

Validation of the FRIENDS Anxiety Prevention Program for Children in Canada

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ABSTRACT

The objective of this pilot project was to evaluate the effectiveness of the FRIENDS program in reducing anxiety and symptoms of depression for children in Regina public schools. The project comprised 461 children in Grades 1, 4, 5, and 6 who participated in the 10-week FRIENDS program between September 2013 and May 2014. Effectiveness of the program was measured using the Revised Children's Anxiety and Depression Scale, which was administered at the beginning and end of the program. The percentage of children with subclinical or clinical levels of anxiety and depression significantly decreased from 21.8% to 13.4%. This study validated the effectiveness of the FRIENDS program in children in Regina schools.

Keywords: anxiety, depression, youth, prevention

RÉSUMÉ

Ce projet pilote avait pour but d'évaluer l'efficacité du programme FRIENDS à réduire les symptômes d'anxiété et de dépression chez les enfants des écoles publiques de Regina. 461 enfants de 1^e, 4^e, 5^e et 6^e années ont participé au programme FRIENDS de 10 semaines entre septembre 2013 et mai 2014. Pour mesurer l'efficacité du programme, on s'est servi de l'Échelle révisée de mesure de l'anxiété et de la dépression chez l'enfant qui a été administrée au début et à la fin du programme. Le pourcentage des enfants manifestant des degrés infracliniques ou cliniques d'anxiété et de dépression a considérablement diminué.

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passant de 21,8% à 13,4%. Cette étude confirme l'efficacité du programme FRIENDS chez les enfants des écoles de Regina.

Mots clés : anxiété, dépression, jeunesse, la prévention

Anxiety and depression are prevalent in school-age children. In Canada, anxiety is the most common child and adolescent mental health problem with a prevalence rate of 6.5% (Waddell & Sheppard, 2002). The prevalence rate for major depressive disorder is estimated at 2% in children and 4% in adolescents (Birmaher & Brent, 2010). Gradually, about 12% of the population experiences mild to severe impairment because of anxiety (Offord et al., 1996).

Even with high prevalence rates, anxiety disorders in children and youth remain under-detected and under-treated (Connolly & Sua'ez, 2010). It is estimated that only 25% of children and 34% of adolescents who are identified with anxiety or depressive symptoms receive clinical treatment (Neil & Christensen, 2009). If left untreated, anxiety and depression disorders can have serious short-term and long-term consequences. These conditions can affect not only academic performance, but also interpersonal relationships and social competence. For example, adolescents with depressive disorders are also at higher risk of developing poor life skills and higher risk of substance abuse, poor academic work, and psychosocial functioning (Birmaher & Brent, 2010).

With high prevalence rates and poor prognosis for those with untreated symptoms of anxiety and depression, there is a need for early detection and prevention. Prevention programs are ideal as they can not only improve the quality of life and productivity of the individual, but they are also cost effective for society as a whole, as they decrease the need and cost of treatment (Donovan & Spence, 2000). Several studies have identified the school system as an ideal setting for identification and delivery of intervention for anxiety symptoms.

The FRIENDS program developed by Dr. Paula Barrett is a universal anxiety prevention program based on cognitive behavioural therapy strategies that are developmentally tailored for different age groups of children (Barrett & Turner, 2001). Through enjoyable games and activities in groups, the program aims to teach coping skills and emotional resilience to prevent the development of mental health issues in children at a later stage in life. Children are shown how to recognize physical symptoms of anxiety, and are provided with both behavioural and cognitive skills to manage these symptoms.

FRIENDS is an acronym for the concepts that are taught in the program: F for "Feelings," R for "Relax and feel good," I for "I can do it," E for "Explore solutions and coping step plans," N for "Now reward yourself! You've done your best!" D for "Don't forget—be brave!" and S for "Stay calm for life." The program, based on a written manual, is delivered on a weekly basis for 1–2 hours for 8–10 weeks, often followed by two booster sessions at 1 and 3 months. The FRIENDS program is designed to provide a positive and enjoyable learning experience that does not involve any clinical assessment or diagnosis, avoids labelling students as anxious or different, and does not rely on students self-identifying.

There is growing support for the effectiveness of the FRIENDS program throughout the world, with benefits for children of various ages, ethnicities, and levels of anxiety (Briesch, Hagermoser, & Briesch, 2010). It is the only program currently supported by the World Health Organization as effective for the prevention of anxiety (WHO, 2004). Recently, a rigorous evaluation was conducted of all empirical published studies of the FRIENDS program to date (Briesch et al., 2010). Using a variety of self-report measures of mood, the effect sizes (*ES*) ranged from 0.1 to 2.76, with larger effect sizes for children with anxiety disorders (Mean *ES* = 0.84) and at-risk populations (Mean *ES* = 0.44) than the general population of children (Mean *ES* = 0.24). The authors concluded that the FRIENDS program is effective at reducing anxiety symptoms in school-based settings for both universal and targeted populations. These beneficial effects have been shown to last at least six months (Liddle & Macmillan, 2010; Mostert & Loxton, 2008) and in some cases, 12 or more months (Barrett, Farrell, Ollendick, & Dadds, 2006; Barrett, Lock, & Farrell, 2005; Lowry-Webster, Barrett, & Lock, 2003; Shortt, Barrett, & Fox, 2001; Stallard, Simpson, Anderson, & Goddard, 2008).

