Child anxiety, resiliency, and the FRIENDS for Life program

by

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Abstract

Anxiety disorders are the most commonly diagnosed group of mental disorders in children (Kessler et al., 2012). Resiliency, defined as a child's ability to successfully overcome an adverse event (Newland, 2014) is believed to be comprised of protective factors such as self-esteem and positive coping strategies (Rutter, 1987). These protective factors are related to child anxiety in that their presence or absence may augment or hinder a child's resiliency towards anxiety-provoking events and situations (Lo Casico, Guzzo, & Pace, 2013; Thorne, Andrews, & Nordstokke, 2013). The FRIENDS for Life (FFL) program is a school-based anxiety prevention program which aims to decrease anxiety and increase resiliency in 8- to 11-year-old children (Barrett & Sonderegger, 2003). Previous studies have shown FFL to be an effective tool in decreasing anxiety and increasing resiliency; however, not all previous studies have utilized control or comparison groups (Brownlee et al., 2013; Neil & Christensen 2007; Stopa, Barrett, & Golingi, 2011). Moreover, existing FRIENDS literature has not previously considered the potential role of parent anxiety in child outcomes. The present study aimed to evaluate child anxiety, resiliency, and parent anxiety in relation to the FFL program while including a no-treatment control group. It was hypothesized that child anxiety would decrease and child resiliency would increase following FFL. Results obtained from a non-identified school-based sample were not entirely consistent with predictions, such that decreases in anxiety and increases in resiliency were observed in both the experimental and control groups.

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Introduction

Childhood Anxiety

Anxiety in childhood is an emotion characterized by feelings of tension, worried thoughts, and fear. Anxiety exists on a continuum of severity, which ranges from normative and protective feelings of worry and fear to the experience of numerous markedly impairing symptoms for those children experiencing clinically diagnosable levels of anxiety (American Psychological Association, 2013). Childhood anxiety can present itself through multiple pathways; behaviourally, cognitively, and physiologically (Weems, 2007). Behaviourally, highly anxious children are more likely to exhibit avoidance behaviours such as school refusal. Cognitively, they are more likely to turn to negative self-talk, rumination, and other maladaptive cognitive patterns in daily thinking. Physiologically, they are more likely to experience anxiety through bodily symptoms such as upset stomach, diarrhea, trouble breathing, or increased heart rate (Weems, 2007). Childhood anxieties can derive from a variety of sources, such as school pressure, social worries, stressful events in the home environment, or one highly salient traumatic event (Haney & Durlak, 2010). Anxiety changes from normative and protective worry and fear to a diagnosable disorder when it becomes excessive and uncontrollable, occurs in response to no specific threat, and is associated with a varied and intense range of both physical and affective symptoms such as changes in behaviour and normative cognitive functioning (Rodgers & Dunsmuir, 2015).

The source of anxiety is often multifaceted for children experiencing maladaptive fears and worries. Researchers have found that both temperamental and environmental

influences can contribute to the development of an anxiety disorder in childhood (Affrunti, Geronimi, & Woodruff-Borden, 2013; Wood, McLeod, Sigman, Hwang, & Chu, 2003). Temperamental traits have been repeatedly shown to contribute to an individual's anxiety and have been identified as a risk factor for emotional disorders, such that individuals who possess certain traits are more likely to experience challenges with respect to emotion regulation (such as anxious symptomatology) (Affruniti et al., 2013). For example, behavioural inhibition (BI), which is defined as a consistent hyper-vigilance and tendency to display fear or uncertainty when faced with novel situations, is a trait associated with emotion dysregulation, shyness, and withdrawal. These traits may be indicative of anxious symptomatology (Carver & White, 1994). In addition to temperamental influences, environmental influences, such as parenting styles, living situations, and school environments, have also been shown to contribute to the development of anxiety in children. For example, children who are exposed to family conflict or violence are at greater risk for emotional disorders. To this end, parental influences, specifically genetics and parenting style, are thought to contribute to the development and maintenance of childhood anxiety through both temperamental and environmental pathways (MacKenzie, Laskey, & Wittkowski, 2013; Pereira, Baros, Merdonga, & Muris, 2013).

The Relationship between Parent and Child Anxiety

Extensive research has supported the relationship between parent and child anxiety in that children with highly anxious parents are more likely to be highly anxious themselves (MacKenzie et al., 2013; Pereira et al., 2013). This relationship has also been demonstrated to be significant in the opposite direction, such that parents of highly

anxious children are also more likely to be anxious (MacKenzie et al., 2013). This reciprocal relationship of anxious symptomatology is thought to come about from both parent behaviours reinforcing anxiety in children and child behaviour reinforcing anxiety in parents (Blossom et al., 2013). This relationship is also purported to be especially salient in the mother-child relationship. As mothers tend to spend more time alone with their children and are more likely to witness the emotions of their child, they are more likely to recognize an anxiety-provoking situation and the subsequent anxious responses of their child than a father (Pereira et al., 2013). Further to this, mothers are often more likely than fathers to respond to their child in these situations and to be more emotional in their reactions. Mothers may be given more opportunity to model and reinforce highly anxious behaviours to their children, and their children to model and reinforce the same behaviours in their mothers (Pereira et al., 2013).

Parents who engage in over-parenting (i.e., are excessively involved in their child's daily life) or home environments wherein parents are overly involved in their child's lives/emotional development, also create situations in which a stronger association between parent and child anxiety may exist (Segrin, Woszildo, Givertz, & Montgomery, 2013). A similar pattern has been documented between the relationship of parent anxiety and resiliency in children. While children of anxious parents are more likely to be anxious, they are also thought more likely to exhibit less effective protective/resiliency skills such as positive coping strategies and positive self-esteem. If parents are highly anxious, children are again less likely to be exposed to modeling behaviours that consist of positive coping and self-esteem strategies. These children are

more likely to be exposed to and engage in negative coping strategies (cognitive and behavioural avoidance) and/or develop negative self-esteem (Pereira et al., 2013).

Impacts of Childhood Anxiety

Maladaptive levels of anxiety can be extremely debilitating for a child's daily functioning, impacting their quality of life and overall mental health during childhood and into adolescence/adulthood (Barrett, Sonderegger, & Xeros, 2003). Anxiety disorders are the most frequently diagnosed group of psychological disorders in children today (Stopa, Barrett, & Golingi, 2011). Recent prevalence rates indicate that up to 24.9% of all children will develop an anxiety disorder during their childhood lasting at least one year (Kessler et al., 2012), and that 26.1% - 38.0% of those children will live with an anxiety disorder (and/or co-morbid internalizing disorder) for the rest of their lives (Beesdo, Knappe, & Pine, 2009). Specific to childhood anxiety, children can demonstrate anxiety based in various causes such as separation anxiety, phobias, fearfulness, extreme self-consciousness, and intense worrying or irrational thoughts about past and future events. As children enter adolescence, anxiety may move to issues that are more related to peer and family relationships, financial problems, or their educational performance, which may subsequently interfere with social and academic functioning (Rodgers & Dunsmuir, 2015).

Through the use of longitudinal studies, researchers have shown that anxiety disorders have a chronic nature, in that the development of an anxiety disorder in childhood may significantly predict the presence of an anxiety disorder in adolescence and adulthood (Pine, Cohen, Gurley, Brook, & Ma, 1998). In both non-clinical and clinical samples of children and adolescents, anxiety has been associated with a poor self-

perceived quality of life (Bastiaansen, Koot, Ferdinand, & Verhulst, 2004; Stevanovic et al., 2013), and can lead to the onset of subsequent forms of psychopathology including depression (e.g., Kessler, Nelson, McGonagle, & Liu, 1996) and substance abuse (e.g., Buckner, Heimberg, Matthews, & Silgado, 2012). Although treatment directed at the remission of childhood anxiety is advancing, research suggests that clinically significant anxious symptomatology remains at both posttest and one year follow up in a large number of children (up to 61%) who have been treated for their anxiety through cognitive behavioural therapy methods (Compton, Burns, Egger, & Robertson, 2002; Southam-Gerow, Kendall, & Weersing, 2001). While anxiety disorders maintain their persistence, they are estimated to account for about one-third of mental health care costs in North America (Ahlen, Breitholtz, Barrett, & Gallegos, 2012). To this end, it is critical that empirical investigations of the mechanisms underlying and maintaining this class of disorders are conducted to further our understanding and encourage the prevention of and intervention for anxiety disorders.

Resiliency and Protective Factors

Resiliency is defined as a child's ability to survive (and ideally, to succeed) under adverse or stressful conditions. It can be thought of as one's ability to "beat the odds" when faced with a challenging situation (Newland, 2014; Rutter, 1987). Children who demonstrate greater resiliency are better able to adapt to changing situations, to recover from trauma, and utilize supports within their specific contexts to overcome difficult circumstances (Newland, 2014). Resiliency is thought to be influenced by a variety of positive personal and environment influences, often referred to as protective factors, which act in combination to promote resiliency within an individual (Barrett, Cooper, &

Gallegoes Guarjardo, 2014; Fortson, 2005; Newland, 2014). In the literature, a protective factor is defined as a personal or contextual condition that aids in the management of stressful events and helps to mitigate or eliminate risk (Newland, 2014). Personal protective factors may be intelligence, social competence, self-esteem, adaptability, active coping skills, and a sense of control. Contextual protective factors may be healthy home environments, high quality relationship with parents, peers, or a safe and caring school environment (Fortson, 2005; Maldonado et al., 2013; Newland, 2014). In the context of this study, an adverse event might be a situation in the school or home environment that a child may find anxiety inducing, such as having to present orally in class, or having their parents go away for the weekend. Children who are more resilient, and more likely to possess the aforementioned protective factors, may be more likely to overcome an adverse situation whereas children who are less resilient, and less likely to possess positive protective factors, might be less equipped to deal with an adverse event in an effective way (Fortson, 2005; Maldonado et al., 2013; Newland, 2014).

In recent years, the goal of much clinical research has been to target both risk and protective mechanisms that mediate psychological health and dysfunction, as this is one way to aid in the development of effective mental health prevention programming (Barrett et al., 2003). In particular, two protective factors, self-esteem and coping strategies, were considered in the present study in regards to their relationship with child anxiety and child anxiety treatment outcomes.

Self Esteem in Children

Self-esteem is defined as a child's personal evaluation of his/her own self-worth and competence (Lo Casico, Guzzo, & Pace, 2013). Self-esteem is believed to be

comprised of two parts; self-competence and self-liking (Tafarodi & Swann, 1995). Self-competence refers to how confident a child is in his/her ability to accomplish different tasks and is also related to his/her self-efficacy, which is defined as one's belief in his/her ability to complete tasks and accomplish goals (Lo Casico et al., 2013). Self-liking refers to whether a child believes him/herself to be a good or bad person (Tarfordi & Swann, 1995). Self-esteem in children is derived from numerous sources, such as their home environments, classroom settings, and personal relationships with friends, family, and significant others (Haney & Durlak, 1998). Children who exhibit positive self-esteem are more likely to feel that they are being listened to, encouraged, and loved by their significant others at home and/or in their daily lives. Children who exhibit negative self-esteem are more likely to be lacking in these areas of support and have less of a sense of encouragement, love, and acceptance from significant others in their lives. An important aspect of self-esteem development and maintenance is that patterns of self-esteem develop early in life and can be hard to break in adolescence and adulthood (Haney & Durlak, 2010).

Much research has been conducted on self-esteem and its relationship to mental health in children. Poor self-esteem has been linked to higher levels of anxiety, depression, and sadness (Ciarrochi, Heaven, & Davies, 2007; Lo Casico et al., 2013). It has also been linked to poorer school performance, in that children with positive self-esteem demonstrate better performance in both academic tasks and relationship building over their classmates with negative self-esteem (Pullman & Allick, 2008; Tafarodi & Swann, 1995). Finally, and perhaps most pertinent to the present study, positive self-esteem has been linked to more effective coping strategies such as problem solving,

wherein a child directly attempts to solve an issue. Meanwhile, poor self-esteem has been linked to negative coping strategies, such as cognitive and behavioural avoidance, wherein a child avoids their problems through cognitive or physical avoidance of the issue (Ciarrochi, et al., 2007).

Coping Strategies in Children

Coping is defined as the way individuals choose to deal with difficult situations (Dunmont & Provost, 1999). Positive coping strategies involve problem solving or assistance seeking strategies, wherein a child will address a problem directly, and/or seek help from those around him/her. Through the utilization of such coping strategies, the child is much more likely to properly deal with the situation and feel good about the outcomes. Conversely, children who develop negative coping strategies, such as cognitive or behavioural avoidance (wherein a child may cognitively or physically avoid the problem), are far less likely to effectively deal with their problems or anxieties. One example of common avoidance behaviour in anxious children is school refusal (children refusing to attend school on a daily basis), which creates issues in both academic and social performance (Dunmont & Provost, 1999; Thorne et al., 2013). Negative coping strategies are also more likely to be observed amongst individuals who are higher in anxiety (Weems, 2007). This relationship is often viewed to be reciprocal, as it is also negative coping strategies that are more likely to be linked with or provide an additional source for anxiety, in the sense that individuals who avoid their problems continue to feel anxiety from their procrastination of dealing with the problem (Weems, 2007). A child who has developed these maladaptive patterns in stress response is at a higher risk of

experiencing challenges in his/her levels of anxiety due to this lack of healthy coping skills (Weems, 2007).

Previous research on coping strategies and their relation to both child anxiety and self-esteem has shown that children who are low in anxiety are more likely to use positive coping strategies, whereas children high in anxiety are more likely to use negative coping strategies (Weems, 2007). The same is true for children who present positive or negative self-esteem in that positive self-esteem predicts effective coping, whereas more negative self-esteem predicts avoidance behaviours (Ciarrochi et al., 2007; Dunmont & Provost, 1999; Thorne et al., 2013). It appears that child anxiety, self-esteem, and coping strategies may be related to one another in that positive self-esteem and effective coping strategies are associated with lower levels of child anxiety.

Mental Health Prevention Programming

Due to the many negative impacts of childhood anxiety problems, much research has been dedicated towards prevention, detection, and treatment with promising results (Stopa, Barrett, & Golingi, 2011). Current anxiety prevention programs target different aspects of anxiety in children (e.g. symptom recognition, coping strategies) in attempts to both decrease existing anxiety and prevent new (maladaptive) anxieties from developing (Barrett et al., 2003). Prevention programming is especially important, as previous research has uncovered two considerable issues in treatment. For example, a study conducted in Sweden found that 1) only one in five children with anxiety problems will receive treatment and 2) treatment is normally sought out anywhere from 6 – 14 years after an anxiety problem has developed (Ahlen, Breitholtz, Barrett, & Gallegos, 2012). Each aforementioned issue presents problems through both a lack of, and delay in,

sufficient treatment for children requiring mental health attention. Canadian research shows that anywhere from 14-25% of Canadian children experience significant mental health problems, and that most of them will not receive treatment for their mental health difficulties (Mental Health Commission of Canada, 2013).

Anxiety treatments are not always effective solutions. Previous research has shown that a variable 21%– 75% of participants will continue to meet criteria for an anxiety disorder after completing an intervention program (Silverman, Pina, & Viswesvaran, 2008). Another issue that influences current mental health prevention programming is that some programs are still based in adult treatment models (Barrett, 2000). In other words, some child prevention programs are adapting adult models (based on adult theories) and applying them to children. Such prevention programs may be better suited to consider the various developmental implications associated with mental health in childhood as they may pertain to assessment, diagnosis, and treatment of emotional disorders in childhood. For example, programs that use age appropriate language to label mental health topics or use interactive games to teach children about mental health will likely be more effective for child populations (Barrett, 2000).

