

The assumption of normality of residuals was tested using Shapiro-Wilks' test, which is recommended over the Kolmogorov-Smirnov test for use with smaller sample sizes ( $N = 50$  to  $2,000$ ). Using Shapiro-Wilks' test with between-groups data, the assumption of normality was significant, and therefore not met, for both groups on the SDQ-S and SDQ-T Prosocial subscales, Times 1, 2, and 3  $ps = .000$ , for the *FRIENDS* group on the SCS-P Total Score, Time 1  $p = .018$ , and for the Control group on the EQ-i Total EQ subscale, Time 3  $p = .045$ . A visual inspection of detrended normal Q-Q plots indicate that data from the *FRIENDS* group on the SDQ-S and SDQ-T Prosocial subscales (Times 1, 2, and 3) satisfied the assumption of normality, and that data from the Control group on the SDQ-S (Time 3) and SDQ-T Prosocial subscales (Times 2 and 3) also satisfied the assumption of normality. This implies that data from the *FRIENDS* group on the SCS-P Total Score (Time 1), and data from the Control group on the SDQ-S Prosocial (Times 1 and 2), SDQ-T Prosocial (Time 1), and the EQ-I Total EQ (Time 3) subscales did not meet assumptions of normality. Since results from the Shapiro-Wilks' test and detrended

normal Q-Q plots indicate that the assumption of normality was not met for all tests, results should be interpreted with caution.

The assumption of homogeneity of variances was tested using Levene's test. Using Levene's test, the assumption of homogeneity of variances was met for all tests except two, the between-groups comparisons on the SDQ-S and the SDQ-T Prosocial subscales at Time 1,  $ps = .028$  and  $.024$ ; the assumption of homogeneity of variances was met for all other tests,  $p > .05$ . As the assumption of homogeneity of variances as measured by Levene's test was not met for all tests, results should be interpreted with caution.

#### **4.4.2 Assumptions of MANOVA**

In order for this study's within-group hypothesis testing to be considered valid, four assumptions of MANOVA had to be met: 1) the distribution of error had to be normal, 2) the variances had to be equal (homogeneity of variances), 3) the covariances had to be equal (covariance equality), and 4) random error had to be truly random (circularity assumption); the circularity assumption is a necessary assumption of MANOVA.

The assumption of normality was tested using Shapiro-Wilks' test. Using Shapiro-Wilks' test, the assumption of normality was not met for the both the student- and teacher-reports of the SDQ Prosocial subscale for both groups at Times 1, 2, and 3,  $ps = .000$ , and the SCS-P Total Score for the *FRIENDS* group at Time 1,  $p = .013$ . A visual inspection of detrended normal Q-Q plots indicate that data from the *FRIENDS* group on the SDQ-S and SDQ-T Prosocial subscales (Times 1, 2, and 3) satisfied the assumption of normality, and that data from the Control group on the SDQ-S (Time 3) and SDQ-T Prosocial (Times 2, 3) also satisfied the assumption of normality. This implies that data from the *FRIENDS* group on the SCS-P Total Score (Time 1), and data from the Control group on the SDQ-S (Times 1 and 2) and SDQ-T Prosocial subscales

(Time 1) did not meet assumptions of normality. As results from the Shapiro-Wilks' test and detrended normal Q-Q plots indicate that the assumption of normality was not met for all tests, results should be interpreted with caution.

The assumption of homogeneity of variances was tested using Levene's test. Using Levene's test, the assumption of homogeneity of variances was not met for both the student- and teacher-reports of the SDQ Prosocial subscale at Time 1,  $ps = .003$  and  $.020$ , the EQ-i Total EQ subscale at Time 1,  $p = .023$ , and for the SCS-P Total Score at Times 2 and 3,  $ps = .025$  and  $.020$ . Since the assumption of homogeneity of variances as measured by Levene's test was not met for all tests, results should be interpreted with caution. The assumption of equality of covariances was tested using Box's M test; all tests met this assumption,  $p > .05$ .

The assumption of circularity was tested using Mauchly's Test of Sphericity. Using Mauchly's test, the assumption of circularity was not met for the SDQ-T Prosocial subscale,  $p = .002$ . All other tests met this assumption,  $p > .05$ .

#### **4.4.3 Between-Groups Independent Samples *T*-Tests**

Participants in the *FRIENDS* and Control groups did not differ significantly on any subscale at Time 1 (see Table 8). At Time 2, participants in the *FRIENDS* group had statistically higher scores than those in the Control group on the EQ-i Total EQ subscale,  $M = 47.67$ , 95% CI [45.41, 49.93],  $t(138) = -2.233$ ,  $p = .027$ , two-tailed; and on the BASC Adaptive Skills subscale,  $M = 62.91$ , 95% CI [58.78, 67.04],  $t(106) = -2.290$ ,  $p = .024$ , two-tailed. At Times 2 and 3, participants in the *FRIENDS* group had higher score on the SCS-P Total Score, Time 2:  $M = 34.89$ , 95% CI [32.90, 36.88],  $t(84) = -2.100$ ,  $p = .039$ , two-tailed; Time 3:  $M = 35.80$ , 95% CI [33.89, 37.72],  $t(105) = -2.549$ ,  $p = 0.012$ , two-tailed. All other between-groups comparisons at Times 2 and 3 were non-significant,  $p > .05$  (see Table 9).

To adjust for the use of multiple t-tests and the risk of Type I error, Bonferroni corrections were applied for each test ( $\alpha = .05/15 = 0.003$ ). After Bonferroni corrections were applied to the *t*-tests (15 tests: 5 subscales x 3 assessment periods), all results failed to reach significance.

Table 8

*Time 1 Between-Groups Independent Samples T-Tests*

| Subscale       | <i>n</i> | <i>M</i> | <i>SD</i> | <i>df</i> | <i>t</i> | Sig.<br><i>p</i> | ES<br><i>d</i> |
|----------------|----------|----------|-----------|-----------|----------|------------------|----------------|
| T1 SDQ-S       |          |          |           |           |          |                  |                |
| <i>FRIENDS</i> | 63       | 7.75     | 1.88      | 134       | 1.419    | .158             | pre            |
| Control        | 73       | 8.16     | 1.56      |           |          |                  |                |
| T1 EQ-i        |          |          |           |           |          |                  |                |
| <i>FRIENDS</i> | 62       | 44.23    | 8.46      | 134       | .822     | .412             | pre            |
| Control        | 74       | 45.57    | 10.25     |           |          |                  |                |
| T1 BASC        |          |          |           |           |          |                  |                |
| <i>FRIENDS</i> | 40       | 61.23    | 13.50     | 104       | -.914    | .363             | pre            |
| Control        | 66       | 58.55    | 15.26     |           |          |                  |                |
| T1 SCS-P       |          |          |           |           |          |                  |                |
| <i>FRIENDS</i> | 40       | 34.05    | 6.32      | 98        | -1.051   | .296             | pre            |
| Control        | 60       | 32.47    | 8.01      |           |          |                  |                |
| T1 SDQ-T       |          |          |           |           |          |                  |                |
| <i>FRIENDS</i> | 69       | 7.75     | 2.10      | 144       | .727     | .468             | pre            |
| Control        | 77       | 7.99     | 1.78      |           |          |                  |                |

*Note:* T1 = Time 1; SDQ-S = *Strengths and Difficulties Questionnaire* – Student Report (Prosocial Scale); EQ-i = *Emotional Quotient Inventory – Youth Version Short* (Total EQ); BASC = *Behavior Assessment System for Children* – Parent Rating Scales (Adaptive Skills); SCS-P = *Social Competence Scale (Parent Version)* (Total Score); SDQ-T = *Strengths and Difficulties Questionnaire* – Teacher Report (Prosocial Scale); pre = pre-intervention, no effect size to measure.

#### 4.4.4 Within-Group 2 x 3 MANOVAs

For the within-group 2 x 3 MANOVAs, comparisons could only be made for participants who returned a set of measures at all three assessment periods. Sample sizes for this analysis are lower than the between-groups analysis, thus decreasing potential power (see Table 10).

Five 2 x 3 MANOVAs were conducted using data from each of the 5 dependent variables (subscales: SDQ-S Prosocial, EQ-i Total EQ, BASC Adaptive Skills, SCS-P Total Score, SDQ-T



Table 9

*Times 2 and 3 Between-Groups Independent Samples T-Tests*

| Subscale       | <i>n</i> | <i>M</i> | <i>SD</i> | <i>df</i> | <i>t</i> | Sig.<br><i>p</i> | ES<br><i>d</i> |
|----------------|----------|----------|-----------|-----------|----------|------------------|----------------|
| T2 SDQ-S       |          |          |           |           |          |                  |                |
| <i>FRIENDS</i> | 66       | 7.98     | 1.77      | 136       | -.574    | .567             | .093           |
| Control        | 72       | 7.81     | 1.89      |           |          |                  |                |
| T2 EQ-i        |          |          |           |           |          |                  |                |
| <i>FRIENDS</i> | 67       | 47.67    | 9.27      | 138       | -2.233   | .027*            | .379           |
| Control        | 73       | 43.86    | 10.77     |           |          |                  |                |
| T2 BASC        |          |          |           |           |          |                  |                |
| <i>FRIENDS</i> | 45       | 62.91    | 13.74     | 106       | -2.290   | .024*            | .452           |
| Control        | 63       | 56.24    | 15.71     |           |          |                  |                |
| T2 SCS-P       |          |          |           |           |          |                  |                |
| <i>FRIENDS</i> | 37       | 34.89    | 5.98      | 84        | -2.100   | .039*            | .465           |
| Control        | 49       | 31.69    | 7.67      |           |          |                  |                |
| T2 SDQ-T       |          |          |           |           |          |                  |                |
| <i>FRIENDS</i> | 68       | 8.37     | 1.77      | 143       | -1.023   | .308             | .174           |
| Control        | 77       | 8.06     | 1.79      |           |          |                  |                |
| T3 SDQ-S       |          |          |           |           |          |                  |                |
| <i>FRIENDS</i> | 69       | 8.14     | 1.71      | 142       | -1.161   | .247             | .193           |
| Control        | 75       | 7.81     | 1.71      |           |          |                  |                |
| T3 EQ-i        |          |          |           |           |          |                  |                |
| <i>FRIENDS</i> | 67       | 48.31    | 10.39     | 139       | -1.958   | .052             | .330           |
| Control        | 74       | 44.97    | 9.87      |           |          |                  |                |
| T3 BASC        |          |          |           |           |          |                  |                |
| <i>FRIENDS</i> | 60       | 62.57    | 14.89     | 119       | -1.738   | .085             | .316           |
| Control        | 61       | 57.59    | 16.55     |           |          |                  |                |
| T3 SCS-P       |          |          |           |           |          |                  |                |
| <i>FRIENDS</i> | 51       | 35.80    | 6.81      | 105       | -2.549   | .012*            | .495           |
| Control        | 56       | 32.21    | 7.68      |           |          |                  |                |
| T3 SDQ-T       |          |          |           |           |          |                  |                |
| <i>FRIENDS</i> | 70       | 7.64     | 2.21      | 145       | .279     | .781             | -.047          |
| Control        | 77       | 7.74     | 2.03      |           |          |                  |                |

