

Transporting a School-Based Intervention for Social Anxiety in Canadian Adolescents

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Prevention/intervention programs for anxiety disorders, the most common form of psychological distress reported by children and adolescents, are critical, as unaddressed anxiety has been associated with a host of negative life-outcomes. This study examines the transportability and dissemination of the *Skills for Academic and Social Success (SASS)*, an early intervention program that can be delivered in high school settings and is aimed at reducing symptoms of anxiety among adolescents. A total of 27 adolescent high school students participated. Teachers and adolescent peer counselors were trained to deliver a modified version of SASS, involving ten 60-minute sessions. The results reveal that at-risk adolescents participating in the SASS program showed a reduction in anxiety, behavioural avoidance, and depression symptoms from pre- to posttesting, which provides further support for the transportability and dissemination of the SASS program in secondary schools. Limitations of the study and future directions are discussed.

Keywords: anxiety, depression, adolescents, cognitive-behaviour therapy, school-based interventions

Overview

Anxiety prevalence rates range from 3.8% (Goodman, Ford, & Meltzer, 2002) to 12.2% (Offord et al., 1996), making this disorder one of the most commonly occurring child or youth mental health concerns as well as most referred problem to mental health care providers (March & Albano, 1998). Anxiety disorders are equally distributed across socioeconomic status and ethnic groups and remain stable throughout the life span (Dadds, James, Barrett, & Verhulst, 2004).

Prevention and early intervention programs for anxiety are critical, as data suggest that unaddressed anxiety in childhood/adolescence can lead to secondary disorders (i.e., depression, suicide, emotional disturbance, and substance use/abuse) and can affect later life functioning (e.g., poor social relationships, academic/occupational performance, marital discord/divorce, premature death, impaired family cohesion and functioning; Sareen, Houlihan, Cox, & Asmundson, 2005).

Childhood anxiety disorders often go undetected and untreated (Barrett, Duffy, Dadds, & Rapee, 2001). With early intervention for anxiety management, evidence suggests that the problems associated with anxiety can be curtailed. Treatment gains from early intervention have long-lasting effects, thus reducing the time an individual is affected (Ferdinand, Barrett, & Dadds, 2004).

Walker (2004) reported that 70–80% of children and adolescents who receive mental health services receive them in the

school setting. Providing mental health services in schools is advantageous given that school-based interventions can ultimately reach a larger number of children. Given the strong relationship between mental health outcomes and educational achievement, the school is an optimal environment to deliver both educational and mental health services to young people. To ensure positive outcomes of intervention and prevention programs, services delivered in school-based settings need to be evidence-based.

Skills for Academic and Social Success

Skills for Academic and Social Success (SASS) (Fisher, Masia-Warner, & Kolin, 2004) is an early intervention program aimed at reducing symptoms of anxiety (in particular, social phobia) among at-risk adolescents that can be delivered in school based settings. The SASS program is based on cognitive behaviour principles (CBT). CBT has been shown to reduce anxiety symptoms effectively in children and adolescent populations when delivered in group settings (Soler & Weatherall, 2005) in both clinical and community samples (Compton et al., 2004). Social anxiety in adolescents, one of the more common presentations of anxiety disorders at this developmental phase, is of concern, as impairment continues into adulthood. The degree of adult impairment associated with social anxiety varies widely and seems heterotypic in presentation from academic and work-related functioning to an overall low level of quality of life (see Fehm, Beesdo, Jacobi & Fiedler, 2007). Implicated outcomes are poor close relationships, lower rates of marriage and higher rates of divorce, and higher engagement in risk behaviours of alcohol and drug abuse.

For the present study, a modified version of the SASS program was delivered as a school early intervention program that met an educational mandate of social-emotional development and social responsibility standards (British Columbia Ministry of Education, 2001). Previous evaluations of the SASS program in school-based