Prevention of anxiety disorders in children is important from a financial perspective. Previous research has shown that it is often cheaper for governing bodies or families covering the health care costs to spend money upfront on mental health promotion or prevention programming targeted at children and families as they develop, as opposed to paying for therapy and treatment across the lifespan after an internalizing disorder becomes present (Mental Health Commission of Canada, 2011). Effective prevention programming is also believed to reduce the likelihood of an individual

spending time in a hospital or within the criminal justice system due to mental health issues, which can also generate cost savings. This may also extend to the workplace as fewer sick days or extended periods of leave due to mental illness can result in more cost saving benefits (Mental Health Commission of Canada, 2011). The development of effective prevention programming for anxiety and mental health in general is imperative for both mental health and fiscal improvements within our society, such that smaller amounts of money spent on healthcare in early life may mitigate more expensive healthcare costs in adulthood.

School-Based Mental Health Programming

School-based mental health programming is beneficial for children for a variety of reasons. Schools are thought to represent the common entry point for most children and adolescents into mental health services (Briesch, Hagermoser Sanetti, & Briesch, 2010). In a school setting, all students (within the target age group) are provided equal access to any universal mental health programming introduced. School based programming, while often provided at the cost to the school, is usually free to students and their families. This means that students, who may not have access to mental health supports due to financial issues, are being provided supports in their school environment (Mental Health Commission of Canada, 2011).

Mental health supports provided in a more generalized school setting may carry less of a stigma for participants than supports provided in clinical, group, or individual therapy settings (Briesch et al., 2010). School staff, specifically guidance counsellors and classroom teachers, may be at an advantage over mental health professionals for targeting and/or identifying mental health issues in students due to their daily interactions with

these children/adolescents (Briesch et al., 2010). Lastly, programs that deal specifically with anxiety and that are administered in a school setting may be especially important as many anxiety triggers for children can be present in their school environment. For example, a student who experiences significant separation anxiety may experience daily triggers from the sight of their school doors, while a student who feels anxious when speaking aloud may experience this stress trigger on a daily basis in their class discussions (Barrett, 2000; Briesch et al., 2010). While there are also some challenges in providing mental health programming in the school setting (i.e., scheduling conflicts with classroom schedules or disruptions from working with a larger group of children (Barrett, 2000)), there may still be added benefits in providing this programming within the public school system.

Theoretical Framework

Sound and effective mental health programming is based in empirically supported theory (Barrett, 2000). One of the theoretical treatment frameworks that is used in mental health programming is Cognitive Behavioural Therapy (Barrett, 2000). Cognitive Behavioural Therapy (CBT) is a form of psychotherapy that is based on the cognitive model that purports that the way in which we perceive situations influences how we emotionally respond to events in our lives (Beck Institute, 2015). CBT also draws on a range of psychological theories to support its effectiveness and utilization in therapy programs. For example, one such theory is Social Cognitive Theory (SCT) which focuses on the human ability to use self-reflection to make sense of experiences, explore thought processes and beliefs, self-evaluate, and then adapt one's behaviour accordingly (Davies, Niles, Pittig, Arch, & Craske, 2015). SCT also holds that personal factors (affective,

biological, and cognitive factors), environmental factors, and behaviour are interrelated such that all three factors work to influence one another. Another theory on which CBT is based is self-efficacy theory, which states that an individual's beliefs about his/her capabilities hold a strong influence on the way they behave, specifically on their social and academic achievements. Overall, by supporting processes of self-reflection and developing feelings of self-efficacy and the ability to model adaptive coping strategies, CBT can work to prevent and/or reduce internalizing problems, such as anxiety and other mood disorders (Davies et al., 2015).

Universal mental health programs that are based in a theoretical framework such as CBT may be more successful in producing positive effects for participants than those that are not. Specific to programming for anxiety symptoms and disorders, which are often characterized by poor regulation of negative emotions, CBT-based programming can help to regulate these emotional difficulties (Davies et al., 2015). Previous research investigating children and their coping abilities has suggested that children who are highly anxious apply strategies such as rumination, escape, and distraction when experiencing adverse events, all of which can interfere with appropriate/effective behaviours (Davies et al., 2015; Weems, 2007). In addressing these maladaptive cognitions with the use of CBT, clinicians may effectively reduce anxiety and other internalizing problems. One such program that utilizes CBT in its aims to decrease anxiety in children is the FRIENDS for Life (FFL) program (Barrett, 2004), which is the focus of this thesis.

The FRIENDS for Life Program

The FRIENDS for Life program is an anxiety prevention program that was developed by Dr. Paula Barrett and initially validated in Australia for school-aged populations. FFL is based on the Coping Cat/Coping Koala programs that originated in Australia to target anxiety symptoms in children (Barrett, 2004). It is designed to assist in the treatment and prevention of anxiety in children ages 8-11 years by teaching students about building resiliency and feeling brave through 10 weekly 60 minute sessions (Barrett, 2004). FRIENDS is an acronym for the main topics covered in the program; *F* – Feelings, *R* – Remember to Relax, *I* – I can do it!, *E* – Explore Solutions and Coping Step Plans, *N* – Now Reward Yourself, *D* – Don't forget to practice, *S* – Smile! Stay Calm inside (Barrett, 2004). The FRIENDS for Life program is administered through combinations of group discussion and classroom demonstrations/activities, and home practice with program workbooks to encourage students to learn about a variety of emotional topics that are generally not covered in the standard classroom curriculum, both in the school setting and at home (Barrett, 2004).

Considerable research has been conducted on the effectiveness of the FRIENDS for Life program, and many studies have shown positive effects in child outcomes of anxiety reduction and resiliency development at both immediate posttest and 12-month follow up (Barrett, Lock, & Farrell, 2005; Barrett et al., 2003; Legerstee et al., 2010; Lowry-Webster, Barrett, & Dadds, 2001). Previous research has also concluded that FRIENDS for Life is strong in its social validity, reliability, and generalizability as a prevention program through analyses of child and parent self-reports at pre, post, and follow up testing points (Barrett, Shortt, Fox, & Wescombe, 2001; Essau, Conradt,

Sasagawa, & Ollendict, 2012; Farrell, Barrett, & Claassens, 2005; Gallegos, Rodriguez, Gomez, Rabelo, & Gutierrez, 2012). However, in a recent meta-analysis of school-based research conducted on the FRIENDS for Life program, researchers concluded that previous research might possess too many methodological flaws to make any claim that FRIENDS for Life is effectively making changes in these school populations (Maggin & Johnson, 2014).

In their meta-analysis, Maggin and Johnson (2014) assessed a total of 17 studies that examined the FRIENDS for Life program in a school setting, as researchers noted that there is a lack of FRIENDS literature pertaining to school settings as compared to the amount of FRIENDS literature available in clinical settings (Maggin & Johnson, 2014). Each study included in this meta-analysis was required to meet the following conditions: 1) it utilized the FRIENDS program or one of its variations; 2) it was conducted with classrooms between the grade levels of kindergarten to grade 12; 3) was conducted in a school or classroom environment; 4) a standard measure of anxiety with proven psychometric properties was used to assess anxiety, and 5) a group-based experimental or quasi-experimental design with a control group was used. Overall, researchers found that certain methodological weaknesses were consistent across studies that included 1) a failure to control for family-wise error rates; 2) lack of reporting on and controlling of differential attrition rates between treatment and control groups; 3) failure to report social validity; and 4) the fact that most studies have been conducted by program developers. The present study has aimed to address all four of these methodological weaknesses.

Maggin and Johnson (2014) comment on three more methodological weaknesses present across recent FFL research. Firstly, they observed a failure of most studies to

report their findings using the appropriate analyses, which could have led to overestimations of the significance of statistical analyses. Secondly, they commented on the heavy reliance of this research on student self-report and the numerous interpretation limitations this presents. Thirdly, the extensive use of wait-list control groups presented issues in significant findings of the FRIENDS program throughout this type of research, as control groups were often lost at one year follow-up testing due to the control groups having received FFL by that point (Maggin & Johnson, 2014). Although these limitations exist within the present study, each has been addressed to the extent possible by the researchers.

Previous research has also examined the FRIENDS for Life program's influence on anxiety and depression in conjunction with protective factors. The FFL program has been shown to decrease anxiety/depression and increase protective factors (as operationalized by the measures used in these studies). Such results have been found in both single quasi-experimental studies and meta-analyses that have examined the effectiveness of various anxiety prevention/intervention programs (Brownlee et al., 2013; Neil & Christensen, 2007; Stopa et al., 2011). In one study that looked at only the FRIENDS program's influence on child anxiety and protective factors, researchers studied a group of socioeconomically disadvantaged children without the use of a control group (Stopa et al., 2011). Researchers concluded that anxiety and depression decreased while protective factors improved through the administration of FRIENDS for Life (Stopa et al., 2011).

Certain limitations exist within the work of Stopa et al. (2011). The disadvantaged sample (of a low social economic status) recruited for their study limited the

generalizability of their findings. The study also failed to utilize a control group, which would serve an integral role in making any program outcome comparisons (Whitley, Kite, & Adams, 2012). Additionally, their measures of anxiety and self-esteem may not have been adequate. Specifically, these researchers used the Revised Children's Manifest Scale (Reynolds & Richmond, RCMAS, 1978) as one of their anxiety measures and the Self-Esteem Inventory (Coopersmith, SEI, 1989) as their measure of global self-esteem. Both measures are only moderately reliable, and improved measures have since become available for both scales. The present study included a control group, utilized a general school-based sample population, and availed of more updated and reliable measures.

Parent Anxiety and the FRIENDS for Life Program

As previously discussed, the current literature suggests that parent and child anxiety work to influence each other in potentially negative ways such that parent anxiety may encourage and/or maintain anxiety in children, and vice-versa (Pereira et al., 2013). A such, one question pertinent to the present study concerned the ways in which parent anxiety might be related to outcomes from a program such as FRIENDS for Life. In previous program effectiveness research, one of the most consistent predictors of a poor response to treatment in children is parent psychopathology and particularly anxiety disorders in mothers (Creswell, Apetroaia, Murray, & Cooper, 2013). Because parent anxiety is also considered to be a contributor to the maintenance of anxiety in children, there lies an additional source of anxious/poorly resilient behaviour modeling that may not be addressed by the program (especially if the program occurs in the parent's absence, as does the FFL program) (Keeton et al., 2013). Alternatively, it has also been suggested that "spill-over" effects from these programs may occur in that positive

developments in the child may influence positive changes in the parents and the family overall (Keeton et al., 2013). Parental anxiety and child program outcomes were studied in the FUN Friends program (a similar program to FFL but for children aged 4-7) and results showed that both children and parents improved in their levels of anxiety. However, the relationship between parent anxiety and child outcomes was not considered (Anticich, Barrett, Silverman, Lacherez, & Gillies, 2013). In respect to the present study, it is hypothesized that children of highly anxious parents may not exhibit as many positive effects of the program as children of non-anxious parents due to the potentially moderating effect of parent anxiety on child anxiety.

Present Study

The goal of the present study was to build upon the findings of Stopa et al. (2011) through a research methodology that would attempt to address the issues that might have limited validity, reliability, and generalizability of previous studies. Specifically, the present study aimed to examine school-based findings of the FFL program while addressing some of the aforementioned limitations present in this body of research as outlined by recent meta-analytic work, by conducting the first study of the FRIENDS for Life program in this geographical location (Maggin & Johnson, 2014). The present study also included analysis of parent anxiety as related to child outcomes in the FFL program, a factor that had not been previously investigated.

Based both upon anxiety theory as well as on previously observed empirical findings, it was first hypothesized that the variables as assessed in the present study would relate to one another in a manner consistent with the literature. Specifically, it was hypothesized that anxiety would be inversely correlated with self-esteem and problem-

solving/assistance seeking behaviours (Barrett et al., 2001; Essau et al., 2012; Farrell et al., 2005; Gallegos et al., 2012). It was hypothesized that anxiety would be positively correlated with cognitive avoidance and behavioural avoidance (Dunmont & Provost, 1999; Thorne et al., 2013; Weems, 2007). Examining these hypotheses first allowed for a check of whether the construct of anxiety was relating to the constructs of self-esteem, coping, and pro-social behaviours as expected. It should be noted that gender was not examined as a moderator variable as the literature has not shown it to be a significant moderational variable in this age group (Barrett et al., 2005; Barrett et al., 2003; Legerstee et al., 2010; Lowry-Webster et al., 2001).

The second hypothesis of the present study pertained to the intervention itself, such that children in the experimental condition, but not those in the control condition, would demonstrate statistically significant decreases with respect to anxiety, and statistically significant increases with respect to positive self-esteem and coping skills (stronger resiliency) at post-treatment, after receiving the FFL program. More specifically, pre- to posttest decreases would be observed in the treatment group for anxiety and negative coping skills (cognitive and behavioural avoidance) while pre- to posttest increases would be observed in the treatment group for self-esteem, prosocial behaviours, and positive coping skills (assistance seeking and problem solving) (Brownlee et al., 2013; Neil & Christensen, 2007; Stopa et al., 2011). Significant pre- to posttest differences were not hypothesized for the control group. As such, the present study aimed to contribute more valid conclusions regarding the FRIENDS for Life program and its influence on both child anxiety and resiliency in a school-based setting

by conducting assessment prior to and following the intervention and by using a control comparison group.

It was lastly hypothesized that parent anxiety may influence program outcomes (in the experimental group). Specifically, it was predicted that children of highly anxious parents would demonstrate higher levels of anxiety at posttest when compared to children of parents with lower anxiety. Children whose parents present or enable greater levels of anxiety in the home environment may experience greater difficulty internalizing program lessons than children of parents with lower anxiety (Keeton et al., 2013). As there is a lack of information regarding the FRIENDS for Life program and potential interactions with parent variables, the present study also aimed to contribute valid findings regarding the possibility of parent influence on FFL program outcomes.

Methods

The current study is part of a larger ongoing study within the Faculty of Education at Memorial University of Newfoundland. Ethical approval was obtained from both the Interdisciplinary Committee on Ethics in Human Research at Memorial University of Newfoundland (ICEHR) and the English School District of Newfoundland and Labrador. The present study was developed in partnership with Eastern Health and the Janeway Hospital of St. John's, Newfoundland. Training for individuals who wish to become certified FRIENDS for Life group facilitators is offered by Eastern Health social workers at the Janeway Family Centre. Because of the previously established relationship between social workers and guidance counsellors of participating schools, school administrators were initially approached by social workers about the present study, allowing researchers to follow up with schools that planned to administer the FFL program in the relevant

academic years. While the FFL program had been administered in numerous Newfoundland schools for several years prior to the start of this project, the present study was the first of its kind to evaluate the program in the Newfoundland and Labrador school system.

Participants

Participants were recruited from elementary schools in the St. John's and surrounding areas. Child participants were recruited at their respective schools, and parent participants were recruited through the study consent form, on which they could indicate their personal interest in study participation. Based on participant counts of previous FFL research, the initial goal of the study was to collect data from 100 students who were completing the FRIENDS program (experimental group), and 100 students who were not (control group). Participant number goals were based on power analyses, suggesting a minimum of 67 participants in both the experimental and control groups (Cohen, 1992). School selection (based on all schools across the province) was dependent upon which guidance counsellors in which schools had received the FRIENDS training to be qualified to administer the program, and/or which schools were receiving support from The Janeway Family Centre to provide the program. Because the FRIENDS program is not a requirement of current school curriculum, researchers were limited as to which schools they could contact for study participation. In total, 15 schools across the province were contacted about possible study participation. Of those 15, nine schools from the St. John's metropolitan area and one school from rural Newfoundland (the Burin Peninsula) were successfully recruited for participation.