*Note:* T2 = Time 2; T3 = Time 3; SDQ-S = *Strengths and Difficulties Questionnaire* – Student Report (Prosocial Scale); EQ-i = *Emotional Quotient Inventory – Youth Version Short* (Total EQ); BASC = *Behavior Assessment System for Children* – Parent Rating Scales (Adaptive Skills); SCS-P = *Social Competence Scale (Parent Version)* (Total Score); SDQ-T = *Strengths and Difficulties Questionnaire* – Teacher Report (Prosocial Scale).

\*  $p < .05$ , two-tailed.

Prosocial) to compare differences in scores over time within both the *FRIENDS* and Control groups (see Table 11). There was a statistically significant effect of group on the EQ-i Total EQ

Table 10

*Within-Group 2 x 3 MANOVA Sample Sizes*

| Subscale       | <i>n</i> | Time 1   |           | Time 2   |           | Time 3   |           |
|----------------|----------|----------|-----------|----------|-----------|----------|-----------|
|                |          | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> |
| SDQ-S          |          |          |           |          |           |          |           |
| <i>FRIENDS</i> | 60       | 7.72     | 1.91      | 7.92     | 1.81      | 8.13     | 1.66      |
| Control        | 63       | 8.19     | 1.41      | 8.00     | 1.88      | 7.92     | 1.74      |
| EQ-i           |          |          |           |          |           |          |           |
| <i>FRIENDS</i> | 54       | 44.70    | 7.17      | 47.98    | 9.37      | 48.96    | 9.49      |
| Control        | 61       | 46.00    | 9.97      | 43.93    | 9.65      | 45.48    | 9.45      |
| BASC           |          |          |           |          |           |          |           |
| <i>FRIENDS</i> | 28       | 61.93    | 13.68     | 63.25    | 13.85     | 63.86    | 15.22     |
| Control        | 48       | 59.73    | 14.72     | 58.90    | 16.26     | 58.08    | 17.40     |
| SCS-P          |          |          |           |          |           |          |           |
| <i>FRIENDS</i> | 20       | 34.10    | 5.35      | 35.65    | 4.46      | 37.20    | 4.94      |
| Control        | 36       | 32.36    | 7.58      | 32.17    | 7.54      | 31.31    | 8.00      |
| SDQ-T          |          |          |           |          |           |          |           |
| <i>FRIENDS</i> | 68       | 7.79     | 2.08      | 8.37     | 1.77      | 7.65     | 2.20      |
| Control        | 71       | 8.04     | 1.74      | 8.08     | 1.83      | 7.85     | 1.96      |

*Note:* SDQ-S = *Strengths and Difficulties Questionnaire* – Student Report (Prosocial Scale); EQ-i = *Emotional Quotient Inventory – Youth Version Short* (Total EQ); BASC = *Behavior Assessment System for Children – Parent Rating Scales* (Adaptive Skills); SCS-P = *Social Competence Scale (Parent Version)* (Total Score); SDQ-T = *Strengths and Difficulties Questionnaire* – Teacher Report (Prosocial Scale).

subscale,  $F(2, 111) = 4.08, p = .009$ ; Wilks'  $\lambda = .901$ , partial  $\eta^2 = .10$ . Follow-up univariate ANOVAs indicate that there was a significant increase in scores on the EQ-i Total EQ at Time 2,  $F(1, 113) = 5.18, p = .025$ , partial  $\eta^2 = .04$ , and at Time 3,  $F(1, 113) = 3.88, p = .05$ , partial  $\eta^2 = .03$ . To determine which group had a significant increase in scores, paired-sample *t*-tests were conducted to compare means within groups over time. The *t*-tests reveal that children in the *FRIENDS* group had a significant increase in scores between Time 1 and Time 2, *M* difference = 3.28, 95% CI [1.04, 5.52],  $t(53) = 2.932, p = .005$ , two-tailed, and between Time 1 and Time 3, *M* difference = 4.26, 95% CI [1.65, 6.87],  $t(53) = 3.279, p = .002$ , two-tailed (see Figure 2). When Bonferroni corrections were applied to adjust for the use of multiple *t*-tests and the risk of Type I error ( $\alpha = .05/2 = .025$ ), results remained significant.

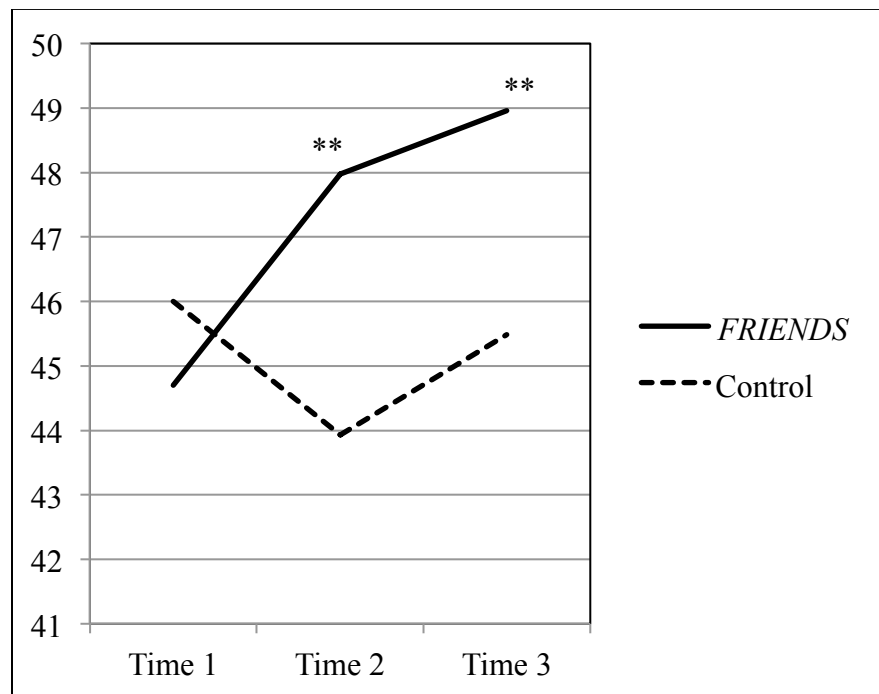
Table 11

*Within-Group 2 x 3 MANOVAs*

| Subscale | $\lambda$ | $df_1$ | $df_2$ | $F$  | $p$    | partial $\eta^2$ |
|----------|-----------|--------|--------|------|--------|------------------|
| SDQ-S    | .967      | 2      | 119    | 1.37 | .266   | .03              |
| EQ-i     | .901      | 2      | 111    | 4.08 | .009** | .10              |
| BASC     | .961      | 2      | 72     | .98  | .408   | .04              |
| SCS-P    | .821      | 2      | 52     | 3.78 | .016*  | .18              |
| SDQ-T    | .968      | 2      | 135    | 1.51 | .214   | .03              |

*Note:* SDQ-S = *Strengths and Difficulties Questionnaire* – Student Report (Prosocial Scale); EQ-i = *Emotional Quotient Inventory – Youth Version Short* (Total EQ); BASC = *Behavior Assessment System for Children* – Parent Rating Scales (Adaptive Skills); SCS-P = *Social Competence Scale (Parent Version)* (Total Score); SDQ-T = *Strengths and Difficulties Questionnaire* – Teacher Report (Prosocial Scale).

\*  $p < .05$ , two-tailed. \*\*  $p < .01$ , two-tailed.



*Figure 2. Emotional Quotient Inventory – Youth Version Short estimated marginal mean Total EQ scores per group across three assessment periods.*

\*\*  $p < .01$ , two-tailed.

There was a statistically significant effect of group on SCS-P Total Scores,  $F(2, 52) = 3.78$ ,  $p = .016$ ; Wilks'  $\lambda = .821$ , partial  $\eta^2 = .18$ . A follow-up univariate ANOVA indicates that there was a significant increase in scores on the SCS-P Total Score at Time 3,  $F(1, 54) = 8.93$ ,  $p = .004$ , partial  $\eta^2 = .14$ . To determine which groups had a significant increase in scores, paired-sample  $t$ -tests were conducted to compare means within groups over time. The  $t$ -tests reveal that children in the *FRIENDS* group had a significant increase in scores between Time 1 and Time 3,  $M$  difference = 3.10, 95% CI [1.02, 5.18],  $t(19) = 3.126$ ,  $p = .006$ , two-tailed (see Figure 3). When Bonferroni corrections were applied ( $\alpha = .05/2 = .025$ ), this result remained significant. All other MANOVAs were non-significant,  $p > .05$  (see Table 11).