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settings have shown the program's efficacy at reducing social anxiety symptoms amongst adolescents. A pilot study found that after participation in the SASS program, 3 out of 6 participants (3 females, 3 males), aged 14 to 17 years, no longer met diagnostic criteria for social phobia (Masia-Warner, Klein, Storch, & Corda, 2001). A similar evaluation was conducted with a group of 35 adolescents (26 females, 9 males), aged 13 to 17 years, that participated in a school-based university research-assistant-led (RA-led) SASS program. Researchers found a significant reduction in social anxiety and avoidance, and improved overall functioning, as indicated by observer evaluations and youth self-reports (Masia-Warner et al., 2005). Of the experimental group, 67% no longer met criteria for social phobia 9 months posttreatment as compared with 6% of the wait-listed control group. The researchers assessed levels of depression using the *Child Depression Inventory* but found no significant treatment effects. Another evaluation of a school-based RA-led SASS program found a statistically significant reduction of social anxiety and improved overall functioning in a sample of 36 adolescents (30 females, 6 males), aged 14 to 16 years (Masia-Warner, Fisher, Shrout, Rathor, & Klein, 2007). Following treatment, 59% of the experimental group, as compared with 0% of the control group, no longer met criteria for social anxiety disorder. These gains were still evident 6 months post-treatment. The researchers assessed depression using the *Beck Depression Inventory-II* and found that the experimental group had lower depression scores than the control group posttreatment; however, both groups had low depression scores. A long-term follow-up study looked at a group of 24 participants (17 females, 7 males) 5 years after participation in one of three social anxiety school-based and therapist-led intervention groups for youth: cognitive-behavioural group therapy for adolescents, *Social Effectiveness Therapy for Adolescents* (Spanish version), and *Social Treatment for Adolescents with Social Phobia* (Garcia-Lopez et al., 2005). At the time of the follow-up, participants ranged in age from 20 to 22 years old. The researchers found that any reductions in social anxiety achieved posttreatment were maintained at the 5-year follow-up. The researchers did not assess participants for depression.

Based on the standards outlined by the *Society for Prevention Research* (SPR; Flay et al., 2005), for program dissemination, SASS has met criteria that demonstrate its readiness for dissemination. SASS has undergone rigorous trials, has a protocol for delivery (e.g., manuals, training, and support), and has been evaluated in real-world conditions (Garcia-Lopez et al., 2005; Masia-Warner et al., 1999, 2001, 2005, 2007).

Due to growing caseloads, school counsellors are experiencing increasing difficulty meeting the demands for school counselling services (Baker & Gerler, 2004; Seashore, Jones & Seppanen, 2001). Peer counselling is one effective way to address this increased demand for school counselling services. The peer counselling approach uses same-age peers in school settings, training them to act as models, social reinforcers, and tutors, and to encourage and promote exposure to positive peer relationships and healthy behaviours (Field, 1981). Research of peer counselling programs reveals the benefits of students assisting other students (peers) in addressing social and academic problems (Whiston & Sexton, 1998).

The goal of the current study was to (a) investigate whether adolescents at risk for anxiety and depression would report

reduced levels of anxiety and depression after participating in the SASS program, and (b) determine the evidence for the social validity in terms of SASS leaders' and participants' perceptions of the program. Finally, we were interested in the effectiveness of SASS by extending the protocol to non-U.S. schools, reducing programmatic time, and using peers as interventionists.

Method

Trainers

Recruitment and training. This research study received university and school board ethical approval. School personnel (i.e., teachers, counsellors, and teen-age peer counsellors) were recruited and trained to deliver the modified SASS program in local schools to adolescents at risk for anxiety and depression. One 3-hr training session in anxiety identification, behavioural avoidance, and the importance of exposure specifically during adolescent development was provided to trainees. An additional 3 hr of training prior to implementing the SASS program focused specifically on adolescent social phobia, group counselling methods, and a lesson-by-lesson demonstration of the SASS curriculum.

Four schools agreed to deliver the SASS program. A total of 6 adult leaders and 10 peer counsellors (adolescents) delivered the SASS program in adult/student pairs. Ongoing structured support (check-in forms) and unstructured support (e-mail and telephone correspondence) were provided to group leaders on a weekly basis for the duration of the project.

Participants

Recruitment and referrals. Participant recruitment and referral into the SASS program occurred through school staff and/or self-nomination. All staff (teaching, administration, and support) at participating schools were provided with information about common anxiety symptoms and asked to suggest students for the SASS program. Additionally, peer counsellors (after being selected by school-related adults and trained by the researchers) visited Grades 9 and 10 classrooms to briefly describe the study to solicit self- or peer nominations. The study was also advertised daily over the public address system, in school counselling offices, and in the school newsletter to solicit referrals. Thus, referrals to the study were received from parents, teachers, other school personnel, and students. Referral concerns included a host of anxiety-related symptoms (i.e., social concerns, somatic complaints, specific fears/worries). Any student referred to the program was then invited to participate and had to have active parental consent to join.