Participants were not recruited on the basis of any preexisting criteria (e.g., levels of existing anxiety or a diagnosis of an internalizing disorder) other than that they were students in a school that provided the FRIENDS for Life program. Participants' ages ranged from 8-11 years, as required by the FFL program. Classroom groups could not be randomly assigned, as it was the school's decision as to which classes were to receive FFL during the school year. The final participant count exceeded recommended baseline amount of at least 67 participants in both the experimental and control groups (Cohen, 1992), and by the average group numbers used in previous FRIENDS research.

Control groups in participating schools were identified in the same manner as the experimental groups, in that school administration permitted researchers to access classes who were not receiving FFL. Some of these classes were in the same grade as classes in the experimental groups, however most control classes were accessed from the grade below the classes receiving FFL. Control groups were accessible in nine of the ten participating schools.

Measures – Child Report

Child assent form (Appendix A). This form was used to allow child participants to provide their own assent to complete the questionnaire package.

The Revised Child Anxiety and Depression Scale (Appendix B, RCADS, Chorpita, Moffit, & Gray, 2005). This scale provides measurement for the underlying symptoms associated with six clinical diagnoses of anxiety including; Generalized Anxiety Disorder, Obsessive Compulsive Disorder, Major Depressive Disorder, Panic Disorder, Social Phobia, and Separation Anxiety Disorder. It also provides a measure of overall anxiety (Chorpita et al., 2005). The RCADS contains 47 items such as " I worry

about things …" which children rate on a 4-point Likert scale depending on how often they feel or experience each item (1 = Never, 4 = Always). The RCADS has demonstrated sound psychometric properties, with each scale yielding internal consistencies from .78 to .88, and an overall reliability alpha of .79 (Ebesutani et al., 2011).

The Coopersmith Self-Esteem Inventory Revised Version (Appendix C, CSEI, Hills, Francis, & Jennings, 2011). The CSEI is a widely used measure of children's global self-esteem. This questionnaire contains 19-items that assess self-esteem through three contributing factors; personal self-esteem, self-esteem derived from parents, and self-esteem derived from peers. Items such as "I often wish I were someone else" are rated as either "Y" or "N", as in the statement either does or does not apply to the child (Hills et al., 2011). This questionnaire, which is the revised version of the SEI, has been shortened to exclude 6 redundant items while yielding improved psychometric properties. While the SEI showed good convergent validity and an internal consistency of .83 (Stopa et al., 2011), the CSEI demonstrates comparable internal consistency along with improved reliability (Hills et al., 2011).

The Coping Scale for Children and Youth (Appendix D, CSCY, Brodzinsky, Elias, Steiger, Simon, Gill, & Clarke Hill, 1992). The CSCY is a 29-item self-report questionnaire with four factors related to positive and negative coping strategies: assistance seeking (positive), cognitive/behavioural problem-solving (positive), cognitive avoidance (negative), and behavioural avoidance (negative). Children respond to items such as "I asked someone in my family for help with the problem" by rating their frequency with which each scenario typically occurs on a Likert scale from 0-3 (0 =

Never, 3 = Always) (Brodzinsky et al., 1992). The CSCY has moderate to high internal reliabilities for each of the four factors (ranging from 0.70 to 0.80), and test-retest reliabilities within each of the factors ranges from 0.70 to 0.83 (Brodzinsky et al., 1992).

The Strengths and Difficulties Questionnaire Self-Report Form (Appendix E, SDQ-S; Goodman, 1997). The SDQ-S is used to assess overall child functioning (including pro-social behaviours) from the perspective of the child. It contains 25 items presented across 5 separate scales; the hyperactivity scale ("I am constantly fidgeting or squirming"), the emotional symptoms scale ("I worry a lot"), the conduct problems scale ("Other children or young people pick on me or bully me"), the peer problems scale ("I have one good friend or more"), and the prosocial scale ("I try to be nice to other people. I care about their feelings"). Respondents check "Not true", "Somewhat true", or "Certainly true" for each item. Previous studies have shown this measure to be reliable and valid and it is frequently used in school and clinical settings (Vostanis, 2006).

Child demographic information form (Appendix F). This form provided demographic information of child participants, such as age, sex, ethnicity, birth date, and parent occupation.

Measures – Parent Report

The Depression, Anxiety, and Stress Scales, 21-item version (Appendix G, DASS-21; Antony, Beiling, Cox, Enns, & Swinson, 1998). The DASS-21 is used to assess parental anxiety, depression, and stress. The DASS-21 is comprised of 21 items that measure the three constructs (7 items per construct) of depression, anxiety, and stress. Respondents answer to items such as "I find it hard to wind down" and rate their responses on a 4-point Likert scale, ranging from 0 (Did not apply to me at all) to 3

(Applied to me very much or most of the time). Internal consistency alphas for the DASS-21 have been found to range from .80 to .94 across various studies, and reliability alphas have shown to range from .70 to .90 (Sinclair et al., 2012).

Parent demographic information sheets provided demographic information such as parent age, sex, birth date, ethnicity, and occupation (Appendix H).

Procedure

Before data collection and FRIENDS for Life sessions could begin, guidance counsellors received consent from all classroom parents for their child to partake in FFL. Parent consent for child participation in any FFL program is a requirement of the FFL program itself. Classrooms that received parent approval to administer FFL were then approached by researchers for study participation. Once approval from school principals and guidance counsellors was obtained, researchers visited each school to distribute consent forms to all children taking part in the FFL program to obtain informed consent from parents. Consent forms (Appendix I) provided information regarding the purpose of the study, the requirements of child and parent participants, potential risks and benefits, and confidentiality. Consent forms also emphasized the voluntary nature of each family's participation, and the lack of negative consequences that would arise from refusal to participate or the halting of participation during any point of the study. A researcher presented the consent forms to the students in each classroom, and read from a standardized script explaining the study and the consent form. Students were given the opportunity to ask questions regarding the study. Researchers then instructed students to return consent forms within the next week to their classroom teacher. No reward was offered for study participation.

Data was collected from children at three separate points during the span of the study. Specifically, pretesting, post testing, and follow up testing (approx. 12 months after posttest) were conducted. At the present time, follow-up testing is still in progress and therefore no follow-up data will be considered in the present study. Pretesting took place approximately one week before programs began, and post testing was completed one week following program completion. In most schools, data collection occurred in a quiet area of the building designated by the guidance counsellor, such as the gymnasium or library. In some schools, scheduling and spatial limitations did not permit this, and so students completed their questionnaires in the classroom. In classes in which some children were not participating in the study, participants worked on their survey packages while the other students read quietly (or engaged in other quiet activities as dictated by the classroom teacher). Research assistants provided verbal instructions and each questionnaire contained a specific set of instructions (see Appendices). Children were also required to provide their own written assent to partake in the study before they started their questionnaires. Research assistants were available during the entirety of the data collection session to answer any questions students may have, allow students to take breaks when requested, and to help control for noise and other distractions.

Students were given as much time as needed to complete their questionnaires, although most students did not exceed 40 minutes to complete their survey package. Questionnaires were presented in the same order in each survey package, and each student was assigned a participant number to ensure anonymity and to collage pre- with posttest questionnaires. Child pretesting survey packages included the child assent form, child demographic form, RCADS, SDQ, SEI-19, and the CSCY. An additional measure,

the Childhood Anxiety Sensitivity Index (CASI; Silverman, Fleisig, Rabian, & Peterson, 1991) was also administered to each child participant, but was not considered in the present study, as it does not pertain to present hypotheses. The same data collection procedures were followed to collect data at both posttest and the 12-month follow up. Child post testing survey packages included all the above measures, in addition to the FRIENDS Social Validity Measure – Child Version (Barrett, 2004), and excluding the child demographic form. Researchers attempted to ensure that each data collection session was conducted at approximately the same time interval for each participant group in each school. However, scheduling for data collection in the school system was dependent upon the administration team, classroom schedules, and school holidays, and as such, this was not always possible. It is important to note that the use of wait list control groups was implemented in the present study, meaning that some participants who were assigned to the control group at pretesting and post testing, would be one year/grade older and receiving FFL in their school at the time of 12-month follow up testing. Follow up testing is still ongoing and outside the parameters of the present study.

Parent data was collected at the same three times as child data; pretest, posttest and 12-month follow up. Parent participants were assigned the same participant number and study group (i.e., experimental or control) as their child. Parents were given the choice to complete their questionnaire packages either online or over the telephone. A website was developed that would hold the parent questionnaire packages and generate spreadsheets of parent data upon questionnaire completion. In the case of selecting the telephone option a research assistant contacted them, dictated the questionnaire package, and recorded their answers. Parent pretest packages consisted of six measures, although

the only measure considered in the present study was the Depression, Anxiety, and Stress scale. Parent packages also included a parent demographic form, the Anxiety Sensitivity Index (ASI; Reiss, Peterson, Gursky, & McNally, 1986), the Childhood Anxiety Sensitivity Index Parent Version (CASI-P; Weems, Taylor, Marks, & Varela, 2010), the Parental Beliefs about Anxiety Questionnaire (PBA-Q; Francis & Chorpita, 2010), the Strengths and Difficulties Questionnaire Parent Version (SDQ-P; Goodman, 1997), and the Revised Child Anxiety and Depression Scale Parent Version (RCADS-P; Chorpita, Moffitt, & Gray, 2005). None of the aforementioned measures were included in the present study, as they do not pertain to present hypotheses. Posttest and follow-up packages included the five aforementioned surveys in addition to the FRIENDS Social Validity Measure – Parent Version.

After pretesting was completed, participants in the experimental groups were administered the FRIENDS for Life program. Students in the control group did not receive any of the FRIENDS for Life program as part of this study; instead they only filled out the questionnaires at the same time as the experimental group. However, many of the control groups were, during the time span of this study, receiving the Roots of Empathy program as part of normal school curriculum (which will be discussed in a later section of this paper).

FRIENDS for Life Program Administration

The FFL program is based in CBT techniques, and addresses the cognitive, physiological, and behavioural aspects of childhood anxiety. Sessions are given in the classroom by a trained program facilitator. Program Facilitator Training is provided by Austin Resilience Inc., which offers FFL program training across Canada. Training

consists of a full day of instruction and group activities so that program facilitators gain an understanding of both the instruction of the FFL program outcomes, and the facilitation of educational group activities for students (Austin Resilience, 2015). Each FFL session lasts approximately 60 minutes and sessions are conducted once a week for ten weeks, in addition to two booster sessions at the start and the end of the program. Facilitators use the FFL program manual (Barrett, 2004) to guide each session, while participants are given parallel program workbooks (Barrett, 2004). Both manual and workbooks outline goals and topics for each session, and provide information, stories, work sheets, and activities for participants to engage in during each session. Sessions cover topics in the following order; 1) Feelings – Understanding Feelings in Ourselves and Others, 2) Introduction To Feelings, 3) Introduction to Body Clues and Relaxation, 4) Playing Careful Attention – Helpful and Unhelpful Self-Talk, 5) Changing Unhelpful Thoughts Into Helpful Thoughts, 6) Introduction To Coping Step Plans, 7) Learning From Our Role Models and Building Support Teams, 8) Using a Problem Solving Plan, 9) Using the FRIENDS Skills To Help Ourselves and Others, and 10) Review and Party. Sessions also cover the topics previously mentioned from the FRIENDS acronym; *F* – Feelings, *R* – Remember to Relax, *I* – I can do it!, *E* – Explore Solutions and Coping Step Plans, *N* – Now Reward Yourself, *D* – Don't forget to practice, and *S* – Smile! Stay Calm inside (Barrett, 2004). Specific in-session activities include relaxation and meditation, cognitive restructuring, attention training, exposure, and how to obtain support from friends and family. Participants are also given home activities to complete with family and friends outside of the classroom, to encourage them to strengthen and generalize the strategies taught in session.

Although FRIENDS for Life programming is designed to span a 10-week duration, not all schools in the present sample included 10 weeks of session time due to scheduling constraints in the school. For example, in some schools, the 10-week program was compressed into 8 weeks. Further to this, not all schools were able to schedule FFL to run with one session per week for ten weeks, and some schedule adjusting occurred in some participating schools. For example, some schools met on alternating weeks over a longer period of time; in addition, school holidays and vacations also in some cases resulted in the content of the FFL program being covered over a time that was shorter or longer than the typical 10-week period. However, all schools completed the FFL program content in its entirety. Further discussion of this possible issue will be examined in the limitations section of this paper.

Twenty-five percent of sessions in each school were randomly selected to be observed in person by a research assistant, except for at one school in which the sample was observed via the use of Skype. The usage of Skype in the present study was implemented due to the geographical location of this school (the Burin Peninsula), which was not within a reasonable distance to travel for session observation purposes. Sessions at this school were live streamed, and thus no audio or visual recording of sessions occurred. Research assistants who observed these sessions were well versed in the goals of each program session through the FFL program manual, and completed the FRIENDS Treatment Integrity Measure immediately after each session to measure the effectiveness of each session. Researchers also recorded notes of each session they observed. Data from observation sessions were used as a tool to ensure that group facilitators were meeting program outcomes as outlined by the program manual, and were conducted in

accordance with previous FFL research. Treatment Integrity and Social Validity data will not be assessed in the present paper.

All child, parent, facilitator, and teacher data collected was entered in SPSS files to conduct appropriate statistical analyses. During data entry, items that were left blank by participants (both child and parent) were coded as "999" for "missing data". Otherwise, all scales were entered and coded as dictated by previous work from the literature.

Results

The present study followed a mixed design, including repeated measures and regression analyses. A pretest – posttest control group design was utilized. To assess for the first hypothesis regarding the relationships between variables of anxiety, self-esteem, and coping strategies at both pre- and posttest, bivariate correlations were conducted. To assess the second hypothesis of outcome differences between the experimental and control groups at posttest, seven repeated measures ANOVAS were conducted, one for each of the dependent variables of anxiety, self-esteem, pro-social behaviours, assistance seeking, problem solving, cognitive avoidance and behavioural avoidance. Lastly, a hierarchical regression analysis was conducted to assess the third hypothesis regarding a possible influence of parent anxiety on child treatment outcomes in the experimental group.

Preliminary Analyses

Descriptive and frequency analyses were conducted to assess demographic information of all child and parent participants. See Table 1 for demographic information of child and parent participants. In the case of child participants, the overall sample

consisted of 310 children, 210 in the experimental group and 100 in the control group. Two children (0.01%) omitted their demographic information. In all present analyses, only participants who had completed testing at both pretest and posttest were included. As such, the number of child participants included in analyses was lowered to 254 (attrition rate of 18.06%), with 169 in the experimental group (attrition rate of 19.52%) and 85 in the control (attrition rate of 15.00%). Only parents of these 254 children were subsequently included in analyses, lowering the parent participant number to from 160 to 135, with 88 in the experimental group and 47 in the control. All remaining participants were excluded from analyses.