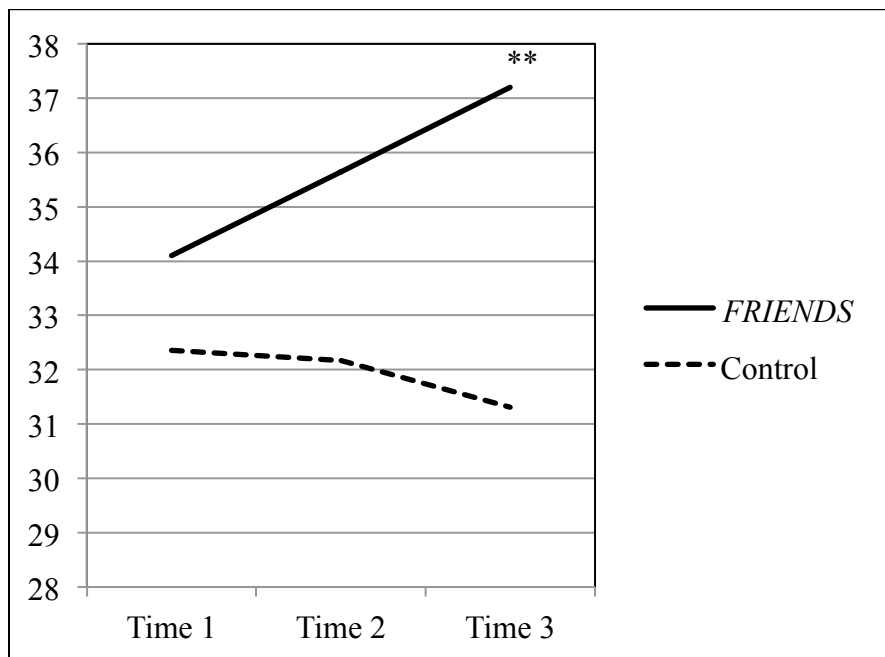


Figure 3. *Social Competence Scale (Parent Version)* estimated marginal mean Total Scores per group across three assessment periods.

\*\*  $p < .01$ , two-tailed.

## **4.5 Correlations of Measurement Subscales**

Pearson correlation calculations (two-tailed) were conducted to determine the degree of magnitude of correlations between child and parent subscales, child and teacher subscales, and parent and teacher subscales (see Table 12).

### **4.5.1 Child-Parent Correlations**

Pearson correlation calculations were used to compare both child-report subscales (SDQ-S Prosocial, EQ-i Total EQ) with both parent-report subscales (BASC Adaptive, SCS-P Total). Small but statistically significant Pearson correlation coefficients exist between the SDQ-S and BASC at Time 2,  $r = .354, p < .01$ , two-tailed, and Time 3,  $r = .419, p < .01$ , two-tailed; between the EQ-i and BASC at Time 1,  $r = .243, p < .05$ , two-tailed, Time 2,  $r = .317, p < .01$ , two-tailed, and Time 3,  $r = .327, p < .01$ , two-tailed; between the SDQ-S and SCS-P at Time 1,  $r = .257, p < .05$ , two-tailed, and Time 3,  $r = .365, p < .01$ , two-tailed; and between the EQ-i and SCS-P at Time 1,  $r = .275, p < .01$ , two-tailed, Time 2,  $r = .286, p < .01$ , two-tailed, and Time 3,  $r = .330, p < .01$ , two-tailed. These coefficients indicate that there was low but significant concordance between child and parent informants regarding children's behaviours and skills at each of the three assessment periods.

### **4.5.2 Child-Teacher Correlations**

Pearson correlation calculations were used to compare both child-report subscales (SDQ-S Prosocial, EQ-i Total EQ) with the teacher-report subscale (SDQ-T Prosocial). Small but statistically significant Pearson correlation coefficients exist between the SDQ-S and SDQ-T at Time 2,  $r = .308, p < .01$ , two-tailed, and between the EQ-i and SDQ-T at Time 2,  $r = .171, p < .05$ , two-tailed. These coefficients indicate that there was low but significant concordance

Table 12

*Pearson Correlations of Measurement Subscales*

| Subscale     | 1      | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 10     | 11     | 12    | 13     | 14     | 15   |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|--------|------|
| 1. SDQ-S T1  | 1.00   |        |        |        |        |        |        |        |        |        |        |       |        |        |      |
| 2. SDQ-S T2  | .312** | 1.00   |        |        |        |        |        |        |        |        |        |       |        |        |      |
| 3. SDQ-S T3  | .338** | .533** | 1.00   |        |        |        |        |        |        |        |        |       |        |        |      |
| 4. EQ-i T1   | .335** | .262** | .286** | 1.00   |        |        |        |        |        |        |        |       |        |        |      |
| 5. EQ-i T2   | .243** | .422** | .448** | .517** | 1.00   |        |        |        |        |        |        |       |        |        |      |
| 6. EQ-i T3   | .235** | .221*  | .449** | .468** | .695** | 1.00   |        |        |        |        |        |       |        |        |      |
| 7. BASC T1   | .165   | .359** | .391** | .243*  | .313** | .284** | 1.00   |        |        |        |        |       |        |        |      |
| 8. BASC T2   | .157   | .354** | .373** | .241*  | .317** | .375** | .820** | 1.00   |        |        |        |       |        |        |      |
| 9. BASC T3   | .198*  | .402** | .419** | .240*  | .278** | .327** | .772** | .834** | 1.00   |        |        |       |        |        |      |
| 10. SCS-P T1 | .257*  | .322** | .391** | .275** | .353** | .403** | .744** | .717** | .624** | 1.00   |        |       |        |        |      |
| 11. SCS-P T2 | .089   | .194   | .323** | .218   | .286** | .311** | .614** | .745** | .658** | .761** | 1.00   |       |        |        |      |
| 12. SCS-P T3 | .161   | .229*  | .365** | .180   | .313** | .330** | .541** | .697** | .687** | .649** | .822** | 1.00  |        |        |      |
| 13. SDQ-T T1 | .020   | .109   | .087   | .069   | .131   | .078   | .227*  | .245*  | 0.54   | .129   | .086   | -.009 | 1.00   |        |      |
| 14. SDQ-T T2 | .074   | .308** | .103   | .018   | .171*  | .116   | .124   | .300** | .257** | .113   | .230*  | .116  | .491** | 1.00   |      |
| 15. SDQ-T T3 | .071   | .252** | .036   | -.041  | .006   | .021   | .136   | .277** | .193*  | -.034  | .080   | .066  | .468** | .658** | 1.00 |

*Note:* T1 = Time 1; T2 = Time 2; T3 = Time 3.

\*  $p < .05$ , two-tailed. \*\*  $p < .01$ , two-tailed.

between child and teacher informants regarding children's behaviours and skills at each of the three assessment periods.

#### **4.5.3 Parent-Teacher Correlations**

Pearson correlation calculations were used to compare both parent-report subscales (BASC Adaptive, SCS-P Total) with the teacher-report subscale (SDQ-T Prosocial). Small but statistically significant Pearson correlation coefficients exist between the BASC and the SDQ-T at Time 1,  $r = .227, p < .05$ , two-tailed, Time 2,  $r = .300, p < .01$ , two-tailed, and Time 3,  $r = .193, p < .05$ , two-tailed; and between the SCS-P and the SDQ-T at Time 2,  $r = .230, p < .05$ , two-tailed. These coefficients indicate that there was low but significant concordance between parent and teacher informants regarding children's behaviours and skills at each of the three assessment periods.

#### **4.6 Effect Size**

Cohen's  $d$  calculations were conducted to measure the effect size of the *FRIENDS* program at Times 2 and 3 (see Table 9). Cohen (1988) suggests .2 as small, .4 as medium, and .6 as large effect sizes. At Time 2, the data show a small to medium effect on scores from the EQ-i Total EQ subscale,  $d = .379$ , and medium effects on scores from the BASC Adaptive Skills subscale,  $d = .452$ , and the SCS-P Total Score,  $d = .465$ . At Time 3, the data show a small effect of the *FRIENDS* program on scores from the SDQ-S Prosocial subscale,  $d = .193$ , a small to medium effect on scores from the EQ-i Total EQ subscale,  $d = .330$ , and the BASC Adaptive subscale,  $d = .316$ , and a medium effect on scores from the SCS-P Total Score,  $d = .495$ .

#### 4.7 Program Fidelity

Teachers in the intervention group were provided with *FRIENDS* Fidelity Checklists at Time 1 that required them to document per session: if all objectives were fulfilled (percent compliance); if any additional resources were used to supplement the session (songs, storybooks, activities from the Teacher Resource Kit); their delivery method (once during the week, two half-sessions, or three or more times spread throughout the week); and the total delivery time in minutes required to complete the session. Due to too few data, *t*-tests could not be calculated to detect if any statistical significances exist between individual teachers' delivery of the program.

Percent compliance refers to the number of objectives that were completed per session. Percent compliance for all ten sessions ranged from 52.78–100%, with an overall mean of 93.98% ( $SD = 16.04\%$ ). All teachers were within one standard deviation of the mean for all sessions except for Session 10. The objectives of Session 10 largely consist of review and activities to celebrate the completion of the program.

The overall mean number of additional resources used per session was 0.35 ( $SD = 0.66$ ), indicating that most teachers did not use songs, storybooks, or activities from the Teacher Resource Kit to supplement their lessons. However, one teacher typically included additional resources in her lessons, and was consistently above one standard deviation of the mean.

The overall mean number of lessons per week used to deliver each session was 2.38 ( $SD = 0.59$ ), more than the 1 session per week recommended in the *FRIENDS* manual (Barrett, 2004); however, all teachers were within one standard deviation of the mean in terms of number of lessons per week.

The overall mean amount of time teachers required to deliver each session was 73.03 minutes ( $SD = 26.85$  minutes), similar to the overall mean of 70.5 minutes, as recommended in



the *FRIENDS* manual (Barrett, 2004). One teacher usually required longer to complete sessions, and is consistently above one standard deviation of the mean.

#### **4.8 Summary of Results**

Cronbach alpha coefficient values reveal that the Peer Relationship Problems subscale from the SDQ-S at Time 3 had the lowest internal consistency (.345), indicating that either children had difficulty conceptualizing the construct of peer relationship problems, or that the measure does not accurately capture this construct. Cronbach alpha coefficient values reveal that the Adaptive Skills subscale from the BASC at Time 3 had the highest internal consistency (.946), indicating that either parents did not have difficulty conceptualizing the construct of adaptability, or that the measure accurately captures this construct.