It was previously shown that children who are at-risk for anxiety disorders also have higher levels of depression than normal children (Lowry-Webster et al., 2001, 2003; Lock & Barrett, 2003). While FRIENDS was initially designed to prevent anxiety, it has also been shown to reduce symptoms of depression in school samples (Barrett et al., 2006; Lock & Barrett, 2003; Lowry-Webster et al., 2003). It would be advantageous to examine the effectiveness of FRIENDS in reducing depressive symptoms in a subsequent community population. The latter is a novel contribution of the current study.

Within Canada, the FRIENDS program is currently offered and well-received in parts of Alberta, British Columbia, Ontario, New Brunswick, and Nova Scotia. There is considerable concern from school administrators and counsellors and psychologists about the extent of anxiety and depressive symptoms in school-age children in Regina, Saskatchewan. Given the worldwide success of this program, the purpose of this study was to pilot the FRIENDS program in schools governed by the Regina Public School Board (RPSB) and validate the effectiveness of this program in reducing feelings of anxiety and depression in school-age children.

METHODS

Participants

Participants in this pilot project included students in Grades 1, 4, 5 and 6 in eight different public elementary schools in the urban setting of Regina, Saskatchewan. The majority of students were in Grades 1 ($n = 149$), 4 ($n = 161$), and 6 ($n = 133$), but one split class with Grade 5s ($n = 17$) was also included. Age was not collected. We chose these grades because the content of the FRIENDS program fit the grade-appropriate aims and goals of the health class curriculum identified by the Saskatchewan Ministry of Education. The *FUN FRIENDS* program was used with Grade 1 students, while the *FRIENDS for Life* program was used for Grades 4, 5, and 6. The schools were chosen based on previous interest in the FRIENDS program, and the school counsellors, who had been trained for this pilot, made arrangements with classroom teachers and principals. Three schools had classes in the French immersion program, but FRIENDS was taught in English. Some classrooms had students with a variety of ethnicities; however, the population of Regina is predominantly Caucasian with European background. We were not able to accurately estimate variations

in socioeconomic status (SES) for the purposes of this study. An optional parent information session was held at interested schools to help introduce the program to all parents without the barrier of written English.

Facilitators

The FRIENDS program was facilitated by six RPSB school counsellors and six social workers from Child and Youth Services in the Regina Qu'Appelle Health Region who were formally trained in FRIENDS program delivery. Two facilitators (one counsellor, one social worker) delivered the program together in each classroom during regularly scheduled hours for delivery of the health curriculum. The teacher was present for most of the FRIENDS sessions and assisted with classroom management but did not specifically deliver the program. Learning assistants employed by the school were present for additional help for children who required it.

Materials

The *FUN FRIENDS workbook for Children: A Family Guide for Building Resilience with 4 to 7 year-old Children through Play* (Barrett, 2009a) teaches social emotional skills through enjoyable activities for children, aged 4 to 7. A corresponding activity book, *FUN FRIENDS Workbook for Children: A Family Guide for Building Resilience with 4 to 7 year-old Children through Play* (Barrett, 2009b) was sent home with children. It encourages active participation of parents at home to help the child complete activities, thus reinforcing the FRIENDS principles and bonding. In the present study, the *FUN FRIENDS* program was used for Grade 1 students.

For the *FRIENDS for Life* program, for children aged 7 to 11, facilitators used the *FRIENDS for Life: Group Leader's Manual for Children*, Canadian edition (Barrett, 2013a). The manual describes the goals and strategies for each session, the desired outcomes, and the specific exercises to be used in meeting these outcomes. Students were each given *FRIENDS for Life: Activity Book for Children*, Sixth Edition (Barrett, 2013b) to be used in class to participate in the activities. The format of the program involves large and small group work, completing exercises in workbooks, role play, games, activities, and quizzes. They also were assigned tasks to complete at home to help reinforce the skills introduced in the sessions. Additional materials used to complement the program included light sabres in red and green colors, worry beads and stones, and short inspirational videos by famous sports personalities. The *FRIENDS for Life* program was used for Grades 4, 5, and 6. The project coordinator provided facilitators with all the necessary materials to deliver and evaluate both programs.