Table 1. *Child (n = 254) and parent (n = 135) participant groups demographic information*

Demographic Feature	Experimental Group	Control Group	Total
Child Sample	*n* = 169	*n* = 85	*n* = 254
Child Age (M (SD))	9.75 (SD = 0.51)	9.33 (SD = 0.61)	9.61 (SD = 0.57)
8 years old	2.40% (*N* = 4)	5.90% (*N* = 5)	3.50% (*N* = 9)
9 years old	21.30% (*N* = 36)	55.30% (*N* = 47)	32.70% (*N* = 83)
10 years old	74.60% (*N* = 126)	36.50% (*N* = 31)	61.80% (*N* = 157)
11 years old	1.20% (*N* = 1)	1.20% (*N* = 21	1.20% (*N* = 3)
Child Sex			
Male	45.60% (*N* = 77)	44.70% (*N* = 38)	45.40% (*N* = 115)
Female	53.80% (*N* = 91)	54.10% (*N* = 46)	53.90% (*N* = 137)
Child Grade Level			
Grade Four	19.50% (*N* = 33)	64.70% (*N* = 55)	34.60% (*N* = 88)
Grade Five	79.90% (*N* = 135)	32.10% (*N* = 29)	64.60% (*N* = 164)

Child Ethnicity			
White	96.40% (*N* =163)	95.30% (*N* = 81)	96.10% (*N* = 244)
South Asian	.06% (*N* = 1)	-	.04% (*N* = 1)
Native	.06% (*N* = 1)	-	-
Mixed	.06% (*N* = 1)	-	.04% (*N* = 1)
Other	.06% (*N* = 1)	3.50% (*N* = 3)	1.20% (*N* = 3)
Parent Sample	*n* = 88	*n* = 47	*n* =135
Parent Age (M (SD))	40.88 (SD = 4.49)	39.40 (SD=7.41)	40.37 (SD =5.70)
Sex/Relation to Child			
Male/Father	10.20% (*N* = 9)	2.20% (*N* = 1)	7.50% (*N* = 10)
Female/Mother	88.60% (*N* = 78)	97.80% (*N* = 45)	91.80% (*N* = 123)
Other	1.10% (*N* = 1)	-	.07% (*N* = 1)

In all analyses considering variable outcome scores, specific subscales from the following measures were utilized: the total anxiety scale from the RCADS, the global self-esteem scale from the SEI-19, the pro-social scale from the SDQ, and all scales (assistance seeking, problem solving, cognitive avoidance, and behavioural avoidance) from the CSCY. Researchers did not include all subscales from all measures in analyses; only subscales pertinent to the present topic were included. One-way ANOVAS were conducted to examine pre-treatment differences in anxiety, self-esteem, pro-social behaviours, and coping skills between the experimental and control participants. One-way ANOVAS were used instead of t-tests due to the number of comparisons made. One-way ANOVA permits the same between group comparisons as a t-test, but maintains an acceptable Type I error rate for the entire set of comparisons (error rates would inflate with t-testing) (Howell, 2002). This was completed by entering each subscale score at

pretest as dependent variables, and the grouping variable (experimental versus control group) as the factor. Results revealed that experimental and control groups did not significantly differ on any variable outcome scores except the prosocial behaviour scores at pretest (see Table 2). Experimental and control groups differed significantly on their prosocial behaviour scores (F (1, 253) = 5.55, p = .02, $\eta p2$ = .022*)* with the experimental group rating slightly higher than the control group; however, this effect size was small. Groups did not significantly differ on any other variable at pretest (see Table 2).

Table 2. *One-way ANOVA variable outcomes of Child participants on anxiety, self-esteem, prosocial behaviour, and coping subscales at pretest of experimental (n = 169) and control (n = 85) groups*

Measure	Experimental M(SD)	Control M(SD)	*df*	*MS*	*F*	*p*	*ηp2*
1. ANXIETY	26.08(17.18)	25.4(16.28)	1 252 253	25.91 285.20	.09	.76	.000
2. SELF-ESTEEM	1.43(1.61)	1.54(1.50)	1 252 253	.75 2.47	.30	.58	.001
3. PROSOCIAL	8.36(1.92)	7.80(1.93)	1 251 252	20.54 3.70	5.55	.02*	.022
4. ASSISTANCE SEEKING	5.78(2.60)	6.00(2.62)	1 239 240	1.03 6.80	.15	.70	.001

5. PROBLEM SOLVING	10.43(6.10)	10.55(6.06)	1 245 246	.75 36.92	.02	.89	.000
6. COGNITIVE AVOIDANCE	16.31(8.73)	17.46(8.13)	1 245 246	73.09 72.81	1.00	.32	.004
7. BEHAVIOURAL AVOIDANCE	8.04(5.61)	7.15(5.41)	1 244 245	43.66 30.77	1.42	.24	.006

*Note: ANXIETY = Revised Child Anxiety and Depression Scale Total Anxiety Scale, SELF-ESTEEM = Self-Esteem Inventory Global Self-Esteem Scale, PROSOCIAL = Strengths and Difficulties Questionnaire Pro-Social Behaviour Scale, ASSISTANCE SEEKING = Coping Scale for Children and Youth Assistance Seeking Scale, PROBLEM SOLVING = Coping Scale for Children and Youth, Problem Solving Scale, COGNITIVE AVOIDANCE = Coping Scale for Children and Youth Cognitive Avoidance Scale, CSCY - BEHAVIOURAL AVOIDANCE = Coping Scale for Children and Youth Behavioural Avoidance Scale. Df = degrees of freedom. Degrees of freedom vary due to variability in survey completion of participants. *p<.05, **p<.01*

Main Analyses

Variable Relationships

The first research question of the present study hypothesized that anxiety would be negatively related to positive self-esteem and positive coping skills, and positively related to negative coping skills, as has been found in previous FFL research (Barrett, Shortt et al., 2001; Essau et al., 2012; Farrell, Barrett, & Claassens, 2005; Gallegos et al., 2012). This hypothesis was addressed by running bivariate correlations at pretest and posttest for experimental and control groups, by entering the variables of child anxiety scores, child global self-esteem scores, child prosocial behaviour scores, and child coping scores (assistance seeking, problem solving, cognitive avoidance, and behavioural avoidance) as variables in the correlation analysis in SPSS. Only participants who had

completed both pretesting and post testing were included in analyses. Results are presented in Tables 3 and 4 for experimental and control participants at pretest and posttest, respectively. Reliability coefficients for each subscale are also provided in Table 3. Reliability coefficients ranged from good to excellent for all scales except the self-esteem, prosocial, and assistance seeking scales (Howell, 2002). The low reliability scores of these three scales are considered in the discussion of limitations. It is prudent to note that due to the number of correlations that were conducted, it is possible that some significant correlations were a result of family wise error. Alpha levels were not adjusted as analyses were based on a priori predictions.

Correlational analyses revealed several expected results. Significant correlational relationships at pretest are first discussed. In the experimental group, prosocial behaviour and self-esteem were significantly correlated in a positive direction, $r = .15$, $n = 210$, $p = .03$. Prosocial behaviours were also significantly correlated with assistance seeking and problem solving coping behaviours in a positive direction, $r = .23$, $n = 160$, $p = .01$, $r = .18$, $n = 163$, $p = .03$. All three of these correlations support the first hypothesis, as prosocial behaviours appear to be related to positive self-esteem and positive coping skills. Results also showed that assistance seeking and problem solving were positively correlated with one another, $r = .55$, $n = 160$, $p = < .01$, which again agrees with the first hypothesis that positive variables would relate to one another. In the control group, assistance seeking and problem solving were also positively correlated, $r = .60$. $n = 81$, $p = < .01$, also supporting the first hypothesis.

Correlational analyses also yielded several unexpected results. A significant positive correlation was observed between anxiety and self-esteem in the experimental

group, $r = .58$, $n = 169$, $p = < .01$, demonstrating that as anxiety increased, self-esteem increased. Anxiety was also significantly and positively correlated with assistance seeking, $r = .22$, $n = 169$, $p = .01$, which also does not align with the first hypothesis. Further results indicated that behavioural avoidance and cognitive avoidance were negatively correlated, $r = -.57$, $n = 162$, $p = < .01$, which was not expected as negative coping strategies would be expected to positively relate to each other. In the control group, behavioural avoidance was positively correlated with problem solving, $r = .29$, $n = 84$, $p = .01$. As seen in the experimental group, anxiety and self-esteem were positively and significantly correlated in the control group, $r = .32$, $n = 85$, $p = < .01$, again inconsistent with the first hypothesis. Lastly in the control group, cognitive avoidance was negatively correlated with behavioural avoidance, $r = -.45$, $n = 84$, $p = < .01$.

Table 3. *Intercorrelations for Child scores on anxiety, self-esteem, pro-social behaviour, and coping subscales at pretest in experimental (n = 169) and control (n = 85) groups*

Measure	α	1	2	3	4	5	6	7
α	--	.93	.68	.66	.42	.86	.84	.84
1. ANXIETY	.93	--	.32**	.16	.14	.04	-.10	.14
2. SELF-ESTEEM	.62	.58**	--	-.15	-.06	-.09	.02	.09
3. PROSOCIAL	.66	.16	-.02	--	.14	.09	-.02	.16
4. ASSISTANCE SEEKING	.38	.22**	.03	.23**	--	.60**	-.02	.17

5. PROBLEM SOLVING	.84	.04	-.05	.18*	.55**	--	-.03	.29*
6. COGNITIVE AVOIDANCE	.84	.01	.11	-.01	.02	.08	--	-.46**
7. BEHAVIOURAL AVOIDANCE	.82	-.12	-.06	.06	-.02	.07	.57**	--

Note: Lower diagonal comprises experimental group; upper diagonal comprises control group.
Note: ANXIETY = Revised Child Anxiety and Depression Scale Total Anxiety Scale, SELF-ESTEEM = Self-Esteem Inventory Global Self-Esteem Scale, PROSOCIAL = Strengths and Difficulties Questionnaire Pro-Social Behaviour Scale, ASSISTANCE SEEKING = Coping Scale for Children and Youth Assistance Seeking Scale, PROBLEM SOLVING = Coping Scale for Children and Youth, Problem Solving Scale, COGNITIVE AVOIDANCE = Coping Scale for Children and Youth Cognitive Avoidance Scale, BEHAVIOURAL AVOIDANCE = Coping Scale for Children and Youth Behavioural Avoidance Scale
Note: Degrees of freedom vary between measures as some participants omitted an item (or a number of items on a measure) when responding.
**p<.05, **p<.01*

Posttest analyses also yielded mixed results. As expected in the experimental group, anxiety was positively related to behavioural avoidance, $r = .50$, $n = 154$, $p = < .01$, Prosocial behaviours and assistance seeking continued to be significantly and positively correlated, $r = .31$, $n = 154$, $p = < .01$, as were assistance seeking and problem solving, $r = .62$, $n = 155$, $p = < .01$, supporting the first hypothesis. In the control group at posttest, problem solving and assistance seeking continued to be positively correlated, $r = .43$, $n = 82$, $p = < .01$, supporting hypotheses. Problem solving was negatively related to behavioural avoidance, $r = .30$, $n = 82$, $p = .01$, suggesting that problem solving decreases as behavioural avoidance increases. In the control group, behavioural avoidance was also positively related to anxiety, $r = .29$, $n = 82$, $p = .01$.

Unexpectedly anxiety and self-esteem were positively correlated, $r = .16$, $n = 163$, $p = .04$ in the experimental group. Cognitive avoidance scores were significantly and positively correlated with self-esteem, $r = .48$, $n = 153$, $p = < .01$, assistance seeking, $r =$

.26, n = 155, p = < .01, and problem solving r = .64, n = 156, p = < .01 in the experimental group, all of which are inconsistent with the first hypothesis. In the control group, problem solving was positively related to cognitive avoidance, r = .38, n = 82, p = < .01. Similar to the results at pretest, the correlations observed at posttest provide mixed results for the first hypothesis that anxiety would negatively relate to positive protective factors, positively relate to negative coping strategies, and that positive and negative coping variables would relate positively within themselves.

In summation, it appears that certain variable relationships (i.e., relationships between prosocial behaviours, self-esteem, and positive coping strategies; relationships between anxiety and negative coping strategies) supported the first hypothesis, and aligned with previous findings in this area, while others did not (i.e., relationships between anxiety and self-esteem, relationships positive coping strategies and cognitive avoidance). These mixed findings may suggest issues in variable measurement, or could be indicative of respondent biases during data collection. The variable of cognitive avoidance may be of particular interest in the aforementioned correlations, as it is concerned with many of the unexpected findings. Possible implications are discussed.

Table 4. *Intercorrelations for Child scores on anxiety, self-esteem, pro-social behaviour, and coping subscales at posttest for experimental (n = 169) and control (n = 85) groups*

Measure	1	2	3	4	5	6	7
1. ANXIETY	--	.05	.06	.02	.15	-.01	.29**
2. SELF-ESTEEM	.16*	--	-.00	.10	.06	.21	-.15

3. PROSOCIAL	.10	-.14	--	.18	.14	.23*	.14
4. ASSISTANCE SEEKING	-.07	.03	.31**	--	.43**	.09	-.11
5. PROBLEM SOLVING	-.03	.16	.05	.62**	--	.38**	-.30**
6. COGNITIVE AVOIDANCE	.09	.48**	-.04	.27**	.64**	--	-.09
7. BEHAVIOURAL AVOIDANCE	.50**	-.02	-.05	.10	-.13	-.09	--

Note: Lower diagonal comprises the experimental group; upper diagonal comprises control group.
Note: ANXIETY = Revised Child Anxiety and Depression Scale Total Anxiety Scale, SELF-ESTEEM = Self-Esteem Inventory Global Self-Esteem Scale, PROSOCIAL = Strengths and Difficulties Questionnaire Pro-Social Behaviour Scale, ASSISTANCE SEEKING = Coping Scale for Children and Youth Assistance Seeking Scale, PROBLEM SOLVING = Coping Scale for Children and Youth, Problem Solving Scale, COGNITIVE AVOIDANCE = Coping Scale for Children and Youth Cognitive Avoidance Scale, BEHAVIOURAL AVOIDANCE = Coping Scale for Children and Youth Behavioural Avoidance Scale
Note: Degrees of freedom vary between measures as some participants omitted an item (or a number of items on a measure) when responding.
**p<.05, **p<.01*

Treatment Effects

To address the second research hypothesis that decreased anxiety and increased protective factors in the form of positive self-esteem, positive coping skills, and prosocial behaviours would be observed in the experimental group but not in the control group, a 2 (group) x 2 (time) repeated measures ANOVA was conducted for each variable of interest (with group as the between subjects factor and time as the within subjects factor). Similar to the one-way ANOVAS used in the preliminary analyses, repeated measures ANOVAS were selected to better control for Type I error rates due to the number of comparisons (Howell, 2002). These analyses compared child outcomes between experimental and control groups at both pretest and posttest. Means and standard

deviations of these results are presented below. See Table 5. With respect to child anxiety scores, tests of time effects showed that participants in both experimental ($F(1, 168) = 8.91$, $p = < .01$, $np2 = .050$) and control groups ($F(1, 84) = 6.28$, $p = .01$, $np2 = .070$) demonstrated significant decreases in anxiety at posttest. Tests between treatment conditions showed that pre-to-post treatment decreases in anxiety were not significantly different between the experimental and control groups, $F(1, 252) = .35$, $p = .55$, $\eta p2 = .001$.