Individual samples *t*-tests comparing between-groups data on the EQ-i Total EQ, BASC Adaptive Skills, and SCS-P Total Score subscales indicate that participants in the *FRIENDS* group had higher scores than participants in the Control group at Times 2 and 3; however, after Bonferroni corrections were applied, these differences were no longer statistically significant.

Five separate 2 x 3 MANOVAs comparing within-group data indicate significant effects for scores from the EQ-i Total EQ subscale and the SCS-P Total Score. Paired-samples *t*-tests indicate that participants in the *FRIENDS* group had significantly increased scores between Time 1 and Time 2 and between Time 1 and Time 3 on the EQ-i Total EQ subscale, and between Time 1 and Time 3 of the SCS-P Total Score. After Bonferroni corrections were applied, these differences remained statistically significant.

Pearson correlation calculations reveal small but statistically significant correlations between both child- and parent-report subscales (SDQ-S vs. BASC, SDQ-S vs. SCS-P, EQ-i vs. BASC, EQ-i vs. SCS-P), between both child- and teacher-report subscales (SDQ-S vs. SDQ-T,

EQ-i vs. SDQ-T), and between both parent- and teacher-report subscales (BASC vs. SDQ-T, SCS-P vs. SDQ-T). This suggests low but significant concordance between informants regarding children's behaviour and skills.

Cohen's *d* effect sizes calculated to determine the impact that the *FRIENDS* program had on participants' social-emotional skills and competencies at Times 2 and 3 indicate that parents reported a medium effect of the program on their children,  $ds = .316 - .495$ , children self-reported a small effect,  $ds = .093 - .379$ , and teachers did not report any effect,  $ds = -.047 - .174$ .

Data from the *FRIENDS* Fidelity Checklists indicate that teachers delivered the *FRIENDS* protocol to their students in a similar manner, completing all session objectives (except for Session 10), rarely using supplemental materials, delivering the program twice per week, and requiring approximately 73 minutes to complete one session. Also, all teachers delivered the protocol in a manner consistent with the recommendations outlined in the *FRIENDS* manual (Barrett, 2004).

## 5 Discussion and Conclusions

The purpose of this study was to research the effect that the *FRIENDS for Life* program has on levels of emotional intelligence and resiliency in a group of grade three and four students over the course of one school year. Participants included children ( $N = 152$ ; intervention  $n = 70$ , control  $n = 82$ ) enrolled in eight classes (intervention  $n = 4$ , control  $n = 4$ ), in eight schools within the same urban school district, their parents ( $N = 152$ ), and their classroom teachers ( $N = 8$ ). All participants completed paper-and-pencil measures at three time points: immediately before the start of the intervention (Time 1), immediately after the end of the intervention (Time 2), and at 3-months follow-up (Time 3). Measures included two child-report measures (*Strengths and Difficulties Questionnaire – Student Report*; *Emotional Quotient Inventory – Youth Version*), two parent-report measures (*Behavior Assessment System for Children – Parent Rating Scales*; *Social Competence Scale – Parent Version*) and one teacher-report measure (*Strengths and Difficulties Questionnaire – Teacher Report*). Teachers in the intervention group also completed a *FRIENDS* Fidelity Checklist to monitor implementation of the program in their class. Data were analyzed using between-groups independent samples *t*-tests and five within-group 2 x 3 MANOVAs. Between-groups comparisons suggest that there are no statistically significant differences between the intervention and the control groups during any of the three assessment periods on any of the 5 measurement subscales. Within-group comparisons indicate that children in the *FRIENDS* group had statistically significant increases in scores on the EQ-i Total EQ subscale and SCS-P Total Score over time; these results are in the expected direction. This result indicates that children who participated in *FRIENDS* self-reported increased emotional quotient (EQ) levels, indicating that they felt that they had increased intrapersonal and interpersonal skills, adaptability, and stress management abilities over time. Parents of children in this study

enrolled in the intervention reported increased social competencies in their children, indicating that they observed improved social skills and emotion regulation abilities within their children over time. Results also indicate that teachers did not report differences in their students' behaviour over time.

## **5.1 Hypothesis Testing**

The first hypothesis of this study was that children who participate in *FRIENDS* would have statistically higher scores at post-test (Time 2) and at 3-months follow-up (Time 3) on subscales related to EI and resiliency than children who did not participate in *FRIENDS*. Data were subjected to between-groups independent-samples *t*-tests, and results indicate that children who participated in *FRIENDS* had higher scores at post-test and 3-month follow-up; however, after Bonferroni corrections were applied, these results no longer reached significance.

The second hypothesis of this study was that children who participate in *FRIENDS* would have statistically significant increases on scores related to EI and resiliency over time. Data were subjected to five 2 x 3 MANOVAs and results indicate significant effects on the EQ-i Total EQ subscale and the SCS-P Total Score. Group means were compared using paired-samples *t*-tests and results indicate that children in the *FRIENDS* group had statistically significant increases in scores on the EQ-i Total EQ subscale (Time 1 vs. Time 2, Time 1 vs. Time 3) and SCS-P Total Score (Time 1 vs. Time 3) over time; after Bonferonni corrections were applied, these results remained significant.

The third hypothesis of this study was that the degree of magnitude of correlations between child-, parent-, and teacher-report measures would be small. Pearson correlation coefficients indicate that correlations between child- and parent-, child- and teacher-, and parent- and teacher-report measures are small but statistically significant. The study's multi-informant

method allowed for a broad account of children's behaviour in different environments (home, classroom). Therefore, the small Pearson correlation coefficients calculated by comparing responses between children and their adult caregivers may be interpreted to mean that these reporters are noting valid accounts of different behaviours that children exhibit, depending on their environment (Achenbach, McConaughy, & Howell, 1987; Renk, 2005).

Although an hypothesis concerning effect size was not posited, the Cohen's *d* effect sizes calculated reveal information on the impact of the *FRIENDS* program on child participants. According to data obtained from the SDQ-S and EQ-i, children in the intervention group self-reported that the program had a small effect on their abilities to be kind, helpful, considerate, share with others, and cope with stress. According to data obtained from the BASC and SCS-P, parents of children in the intervention group reported that the program positively influenced their children's abilities to adapt to change, achieve goals, interact successfully with peers and adults, and regulate their emotions (medium effect). According to data obtained from the SDQ-T, teachers did not report any effect of *FRIENDS* on their students' social-emotional competencies or abilities. It is worth noting that parents reported the greatest increase in skills and emotional functioning (large effect sizes) of all three informant groups. This finding suggests that the benefits of the *FRIENDS* program are more likely to be observed by parents in a home environment than by teachers in a school environment, or that parents perceived increases in their children's functioning whereas neither teachers nor children did.

The impact of *FRIENDS* on child participants' social and emotional competence and skills must be considered by comparing the actual costs of the program against its potential benefits. Although schools and parents do not directly pay for *FRIENDS*, they indirectly pay via tax dollars allocated to the Ministry of Child and Family Development. The actual costs of the

program are not made available to the general public, but include fees for production and development (teacher manuals, children's workbooks, supplemental materials), training (salaries for teachers-on-call, room rental, audio-visual equipment rental), salaries (*FRIENDS* trainers, *FRIENDS* liaisons), and travel (*FRIENDS* personnel to schools and conferences). The potential benefits of *FRIENDS* are also difficult to measure. Results from this evaluation indicate that the program has the potential to improve children's social and emotional competence and skills, and maintain these gains for up to 3-months. If these gains can be maintained throughout adolescence and adulthood, "significant societal cost savings could result" (Kuo, Vander Stoep, McCauley, & Kernic, p. 283). An effective SEL program could help to prevent the development of mental health concerns, allowing individuals to decrease both the monetary impact of mental illness, as well as its impact on human potential (Flaherty, Weist, & Warner, 1996). An early intervention and preventive program that has a significant impact on children's emotional and social skills, such as *FRIENDS*, if offered to participants at a low cost, may be an ideal method for improving mental health trajectories across the lifespan.

## **5.2 Possible Explanations for Results**

Previous evaluations of the *FRIENDS for Life* program have elicited positive results, with researchers finding statistically significant decreases in anxious and depressive symptoms, as well as statistically significant increases in self-esteem and social skills amongst participants (Barrett, Farrell, Ollendick, & Dadds, 2006; Briesch, Sanetti, & Briesch, 2010; Essau, Conradt, Sasagawa, & Ollendick, 2012; Fisak, Richard, & Mann, 2011; Liddle & Macmillan, 2010; Lowry-Webster, Barrett, & Dadds, 2001; Lowry-Webster, Barrett, & Lock, 2003; Martinsen, Aalberg, Gere, & Neumer, 2009). However, *FRIENDS* evaluations have never explicitly sought

to measure possible increases in EI and resiliency, or compared EI and resiliency outcomes to the program's stated objectives.

Results achieved from conducting independent-samples *t*-tests with between-groups data indicate that participants in the *FRIENDS* group do not have statistically significantly higher scores on any subscale of interest at assessment period. Results achieved from conducting five 2 x 3 within-group MANOVAs indicate that children in the *FRIENDS* group had statistically significant increases in scores on the EQ-i Total EQ subscale (Time 1 vs. Time 2 and Time 1 vs. Time 3) and the SCS-P Total Score (Time 1 vs. Time 3) over time. Considering this result and a comparison of the measures' subscales with the common EI and resiliency factors (see Table 2), one could argue that four of the five common factors (early effortful control, positive social behaviour, self-regulatory skills, emotion recognition) significantly increased amongst participants in the *FRIENDS* group over time. This suggests that empathy is the only common factor that did not statistically increase over time; however, this outcome might be due to the inability of the chosen measures to evaluate adequately empathy outcomes. One could argue that the *FRIENDS for Life* program helps to improve the majority of common EI and resiliency factors amongst its participants.