Measures

Anxiety/depression measures: Revised child anxiety and depression scale (RCADS; Chorpita, Yim, Moffitt, Umemoto, & Francis, 2000). The RCADS, a revision of the Spence Children's Anxiety Scale (SCAS; Spence, 1998), is a 47-item self-report questionnaire, with scales corresponding to separation anxiety disorder (SAD), social phobia (SP), generalized anxiety disorder (GAD), panic disorder (PD), obsessive compulsive disorder (OCD), and major depressive disorder (MDD). The participants rate how often each item applies to them. Items are scored 0–3 corresponding to “never,” “sometimes,” “often,”

and “always.” In addition to the six subscales, it yields a total anxiety score (sum of all five anxiety scales) and a total score (sum of all six subscales). T-scores for each scale were generated based on sex and grade. The RCADS is well validated for Grades 3–8 in both community/school and clinical samples with strong psychometric properties (Chorpita, Moffitt, & Gray, 2005; Chorpita, Yim, Moffitt, Umemoto, & Francis, 2000; De Ross, Gullone, & Chorpita, 2002). The RCADS was chosen because of its psychometric properties, the inclusion of several types of anxiety as well as a scale for depression, and it is currently used in the anxiety clinical pathway in Child and Youth Services. The internal consistency of the RCADS subscales is high, with Cronbach alphas for each scale: 0.78 (SAD), 0.87 (SOC), 0.82 (OCD), 0.88 (GAD), 0.88 (PD) and 0.87 (MDD; Chorpita et al., 2000).

Given the length of this measure, we only included the RCADS to reduce burden on the facilitators. However, Grade 1 students in the *FUN FRIENDS* program were not given the RCADS because it was felt the length and reading level were too difficult for that age group and the test is currently only standardized for Grades 3 and above.

Child, parent and teacher program acceptability evaluations. To get feedback on the acceptability of the FRIENDS program, we gathered the following self-report information from children, parents and teachers after the end of the program based on previous measures developed by Barrett, Lowry-Webster, Turner, and Johnson (1998):

A) Child Questions:

1. How much did you enjoy the FRIENDS program? (1 = A lot, 2 = Some, 3 = A little, 4 = Not at all);
2. Which activities from the FRIENDS program did you find most useful/use the most? (List/draw).

(B) Parent Questions:

1. How useful/important did you find the FRIENDS program in enhancing your child’s emotional skills? (1 = Not useful/Not important, 2 = Useful/Important, 3 = Somewhat useful/Important, 4 = Very useful/Very important);
2. To what extent do you think your child learned skills to manage his/her emotions? (1 = Not at all, 2 = A little, 3 = Some, 4 = A lot);

(C) Teacher Questions:

1. How useful/important did you find the FRIENDS program? (1 = Not useful/Not important, 2 = Useful/Important, 3 = Somewhat useful/Important, 4 = Very useful/Very important);
2. How much do you think your students learned about their feelings and how to cope? (1 = A lot, 2 = Some, 3 = A little, 4 = Not at all);
3. How well does the program complement your existing school curriculum? (1 = A lot, 2 = Some, 3 = A little, 4 = Not at all);
4. How easy was the implementing process of the program into your setting? (1 = Very easy, 2 = Easy, 3 = Not very easy, 4 = Difficult).

Procedure

An informational letter describing the purpose and benefits of the FRIENDS program was sent home to all parents of children in participating classrooms. A parent information session was also held at one school prior to the start of the first program to provide parents with background on the FRIENDS program. Each letter contained an informed consent slip that parents were required to sign and return in order for their child to be included in the program. In the absence of missing written consent, the slips were not returned, and parents were called to get verbal permission for their child to participate. Parents were also asked to consent to be contacted for feedback at the end of the program.

Once all consent from students was obtained, the facilitators organized the first session. For Grade 4, 5, and 6 students, within a week of the first session, baseline/pre-intervention data for the RCADS were collected for all participating children. The majority of children completed the RCADS individually at their desk. The facilitator gave them verbal instructions about how to complete the RCADS. Each question was read aloud to students, and facilitators assisted students who did not understand the question or had trouble filling out the page. In some cases, small groups were used instead to facilitate completion of the RCADS for children with learning or behavioural issues. Students were assured that their responses to the questions would be kept confidential. As noted above, the RCADS was not appropriate for Grade 1 students and no alternative, validated method to measure anxiety was available at this time.

The *FUN FRIENDS* program was run for approximately 10 weeks, with one 60-minute session held at a similar time each week. The *FRIENDS for Life* program was also run for 10 weeks, with one session per week of approximately 60 minutes. There was variation between schools in the start/end dates of each program. In some cases, two sessions were combined.

At the completion of the final session (within one week), children in Grades 4, 5, and 6 were asked to complete the RCADS again, using the same standardized instructions and procedures as for the pre-intervention assessment. Within one month of completion of the FRIENDS program, all children, including the Grade 1s, were asked to complete the self-report ratings described above. The teachers were also asked to complete their self-report questions related to program acceptability. Parents who had previously consented to be contacted at the start of the FRIENDS program were contacted by the project coordinator and asked to complete the questions about program acceptability. Booster sessions were not included in this pilot project. The project was reviewed by the Regina Qu'Appelle Health Region Research Ethics Board as a program evaluation.