Table 5. *Treatment effects comparing child outcomes in anxiety, self-esteem, pro-social behaviour, and coping scales from pretest to posttest in experimental (n=169) and control (n=85) groups*

	Experimental		Control	
	M(SD)	M(SD)	M(SD)	M(SD)
Measure	Pretest	Posttest	Pretest	Posttest
1. ANXIETY	26.08(17.18)	23.01(18.19)**	25.40(16.28)	21.17(17.35)**
2. SELF-ESTEEM	1.42(1.60)	2.50(2.10)**	1.51(1.51)	2.48(1.90)**
3. PROSOCIAL	8.42(1.81)	8.05(2.13)	7.78(1.89)	7.99(1.66)
4. ASSISTANCE SEEKING	5.72(2.63)	6.96(3.27)**	6.00(2.60)	6.75(2.87)**
5. PROBLEM SOLVING	10.28(6.09)	12.28(9.54)**	10.55(6.10)	11.85(5.93)**
6. COGNITIVE AVOIDANCE	16.45(8.85)	15.69(11.29)	17.63(8.09)	17.41(8.84)
7. BEHAVIOURAL AVOIDANCE	8.12(5.58)	12.65(4.47)**	7.00(5.34)	12.14(4.96)**

Note: ANXIETY = Revised Child Anxiety and Depression Scale Total Anxiety Scale, SELF-ESTEEM = Self-Esteem Inventory Global Self-Esteem Scale, PROSOCIAL = Strengths and Difficulties Questionnaire

*Pro-Social Behaviour Scale, ASSISTANCE SEEKING = Coping Scale for Children and Youth Assistance Seeking Scale, PROBLEM SOLVING = Coping Scale for Children and Youth, Problem Solving Scale, COGNITIVE AVOIDANCE = Coping Scale for Children and Youth Cognitive Avoidance Scale, BEHAVIOURAL AVOIDANCE = Coping Scale for Children and Youth Behavioural Avoidance Scale. *p<.05, **p<.01, these denote significant differences between pre and post testing within groups.*

Next, self-esteem was assessed by using the global self-esteem scale of the SEI-19. Tests of time effects showed that self-esteem increased in both the experimental ($F(1, 162) = 32.91$, $p = < .01$, $np2 = .169$) and control groups ($F(1, 82) = 15.69$, $p = < .01$, $np2 = .161$) after the administration of the FFL program. However, in contrast with our predictions, the increases in self-esteem were not significantly different between experimental and control groups, $F(1, 244) = .05$, $p = .82$, $\eta p2 = < .001$. In terms of child scores on the prosocial scale of the SDQ, tests of time effects showed that scores did not significantly differ from pretest to posttest in either the experimental ($F(1, 165) = 4.05$, $p = .05$, $np2 = .024$) or control ($F(1, 81) = 1.16$, $p = .28$, $np2 = .014$) groups . Tests of treatment effects showed that there were no significant differences in prosocial scale scores between the experimental and control group, $F(1, 246) = 2.66$, $p = .10$, $\eta p2 = .011$.

Lastly, positive and negative coping scales of the CSCY were assessed. The positive scales of this measure include the assistance seeking and problem solving scales, while the negative scales are comprised of the cognitive avoidance and behavioural avoidance scales. Results for the assistance seeking scale of CSCY showed that increases in assistance seeking were present in both the experimental ($F(1, 147) = 17.26$, $p = < .01$, $np2 = .105$) and control groups ($F(1, 78) = 4.70$, $p = .03$, $np2 = .057$) at posttest; however, this increase was not significantly different between the experimental and control groups $F(1, 225) = .11$, $p = .92$, $\eta p2 = <.01$. In terms of the problem solving scale, analyses showed that from pretest to posttest, participants in both the experimental ($F(1, 150) = 5.86$, $p = .02$, $np2 = .038$) and control groups ($F(1, 81) = 3.56$, $p = .06$, $np2 = .042$)

demonstrated significant increases in problem solving, while tests of treatment effects showed that these increases were not significantly different between the experimental and control groups, $F(1, 231) = .01$, $p = .92$, $\eta p2 = <.01$. For the cognitive avoidance scale, tests of time effects showed that child score decreases did not significantly change from pretest to posttest in either the experimental ($F(1, 149) = .64$, $p = .42$, $np2 = .004$) or control group ($F(1, 81) = .03$, $p = .86$, $np2 = < .001$). Changes were also not significantly different between the experimental and control groups, $F(1, 230) = 1.91$, p = .17, $\eta p2 = .008$. For the behavioural avoidance scale, tests of time effects showed that scores significantly increased from pretest to posttest in both experimental ($F(1, 148) = 73.98$, $p = < .01$, $np2 = .333$) and control groups ($F(1, 81) = 42.53$, $p = < .01$, $np2 = .344$); however, they did not significantly differ between experimental and control groups, $F(1, 229) = 2.45$, $p = .12$, $\eta p2 = .011$. These increases in behavioural avoidance scores were unexpected and are further examined in the discussion.

Because none of the aforementioned analyses yielded significant differences between experimental and control groups in variable outcomes between pretest and posttest, additional follow up testing was not conducted.

Parent Anxiety and Child Treatment Outcomes

To address the last research question regarding a possible influence of parent anxiety on child treatment outcomes, regression analyses were conducted in SPSS. Only experimental group data were included in analyses as per the a priori research questions. Regression analyses were performed according to Baron and Kenny's (1986) regression model, wherein a moderator variable influences an observed relationship between an

independent variable and dependent variable (i.e., relationship strength or direction). In a hierarchical regression analysis of children's posttest anxiety scores, their pretest anxiety scores and their parent's anxiety scores were entered in the first block and an interaction term for these two independent variables were entered in the second block of analysis. The interaction term was the product of the two original terms (child pretest anxiety x parent pretest anxiety) after each had been centered. Child anxiety scores at posttest were entered as the dependent variable. Only data of experimental child participants who completed both pre and post testing, and the parents of those children, were included in these analyses.

Analysis revealed that child anxiety at pretest, $\beta = .65$, $t(87) = 7.86$, $p = .00$, accounted for a significant proportion of variance in child anxiety outcomes scores, but parent anxiety, $\beta = .11$, $t(87) = 1.28$, $p = .21$, did not. These statistics show that only child anxiety at pretest, $R^2_{\text{Change}} = .42$, $F_{\text{Change}}(1,86) = 69.91$, $p = .00$, not parent anxiety at pretest, $R^2_{\text{Change}} = .01$, $F_{\text{Change}}(1, 85) = 1.63$, $p = .21$, is significantly related to child anxiety scores at post treatment. Further to this, the moderating influence of the child anxiety x parent anxiety interaction term was evaluated, $\beta = -.06$, $t(87) = -.57$, $p = .57$. Analyses showed the child anxiety at pretest x parent anxiety at pretest interaction variable was not a significant moderator of child anxiety outcome scores after completing the FFL program, $R^2_{\text{Change}} = .00$, $F_{\text{Change}}(1,84) = .32$, $p = .57$. In combination, child anxiety at pretest, parent anxiety at pretest, and the interaction between child anxiety and parent anxiety account for 43% of the variation in child anxiety scores at posttest, $R^2 = .43$. In child anxiety post treatment scores, child anxiety scores at pretest alone accounted for 42% of the variation in scores, $R^2 = .42$. Parent anxiety accounted for 0.1%, $R^2_{Change} =$

.01, of this variance, and the interaction variable between child and parent anxiety accounted for .00%, $R^2_{\text{Change}} = .00$, of the total variance. Table 6 displays the findings from these analyses, which discredit the third hypothesis and suggest that parent anxiety did not have an effect on child treatment outcomes.

Table 6. *Hierarchical Regression Analyses of the Moderator Variable of Parental Anxiety Scores on the Dependent Variable of Child Anxiety Scores at Posttest*

Predictor	*B*	*β*	*T*	R^2	R^2_{Change}	F_{Change}	*p*
Child anxiety at pretest	.69	.65	7.87	.42	.42	61.91	.00**
Parent anxiety at pretest	1.09	.11	1.28	.43	.01	1.63	.21
Child anxiety at pretest x Parent anxiety at pretest	-.05	-.06	-.57	.43	.00	.32	.57

**=p<.05, **=p<.01*

Discussion

Findings from the present study hold possible implications concerning the effectiveness of the FRIENDS for Life (FFL) program within the Newfoundland and Labrador English School District while contributing to the growing body of research surrounding this program. The present study's design was guided by the previous work of Stopa et al. (2011) by considering child anxiety, child resiliency, and parent anxiety, but in a more generalized population sample. An additional aim of the present study was to produce reliable and valid research in a school-based setting, while addressing some

weaknesses of previous work in school-based settings, as per the meta-analysis conducted by Maggin and Johnson (2014).

Aims of the Present Study

The present study was the first program evaluation conducted to assess the effectiveness of the FRIENDS for Life program in elementary schools across the Newfoundland and Labrador English School District. Through the utilization of a generalized population sample and control groups, the improved methodology of this project allowed researchers to 1) examine the correlations of construct variables to see if they were operating in a manner consistent with theory. With those analyses in place, the present study 2) assessed the program's effectiveness in reducing child anxiety and enhancing child resiliency (positive self-esteem and coping skills); 3) assessed for any changes between pretreatment and post treatment testing between the experimental and control groups; and 4) tested for the possible influence of parent anxiety on the child anxiety and child treatment outcome relationship.

Variable and Treatment Outcomes

As previously outlined, correlation analyses assessing variable relationships between anxiety, self-esteem, prosocial skills, and positive and negative coping strategies revealed mixed findings. Some of the observed correlations fit with previous work within this field, while others did not. At the start of the program, it was noted that in both experimental and control groups, positive factors such as self-esteem, prosocial behaviours, problem solving, and assistance seeking were positively related, agreeing with previous literature (Dunmont & Provost, 1999; Thorne et al., 2013; Ciarrochi et al.,

2007). Unexpected correlations were also noted at pretest, such as a positive correlation between anxiety and both self-esteem and assistance seeking, suggesting that in this sample higher levels of anxiety were associated with higher levels of self-esteem. Cognitive and behavioural avoidance were negatively correlated which would also not be predicted given that theory would predict these two forms of avoidance being positively related to one another. Further to this, behaviour avoidance was positively related with problem solving, suggesting that the more behavioral avoidance one engages in, the more likely they are to problem solve. None of these relationships were expected based on previous literature (Brodzinksy et al., 1992).

Mixed results persisted at posttest. As expected, anxiety was positively related to behavioural avoidance. Prosocial behaviours and assistance seeking continued to be significantly and positively correlated, as were assistance seeking and problem solving, supporting the first hypothesis. Also in the control group at posttest, problem solving and assistance seeking continued to be positively correlated, supporting hypotheses. Problem solving was negatively related to behavioural avoidance, suggesting that problem solving decreases as behavioural avoidance increases. In the control group, behavioural avoidance was also positively related to anxiety, agreeing with the first hypothesis.

Unexpected findings at posttest included the positive correlation between anxiety and self-esteem. Cognitive avoidance scores were significantly and positively correlated with self-esteem, assistance seeking, and problem solving in the experimental group, all of which are inconsistent with the first hypothesis, and do not coincide with problem solving strategies emphasized in the FFL program (Barrett, 2004). In the control group,

problem solving was positively related to cognitive avoidance, which also does not align with hypotheses (Weems, 2007).

Overall, the positive constructs of self-esteem, prosocial behaviours, assistance seeking, and problem solving were related in the expected ways at both pre and post testing. This information may suggest that the FFL program contributes to the maintenance of these positive resiliency factors in its participants, as program goals align with the development and maintenance of these resiliency factors (Barrett, 2004). Positive relationships between anxiety and behavioural avoidance were also observed, which may also support the hypothesis that FFL encourages learning about anxiety and its relation to negative coping patterns.

In terms of the unexpected correlations, some of the relationships between anxiety, self-esteem, and the negative coping patterns presented in directions opposite to predictions and may be explained by different factors. Firstly, it is possible that the positive relationship between anxiety and self-esteem could be explained by small degrees of anxiety motivating students to work harder in various aspects of their lives, and feel better about their accomplishments. The positive relationships between behavioural and cognitive avoidance with self-esteem, assistance seeking, and problem solving, may have something to do with small amount of avoidance (i.e. putting a problem out of one's mind for a little while or exiting a stressful situation to calm down), helping students to normally function until they feel ready to deal with a certain issue. These explanations might be plausible in the present sample given that it was a non-identified sample of normally functioning students who exhibited lower levels of anxiety than what would typically be observed in a clinical sample. In addition to these possible

explanations, it is also possible that correlation results were influenced by respondent biases that are present in self-reported data, or that significant relationships were due to the high number of correlations conducted.

With respect to treatment gains in the experimental group, positive pre-post gains were observed providing support for the effectiveness of the FFL program in reducing anxiety and increasing resiliency when applied in a general classroom setting. From pre to post testing, participants in the experimental group demonstrated statistically significant decreases in anxiety and cognitive avoidance, and statistically significant increases in self-esteem, assistance seeking, and problem-solving behaviours. As such, reductions in anxiety and negative coping patterns, as well as increases in positive resiliency factors, were present, consistent with hypotheses and previous evaluations of the FFL program (Brownlee et al., 2013; Neil & Christensen, 2007; Stopa et al., 2011).

In terms of the main hypothesis, the program's effectiveness in reducing child anxiety and increasing child resiliency in the experimental group only, results were not significant. Results demonstrated that while child anxiety decreased and some of the protective factors were strengthened after the course of the FFL program (namely the positive coping strategies), the positive changes were observed in both the experimental and control groups. While this decrease in anxiety agrees with program aims (Barrett, 2004), these data do not align with the research hypothesis that changes in anxiety and coping would only be observed in the experimental group.

What is most important to note, however, is the fact that the majority of control participants were receiving a separate preventative mental health program during the time

of data collection, specifically, the Roots of Empathy (ROE) program, which may have influenced their responses at testing periods. As such, the control group in the present study was an active control group, meaning that instead of comparing the FFL program to a no-treatment control group (as was the initial intent of this study), it was inadvertently being compared to another treatment group. With this treatment-treatment comparison, it might have been more difficult for the FFL program to show significant effectiveness relative to a control group, over (what should have been) a true inactive control group, with no treatment present. Nonetheless, the inclusion of the control group in this study provided important information showing that changes in the experimental group were also seen in control participants, suggesting that FRIENDS for Life program is providing mental health support in a similar way as other mental health programs that students are exposed to within their school environments.

As previously described, the FFL program was not an ineffective intervention, as FFL participants did demonstrate treatment gains consistent with what previous studies on this program have found. Further to this, when FFL was (unintentionally) compared with another intervention, outcomes were comparable. The literature in program effectiveness discerns different levels of empirical support needed to determine a program's effectiveness when comparing an intervention to a control group, versus comparing it to another intervention program. For example, Chambless and Ollendick (2001) state that when comparing a treatment to a control group, effects must be demonstrated via two experiments from different investigators. When comparing two different treatments, effects must be demonstrated via at least two between-subject designs with ample sample sizes. As such, it is more challenging to compare two

treatments, and assess a greater effectiveness of one treatment over the other. As demonstrated in the present study, the ROE program may have produced similar effects of the FFL program, creating a higher bar for the FFL program to show effectiveness. Impacts of the active control groups are further discussed in proceeding sections.

Positive developments were most significantly noted in the self-esteem and positive coping scales. The self-esteem, assistance seeking, and problem solving increased, while a decrease in cognitive avoidance was also observed at the end of the program. Again, these changes in coping patterns were demonstrated in both experimental and control groups. Most interesting perhaps were the changes noticed in the behavioural avoidance scales, which increased over the course of the study in both experimental and control groups. Again these results do not coincide with prior hypotheses, as it would have been expected that behavioural avoidance, a negative coping strategy, would have decreased over the course of programming (Barrett et al. 2005; Barrett et al., 2003; Legerstee et al., 2010; Lowry-Webster et al., 2001). In regards to the prosocial behaviour scale, it did not significantly change in child participants from pretest to posttest, or between groups.