Intervention. SASS is a cognitive-behavioural program for teens with social anxiety developed by Masia-Warner and colleagues (1999). SASS was specifically developed as a CBT intervention program that could be delivered in high schools over 12 weeks, with each session lasting approximately 40 min. The school components of the SASS program include psychoeducation, realistic thinking, social skills training, exposure, and relapse prevention. In addition to the school components, there are school-based individual meetings, after-school social events, parent meetings, and teacher meetings. A more detailed description of the SASS program characteristics is provided elsewhere (Masia-Warner et al., 1999; Fisher et al., 2004).

With permission by the developers, the SASS program was slightly modified for the current study. To accommodate the schedule of the school term, the program was condensed into 10 longer sessions of 60 min; the Psychoeducation section (Session #1) and the Realistic Thinking section (session #2) were collapsed into one session, and one of the later exposure sessions was dropped due to the exposure activities (i.e., "social events") outside of school. In addition, two of the four weekend social events (i.e., bowling, going to the mall, playing billiards, laser tag) were included in the modified program. While the two individual check-ins with each participant were retained, the modified program did not include the two parent meetings or the two brief teacher meetings.

Descriptive information of participants. In total, 58 adolescents were referred to the study. Of the total referral sample, 27 adolescents agreed to participate in the study and received parent consent (44% male, 56% female). Teens who were referred but did not participate were not tracked. Participants ranged from 13 to 17 years old ($M = 14.67$, $SD = 1.14$), and attended Grades 8 to 12 ($M = 9.44$, $SD = 1.15$). Approximately half of the participants attended more than six of the 10 sessions ($M = 5.54$, $SD = 2.97$). One participant did not attend any sessions and dropped out of the program; this resulted in 26 total participants. English was the primary language spoken at home for 85% of the participants and is representative of the larger district demographics.

Measures of Anxiety

The *Multidimensional Anxiety Scale for Children* (MASC; March, Parker, Sullivan, Stallings, & Conners, 1997) and the *Mobility Inventory* (Chambless, Caputo, Jasin, Gracely, & Williams, 1985, modified for teens) were used to measure change in symptoms of anxiety. One other measure, which does not yet have normative data (the *Teen Anxiety Scale for Parents*, T-ASP), was developed for the present study purposes. Each measure was administered at the beginning (pretest) and end of the study (posttest).

Multidimensional Anxiety Scale for Children. The MASC (March et al. 1997) is a 39-item self-report measure used to assess a broad spectrum of anxiety. Items are rated on a 4-point Likert scale (*never true to often true*) and the tool is easily administered in a school setting in approximately 15 min. The MASC provides a total score (sum of the 39 items, resulting in scores ranging from 0 to 117), with higher scores indicating increasing anxiety symptoms. Items are distributed across four composite scales: Physical Symptoms (tense/restless and somatic/autonomic; 12 items), Harm Avoidance (perfectionism and anxious coping; 9 items), Social Anxiety (humiliation fears and public performance fears; 9 items), and Separation Anxiety/Panic (no subfactors; 9 items). This factor structure has been cross-validated with community and clinical samples and holds true across gender and age (Baldwin & Dadds, 2007; March et al., 1997; Thaler, Kazemi, & Wood, 2010). The MASC is an empirically derived assessment that has been found to capture clinically relevant anxiety symptoms both at the factor and item level (approximates the *Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, Text revision, DSM-IV-TR*, pediatric anxiety disorders; March et al., 1997). The MASC is widely used with clinical populations; its use in school populations is nascent (for discussion, see Thaler et al., 2010). The MASC manual

converts raw scores to standard T scores and differentiates anxiety in children as follows: 45–55, average; 56–60, slightly above average; 61–65, above average, 66–70, much above average, and scoring above 70 would be indicative of a possible clinical diagnosis (March et al., 1997). All MASC raw total scale, composite, and subscale scores were converted to T scores ($\mu = 50$, $SD = 10$) by gender in order for comparison.

The MASC has reasonable internal consistency, test-retest reliabilities, and satisfactory convergent and divergent validities (Baldwin & Dadds, 2007; March et al., 1997). Cronbach's alpha coefficients for MASC scores from the present sample revealed moderate to strong internal consistency for total score and composites at both pre- and posttests, ranging from .75 (separation anxiety/panic and harm avoidance) to .93 (physical symptoms). Total scale reliabilities for pre- and posttest were strong ($\alpha = .84$ and .92, respectively). Correlations between pre- and post-MASC ranged from .60 (total score) to .65 (harm avoidance). These psychometric properties are consistent with previous research using the MASC (Baldwin & Dadds, 2007; Thaler et al., 2010) and with those reported by March (March et al., 1997).