Data Analysis

First, descriptive statistics were computed for demographic information and RCADS subscales and total scores were summarized as the mean and standard deviation for continuous variables. Frequency data were generated for the ratings of program acceptability from the child, parent, and teacher evaluations. Our primary analyses focused on the RCADS data. We first conducted preliminary analyses to determine if there were differences in baseline raw Total Anxiety scores for different schools, sex and grades. If any factors showed significant differences in baseline Total Anxiety scores, we included them in a final mixed ANOVA model. Post-hoc comparisons were evaluated with Tukey's test for appropriate variables. We used a similar

analysis plan to explore changes in depression scores. Paired t-tests were used to evaluate specific changes on the anxiety subscales of the RCADS. Effect sizes were calculated with Cohen's d. T-scores for Total Anxiety, depression and each anxiety subscale and were generated using sex and grade tables. Using the T-scores, we also generated results to show whether students had clinical (≥ 98 th percentile) or subclinical (≥ 94 th percentile) levels of anxiety or depression at pre- and post-intervention. We compared the frequency of these groups using McNemar's paired frequency test. Statistical analyses were performed using SPSS for Windows Version 22.0 (SPSS, Chicago, IL).

Missing Data. RCADS subscale scores were considered missing data and excluded from analyses if more than one item on a given subscale was missing. When scoring the RCADS, if there was only one item not selected, then the following method was used. The score on that subscale was adjusted by adding the scores for the remaining items and multiplying that score by the total number of items divided by the total number of items minus 1 (i.e., within-scale, within participant mean substitution; Ebesutani, Bernstein, Nakamura, Chorpita & Weisz, 2010). If more than two items from a subscale were missing, that subscale was not generated. When generating T-scores for each subscale, the raw score was rounded up or down based on a cutoff of 0.5.

RESULTS

Sample Composition, Attrition and Missing Data

There were 311 students who completed the RCADS (50.3% male and 48.7% female) in Grades 4 (50.2%), 5 (5.5%), and 6 (44.4%). During the course of the program, five students moved away and could not provide post-test RCADS data. An additional six students were absent from class and the RCADS could not be obtained at a later date. Two children completed both pre-test and post-test versions, but their data were excluded because multiple subscales could not be calculated due to missing items. Therefore, the final sample sizes for each scale were: Separation Anxiety ($n = 296$), Generalized Anxiety ($n = 296$), Panic Disorder ($n = 294$), Social Phobia ($n = 292$), Obsessive Compulsive Disorder (OCD; $n = 294$), Depression ($n = 292$), Total Anxiety ($n = 296$).

Descriptive Statistics

The mean (SD) scores for all the scales of the RCADS at pre and post-intervention for both sexes in Grades 4, 5, and 6 are reported in Table 1. Compared to other school and community samples (Brown et al., 2013; Esbjørn, Sømhovd, Turnstedt, & Reinholdt-Dunne, 2012; Muris, Dreesen, Bogels, Weckx, & van Melick, 2004), the RCADS scores in our sample were generally higher at baseline. However, the previous samples included adolescents up to 17 years of age.

Total Anxiety

Preliminary analyses revealed no significant difference in pre-intervention mean Total Anxiety raw scores between the eight schools, $F(7, 306) = 1.17, p = .32$. However, there were significant differences in mean Total Anxiety between girls and boys, $t(306) = -2.01, p = .045$ and between Grades 4, 5, and 6, $F(2,$

Table 1**Mean (SD) for each scale of the RCADS for both sexes in Grades 4, 5 and 6 at Pre-and Post-Intervention**

Pre-Intervention						
Scale	Grade 4		Grade 5		Grade 6	
	Boys	Girls	Boys	Girls	Boys	Girls
Total Anxiety	33.91 (19.77)	34.67 (18.46)	17.22 (14.41)	25.88 (18.42)	29.58 (16.22)	37.66 (21.38)
Depression	10.05 (5.05)	8.63 (4.41)	7.89 (4.11)	7.00 (7.25)	8.00 (4.30)	9.80 (5.50)
Separation Anxiety	4.96 (4.62)	5.96 (4.41)	1.11 (1.27)	2.88 (2.95)	3.38 (3.28)	4.77 (4.11)
Generalized Anxiety	6.85 (4.48)	6.86 (3.88)	3.00 (2.65)	4.63 (3.20)	6.17 (3.59)	7.45 (4.11)
Panic Disorder	6.04 (4.91)	6.52 (5.17)	3.00 (3.87)	5.63 (6.32)	5.15 (4.59)	6.71 (5.64)
Social Phobia	10.08 (5.68)	9.91 (4.96)	6.56 (5.64)	9.13 (4.61)	10.09 (5.30)	12.75 (6.42)
Obsessive/Compulsive	6.23 (3.88)	5.58 (3.70)	3.56 (3.09)	3.63 (3.50)	4.79 (3.40)	5.52 (4.07)
Post-Intervention						
Scale	Grade 4		Grade 5		Grade 6	
	Boys	Girls	Boys	Girls	Boys	Girls
Total Anxiety	27.55 (20.38)	28.54 (20.00)	16.78 (11.52)	20.50 (15.01)	21.91 (14.19)	30.58 (19.69)
Depression	7.81 (4.63)	7.17 (4.43)	6.33 (5.24)	5.38 (5.37)	6.75 (4.77)	7.74 (5.52)
Separation Anxiety	4.00 (4.50)	4.69 (4.26)	1.22 (1.79)	2.50 (2.33)	1.96 (2.30)	4.00 (4.03)
Generalized Anxiety	5.81 (4.41)	5.48 (3.87)	3.44 (3.64)	3.25 (2.92)	5.05 (3.36)	5.87 (3.95)
Panic Disorder	5.24 (5.14)	5.02 (4.67)	3.11 (3.10)	3.50 (3.02)	3.85 (3.41)	5.80 (5.21)
Social Phobia	8.00 (5.54)	9.14 (5.99)	6.11 (4.17)	7.75 (4.03)	7.76 (5.10)	10.43 (6.05)
Obsessive/Compulsive	4.50 (3.76)	4.53 (4.04)	2.89 (2.32)	3.50 (4.47)	3.25 (2.78)	4.38 (3.67)