When considering the MANOVA results and the comparison of the measures' subscales with the *FRIENDS* program's objectives (see Table 3), one could argue that the *FRIENDS* program was successful at meeting 7 of its 11 objectives, helping participants to gain skills that increased their levels of self-esteem and self-expression, as well as increasing their abilities to build positive relationships with peers and adults, deal with difficulties, employ emotional resilience, use peer support, and resolve conflicts. This result also implies that the program was unsuccessful at meeting 4 of its 11 objectives: helping participants learn how to problem solve,

recognize signs of anxiety, implement relaxation techniques, and use positive thinking. Again, this result could be attributed to the inability of the chosen measures to adequately evaluate the successful fulfillment of these particular objectives.

### **5.3 Strengths**

A considerable strength of this study is that its methodology is consistent with many of the critical elements of outcome evaluations as suggested by Schonert-Reichl (2008). First, it evaluates a program based on a theoretical model (CBT) that espouses a theory of change. Second, there are parallels between the program's objectives and the measures used to evaluate it (see Table 3). Third, it uses a rigorous assessment procedure (pre-test, post-test, 3-month follow-up); data collected at 3-month follow-up allows for the assessment of any latent effects of the *FRIENDS* program. Fourth, it examines outcomes across a variety of functioning. The multiple measures used provide a rich and broad understanding of the child's changing behaviour, including changes in skills associated with adaptability, leadership, emotional intelligence, interpersonal abilities, communication, and emotional regulation. Fifth, the study uses measures that have strong psychometric properties and are developmentally appropriate for this population. Sixth, it uses a multiple informant method, which offers a comprehensive representation of the child, including evaluations of his or her behaviour at school as observed by the classroom teacher, at home as observed by a parent, and a self-assessment. Lastly, the study measures program fidelity via a *FRIENDS* Fidelity Checklist completed by all teachers in the intervention group.

Additionally, this study's methodology is similar to other methodologies used in published and often-cited evaluations of *FRIENDS*; however, unlike previous evaluations, this study focuses on increases in prosocial behaviours related to EI and resiliency. Rather than



conducting another evaluation that examines reductions in anxious or depressive symptoms, which have garnered mixed results in the past (Barrett, Farrell, Ollendick, & Dadds, 2006; Miller et al., 2011; Rose, Miller, & Martinez, 2009), this evaluation adopts a positive psychology lens, and seeks out possible benefits of the *FRIENDS* program. Results viewed through this lens, rather than through a lens of psychopathology, could entice more school personnel to implement *FRIENDS* in their schools, who might be more attracted to programs that promote mental health rather than programs that reduce mental illness.

#### **5.4 Limitations**

Limitations of this study include threats to both its internal and external validity. Threats to the study's internal validity are those that threaten the extent to which the *FRIENDS* program solely increased scores related to EI and resiliency. Although statistically significant effects of the program were found, one cannot conclude that levels of EI and resiliency were only affected due to participation in *FRIENDS*. Comparisons of Time 1 data indicate that the groups did not statistically differ from one another (see Table 7). Participants were clustered within classrooms, and classrooms were clustered within schools. Individual classroom or school factors might have confounded the effects of the program. Also, normal developmental changes could account for the significant increases in scores observed between Time 1 and Times 2 and 3.

Another threat to internal validity was the non-uniformity of Time 2 and 3 data collection visits. Due to differing lesson plans in the intervention classes, *FRIENDS* was completed at different times. In order to schedule visits as closely as possible to the conclusion of the program, Time 2 visits occurred on three days within the span of nearly 6 weeks; subsequently, Time 3 visits occurred on three days spread over 6 weeks. Additionally, one class in the intervention

group had not completed the program by Time 2, so data were collected prior to the completion of the program.

An additional threat to this study's internal validity is its use of self-report measures. When using self-report measures, there is a concern that participants might not communicate their actual beliefs, behaviours, values, or personalities (Gay, Mills, & Airasian, 2009). Some children or parents may have responded in a way that they believed to be more socially acceptable, or to meet requirements that they believed the researcher was seeking.

Another threat to this study's internal validity is the failure of all comparisons to meet the assumptions of *t*-tests and MANOVA. The assumption of normality (as tested by Shapiro-Wilks' test and detrended normal Q-Q plots) and the assumption of homogeneity of variances (as tested by Levene's test) indicate that these assumptions were not met for all between- and within-group tests. Additionally, the assumption of circularity, tested using Mauchly's Test of Sphericity, was not met for one within-group comparison.

Other limitations include threats to the study's external validity, or the extent to which results can be generalized to other populations. The greatest concern here is that the study implemented a non-randomized, quasi-experimental design. To expedite the recruitment process, teachers who were already planning to implement the *FRIENDS* program were chosen. By utilizing a convenience sampling method, the representativeness of participants is not ensured, and one cannot conclusively generalize results to a larger population. Additionally, since all participants are residents of an urban area, results cannot be generalized conclusively to other more rural regions of the province. Also, only English language measures were used, which limited both the number and the ethnic diversity of parents and students who could participate. Additionally, ethnic diversity, as measured by home language data, indicates that differences

between study participants and the provincial average are vastly different. The percentage of study participants who spoke English as their first home language (63%) as compared to the provincial average (82%) suggests unrepresentativeness (Statistics Canada, 2010). Also, the percentage of participants who spoke a non-official Canadian language as their first home language (34%) as compared to the provincial average (16%) suggests unrepresentativeness of the sample (Statistics Canada, 2010).

## **5.5 Ethical Issues**

Ethical issues are of great concern when conducting research with children. Since children cannot legally give consent to participate, parents consented on their behalves. Children were asked to give assent to participate. Once children had given assent, they were assured that their answers would have no bearing on their academic standing. However, since the research involves mental health, some children may have been apprehensive to answer truthfully.

Another ethical issue involved parents who declined consent for their children to participate, or parents who did not return the form. The initial procedure required all children to complete measures regardless of their consent status, as not to ostracize children from their peers, and to shred measures from children without consent afterward. However, both the university's and the school district's ethics boards refused to grant ethical approval based on this procedure. The procedure was altered so that children without parental consent completed schoolwork or read silently instead. Typically this was not a problem, except that a few children became upset when they were informed that they did not have permission to participate in the study. All children who had parental consent and were present during the assessment visits assented and completed measures.

The ethical issue of anonymity of research participants was considered. Each child was assigned an alphanumeric code for the purposes of data entry and analysis. All identifying information was removed from measures and replaced with this code prior to data entry.

## **5.6 Challenges of Conducting Research in a School-Setting**

The first challenge of conducting this study in a school setting was acquiring ethical approval from the school district. The school district required university ethical approval prior to giving their approval; however, the university required school board approval before giving their approval. In order to satisfy both ethical boards, conditional approval was obtained from each board and documentation was sent to the other in order to verify their conditional approval. This was a very time-consuming and tedious process.

Once university and school district ethical approval were obtained, the second challenge was recruiting appropriate participants. Professional connections with persons employed by the school board, who were keen to help researchers, helped to expedite this process.

Once appropriate schools were selected and administrators and teachers had agreed to participate, the third challenge was obtaining active consent from parents overwhelmed with the demands of raising school-aged children. Once parental consent was obtained, another challenge was retrieving parent questionnaires from students' homes, and doing so in a timely manner.

The fourth challenge of conducting this research was teachers' full workloads. Teachers had limited time not only to complete *FRIENDS* in addition to regular school curricula, but also limited time to participate in research and complete questionnaires. *FRIENDS* lesson plans were often interrupted by school events, which affected the amount of time needed to complete the program, which in turn, affected research timelines.

The fifth challenge was Teachers' Federation job action that occurred during recruitment and data collection. Teachers still volunteered to participate in the study and devote time outside of the classroom to complete questionnaires. Also, a portion of Time 2 data collection visits had to be rescheduled on short notice due to a teacher strike.

In order to overcome these challenges, significant amounts of time were devoted to networking with school personnel, explaining the study's purpose and methods with administrators and teachers, and corresponding with teachers and parents via e-mail and phone.

## **5.7 Suggestions for Future Research**

Future researchers planning to evaluate a school-based, early intervention and preventive program might consider the following suggestions in order to reduce threats to both the internal and external validity of their study. Following these suggestions would serve to decrease their study's limitations, therefore increasing strengths.

In order to reduce threats to internal validity, future researchers could attempt to acquire a larger sample size than was targeted for this study. This would increase the study's potential power. However, in order to do so, additional research personnel might be required in order to assist with additional data collection and entry demands. Second, future researchers might include stricter guidelines for teachers in the intervention group to begin and end the SEL program at the same time; the inclusion of an incentive for teachers to do so might be required. Third, future researchers might include an incentive for parents to return measures, and to do so in a timely manner. A higher return rate of parent measures in this study would have increased sample sizes for the within-group MANOVAs, which might have elicited different results. Fourth, future researchers could observe one lesson in each class in the intervention group, to ensure uniform delivery of the program beyond what the Fidelity Checklist is able to capture.

Again, this change in procedure might require additional research personnel. Lastly, future researchers might select measures that are more sensitive to change. In this study, it seemed that questionnaires with a larger range of possible scores were better able to capture participant change over time. For example, the SDQ-S and SDQ-T Prosocial subscales have a possible range of 0–10. A ceiling effect occurred on this subscale at Time 1, and many of the participants' scores did not change at Times 2 or 3.

In order to reduce threats to external validity, future researchers might consider screening classes prior to consent visits, to assess for uniformity both between- and within- groups. Researchers might want to measure such variables as: how long the teacher has been teaching, how long the teacher has been teaching the program, the socioeconomic status of the school's community, the ethnic diversity of students within the school, and whether or not the school employs a whole-school approach to social and emotional learning. By measuring these variables prior to recruitment, the researcher has more control over whether or not participants are 'equal' and representative of a larger population.

## **5.8 Conclusion**

Counselling psychologists encounter a diverse population of clients – individuals who are struggling and coping with various mental health, interpersonal, and intrapersonal issues. Counsellors might feel disheartened or discouraged when working with an adult client who has struggled with mental illness for the majority of his or her life, and although psychotherapeutic intervention might be helpful, it might never effectively 'fix' the client's problems. Perhaps the answer to real and lasting psychotherapeutic change lies in the early intervention and prevention of mental health issues, instead of the treatment of mental health issues later in life. Results from this evaluation of the *FRIENDS for Life* for Children program, an early intervention and

preventive program targeted at reducing childhood mental health problems and increasing emotional competence, provide empirical support for its effectiveness. Participation in this and similar programs can help children to learn the invaluable emotional and social skills that will allow them to live happier and healthier lives.