In terms of possible clinical significance of findings, clinical cut off scores of the RCADS scale were used to assess for levels of anxiety in child participants before and after FFL administration. Before the FFL program, children in both groups were experiencing mild to moderate levels of anxiety (not reaching clinical levels of anxiety). After FFL administration, both groups decreased in their anxiety levels; however, they still fell within the mild to moderate range. Analyses were also conducted to see if children who fell within the “high anxiety” range differed in their experiences with FFL

than children who fell in the mild to moderate range at pretest. No differences we found between these groups as they both decreased in anxiety to similar degrees; however, this is not unexpected as FFL is meant to be a universal prevention program.

Parent Anxiety and Child Treatment Outcomes

Lastly, the present study aimed to examine whether parental anxiety might influence child treatment outcomes in the FRIENDS for Life program. Results from the previously described regression analysis did not support the hypothesis that parent anxiety influences child treatment outcomes, as parent anxiety was not found to be a significant predictor of child anxiety levels at post treatment testing. Further to this, the interaction variable created between child anxiety scores at pretest and parent anxiety scores showed no significant predictive ability in child anxiety at posttest. Researchers hypothesize that while parent anxiety has been shown to influence child anxiety in previous studies (Blossom et al., 2013; MacKenzie, et al., 2013), issues in either the present study's measurement of parent anxiety, recruitment of parent participants, or lack of parent communication throughout program administration and study implementation, or a combination of all three suggested factors, may have contributed to lack of significant findings.

Unexpected Research Findings

The main goal of the present study was to assess the effectiveness of the FFL program in helping students reduce their anxiety levels while concurrently teaching them effective problem solving and relationship building strategies to positively influence their development of resiliency. Results were unexpected in that students from both the

experimental and control groups showed decreases in anxiety and increases in certain aspects of resiliency, yet decreases in others. To this end, the present results suggest that the FRIENDS for Life program may be working to reduce anxiety and enhance resiliency in a manner similar to other programs or influences students are exposed to during this age period in elementary school. These mixed findings may be the result of a variety of factors working to influence each other, with some of those factors being unrelated to the study or out of the control of researchers during data collection periods.

The present study also represents an example of the challenges in conducting research in a school-based setting. Specifically, this study illustrated the challenges inherent in evaluating programs conducted by the schools, rather than by the researchers, given that alternative programming can be running simultaneously with programming being studied by the researchers. This was the case with the Roots of Empathy program being run simultaneously with the FFL program. While program outcome measurement was scheduled around the start and end of the FFL programs, the (inadvertent) measurement of the ROE classes was not monitored to match up with time points of that program. As such, observed effects in the FFL group are of greater validity and provide more sound evidence for the potential effectiveness of the FFL program. Literature on clinical research supports this possibility, stating that although taking measurements before and after an intervention do not suggest that the intervention caused the change, it provides support to the validity of observed results (Kazdin & Nock, 2003). To this end, effects observed in the ROE groups are a possible result of the program, however the measurement is not nearly as reliable. The ROE program is further discussed below.

These results raise certain questions and concerns. Firstly, why was it that there were no significant outcome differences between the experimental and the control groups? Secondly, might there be a possible positive relationship between problem solving and a certain degree of cognitive or behavioural avoidance? It is plausible that various challenges in field research, especially those within the school setting, influenced child anxiety and child resiliency in concurrence with the offering of FFL, contributing to the lack of significant findings. It is also possible the FFL does not work to effectively reduce anxiety and enhance resiliency through classroom based group programming, or that issues in program implementation played a role. These possibilities are reviewed below.

The Roots of Empathy Program

Why was it that there were no significant outcome differences between the experimental and the control groups? The inadvertent presence of another mental health program may have played a role. Almost all students who participated in the present study had already received or were receiving additional programming during the time of data collection, which likely influenced present outcomes, and transformed a treatment-no treatment comparison design, to a treatment-treatment comparison. As such, it became much harder for the FFL program to achieve statistical significance in terms of program outcome differences, as it was inadvertently being compared to another program. The Roots of Empathy Program (ROE) was introduced into the English School District of Newfoundland and Labrador years before the FRIENDS for Life program, and has been offered to students for approximately the last decade (Newfoundland and Labrador English School District, 2015).

Roots of Empathy is a school-based program that focuses on the development of empathy amongst participating students. Through raising levels of empathy, this program aims to increase respectful caring relationships, and decrease bullying and aggression in school-aged children (Roots of Empathy.org, 2015). Program evaluation research has been conducted on the ROE program, with results showing that students who participated in ROE showed increased levels of empathetic/prosocial qualities, and reduced levels of aggression (Schonert-Reichl, Smith, Zaidman-Zait, & Hertzman, 2012). The implementation of this program for grade four students in the present study may have influenced both experiences with the FFL program a year after receiving ROE, as well as the responses observed in the control groups who received ROE in concurrence with experimental participants who received FFL. Education surrounding empathy and prosocial behaviours may have also worked to 1) decrease anxiety in children and 2) increase prosocial behaviours, similar to the FFL program. This may be the case in that by identifying factors that predict children's social and emotional competence we are better equipped to understand mechanisms and processes that may decrease a child's likelihood to turn to maladaptive cognitions and behaviours (Schonert-Reichl et al., 2012), where anxiety disorders are characterized as part of a maladaptive problem with emotion regulation.

Roots of Empathy is typically offered to grade four students, meaning that while the majority of the present study's control group was comprised of grade four students, the "control group" was in fact receiving additional programming which in effect, eliminated their capacity to be considered a true control group. Further to this, the majority of grade five students who comprised the experimental group had received

Roots of Empathy the year before. This information was obtained through conversations with school administration.

In addition to the presence of the Roots of Empathy program, the current rise in awareness surrounding mental health issues within the Newfoundland English School District and the media within this region is not to be discounted as a possible influence on study results. While FFL certainly highlights childhood anxiety and ways to increase resiliency against adversity for its participants, there are other sources within the school that communicate similar messages to students, whether it be through school-wide assemblies about mental wellness, month long events dedicated to spreading mental health information and supportive environments within the schools, or daily projects, conversations, or videos that students may be exposed to by classroom teachers and guidance counsellors (Newfoundland and Labrador English School District, 2015). While the FFL program contributes to the expanding knowledge of mental health awareness in young students, it is not the only form of mental health education they are receiving.

Negative Coping Patterns and Problem Solving

Might there be a possible positive relationship between problem solving and cognitive or behavioural avoidance? One of the more surprising findings from the present study was the positive relationship between cognitive avoidance, behavioural avoidance, and positive problem solving factors observed in both experimental and control groups at post treatment. Scores for the behavioural avoidance scales also increased in both groups over the course of the program. As discussed in previous sections of this paper, cognitive and behavioural avoidance are categorized as negative coping mechanisms in that they do

not encourage effective methods of addressing problems (Dunmont & Provost, 1999; Thorne et al., 2013). As such, it is expected that the two variables would positively relate to one another, but to negatively relate to both assistance seeking and problem solving coping patterns (Brodzinksy et al., 1992). As previously discussed, the opposite was observed in the present study.

While there is little support for the concept of a positive influence of cognitive or behavioural avoidance within problem solving strategies throughout the literature, a study by Ruchkin, Eisemann, and Hagglof (2000) on adolescent delinquent males (aged 15-18) in Russia concluded that avoidant coping styles need not always be considered to be negative, and purported that frequent avoidant coping should not always be thought of as negative per se. These researchers suggested that avoidant coping might only be negative in situations of severely unfavorable circumstances (such as in a correctional facility) (Ruchkin et al., 2000). Perhaps it is possible that small amounts of behavioural and cognitive avoidance, such as putting the problem out of one's mind until one can effectively deal with it, is conducive to improved problem solving. Perhaps problems that are rooted in anxiety go away if they can be put out a one's mind, or if the individual does not pay attention to certain irrational, anxiety based thoughts. It is also possible that behavioural avoidance holds some effectiveness for this age group if they are learning to avoid or exit potentially problematic situations. These suggested explanations are plausible as this was a non-identified sample that did not have elevated anxiety levels to begin with. This being said, these hypotheses still do not agree with the stated outcomes of the FRIENDS for Life program which provide education surrounding positive and direct methods of problem solving (Barrett, 2004).

It is also possible that issues in survey completion and analysis of the CSCY contributed to the negative coping scale outcomes. In addition to biases issues that lie in all self-reporting measures, the present study did not consider coping responses as a function of the stressor in analysis (Brodzinsky et al., 1992). When participants completed their coping responses, they were given the option to write out a problem they had experienced in the past couple months and then answer the CSCY items as if they were dealing with their listed problem. If students could not think of any problem, they were permitted to leave them blank and respond to items as if they were dealing with a problem in general. It may be beneficial for future studies with this database to consider coping as a function of stressor, in the sense that students with certain types of problems may be responding differently than students who list other types or problems, or who do not list a problem at all.

Program Implementation

Although the FRIENDS for Life Program includes a program manual, program handbooks, and is designed to be administered in a standardized fashion across all participants (Barrett, 2004), this was hard to achieve and monitor for a variety of reasons. Firstly, the relationship that each program administrator held with each group of students varied across schools and classrooms. For example, in schools where a social worker from the Janeway Family Centre administered the program, students might not have felt as comfortable in sharing and learning during sessions as compared to students in a classroom whose program was being taught by the school guidance counsellor whom they see every day. Further to this, while guidance counsellors may have been better equipped to tailor their sessions to the individual needs of each classroom, social workers

might have been less likely to do so, with either possibility contributing to variability in program implementation. This is not to suggest that either circumstance would be detrimental for program participants, but it created challenges in attempting to evenly measure programming across schools, and be assured of program reliability. Because the present researchers are not program developers or administrators, it was not the role of the researchers who visited participating schools to regulate program implementation. Oppositely, this would have biased the validity and reliability of results as the purpose was to assess the effectiveness of FFL in this region as it is currently being implemented. It is also noted that variability was present in the timeline of program administration in each school. As schools attempted to adhere to program timelines as dictated by the FFL manual (Barrett, 2004), holidays, sick days, and other school events caused changes in session times as reported to researchers in all schools.

Each of these issues created challenges in program evaluation, as variability between administrators, schools, classrooms, and program timelines were possible confounds. It is noted that the present study did not assess differences across schools or analyze the treatment integrity data that was collected, and this is something that could be looked at in future studies. It should also be emphasized that the present study served as an effectiveness study rather than an efficacy study. While efficacy studies are conducted on interventions in a highly controlled setting, effectiveness studies are conducted in the real world as the intervention is being implemented. To this end, the aforementioned challenges in program evaluation would be expected in real world data collection.

Classroom Selection

A commonly cited issue in field research is a lack of researcher control over experimental manipulations and study design (Whitley et al., 2012). While many common limitations exist within this type of research, a potentially important contributor to the outcome of this study was the lack of random selection of participating classrooms, and not just in the sense of a lack of random assignment. While study participation was based on obtaining permission from school administration teams and classroom teachers, it raises the question of 1) variability across which classes were selected by school administration for study participation within each school and 2) variability across which classes were selected to receive the FFL program in each school. There exists significant room for subjective selection by school administration as most participating grades consisted of at least two classes. It is possible that classes that were selected to participate in the FRIENDS program at the time of study participation were already different from students in other classes who were not selected to receive FFL at that time. While FFL is targeted towards a specific age group (Barrett, 2004), guidance counsellors in schools with multiple classes in each grade may have selected classes with more specific needs to receive FFL while classes who were deemed "control" groups were considered less in need of intervention programming at that time. Therefore it may have been the case that in some participating schools, students receiving FFL showed decreases in anxiety and increases in certain protective factors due to program implementation, while their corresponding control classes demonstrated similar changes due to maturation effects, or were stronger students in terms of their ability to encourage their own positive developments, regardless of program offerings.

Strengths

Participants of the present study were not required to meet any prerequisite criterion to be invited to participate, except for being a student, in a school, in a grade, and in a classroom, that was singled out as available for study participation by the school's administration team. As FFL is marketed as a universal anxiety prevention program (Barrett, 2004), it made theoretical sense to utilize a sample population that was comprised of a generalized sample of students, which increases the generalizability of the present results. The sample size collected also exceeded initial study design planning, as researchers exceeded their child and parent participant counts by over 100 and 60 participants, respectively. Because this was the first study of its kind in Newfoundland and Labrador, and considering the mixed effects of the program, this work may inspire further research into this program, or other school-based mental health programming, to further benefit students in this region.

By including parent data in the study design, the ability to seek further information relating to the effectiveness and overall familial effects of FFL in Newfoundland and Labrador was made possible. As there exists a lack of information relating to parent variables and the FRIENDS for Life program, researchers were interested to see how parents may or may not play a role in student outcomes. While significant amounts of research have been conducted on the relationship between parent and child anxiety to show the reciprocity of this relationship (MacKenzie et al., 2013; Pereira et al., 2013), it is beneficial to include parents in research that is aimed towards child anxiety reduction. Although parent anxiety did not hold any significant effect on child participants in the present study, further analyses with this database may give way

to other program effects of varying parent variables (or vice versa), which may guide future research and program development.

As previously discussed, there is merit in conducting research on mental health programming within the school system because it 1) allows researchers to study the benefit of these programs taking place in the school environment and 2) permits a more natural observation of program implementation and outcomes (Barrett, 2000). By conducting research within a school setting, findings contribute to the understanding of how these programs are being interpreted in real world settings while gathering feedback from the teachers and facilitators who deal with students and curriculums on a daily basis. This research is especially important in today's classroom setting where teachers are expected to deal with an ever changing and diverse group of students in the typical classroom setting (Schonert-Reich et al., 2012). If researchers are able to determine effective programming, or effective aspects of programming, more efficient use of time and money throughout the school system may be encouraged, and positive changes may be effected. Finally, by conducting research within the school system, the ecological validity of present results was also increased, and heightens researchers' ability to relate findings in real world terms.

The lack of significant findings of the present study may also serve to encourage programming changes, or provide evidence to how mental health programming overall is operating in a school setting. The present study is not the first of its kind to discover mixed results of FFL effectiveness in a Canadian, school-based population. In 2011 a group of researchers assessed the FRIENDS for Life program's effectiveness with a sample of Canadian aboriginal students, and found that decreases in anxiety were not

statistically significant. Further to this, decreases in anxiety were also reported across both experimental and control groups (Miller et al., 2011). In another 2009 FFL study conducted with Canadian students, it was again found that decreases in anxiety were reported by both experimental and control participants (Rose, Miller, & Martinez, 2009). Researchers suggest that mixed results may be due to combinations of issues in conducting research in the school setting and variability in programming sessions across schools (Miller et al., 2011; Rose et al., 2009), as is suggested in the present study. As multiple studies have presented mixed results in FFL program effectiveness as it currently exists in Canadian schools, it is suggested that a more controlled (i.e. randomized control trial) study be conducted to provide a more empirically sound test of the effectiveness of the FFL program.

Limitations

As with much research conducted on the FRIENDS for Life program and in school settings (Maggin & Johnson, 2014), limitations exist in the present study that may influence the generalizability of findings. Firstly, due to the geographical demographics of the study's location, the majority of participants were Caucasian, which hinders the ability to generalize findings to students of other ethnicities. The Caucasian majority may also hold implications for the small numbers of students of other ethnicities in terms of their comprehension of 1) study instructions, 2) study questionnaires, and 3) the administration of the FRIENDS for Life program in their schools. Many English as a second language students in this region enter primary/elementary school with little knowledge of the English language, which may act as a barrier in this type of research.