305) = 3.60, $p = .03$. Therefore, we included these grade and sex differences as between-subject factors in the final model. For our primary analysis, we evaluated the mean change in raw Total Anxiety scores from pre- to post-intervention using a 2 (sex) \times 3 (grade) mixed-model ANOVA with time as the within-subjects factor. The analysis revealed a significant main effect of intervention (FRIENDS), $F(1, 268) = 15.44$, $p < .001$, but no main effects of sex, $F(1, 268) = 2.47$, $p = .12$ or grade, $F(2, 286) = 2.86$, $p = .06$. There were also no significant interactions of intervention with sex, $F(1, 286) = .07$, $p = .79$, grade, $F(2, 286) = .55$, $p = .58$ or three-way interaction, $F(2, 286) = .43$, $p = .65$, suggesting that the FRIENDS program decreased anxiety in a similar manner for all children in the program.

Depression

Preliminary analyses revealed no significant differences in pre-intervention depression scores between sexes, grades, and schools (all $p > .05$). Therefore, we used a paired t-test to compare raw depression scores from pre to post FRIENDS intervention. The analysis revealed a significant decrease in depression scores, $t(293) = 6.97$, $p < .001$. Figure 1 shows an 18.4% decrease in the average level of anxiety ($d = .32$) from pre ($M = 32.99$, $SD = 19.18$) to post ($M = 26.92$, $SD = 18.96$) intervention and an 18.9% decrease in the average level of depression ($d = .35$) from pre ($M = 9.07$, $SD = 5.01$) to post ($M = 7.35$, $SD = 4.9$) intervention among all children.

Figure 1
Mean (*SD*) Raw scores for Total Anxiety and Depression scales at pre-test and post-test