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## Appendices

### Appendix A

**Department of Educational and Counselling Psychology,  
and Special Education**

2125 Main Mall  
Vancouver, BC Canada V6T 1Z4

Tel: (604) 822-8321 Fax: (604) 822-3302  
[www.ecps.educ.ubc.ca/faculty/l\\_miller.htm](http://www.ecps.educ.ubc.ca/faculty/l_miller.htm)

**\*PLEASE KEEP THIS PAGE FOR YOUR OWN RECORDS\***

### Consent Form - Teacher

#### **Title: Promoting Resiliency in Children by Fostering Emotional Intelligence**

**Principal Investigator:** Lynn Miller, Ph. D., R. Psych., Department of Educational and Counselling Psychology, and Special Education, University of British Columbia,  
Tel. (604) 822-8321

**Co-Investigator:** Vanessa Waechter, M.A. Student, Department of Educational and Counselling Psychology, and Special Education, University of British Columbia

Fall 2011

Dear Teacher,

You are invited to participate in a study entitled “Promoting Resiliency in Children by Fostering Emotional Intelligence”. The **purpose** of the study is to assess levels of emotional intelligence and levels of resiliency in a community sample of school-aged children. The research team is assessing the effect that the FRIENDS for Life (Barrett, 2004) program has on levels of emotional intelligence and resiliency. Promoting resilience in children encourages prevention of mental health concerns. By working towards the prevention of these disorders, educators can help children to live happier and healthier lives.

#### **Study Procedure:**

I will visit your classroom four times over the course of one school year: once to distribute teacher and parent/guardian consent forms, and three more times to distribute questionnaires at your convenience during teaching of the FRIENDS for Life program.

Time 1: Consent Forms (participate in data analysis) distributed, prior to FRIENDS program

Time 2: Assessments administered, immediately prior to FRIENDS program

Time 3: Assessments administered, immediately following FRIENDS program end

Time 4: Assessments administered, 3 months following FRIENDS program end

During the first visit, parental/guardian consent forms will be given to students to take home to their parents or guardians, and students will be asked to return consent forms to their classroom teacher. During the second visit, questionnaires will be distributed to teachers and students.

Teachers and students will complete questionnaires at the same time, which require approximately 25 minutes to complete. If a student refuses to fill out the questionnaires, or if

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a parent requests that their child not complete the questionnaires, the researchers will provide those students with a supervised alternate activity in the school's library. At this time, additional questionnaires will be sent home to parents/guardians with the students, which will be collected by the researcher. The researcher will visit the classroom two more times over the course of the school year to distribute teacher and student questionnaires and collect parent questionnaires.

**Role of Teacher:**

All participating teachers will be asked to distribute consent forms to their students and to distribute a prepared reminder notice to return consent forms after two weeks. Teachers will also be asked to complete one questionnaire per student at three times during the school year. The researcher will inform teachers to not complete questionnaires for students whose parents have requested they do not participate. Students will be asked to return parent questionnaires to their teacher, and I will collect these during the assessment period. Please refer any inquiries from parents to the researcher at (604) 822-8321.

**Risks and Benefits:**

It is not anticipated that this intervention will pose any risks to students, parents/guardians, or teachers. Benefits may be an increased understanding of the importance of research.

**Confidentiality:**

Any information resulting from the research study will be kept strictly confidential. All documents will be identified only by code number and kept in a locked filing cabinet. Participants will not be identified by name in any study reports. Electronic data stored on the computer will be password protected. It is the teacher's responsibility to maintain confidentiality, by not disclosing the identity of students and parents participating in this study.

**Inquiries:**

If you have any further questions or concerns, please feel free to contact Dr. Lynn Miller at (604) 822-8321. If you have any concerns about your treatment or rights as a research participant, please contact the Research Subject Information Line in the UBC Office of Research Services at the University of British Columbia, at (604) 822-8598.

Sincerely,

Lynn Miller, Ph. D., R. Psych.  
Vanessa Waechtler, M.A. Student



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**PLEASE DETACH AND RETURN**

**Teacher Consent Form**

**Title: Promoting Resiliency in Children by Fostering Emotional Intelligence**

I understand that my participation in this study is entirely voluntary and that I may refuse to participate or withdraw from the study at any time without jeopardy to my teaching position within my school.

Teacher's Name: \_\_\_\_\_ (please print)

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

School: \_\_\_\_\_

School Telephone Number: \_\_\_\_\_

School Address: \_\_\_\_\_

Number of students in class: \_\_\_\_\_

*Please complete this page and return it to the researcher along with your student consent forms during the next visit.*

*Please keep the other 3 pages of this form.*

**\*All responses will be held confidential\***



**\*PLEASE KEEP THIS PAGE FOR YOUR OWN RECORDS\***

### **Teacher Consent Form**

#### **Title: Promoting Resiliency in Children by Fostering Emotional Intelligence**

I understand that my participation in this study is entirely voluntary and that I may refuse to participate or withdraw from the study at any time without jeopardy to my teaching position within my school.

I have received a copy of this consent form for my own records.

- I agree to distribute consent forms/questionnaires to my students.  
\_\_\_\_\_ Yes                      \_\_\_\_\_ No
- I agree to forward parent inquiries to the research team.  
\_\_\_\_\_ Yes                      \_\_\_\_\_ No
- I will not disclose the identity of the students/ parents participating in this study with other school staff (School principal exempt), parents, or students.  
\_\_\_\_\_ Yes                      \_\_\_\_\_ No

Teacher's Name: \_\_\_\_\_ (please print)

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

School: \_\_\_\_\_

School Telephone Number: \_\_\_\_\_

School Address: \_\_\_\_\_

Number of students in class: \_\_\_\_\_

## Appendix B

### Department of Educational and Counselling Psychology, and Special Education

2125 Main Mall  
Vancouver, BC Canada V6T 1Z4

Tel: (604) 822-8321 Fax: (604) 822-3302  
[www.ecps.educ.ubc.ca/faculty/l\\_miller.htm](http://www.ecps.educ.ubc.ca/faculty/l_miller.htm)

**\*PLEASE KEEP THIS PAGE FOR YOUR OWN RECORDS\***

### Consent Form – Parent/Guardian

#### **Title: Promoting Resiliency in Children by Fostering Emotional Intelligence**

**Principal Investigator:** Lynn Miller, Ph.D., R. Psych., Department of Educational and Counselling Psychology, and Special Education, University of British Columbia  
Tel. (604) 822-8539

**Co-Investigator:** Vanessa Waechtler, M.A. Student, Department of Educational and Counselling Psychology, and Special Education, University of British Columbia

Fall 2011

Dear Parent/Guardian,

#### **Purpose:**

You and your child are invited to participate in a study entitled “Promoting Resiliency in Children by Fostering Emotional Intelligence”. The purpose of the study is to assess levels of emotional intelligence and levels of resiliency in a sample of school-aged children. The research team is assessing the effect that a Social and Emotional Learning program (the *FRIENDS* for Life Program) has on levels of emotional intelligence and resiliency. Your child may or may not be participating in this program this school year. Promoting resilience in children encourages prevention of mental health concerns.

#### **Study Procedure:**

A research assistant will deliver questionnaires to your child’s classroom at three different times during the course of one school year. Questionnaires will be completed by children, teachers, and parents and are designed to assess levels of emotional intelligence and personality resiliency of the children. Your child’s teacher will be asked to complete one questionnaire that measures your child’s ability to regulate emotions, cope with interpersonal problems, and demonstrate positive behaviour.

Parent questionnaires will be sent home with your child for you to complete three times over the school year. Parent/guardian questionnaires are to be returned to your child’s teacher in a sealed, confidential envelope.

**\*PLEASE KEEP THIS PAGE FOR YOUR OWN RECORDS\***

Participation in the study requires 30 minutes (3 times x 10 minutes) of participation from you and 75 minutes (3 times x 25 minutes) of participation from your child over an 8-month period. Participation in the study involves completing paper questionnaires. If you do not provide your child with consent or he or she does not want to participate, the researchers will provide your child with a supervised alternative activity.

**Risks and Benefits:**

It is not anticipated that this intervention will pose any risks or provide any benefits to children or parents/guardians. Although questionnaires will be delivered to your child's classroom teacher, teachers will not have access to data. Your child's academic standing will not be affected by your decision to participate in the study.

**Confidentiality:**

Any information resulting from the research study will be kept strictly confidential. All documents will be identified only by code number and kept in a locked filing cabinet. Participants will not be identified by name in any study reports. Electronic data stored on the computer will be password protected. Parents are asked not to disclose the identity of other students/parents participating in this study. The research team is aware that there may be some limits to confidentiality when dealing with elementary school-aged children (i.e. students copying each others forms, discussing questionnaires with one another). However, the research team will take the steps outlined above to keep all information confidential.

**Compensation:**

While we do not have the means to compensate families for their participation, our research teams will be offering a free public lecture on childhood social-emotional competence in your school district, and children will be provided with a year-end pizza party for participating in the study.

**Inquiries:**

If you have any further questions or concerns, please feel free to contact Dr. Miller or Vanessa Waechtler at (604) 822-8321. If you have any concerns about your treatment or rights as a research participant, please contact the Research Subject Information Line in the UBC Office of Research Services at (604) 822-8598.

Sincerely,

Lynn Miller, Ph. D., R. Psych.  
Vanessa Waechtler, M.A. Student



-----  
**PLEASE DETACH AND RETURN**

**Parent/Guardian Consent Form**

**Title: Promoting Resiliency in Children by Fostering Emotional Intelligence**

I **consent** / **do not consent** (circle one) to my child's participation.

I understand that my participation and my child's participation in this study are entirely voluntary and that we may refuse to participate or withdraw from the study at any time.

I have received a copy of this consent form for my own records.