Another issue, which is often a function field research (Whitley et al., 2012), was the researchers' inability to randomly select schools and classrooms for 1) study participation and 2) their assignment to the treatment or control condition. Because the FRIENDS for Life program is not mandatory curriculum within the Newfoundland and Labrador English School District, only certain schools in the province were administering the program during the time of this research project and thus only those schools could be approached for study participation. Schools who train their guidance counsellors to administer FRIENDS for Life also do not receive any additional funding from the provincial government to do so, so it is offered by schools on an individual basis. Although researchers availed of the assistance of the Janeway Family Centre for study recruitment, only approximately 60% of schools approached for participation consented to participate. In terms of group assignment, schools had predetermined which grade (grade four or grade five) and which classrooms in each grade (in some schools, all classes within a grade, and in other schools, only certain classes) would be receiving FRIENDS for Life programming. In numerous schools, a grade level was comprised of two or three classes, and program administrators would plan to administer the program to one class at a time. Therefore, while the present study availed of control groups, in accordance with the commentary from Maggin and Johnson (2014), the use of waitlist control groups was present, such that in certain schools, a class who acted as a control group during the time of our experiment would be receiving FRIENDS for Life later in the school year. However, as later determined, the previously discussed issue of the presence of the Roots of Empathy program also created limitations in the control group,

in that most control participants were receiving the ROE program at the time of data collection and thus could not truly be considered “wait list controls”.

The use of self-report measures in the present study, and earlier studies with the FFL program, also poses limitations as the exclusive use of self-report measures is often questioned given that respondents can report upon their attitudes and behaviors from only their own perspective; neglecting to obtain others’ perspectives on the participant’s behaviors and attitudes (e.g., teachers, parents) and to use other methodologies in data collection (e.g., behavioral observation) can limit the interpretability of the observed data (Whitley et al., 2012). Self-serving biases or the possibility for a child or parent to have misunderstood what is being asked of them by the questionnaire are both possible issues in the present study, although researchers were present to answer any questions during child survey completion to mitigate this issue. It is also possible that both child and parent participants engaged in acquiescence bias, demand characteristics, extreme responding, and/or social desirability biases.

When considering the correlational analyses it should be noted that correlation does not infer causation. When referring to results regarding how each variable of interest related to one another at pretreatment and post treatment testing, it cannot be assumed that any change in direction or strength of the relationships between variables was caused by any of the variables themselves, or even the FFL program. The possibility for confounding variables to have interfered with results is always a possibility, thus reminding researchers of the benefits of utilizing more varied methods of data collection in future projects in this area. For example, future work could involve behavioural measurements of anxiety and resiliency factors at pre and post testing, or perhaps data

collection sessions could be built into FFL sessions such that anxiety and resiliency would be measured more frequently throughout program implementation to increase reliability of measurement. In relation to the correlation analyses, the low reliability estimates of the self-esteem, prosocial behaviour, and assistance seeking scales in the present study attenuate confidence in results related to those scales.

Variability across data collection environments may have also influenced study outcomes. In an ideal scenario, researchers were able to take participants out of class and bring them to the school cafeteria, library, or gymnasium to provide a quiet setting for survey completion where students could be more easily supervised by researchers and be spaced apart from one another. In participating schools where the extra space was not available, participants completed their surveys in their classrooms where students were grouped closer together around desks or small tables. While participants were instructed to answer their own questions and remain quiet during survey completion, those who completed their surveys in their classrooms may have biased each other responses due to whispering about questions, answering questions in the same manner as their friends, etc.

It cannot be assumed that any changes observed in participants before and after the administration of the FRIENDS for Life program can be solely attributed to the program. Maturation and other environmental effects may have also contributed to developments in emotional intelligence and coping mechanisms as children move through developmental stages. As children grow, their environments, relationships with peers, family members, classroom environments and cognitive development will all contribute to emotional developments (Cefai & Camilleri, 2015). As the FFL program (and data collection of control groups) occurred over a three to four month period in each

school, other maturation influences that occur in this age group may have contributed to changes in posttest data. It is also noted that the majority of control participants were in grade four, while the majority of experimental participants were in grade five. This age difference may also have impacted results.

A final limitation to be considered lies within parent participants. Firstly, there may have been preexisting differences between parents (and families/children) who consented for their child to participate in the study and those who did not. The majority of parents who agreed to child participation also agreed to the parent web survey. This limitation is twofold in the sense that the present study may have missed data from 1) children of parents who did not consent to their child's participation and 2) the parents of these children who gave up the possibility to participate in the study themselves by not consenting for their child's participation. Another possible issue with parent data collection was the method in which this was done. Parents were given the option to participate via the consent forms, while child participants received a short presentation in class. Further to this, parent's surveys were administered via a website, which implies a host of limitations in regards to their survey completion. Commonly cited issues with web surveys include a lack of researcher presence during data collection, problems in participants responding such as differences between those who responded and those who did not, issues in sample representativeness (those who have computer access versus those who do not, although telephone surveys were also utilized in the present study) (Whitley et al., 2012). In terms of actual responses, there also lies the possibility for issues such as self-selection, non-serious responses and dropouts (Matsuo, McIntyre, Tomazic, & Katz, 2015, Whitley et al., 2012), to have biased present results. There also

exists the possibility for differences to be present between parents who completed both pre- and post-testing, and those who completed only pre-testing.

Implications and Future Directions

Present results may suggest practical implications regarding the current effectiveness of the FRIENDS for Life program in Newfoundland and Labrador. It is highlighted that while FFL may be contributing positive influences in child anxiety and resiliency development, it may not be working as intended considering the variability of present results. Due to the lack of differences between experimental and (active) control groups, the FFL program might be working in similar ways as other mental health resources present in the school system, and it may be beneficial to consider how these programs and other resources can work together to develop the most effective mental health and resiliency education for elementary school students. That being said, it is again noted that although changes were observed in the active control group (of whom many participants were receiving the ROE program), assessment points were not matched up with the ROE program as they were with the start and end of FFL programs. To this end, researchers' cannot be sure of any FFL or ROE treatment effects, but it is possible that FFL and ROE may be working in similar ways. If FFL and ROE provide similar benefits, both programs may not be needed in the school system, which could provide financial savings. Future research might, as such, compare and contrast common factors amongst these programs.

While FFL may be contributing to some positive influences of child participants, the lack of significant findings also encourage program administrators to assess current

administration methods and develop pathways for improvement. More specifically, in regards to the current implementation of the FFL program in this region, it appears that steps need to be taken to ensure more stringent administrator training, program adherence, and cohesiveness across schools and classrooms. While it is certainly important for program administrators to connect with the students and target classroom needs, this variability in programming may have contributed to the mixed results. It is also probable that the mixed results are due to a combination of issues in program administration and data collection/responding biases. Lastly, it is also possible that FFL does not work in the classroom setting, or at all. Future analyses with the present database assessing the treatment integrity data may provide detailed information in regards to specific issues in FFL program implementation, as it currently exists. With this information, more detailed suggestions for program improvements may be possible.

Future research regarding FRIENDS for Life in school-based settings would benefit from availing of more varied methods of data collection, and in ensuring a no-treatment control group. The most important issue in the present study was the presence of the Roots of Empathy program in the control groups, and this should be controlled for going forward. While the present study utilized self-report questionnaire packages as a method of data collection, studies that are able to include behavioural observation or more objective forms of data collection may be better able to capture any changes in anxiety and resiliency levels both before and after program implementation in a school setting. In terms of the inclusion of parent participants, it would also be beneficial for future studies to utilize more direct methods of 1) parent participant recruitment and 2) parent data collection. Again, similar issues lie within the use of self-report methods from

both child and parent participants that could certainly be improved upon in proceeding studies. Considering these aforementioned limitations within the present study, future research is required to further examine the effectiveness of this program in Newfoundland schools.

The present study also serves as an excellent example of the issues that arise when conducting research in the field. Issues in participant selection, group assignments, scheduling of data collection, maintaining open communication with all school members involved, while attempting to maintain a empirically sound experimental design proved challenging. While there were many factors out of control of the researchers, it is also important to note that it is through this type of naturalistic field research that more ecologically relevant results can be uncovered. Again, it would be prudent for future research conducted in this field to attempt to mitigate as many of the aforementioned field related issues as possible. Perhaps the most important step moving forward would be to ensure reliability across program administration, and accessing control groups that would not be receiving any additional programming at the time of data collection.

It is also noted that analyses were not conducted to compare children and parents who completed both pre- and post-testing with child and parents who did not complete post-testing. It is possible that FFL and/or control group children and/or parents who completed both pre and post testing measures were more or less anxious, or somehow different from those who did not complete post testing. Future work with this data sample may seek to make these comparisons.

Conclusions

In conclusion, present findings attempted to demonstrate the strengths and weaknesses of the FRIENDS for Life program in schools across Newfoundland and Labrador. Present findings may also provide some information as to how prevention programming in general, including FFL and ROE, is operating in the classroom setting. The potential positive impacts of this program (decreased anxiety and increased resiliency factors) in school environments contributes to the literature related to the salience of providing education and prevention programming surrounding mental health and emotional resiliency for children. Unexpected research findings may suggest a need for program implementation changes, or expose weaknesses/ineffectiveness of the FFL program. Nonetheless, prevention programming is important in reducing anxiety and other mental health issues in both childhood and later life, where issues may magnify or present alongside additional mental health issues (Beesdo et al., 2009; Rodgers & Dunsmuir, 2015). The movement towards increased mental health awareness and mental health prevention programming is an integral component of healthy development for our children.

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Appendix A

Child Assent Form

Title: Program Evaluation of the FRIENDS Anxiety Prevention Program

Researcher(s): Sarah Francis, Ph.D., R.Psych., Associate Professor, Department of Psychology, Memorial University of Newfoundland, (709) 864 4897, sfrancis@mun.ca

You are invited to take part in a research project entitled "Program Evaluation of the FRIENDS Anxiety Prevention Program".

I understand that I am being asked to take part in a study to help people find out more about the FRIENDS program that I am taking part in at my school. I am going to be asked to fill out some questionnaires about how I think and feel. My parents will also be asked to fill out some forms.

I understand that I do not have to take part in the study if I do not want to.

I can ask for help at any time, and I can ask to stop or to take a break at any time. If I am uncomfortable with any of the questions, I can stop. I know I do not have to answer any questions I do not want to answer.

Whatever I write on my questionnaires is private. No one here will use my name to talk about anything that I write or say.

This is not a test. There are no right or wrong answers. I can answer these questions however I think or feel.

If I have questions for anyone, I can ask them now before we begin or at any time I need help.

I understand what I just read, and I agree to take part in this study.

Assent of minor participant:

_____ _____

Signature of minor participant Date

Appendix B

The Revised Child Anxiety and Depression Scale

RCADS

Please put a circle around the word that shows how often each of these things happen to you. There are no right or wrong answers.

1. I worry about things.	Never	Sometimes	Often	Always
2. I feel sad or empty.	Never	Sometimes	Often	Always
3. When I have a problem, I get a funny feeling in my stomach.	Never	Sometimes	Often	Always
4. I worry when I think I have done poorly at something.	Never	Sometimes	Often	Always
5. I would feel afraid of being on my own at home.	Never	Sometimes	Often	Always
6. Nothing is much fun anymore.	Never	Sometimes	Often	Always
7. I feel scared when I have to take a test.	Never	Sometimes	Often	Always
8. I feel worried when I think someone is angry with me.	Never	Sometimes	Often	Always
9. I worry about being away from my parents.	Never	Sometimes	Often	Always

10.	I get bothered by bad or silly thoughts or pictures in my mind.	Never	Sometimes	Often	Always
11.	I have trouble sleeping.	Never	Sometimes	Often	Always
12.	I worry that I will do badly at my school work.	Never	Sometimes	Often	Always
13.	I worry that something awful will happen to someone in my family.	Never	Sometimes	Often	Always
14.	I suddenly feel as if I can't breathe when there is no reason for this.	Never	Sometimes	Often	Always
15.	I have problems with my appetite.	Never	Sometimes	Often	Always
16.	I have to keep checking that I have done things right (like the switch is off, or the door is locked)	Never	Sometimes	Often	Always
17.	I feel scared if I have to sleep on my own.	Never	Sometimes	Often	Always
18.	I have trouble going to school in the mornings because I feel nervous or afraid.	Never	Sometimes	Often	Always
19.	I have no energy for things.	Never	Sometimes	Often	Always
20.	I worry I might look foolish.	Never	Sometimes	Often	Always

21.	I am tired a lot.	Never	Sometimes	Often	Always
22.	I worry that bad things will happen to me.	Never	Sometimes	Often	Always
23.	I can't seem to get bad or silly thoughts out of my head.	Never	Sometimes	Often	Always
24.	When I have a problem, my heart beats really fast.	Never	Sometimes	Often	Always
25.	I cannot think clearly.	Never	Sometimes	Often	Always
26.	I suddenly start to tremble or shake when there is no reason for this.	Never	Sometimes	Often	Always
27.	I worry that something bad will happen to me.	Never	Sometimes	Often	Always
28.	When I have a problem, I feel shaky.	Never	Sometimes	Often	Always
29.	I feel worthless.	Never	Sometimes	Often	Always
30.	I worry about making mistakes.	Never	Sometimes	Often	Always
31.	I have to think of special thoughts (like numbers or words) to stop bad things from happening.	Never	Sometimes	Often	Always
32.	I worry what other people think of me.	Never	Sometimes	Often	Always

33.	I am afraid of being in crowded places (like shopping centers, the movies, buses, busy playgrounds).	Never	Sometimes	Often	Always
34.	All of a sudden, I feel really scared for no reason at all.	Never	Sometimes	Often	Always
35.	I worry about what is going to happen.	Never	Sometimes	Often	Always
36.	I suddenly become dizzy or faint when there is no reason for this.	Never	Sometimes	Often	Always
37.	BLANK				
38.	I feel afraid if I have to talk in front of my class.	Never	Sometimes	Often	Always
39.	My heart suddenly starts to beat too quickly for no reason.	Never	Sometimes	Often	Always
40.	I feel like I don't want to move.	Never	Sometimes	Often	Always
41.	I worry that I will suddenly get a scared feeling when there is nothing to be afraid of.	Never	Sometimes	Often	Always
42.	I have to do some things over and over again (like washing my hands, cleaning or putting things in a certain order).	Never	Sometimes	Often	Always

43.	I feel afraid that I will make a fool of myself in front of people.	Never	Sometimes	Often	Always
44.	I have to do some things in just the right way to stop bad things from happening.	Never	Sometimes	Often	Always
45.	I worry when I go to bed at night.	Never	Sometimes	Often	Always
46.	I would feel scared if I had to stay away from home overnight.	Never	Sometimes	Often	Always
47.	I feel restless	Never	Sometimes	Often	Always

Appendix C

The Coopersmith Self-Esteem Inventory Revised Version

SEI-19

Here are 19 statements about self-esteem. You are to decide which of these statements you agree with about yourself and which you do not agree with. If you think the statement applies to yourself, circle the Y (Yes) to the right of the statement. If you think the statement does not apply to yourself, circle the N (No) to the right of the statement.