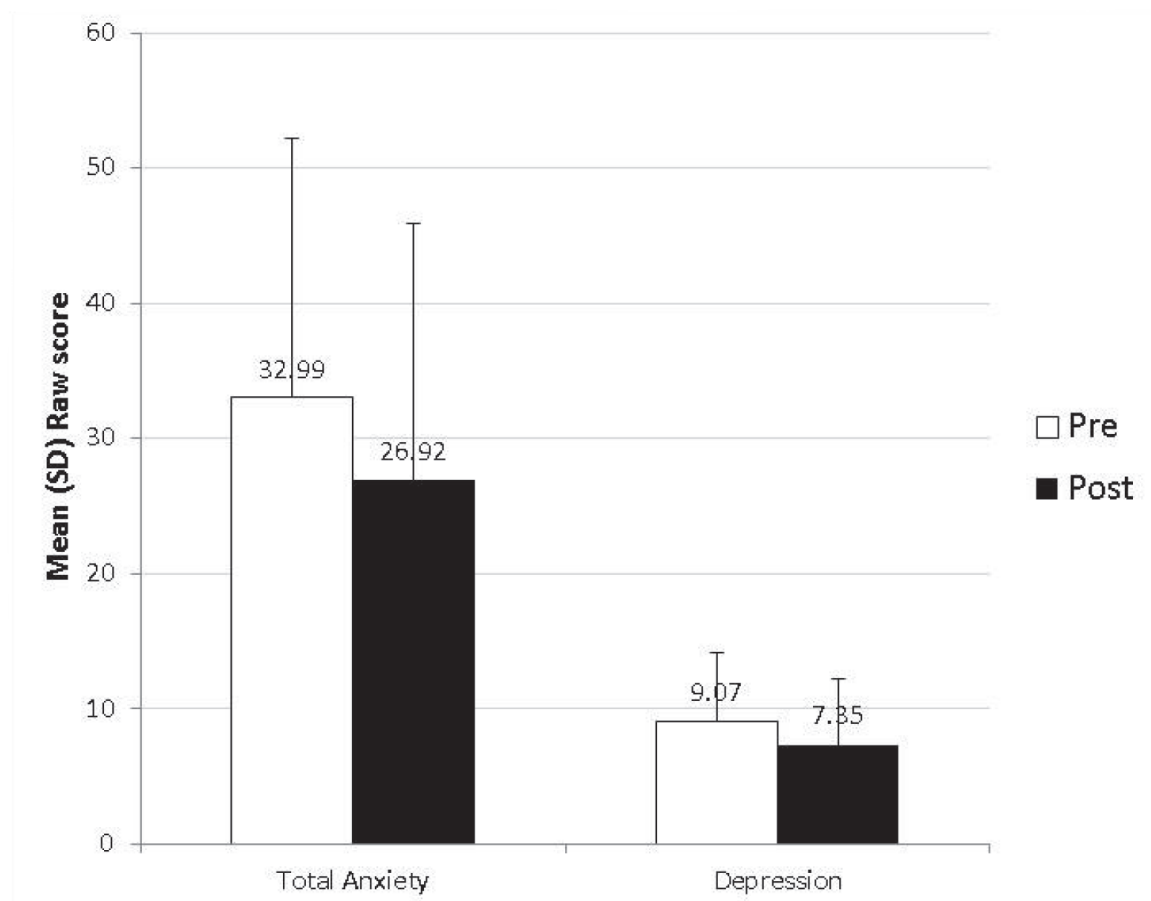


Figure 2
Mean (*SD*) scores on RCADS subscales at pre-test and post-test

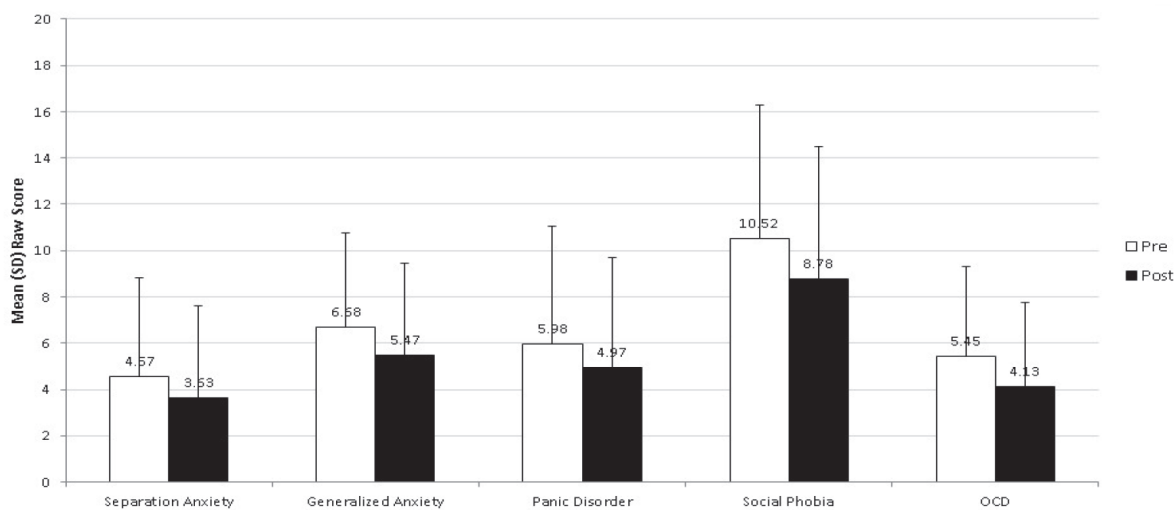
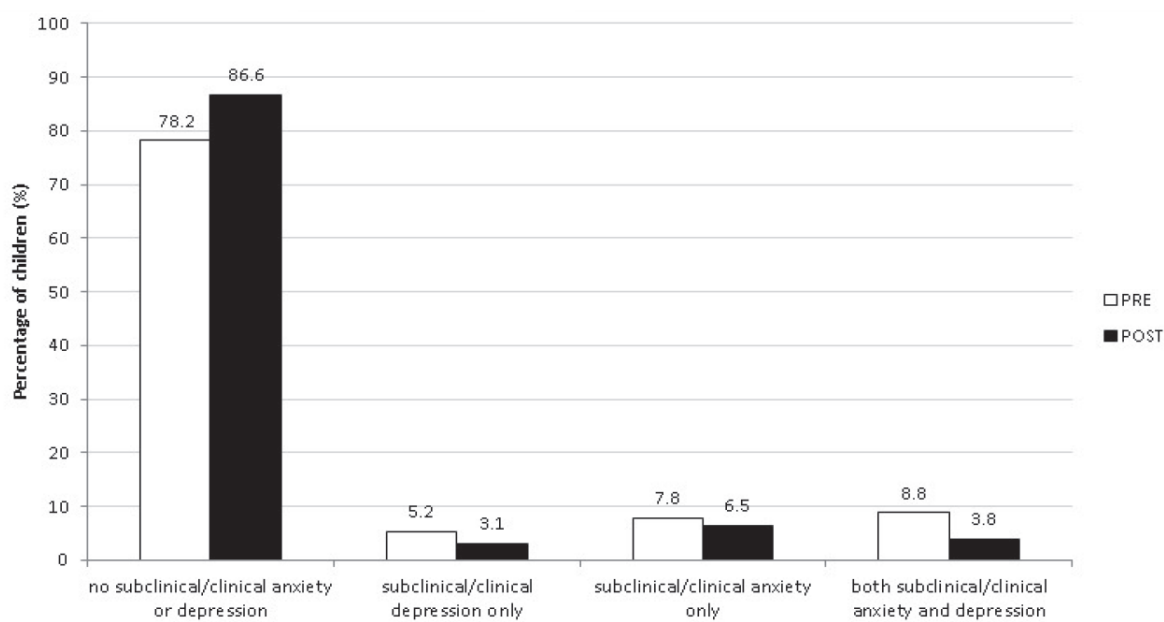


Figure 3
Percentage of children with subclinical and/or clinical anxiety, depression or both at the pre-test and post-test



RCADS Anxiety Subscales

Using paired t-tests, significant reductions occurred on all anxiety subscales of the RCADS (all $p < .001$; see Figure 2). The greatest relative reduction from baseline was for the OCD subscale (24.2%), followed by Separation Anxiety (20.6%), Generalized Anxiety (18.1%), Panic Disorder (16.9%), and Social Phobia (16.5%).