Parent/Guardian Name: \_\_\_\_\_ (please print)

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Home Telephone Number: \_\_\_\_\_

E-mail: \_\_\_\_\_

Mailing Address: \_\_\_\_\_  
\_\_\_\_\_

Child's Name: \_\_\_\_\_ Child's Age (years): \_\_\_\_\_

Child's Gender: \_\_\_\_\_ Language(s) spoken at home: \_\_\_\_\_

Teacher's Name: \_\_\_\_\_

School: \_\_\_\_\_

***Please complete this page and place in the enclosed envelope, seal, and return to your child's teacher.***

***Please keep the 3 other pages of this form for your own records.***

**\*All responses will be held confidential\***





**\*PLEASE KEEP THIS PAGE FOR YOUR OWN RECORDS\***

**Parent/Guardian Consent Form**

**Title: Promoting Resiliency in Children by Fostering Emotional Intelligence**

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I have received a copy of this consent form for my own records.

Parent/Guardian Name: \_\_\_\_\_ (please print)

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Home Telephone Number: \_\_\_\_\_

E-mail: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

\_\_\_\_\_

Child's Name: \_\_\_\_\_ Child's Age (years): \_\_\_\_\_

Child's Gender: \_\_\_\_\_ Language(s) spoken at home: \_\_\_\_\_

Teacher's Name: \_\_\_\_\_

School: \_\_\_\_\_

**\*All responses will be held confidential\***

## Appendix C

### Assent Script for Child Participants

Hello! My name is Vanessa, and I will be helping your teacher,  
Mr./Mrs./Ms.\_\_\_\_\_. I am a student from the University of British Columbia, in  
Vancouver.

*For children participating in FRIENDS Program:*

I am here because I am studying a program for Elementary school kids.

Over the next few weeks, you and your teacher are going to be taking part in a program called FRIENDS for Life. Your teacher will give you one lesson each week in your own class. This program was made to help kids learn how to deal with things that might make them feel worried or scared, like school, friends, or family stuff. The program also teaches kids how to be good friends to each other.

I would like your help to see if the FRIENDS program works. You will see me two more times over the rest of the school year. When I visit, I will ask you to fill out some questionnaires that ask a few questions about yourself. They're pretty simple, and they should only take about half an hour to fill out.

This study is voluntary. This means that you do not have to take part in it if you don't want to. I am going to give you a letter for your parents, so they can give you permission to participate in the study. If your parents don't want you to fill out the questionnaires, then we will take you to the library to do some other work. Does anyone have any questions?

*For children **not** participating in FRIENDS Program:*

I am here because I am interested in how Elementary children change and mature over the course of a school year. I would like your help with my study.

You will see me a few times over the rest of the school year. When I visit, I will ask you to fill out some questionnaires that will ask you a few questions about yourself. They're pretty simple, and it should only take you about half an hour to fill them out.

This study is voluntary. This means that you do not have to take part in it if you don't want to. I am going to give you a letter for your parents, so they can give you permission to participate in the study. If your parents don't want you to fill out the questionnaires, then we will take you to the library to do some other work. Does anyone have any questions?

## Appendix D

Teacher's Name: \_\_\_\_\_ School: \_\_\_\_\_

### FRIENDS FIDELITY CHECKLIST

*Please take a minute or two to fill this out on a weekly basis. I will collect this checklist at the end of FRIENDS. Thank you.*

**Reminder:** According to FRIENDS trainers, teachers are not asked to complete all of the activities included in each session – this checklist is a record of which activities you have selected and delivered in order to achieve each weekly session's objective(s).

Thanks!



### SESSION 1 – INTRODUCTION TO THE GROUP

*Please check if the following objectives/activities were achieved in Session 1.*

- ☐ 1. Rationale of the Group, Introduce members to each other
- ☐ 2. Explain FRIENDS Program
- ☐ 3. Activity #1: Questions for Making Friendships
- ☐ 4. Activity #2: Working Together
- ☐ 5. Activity #3: People are Different
- ☐ 6. Activity #4: Jessica and Tom
- ☐ 7. Introduce Home Activities and Negotiate Rewards

**Songs** included in this session (if any): \_\_\_\_\_

**Storybooks** included in this session (if any): \_\_\_\_\_

Did you supplement this session with any activities from the **TEACHER RESOURCE KIT** (circle one)? **Y** **N**

**Delivery** of Session 1 activities/lessons:

- ☐ Delivered **once** during the week
- ☐ Delivered as **two** half-sessions
- ☐ Delivered **three or more** times (activities spread through the week)

**Total delivery time** of Session 1: \_\_\_\_\_ minutes (approx).



## SESSION 2 – INTRODUCTION TO FEELINGS

*Please check if the following objectives/activities were achieved in Session 2.*

- ☐ 1. Review Session #1 and Home Activities
- ☐ 2. Let's Talk about Feelings
- ☐ 3. Activity #1: Face 2 Face
- ☐ 4. Activity #2: Understanding Feelings
- ☐ 5. Activity #3: Our Thoughts and Feelings
- ☐ 6. Activity #4: Our Control Centre
- ☐ 7. Extra Time Activities (Isabella and Carlos/Joanna and Daniel)
- ☐ 8. Assign Home Activities

**Songs** included in this session (if any): \_\_\_\_\_

**Storybooks** included in this session (if any):  
\_\_\_\_\_  
\_\_\_\_\_

Did you supplement this session with any activities from the **TEACHER RESOURCE KIT** (circle one)? **Y** **N**

**Delivery** of Session 2 activities/lessons:

- ☐ Delivered **once** during the week
- ☐ Delivered as **two** half-sessions
- ☐ Delivered **three or more** times (activities spread through the week)

**Total delivery time** of Session 2: \_\_\_\_\_ minutes (approx).



### SESSION 3 – LEARNING TO FEEL CONFIDENT AND BRAVE: STEPS 1 & 2

*Please check if the following objectives/activities were achieved in Session 3.*

- ☐ 1. Review Session #2 and Home Activities
- ☐ 2. Introduce Step 1 to Feeling Confident and Brave
- ☐ 3. Activity #1: Let's learn to be a Friend to our Bodies
- ☐ 4. Introduce Step 2 to Feeling Confident and Brave
- ☐ 5. Activity #2: Relaxation Games
- ☐ 6. Activity #3: Learning How to Feel Good
- ☐ 7. Activity #4: Helping Others to Feel Good
- ☐ 8. Assign Home Activity

**Other Songs** included in this session (if any): \_\_\_\_\_

**Storybooks** included in this session (if any):  
\_\_\_\_\_  
\_\_\_\_\_

Did you supplement this session with any activities from the **TEACHER RESOURCE KIT** (circle one)? **Y** **N**

**Delivery** of Session 3 activities/lessons:

- ☐ Delivered **once** during the week
- ☐ Delivered as **two** half-sessions
- ☐ Delivered **three or more** times (activities spread through the week)

**Total delivery time** of Session 3: \_\_\_\_\_ minutes (approx).



#### SESSION 4 – LEARNING TO FEEL CONFIDENT AND BRAVE: STEP 3A

*Please check if the following objectives/activities were achieved in Session 4.*

- ☐ 1. Review Session #3 and Home Activity
- ☐ 2. Introduce Step 3 to Feeling Confident and Brave
- ☐ 3. Activity #1: Happiness Creations
- ☐ 4. Activity #2: Thought Balloon Game
- ☐ 5. Activity #3: Always Think Twice
- ☐ 6. Activity #4: Thinking in Helpful Ways
- ☐ 7. Assign Home Activity

**Songs** included in this session (if any): \_\_\_\_\_

**Storybooks** included in this session (if any):  
\_\_\_\_\_  
\_\_\_\_\_

Did you supplement this session with any activities from the **TEACHER RESOURCE KIT** (circle one)?   **Y**   **N**

**Delivery** of Session 4 activities/lessons:

- ☐ Delivered **once** during the week
- ☐ Delivered as **two** half-sessions
- ☐ Delivered **three or more** times (activities spread through the week)

**Total delivery time** of Session 4: \_\_\_\_\_ minutes (approx).



## SESSION 5 – LEARNING TO FEEL CONFIDENT AND BRAVE: STEPS 3B & 4A

*Please check if the following objectives/activities were achieved in Session 5.*

- ☐ 1. Review Session #4 and Home Activity
- ☐ 2. Activity #1: Attention Training Exercise
- ☐ 3. Activity #2: Changing Unhelpful into Helpful Thoughts
- ☐ 4. Introduce Step 4 to Feeling Confident and Brave
- ☐ 5. Activity #3: Exploring Ways to Cope
- ☐ 6. Introduce the Coping Step Plan for Difficult Situations
- ☐ 7. Assign Home Activity

**Songs** included in this session (if any): \_\_\_\_\_

**Storybooks** included in this session (if any):  
\_\_\_\_\_  
\_\_\_\_\_

Did you supplement this session with any activities from the **TEACHER RESOURCE KIT** (circle one)? **Y** **N**

**Delivery** of Session 5 activities/lessons:

- ☐ Delivered **once** during the week
- ☐ Delivered as **two** half-sessions
- ☐ Delivered **three or more** times (activities spread through the week)

**Total delivery time** of Session 5: \_\_\_\_\_ minutes (approx).





## SESSION 6 – LEARNING TO FEEL CONFIDENT AND BRAVE: STEP 4B

*Please check if the following objectives/activities were achieved in Session 6.*

- ☐ 1. Review Session #5 and Home Activity
- ☐ 2. Activity #1: Role Models in My Life
- ☐ 3. Activity #2: Support Teams
- ☐ 4. Introduce the 6-Block Problem-Solving Plan
- ☐ 5. Activity #3: Let's use the 6-Block Problem-Solving Plan
- ☐ 6. Review Step 4 to Feeling Confident and Brave
- ☐ 7. Assign Home Activities

**Other Songs** included in this session (if any): \_\_\_\_\_

**Storybooks** included in this session (if any):  
\_\_\_\_\_  
\_\_\_\_\_

Did you supplement this session with any activities from the **TEACHER RESOURCE KIT** (circle one)? **Y** **N**

**Delivery** of Session 6 activities/lessons:

- ☐ Delivered **once** during the week
- ☐ Delivered as **two** half-sessions
- ☐ Delivered **three or more** times (activities spread through the week)