1.	I often wish I were someone else.	Y	N
2.	There are lots of things about myself I'd change if I could.	Y	N
3.	I get easily upset at home.	Y	N
4.	I am a lot of fun to be with.	Y	N
5.	I am popular with kids my own age.	Y	N
6.	My parents usually consider my feelings.	Y	N
7.	My parents expect too much of me.	Y	N
8.	It is pretty tough to be me.	Y	N
9.	Things are all mixed up in my life.	y	N
10	Kids usually follow my ideas.	Y	N
.			
11	I have a low opinion of myself.	Y	N

.

12 There are many times when I would like to leave home. Y N

.

13 I often feel upset in school. Y N

.

14 I am not as nice looking as most people. Y N

.

15 If I have something to say I usually say it. Y N

.

16 My parents understand me. Y N

.

17 Most people are better liked than me. Y N

.

18 I usually feel as if my parents are pushing me. Y N

.

19 I often get discouraged in school. Y N

.

Appendix D

The Coping Scale for Children and Youth

CSCY

All Children and teenagers have some problems they find hard to deal with and that upset them or worry them. We are interested in finding out what you do when you try to deal with a hard problem. Think about some problem that has upset you or worried you in the past few months. It could be a problem with someone in your family, a problem with a friend, a school problem, or anything else. Briefly describe what the problem is in the space below.

_____

_____

_____

_____

Listed below are some ways that children and teenagers try to deal with their problems. Please tell us how often each of these statements has been true for you when you tried to deal with the problem you described above.

	Never	Sometimes	Often	Very Often
I asked someone in my family for help with the problem	0	1	2	3

I thought about the problem and tried to figure out what I could do about it	0	1	2	3
I tried not thinking about the problem	0	1	2	3
I stayed away from things that reminded me about the problem	0	1	2	3
I got advice from someone about what I should do	0	1	2	3
I took a chance and tried a new way to solve the problem	0	1	2	3

	I went on with things as if nothing was wrong	0	1	2	3
	I tried not to feel anything inside of me. I wanted to feel numb	0	1	2	3
	I shared my feelings about the problem with another person	0	1	2	3
	I made a plan to solve the problem and then I followed the plan	0	1	2	3
	I pretended the problem wasn't very important to me	0	1	2	3
	I went to sleep so I wouldn't have to think about it	0	1	2	3
	I kept my feelings to myself	0	1	2	3

I went over in my head some of the things I could do about the problem	0	1	2	3
I knew I had lots of feelings about the problem, but I just didn't pay any attention to them	0	1	2	3
When I was upset about the problem, I was mean to someone even though they didn't deserve it	0	1	2	3
I thought about the problem in a new way so that it didn't upset me as much.	0	1	2	3
I tried to get away from the problem for a while by doing other things	0	1	2	3

	I tried not to be with anyone who reminded me of the problem	0	1	2	3
	I learned a new way of dealing with the problem	0	1	2	3
21.	I pretended the problem had nothing to do with me	0	1	2	3
22.	I decided to stay away from people and be by myself	0	1	2	3
23.	I tried to figure out how I felt about the problem	0	1	2	3
24.	I tried to pretend that the problem didn't happen	0	1	2	3
25.	I figured out what had to be done and then I did it	0	1	2	3

26.	I hoped that things would somehow work out so I didn't do anything	0	1	2	3
27.	I tried to pretend that my problem wasn’t real	0	1	2	3
28.	I realized there was nothing I could do. I just waited for it to be over	0	1	2	3
29.	I put the problem out of my mind	0	1	2	3

Appendix E

The Strengths and Difficulties Questionnaire

SDQ

Strengths and Difficulties Questionnaire S

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.....

I try to be nice to other people. I care about their feelings □ □ □

I am restless, I cannot stay still for long □ □ □

I get a lot of headaches, stomach-aches or sickness □ □ □

I usually share with others, for example CD's, games, food □ □ □

I get very angry and often lose my temper □ □ □

I would rather be alone than with people of my age □ □ □

I usually do as I am told □ □ □

I worry a lot □ □ □

I am helpful if someone is hurt, upset or feeling ill □ □ □

I am constantly fidgeting or squirming □ □ □

I have one good friend or more □ □ □

I fight a lot. I can make other people do what I want □ □ □

I am often unhappy, depressed or tearful □ □ □

Other people my age generally like me □ □ □

I am easily distracted, I find it difficult to concentrate □ □ □

I am nervous in new situations. I easily lose confidence □ □ □

I am kind to younger children □ □ □

I am often accused of lying or cheating □ □ □

Other children or young people pick on me or bully me □ □ □

I often offer to help others (parents, teachers, children) □ □ □

I think before I do things □ □ □

I take things that are not mine from home, school or elsewhere □ □ □

I get al.ong better with adults than with people my own age □ □ □

I have many fears, I am easily scared □ □ □

I finish the work I'm doing. My attention is good □ □ □

Your Signature .....

Thank you very much for your help

Appendix F

Child Demographic Information Sheet

1. What grade are you in? (circle one) 4th 5th 6th
2. How old are you?
3. What month were you born?
4. What year were you born?
1. Circle which one you are.
    a. Boy
    b. Girl
5. Who do you live with?
    a. I live mostly or only with my mom.
    b. I live mostly or only with my dad.
    c. I spend about the same time living with my mom and dad but they do not live together
    d. I do not live with my mom or dad, but I live with
    e. I live with my mom and dad together.
6. How many sisters do you have? (write 0 if you do not have any sisters)
7. How many brothers do you have? (write 0 if you do not have brothers)
8. Which of the following is your ethnic group?
    f. White
    g. Black
    h. East Asian (e.g. Chinese, Japanese, Korean)
    i. South Asian (e.g. Indian, Pakistani, Sri Lankan)
    j. Native (e.g. Inuit, Metis)
    k. Mixed
    l. Other

9.What do your parents do (even if they do not work now)?

m.Father's job _____

n.Mother's job _____

Appendix G

Depression Anxiety and Stress Scale

DASS-21

DASS21

Name: *Date:*

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the stateme applied to you *over the past week*. There are no right or wrong answers. Do not spend too much time c any statement.

The rating scale is as follows:

0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me to a considerable degree, or a good part of time
3 Applied to me very much, or most of the time

1	I found it hard to wind down	0	1	2	3
2	I was aware of dryness of my mouth	0	1	2	3
3	I couldn't seem to experience any positive feeling at all	0	1	2	3
4	I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5	I found it difficult to work up the initiative to do things	0	1	2	3
6	I tended to over-react to situations	0	1	2	3
7	I experienced trembling (eg, in the hands)	0	1	2	3
8	I felt that I was using a lot of nervous energy	0	1	2	3
9	I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
10	I felt that I had nothing to look forward to	0	1	2	3

11	I found myself getting agitated	0	1	2	3
12	I found it difficult to relax	0	1	2	3
13	I felt down-hearted and blue	0	1	2	3
14	I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3
15	I felt I was close to panic	0	1	2	3
16	I was unable to become enthusiastic about anything	0	1	2	3
17	I felt I wasn't worth much as a person	0	1	2	3
18	I felt that I was rather touchy	0	1	2	3
19	I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)	0	1	2	3
20	I felt scared without any good reason	0	1	2	3
21	I felt that life was meaningless	0	1	2	3

Appendix H

Parent Demographic Information Sheet

Background Information

1. Your age: _____

2. Your relationship to the child participating in this program:

   a. Mother b. Father c. Other_____

3. Your child's date of birth: Month:_____ Day:_____ Year:_____

4. Your marital status (check one):

_____ Married

_____ Divorced/separated

_____ Single

_____ Other; please explain: _____

5. Highest education level attained (check one):

_____ Grade 8 or less

_____ More than grade 8, but did not graduate from High School

_____ High School Graduate

_____ Went to a business, trade, or vocational school after High School

_____ Went to university, but did not graduate

_____ Graduated university with a bachelor's degree (B.A., B.Sc.)

_____ Graduate education at the Master's degree level (M.A., M.Sc., etc.)

_____ Graduate education at the doctoral level (M.D., Ph.D., etc.)

Appendix I

Parent Consent Form

Informed Consent Form - Parents

Title: Program Evaluation of the FRIENDS Anxiety Prevention Program

Researcher(s): Sarah Francis, Ph.D., R.Psych., Associate Professor, Department of Psychology, Memorial University of Newfoundland, (709) 864-4897, sfrancis@mun.ca

You are invited to take part in a research project entitled "Program Evaluation of the FRIENDS Anxiety Prevention Program".

This form is part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. It also describes your right to withdraw from the study at any time. In order to decide whether you wish to participate in this research study, you should understand enough about its risks and benefits to be able to make an informed decision. This is the informed consent process. Take time to read this carefully and to understand the information given to you. Please contact the researcher, Dr. Sarah Francis, if you have any questions about the study or for more information not included here before you consent.

It is entirely up to you to decide whether to take part in this research. If you choose not to take part in this research or if you decide to withdraw from the research once it has started, there will be no negative consequences for you, now or in the future.

Introduction

I am an associate professor in the Department of Psychology at Memorial University of Newfoundland. I am studying the FRIENDS anxiety prevention program that is being run in your child's school.

Purpose of study:

The FRIENDS program has been used in many different countries. It has been run in St. John's schools for the past two years. No one has studied how this program is working here yet. We do not yet know what its benefits are to the students who take part in it.

In this study we want to find out how the FRIENDS program works in St. John's. We also want to know if it helps lower child anxiety and increase child well being. Knowing this will help schools understand better the effects of the FRIENDS program for students and parents. To find out more about the FRIENDS program, we are asking children who are participating in the FRIENDS program this year and children who are not participating in the program to take part in this study. If your child is not taking part in the program this year, this program might be offered to him or her at a later time.

What you will do in this study:

In this study you and your child will be asked to fill out some questionnaires. Parents will be asked to fill out 4 questionnaires and children will be asked to fill out 5 questionnaires.

Parents and children will be asked to fill out these questionnaires at 3 times: (1) before the FRIENDS program starts, (2) when it ends, and (3) one year after the program is finished. Parents will be asked to fill out their questionnaires over the phone or online. Children will be asked to fill out their questionnaires in their classrooms at school.

For children in the FRIENDS program, we will also watch about 25% of the group sessions at school. When we watch a group session, a research assistant will take notes on the group activities. This is to find out whether the group is running the way it was intended to. We will also ask each group leader to let us know what they thought about the group at the end of the program.

Length of time:

Parent questionnaires will take about 15 minutes. Child questionnaires will take about 30 minutes.

Withdrawal from the study:

You can choose to stop taking part in this study at any time. If you choose to stop taking part in this study, any data collected from you or your child will be destroyed. If you choose to stop taking part in this study at any time, it will not have any consequences for you or your child or for your child's participation in the FRIENDS program at school now or in the future.

Possible benefits:

Taking part in this study will help your child's school understand better how the FRIENDS program is working. It will also help the school know more about its specific benefits (for example, being able to cope better, having better friendships) for your child.

Taking part in this study will help schools and researchers understand better how the FRIENDS program affects child anxiety, child well being and coping, and parents' feelings about their child's anxiety. Taking part in this study will also help your child's school compare the FRIENDS program in St. John's schools to the FRIENDS program in other provinces and countries.

Possible risks:

For some parents and children, it is possible that reading certain questions may cause some upset or bad feelings. This is unlikely, but it is possible that this might happen for some parents or children. Parents and children can stop taking part in this study at any time they choose. If you or your child becomes upset while taking part in this study, the researcher will be available to answer your questions and address your concerns. If you have questions or concerns about taking part in the study *after* you or your child has finished the questionnaires, the investigator will also be available to answer any questions and address any concerns. The investigator will also be able to provide you with a referral to a registered counsellor or psychologist if you need to ask for one.

Confidentiality vs. Anonymity

There is a difference between confidentiality and anonymity: Confidentiality is ensuring that identities of participants are accessible only to those authorized to have access.

Anonymity is a result of not disclosing participant's identifying characteristics (such as name or description of physical appearance).

Confidentiality and Storage of Data:

Your child will be asked to fill out questionnaires at school in the classroom. Because there will be other children in the room while your child is completing the questionnaires, your child's participation in this study will not be anonymous. That is, other children at your child's school will know that your child is taking part in this study. Every effort will be made to ensure your child's confidentiality. That is, no one else will see your child's responses to the questionnaires other than the researchers in this study. Each research assistant working on this study will also be required to sign a confidentiality agreement.

The questionnaires that you fill out will be assigned a code. Your child's questionnaires will be assigned the same code. This is so that your responses can be compared to your child's responses. Also, your responses at the beginning of the study can be compared to your responses at the end of the study. Neither your name nor your child's name will be on the questionnaires after this code has been assigned and the questionnaires have been linked. The information collected on these questionnaires might be re-analyzed at a later time as part of a future study. Your responses will remain anonymous. Your name or any information that can identify you will never be associated with presentations, reports, or articles using information collected in this project.

The questionnaires that you and your child fill out will be kept in secure locked file cabinets in a locked room in the Department of Psychology, Science Building, Memorial University of Newfoundland. The primary investigator and her research assistants will have access to these questionnaires. Paper copies of these questionnaires will be kept for a minimum of five years, as per Memorial University policy on Integrity in Scholarly Research. Electronic copies of your responses to these questionnaires will be stored on password-protected computers in a locked room in the Department of Psychology; the primary investigator and her research assistants will have access to these files.

Anonymity:

Every reasonable effort will be made to assure your anonymity. Neither you nor your child will be identified in any reports and publications.

Reporting of Results:

Data collected will be used in the context of a report to the school board, journal articles, conference presentations, and graduate-level theses. These documents will report data in an aggregated or summarized form; no identifying information from individual participants will be included in these reports.

Sharing of Results with Participants:

A report of the findings from this study will be provided to each participating school after the project is complete. Participants may obtain copies of this report by contacting their school directly or by contacting the primary investigator. You will not receive any test results from participating in this study.

Assent of your child:

Your child will be independently asked to provide his/her assent to take part in this study.

Questions:

You are welcome to ask questions at any time during your participation in this research. If you would like more information about this study, please contact: Dr. Sarah Francis at sfrancis@mun.ca or 709-864-4897.

The proposal for this research has been reviewed by the Interdisciplinary Committee on Ethics in Human Research and found to be in compliance with Memorial University's ethics policy. If you have ethical concerns about the research (such as the way you have been treated or your rights as a participant), you may contact the Chairperson of the ICEHR at icehr@mun.ca or by telephone at 709-864-2861.

Consent:

Your signature on this form means that:

- You have read the information about the research.
- You have been able to ask questions about this study.
- You are satisfied with the answers to all your questions.
- You understand what the study is about and what you will be doing.
- You understand that you are free to withdraw from the study at any time, without having to give a reason, and that doing so will not affect you now or in the future.
- You understand that any data collected from you up to the point of your withdrawal will be destroyed.

If you sign this form, you do not give up your legal rights and do not release the researchers from their professional responsibilities.

Your signature:

I have read what this study is about and understood the risks and benefits. I have had adequate time to think about this and had the opportunity to ask questions and my questions have been answered.

I AGREE for myself and my child to participate in the research project understanding the risks and contributions of my participation and my child's participation, that my participation and my child's participation is voluntary, and that my child and I may end our participation at any time.

A copy of this Informed Consent Form has been given to me for my records.

I DO NOT AGREE for myself and my child to participate in the research project.

_____ _____

Signature of parent participant Date

_____

Printed name of parent participant

_____

Printed name of child participant

_____

_____

Name of child's school Name of child's teacher

Please complete the information below only if you are interested in participating:

I would like to complete my questionnaires by phone. My phone number is:_____. The best time to reach me by phone is: _____.

I would like to complete my questionnaires online. My email address is: _____.