Examination of Clinical Levels of Anxiety and Depressive Symptoms

T-scores for Total Anxiety and depression were generated using sex and grade tables (Chorpita et al., 2000). At the pre-test, 21.8% of children had clinical (≥ 98 th percentile) or subclinical (≥ 94 th percentile) levels of anxiety, depression, or both depression and anxiety. After the completion of the FRIENDS program, this dropped significantly to 13.4% (McNemar's test, $p < .01$; see Figure 3).

Child, Parent, and Teacher Self-Report Program Acceptability Evaluation

Two hundred and eighty-two children completed the Child Evaluation. They reported a mean (SD) of 1.5 (.78) on their measure of enjoyment of the FRIENDS program (1 being more enjoyment). 62.1% of students reported they liked the program *a lot* and 90.5% reported they liked it at least *some*. We obtained feedback from 15 teachers and the results of the questions are presented in Table 2. 86.7% of teachers surveyed reported they thought the program was *useful/important* or *very useful/important* while 60% thought the children learned *a lot* from the program. We were only able to obtain feedback from 17 parents. Of those

Table 2
Descriptive statistics for the Teacher Program Acceptability Evaluation

Question	Rating Scale			
How useful/important did you find the FRIENDS program?	<i>Very useful/important</i>	<i>Useful/important</i>	<i>Somewhat useful/important</i>	<i>Not useful/important</i>
	7 (46.7%)	6 (40.0%)	2 (13.3%)	-
How much do you think your students learned about their feelings and how to cope?	<i>A lot</i>	<i>Some</i>	<i>A little</i>	<i>Not at all</i>
	9 (60.0%)	5 (33.3%)	1 (6.7%)	-
How well does the program complement your existing school curriculum?	<i>A lot</i>	<i>Some</i>	<i>A little</i>	<i>Not at all</i>
	8 (53.3%)	6 (40.0%)	1 (6.7%)	-
How easy was the implementing process of the program into your setting?	<i>Very easy</i>	<i>Easy</i>	<i>Not very easy</i>	<i>Difficult</i>
	7 (46.7%)	3 (20.0%)	5 (33.3%)	-

Table 3
Descriptive statistics for the Parent Program Acceptability Evaluation

Question	Rating Scale			
How useful/important did you find the FRIENDS program in enhancing your child's emotional skills?	<i>Very useful/important</i>	<i>Useful/important</i>	<i>Somewhat useful/important</i>	<i>Not useful/important</i>
	8 (61.5%)	4 (30.8%)	1 (7.7%)	-
To what extent has your child showed improvements in how they handle their emotions?	<i>A lot</i>	<i>Some</i>	<i>A little</i>	<i>Not at all</i>
	4 (23.5%)	4 (23.5%)	3 (17.6%)	6 (35.3%)

surveyed, almost all reported that the FRIENDS program was at least somewhat *useful/important* (92.3%), whereas only 23.5% felt their child learned *a lot* (see Table 3).

Supplementary Analysis

We performed a supplementary analysis to compare the results from students who took the FRIENDS program during the fall (Phase 1) and the winter (Phase 2) months. There was no significant interaction between intervention and phase for Total Anxiety raw scores, $F(1, 290) = 1.23, p = .27$. The mean change in Total Anxiety was similar for both Phase 1 students ($n = 109$; Mean difference = -7.28 (14.92); 95% CI [4.45, 10.12]) and Phase 2 ($n = 183$; Mean difference = -5.36 (14.01); 95% CI [3.31, 7.40]). The results were similar for depression raw scores, with no interaction, $F(1, 292) = .04, p = .85$, and similar mean change for students in Phase 1 ($n = 109$; Mean difference = -1.78 (4.17); 95% CI [-1.99, 2.57]) and Phase 2 ($n = 185$; Mean difference = -1.68 (4.29); 95% CI [-1.06, 2.31]). There was also no significant difference in the proportion of students with clinical levels of anxiety or depression in the pre-test of Phase 1 vs. 2 (data not shown).

DISCUSSION

In this pilot study, we validated the effectiveness of the FRIENDS program in Regina public schools. We observed both statistically and clinically significant reductions in levels of both anxiety and depression symptoms in our students. Our effect sizes of .32 and .35 for anxiety and depression, respectively, are similar, and somewhat higher, than other studies using the FRIENDS program in the general population of children (Briesch et al., 2010). Most importantly, the frequency of children with subclinical and clinical symptoms of anxiety and depression decreased, with only 13% of children showing signs of one or both at the end of the program.