**Total delivery time** of Session 6: \_\_\_\_\_ minutes (approx).



## SESSION 7 – LEARNING TO FEEL CONFIDENT AND BRAVE: STEP 5

*Please check if the following objectives/activities were achieved in Session 7.*

- ☐ 1. Review Session #6 and Home Activities
- ☐ 2. Introduce Step 5 to Feeling Confident and Brave
- ☐ 3. Activity #1: Be Happy with Yourself for Trying
- ☐ 4. Activity #2: Your Coping Step Plan Rewards
- ☐ 5. Group Discussion
- ☐ 6. Activity #3: Thinking Like a Winner
- ☐ 7. Activity #4: Seeing the Funny Side of Life
- ☐ 8. Assign Home Activities

**Songs** included in this session (if any): \_\_\_\_\_

**Storybooks** included in this session (if any):  
\_\_\_\_\_  
\_\_\_\_\_

Did you supplement this session with any activities from the **TEACHER RESOURCE KIT** (circle one)? **Y** **N**

**Delivery** of Session 7 activities/lessons:

- ☐ Delivered **once** during the week
- ☐ Delivered as **two** half-sessions
- ☐ Delivered **three or more** times (activities spread through the week)

**Total delivery time** of Session 7: \_\_\_\_\_ minutes (approx).



## SESSION 8 – LEARNING TO FEEL CONFIDENT AND BRAVE: STEPS 6 & 7

*Please check if the following objectives/activities were achieved in Session 8.*

- ☐ 1. Review Session #7 and Home Activities
- ☐ 2. Introduce Step 6 and 7 to Feeling Confident and Brave
- ☐ 3. Using the FRIENDS Plan
- ☐ 4. Activity #1: Coaching Companions
- ☐ 5. Activity #2: Practicing your Coping Step Plan
- ☐ 6. Assign Home Activities

**Songs** included in this session (if any): \_\_\_\_\_

**Storybooks** included in this session (if any):  
\_\_\_\_\_  
\_\_\_\_\_

Did you supplement this session with any activities from the **TEACHER RESOURCE KIT** (circle one)? **Y** **N**

**Delivery** of Session 8 activities/lessons:

- ☐ Delivered **once** during the week
- ☐ Delivered as **two** half-sessions
- ☐ Delivered **three or more** times (activities spread through the week)

**Total delivery time** of Session 8: \_\_\_\_\_ minutes (approx).



## SESSION 9 – USING THE FRIENDS PLAN: HELPING OURSELVES AND OTHERS

*Please check if the following objectives/activities were achieved in Session 9.*

- ☐ 1. Review Session #8 and Home Activities
- ☐ 2. Activity #1: The FRIENDS Plan: How to Use It
- ☐ 3. Activity #2: Using the FRIENDS Plan to Help Ourselves and Others
- ☐ 4. Assign Home Activity

**Songs** included in this session (if any): \_\_\_\_\_

**Storybooks** included in this session (if any):  
\_\_\_\_\_  
\_\_\_\_\_

Did you supplement this session with any activities from the **TEACHER RESOURCE KIT** (circle one)? **Y** **N**

**Delivery** of Session 9 activities/lessons:

- ☐ Delivered **once** during the week
- ☐ Delivered as **two** half-sessions
- ☐ Delivered **three or more** times (activities spread through the week)

**Total delivery time** of Session 9: \_\_\_\_\_ minutes (approx).



## SESSION 10 – REVIEW AND PARTY

*Please check if the following objectives/activities were achieved in Session 10.*

- ☐ 1. Review Session #9 and Home Activity
- ☐ 2. Activity #1: Preparing for Future Challenges
- ☐ 3. Group Discussion: Remembering the FRIENDS Plan
- ☐ 4. Activity #2: The Quiz Game
- ☐ 5. Activity #3: Sharing 'Positives'
- ☐ 6. Present Certificates and Reward
- ☐ 7. Return Home Activities
- ☐ 8. Assign Home Activity
- ☐ 9. Party to celebrate new skills learned

**Songs** included in this session (if any): \_\_\_\_\_

**Storybooks** included in this session (if any):  
\_\_\_\_\_  
\_\_\_\_\_

Did you supplement this session with any activities from the **TEACHER RESOURCE KIT** (circle one)? **Y** **N**

**Delivery** of Session 10 activities/lessons:

- ☐ Delivered **once** during the week
- ☐ Delivered as **two** half-sessions
- ☐ Delivered **three or more** times (activities spread through the week)

**Total delivery time** of Session 10: \_\_\_\_\_ minutes (approx).

## Appendix E

### Strengths and Difficulties Questionnaire

S 11-17

For each item, please mark the box for Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain. Please give your answers on the basis of how things have been for you over the last six months.

Your name.....

Male/Female

Date of birth.....

|  | Not<br>True              | Somewhat<br>True         | Certainly<br>True        |
|--|--------------------------|--------------------------|--------------------------|
| I try to be nice to other people. I care about their feelings  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am restless, I cannot stay still for long                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I get a lot of headaches, stomach-aches or sickness            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I usually share with others, for example CD's, games, food     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I get very angry and often lose my temper                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I would rather be alone than with people of my age             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I usually do as I am told                                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I worry a lot  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am helpful if someone is hurt, upset or feeling ill          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am constantly fidgeting or squirming                         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I have one good friend or more                                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I fight a lot. I can make other people do what I want          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am often unhappy, depressed or tearful                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other people my age generally like me                          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am easily distracted, I find it difficult to concentrate     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am nervous in new situations. I easily lose confidence       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am kind to younger children                                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am often accused of lying or cheating                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other children or young people pick on me or bully me          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I often offer to help others (parents, teachers, children)     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I think before I do things                                     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I take things that are not mine from home, school or elsewhere | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I get along better with adults than with people my own age     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I have many fears, I am easily scared                          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I finish the work I'm doing. My attention is good              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Your Signature .....

Today's Date .....

**Thank you very much for your help**

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## Appendix F

### **Social Competence (Parent Version)**

I will read to you some statements that could describe your child.  
Please tell me how well each of the statements actually does describe your child.

|  | Very Well | Well | Moderately Well | A Little | Not At All |
|--|-----------|------|-----------------|----------|------------|
| 1. Your child can accept things not going his/her way.                               | 0         | 1    | 2               | 3        | 4          |
| 2. Your child copes well with failure.   | 0         | 1    | 2               | 3        | 4          |
| 3. Your child thinks before acting.  | 0         | 1    | 2               | 3        | 4          |
| 4. Your child resolves problems with friends or brothers and sisters on his/her own. | 0         | 1    | 2               | 3        | 4          |
| 5. Your child can calm down when excited or all wound up.                            | 0         | 1    | 2               | 3        | 4          |
| 6. Your child does what he or she is told to do.                                     | 0         | 1    | 2               | 3        | 4          |

|   | Very Well | Well | Moderately Well | A Little | Not At All |
|---|-----------|------|-----------------|----------|------------|
| 7. Your child is very good at understanding other people's feelings.  | 0         | 1    | 2               | 3        | 4          |
| 8. Your child controls his/her temper when there is a disagreement.   | 0         | 1    | 2               | 3        | 4          |
| 9. Your child shares things with others.                              | 0         | 1    | 2               | 3        | 4          |
| 10. Your child is helpful to others.                                  | 0         | 1    | 2               | 3        | 4          |
| 11. Your child listens to others' points of view.                     | 0         | 1    | 2               | 3        | 4          |
| 12. Your child can give suggestions and opinions without being bossy. | 0         | 1    | 2               | 3        | 4          |

## Appendix G

### Strengths and Difficulties Questionnaire

T 4-10

For each item, please mark the box for Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain. Please give your answers on the basis of the child's behavior over the last six months or this school year.

Child's name .....

Male/Female

Date of birth.....

|   | Not<br>True              | Somewhat<br>True         | Certainly<br>True        |
|---|--------------------------|--------------------------|--------------------------|
| Considerate of other people's feelings                                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Restless, overactive, cannot stay still for long                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Often complains of headaches, stomach-aches or sickness               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Shares readily with other children, for example toys, treats, pencils | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Often loses temper  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Rather solitary, prefers to play alone                                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Generally well behaved, usually does what adults request              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Many worries or often seems worried                                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Helpful if someone is hurt, upset or feeling ill                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Constantly fidgeting or squirming                                     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Has at least one good friend  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Often fights with other children or bullies them                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Often unhappy, depressed or tearful                                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Generally liked by other children                                     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Easily distracted, concentration wanders                              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Nervous or clingy in new situations, easily loses confidence          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Kind to younger children  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Often lies or cheats  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Picked on or bullied by other children                                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Often offers to help others (parents, teachers, other children)       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Thinks things out before acting                                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Steals from home, school or elsewhere                                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Gets along better with adults than with other children                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Many fears, easily scared   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Good attention span, sees work through to the end                     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Do you have any other comments or concerns?

**Please turn over - there are a few more questions on the other side**



Overall, do you think that this child has difficulties in any of the following areas:  
emotions, concentration, behavior or being able to get on with other people?

| No                       | Yes-<br>minor<br>difficulties | Yes-<br>definite<br>difficulties | Yes-<br>severe<br>difficulties |
|--------------------------|-------------------------------|----------------------------------|--------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/>      | <input type="checkbox"/>         | <input type="checkbox"/>       |

If you have answered "Yes", please answer the following questions about these difficulties:

- How long have these difficulties been present?

| Less than<br>a month     | 1-5<br>months            | 6-12<br>months           | Over<br>a year           |
|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

- Do the difficulties upset or distress the child?

| Not<br>at all            | Only a<br>little         | Quite<br>a lot           | A great<br>deal          |
|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

- Do the difficulties interfere with the child's everyday life in the following areas?

|                    | Not<br>at all            | Only a<br>little         | Quite<br>a lot           | A great<br>deal          |
|--------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| PEER RELATIONSHIPS | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| CLASSROOM LEARNING | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

- Do the difficulties put a burden on you or the class as a whole?

| Not<br>at all            | Only a<br>little         | Quite<br>a lot           | A great<br>deal          |
|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Signature .....

Date .....

**Thank you very much for your help**

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