Unlike some previous studies using FRIENDS (Barrett et al., 2006; Lock & Barrett, 2003), we did not observe any differences in response to the program between boys and girls, which is consistent with other studies (Lowry-Webster et al., 2003). Despite initial differences in anxiety levels between Grades 4, 5, and

6, there were no significant differences in effectiveness of the intervention, suggesting that children in all three grades can benefit from FRIENDS. The initial difference was attributable to lower scores in Grade 5, which is likely a random result because of a much smaller sample size ($n = 17$ vs. 154 in Grade 4 and 137 in Grade 6) since Grade 4 and 6 scores were almost identical. These findings are consistent with previous research showing reductions in anxiety for all children (Barrett & Turner, 2001; Lowry-Webster et al., 2003); however greater effects have been demonstrated for Grades 4–6 compared to Grade 9 (Lock & Barrett, 2003), suggesting the importance of early intervention.

Despite anecdotal reports of lower SES and greater frequency of English as an additional language (EAL) students in some schools, there were also no significant differences in baseline anxiety or depression between schools; however, sample sizes were low and variation high in some schools, which may have limited power in this analysis. The schools that participated were based on interest of the school counsellors, social workers, and principals so it is possible that the findings may not generalize to all schools in the city. However, because some of these schools were in lower SES areas, our results suggest that the beneficial effect of the FRIENDS program appears to have a similar impact for all children.

We also obtained self-report information from the children, teachers, and parents to supplement the data from the RCADS. Overall the feedback was positive from all sources. Some parents reported that they did not notice any specific changes in their child's behaviour, however recruitment was difficult in this sample and there was wide variation in the engagement of parents with the program. Some parents reported noticeable improvement in their child's behaviour. Although teachers had some criticisms of the program itself (too much reading/homework), they also felt it provided everyone in the program with a "common language," which could be beneficial in helping them identify and communicate their feelings even after the students had completed the program.

Although we observed significant effects of the FRIENDS program in this pilot study, we have to interpret the results with some caution as random assignment was not used and there was no control group. Symptoms of anxiety and depression are thought to change with age, although the direction is not always clear (Lock & Barrett, 2003; Lowry-Webster et al., 2003). It is possible that the students improved as a result of development alone and not because of their participation in the FRIENDS program. However, the baseline anxiety scores for Grade 4 were the same as Grade 6 and both grades were similar across Phase 1 and 2, suggesting that symptoms were not merely changing over time, although this is a between-participants comparison as opposed to within-participants, so we cannot rule out the role of developmental changes in anxiety and depression.

Our post-test RCADS occurred at 1 to 2 weeks after the completion of the program so we do not have long-term follow up data. However, long-term effects lasting up to 36 months have been well established in previous research (Barrett et al., 2006; Liddle & Macmillan, 2010; Lowry-Webster et al., 2003; Mostert & Loxton, 2008; Shortt et al., 2001; Stallard et al., 2008), suggesting we are likely to observe the same in our population. In this pilot, neither the booster sessions nor the parent sessions described in the original program were used, which may have limited the effect sizes in this study and the long-term effectiveness of this implementation. However, little research has directly assessed the relative contribution that these components of the program make to improving anxiety and depression (Briesch et al., 2010), so it remains a future topic for research whether they are beneficial additions. Finally, we were not able to capture accurate

information on language, ethnicity, or SES. There may be subgroups of children from different ethnicities and backgrounds who either benefit *more* (e.g., low SES) or *less* (e.g., EAL) from the program that we weren't able to identify in this pilot (Barrett, Sonderegger, & Sonderegger, 2001).

CONCLUSION

This study adds to the growing literature in support of the FRIENDS program. Although intensive one-on-one cognitive-behavioural or other therapies should still be reserved for children with more severe mental health symptoms, there are numerous benefits of using a school-based program designed as universal prevention of anxiety disorders. School-based programs are lower in cost, making it more accessible to children and families regardless of SES or other background factors. They are less stigmatizing because they do not identify and target specific children, making it more likely families will get the help they need rather than from clinic-based help (Briesch et al., 2010; McLoone, Hudson, & Rapee, 2006). Also, because there is routine interaction, particularly when teachers are the facilitators of FRIENDS, symptoms can be identified early, and more concentrated efforts made, before the symptoms intensify (Sink & Igelman, 2004).

Future research could examine any potential differences when teachers are the facilitators vs. social workers at our site. There is some evidence to suggest that outcomes are similar when FRIENDS is delivered by teachers compared to psychologists (Barrett & Turner, 2001; Lowry-Webster et al., 2003). However, in two studies where teachers implemented the program, the effect sizes were half as large and non-significant (Briesch et al., 2010). The burden of the program on teachers should also be formally evaluated. It would also be worthwhile to increase parental involvement throughout the program, to help consolidate the learning developed in class. In conclusion, the FRIENDS program has shown promise in reducing symptoms of anxiety and depression in children in Regina. The fact that 21% of children showed elevated levels of anxiety, depression, or both at the beginning of the program suggests that the need for a universal intervention like FRIENDS is warranted. Therefore, we hope to expand this program to more classes/schools throughout the area to promote emotional resilience for all children.

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