Teen Anxiety Scale for Parents (T-ASP). The *Teen Anxiety Scale for Parents* (T-ASP) was a pilot measure. The brief checklist (16 items) was developed by the researchers based on DSM-IV criteria for use in identifying teens with anxiety, based on narrow descriptions of anxious behavioural observations (e.g., youth who are shy, nervous, afraid, inhibited). Previous research supports a multi-informant approach to anxiety disorders (Safford, Kendall, Flannery-Schroeder, Webb & Sommer, 2005). This measure takes approximately 5 min to complete. Respondents rate 16 different symptoms on a 4-point scale ranging from 0 (*never*) to 4 (*very often*), resulting in scores ranging from 0 to 64. Higher scores suggest higher levels of anxiety.

Mobility Inventory for Teens. The *Mobility Inventory for Teens* is a revised version of a self-report questionnaire (*Mobility Inventory for Agoraphobia*; Chambless et al., 1985), developed to assess the severity of agoraphobic avoidance associated with symptoms of panic and anxiety. Avoidance behaviours account for a significant portion of the functional disability associated with anxiety problems. This measure takes approximately 5 to 10 min to complete. Respondents rate 39 different situations on a 5-point scale ranging from 1 (*never avoid*) to 5 (*always avoid*), resulting in scores ranging from 39 to 195. Higher scores indicate more severe agoraphobic avoidance. The original version of this measure has shown acceptable levels of test-retest reliability (median $r = .76$, with individual item reliabilities ranging from $r = .48$ to .90) and validity (concurrent and construct validity were demonstrated), and norms have been established for adults (Chambless et al., 1985). To assess levels of functional avoidance during adolescence, we revised the adult version to include additional avoidance items that are developmentally appropriate to teenagers (e.g., school assemblies, sleeping over at a friend's house; see Appendix A).

Measure of Depression

The *Centre for Epidemiological Studies Depression Scale for Children* (CES-DC; Radloff, 1977) administered at the beginning (pretest) and end of the study (posttest), is a 20-item self-report depression inventory, with possible scores ranging from 0 to 60.

Higher scores are indicative of increasing levels of depression. An evaluation of the *CES-DC* by Faulstich, Carey, Ruggiero, Enyart, and Gresham (1986) showed good psychometric properties for adolescents, with adequate scale score reliability ($\alpha = .60$), satisfactory test-retest reliability ($r = .69$), and evidence for concurrent validity with the *Children's Depression Inventory* (Kovacs, 1985; $r = .61$).

Woodward and Fergusson (2001) reviewed the literature reporting that 15.9–61.9% of children with an anxiety disorder also had depression. Some strategies taught in *SASS* are likely to generalise to self-managing symptoms of depression, although depression was not specifically targeted by *SASS*.

Evaluation and Acceptability of SASS Program

Adult leaders, peer counsellors, and program participants were each asked to complete a different version (i.e., based on their role) of a program evaluation questionnaire following the *SASS* program. The adult and peer leader evaluation forms were similar and asked about participating as a leader and program characteristics. There were questions specific to the research team (e.g., accessibility and helpfulness of the researcher team), and to the *SASS* program (e.g., project and manual format, ease of implementation). Response formats were presented in a 5-point Likert-type scale, from 1 (*strongly disagree*) to 5 (*strongly agree*). There were also open-ended questions for leaders to provide additional feedback.

Participant evaluation forms asked participants process-related questions, such as the accessibility and helpfulness of the research team, and *SASS* program content-related questions, such as participants' ability to cope with worries and fears, and level of confidence when speaking to others. The response format followed a similar 5-point Likert-type scale. Questions were presented in a positive and negative format to prevent random responding. There were also open-ended questions to provide additional feedback.

Results

Effect of Intervention

In order to assess Research Question 1, did groups show changes in anxiety symptoms as a result of the *SASS* program, paired *t* tests were conducted to assess differences from pre- to posttest scores for the *MASC* (*T* score), *T-ASP* (total score), and *Mobility Inventory* (total score). Paired *t* tests revealed significant differences between pre- and postassessment on both self-report measures: the *MASC* total anxiety *T* score, $t(1, 23) = 4.20, p < .001, d = .76$, and the *Mobility Inventory for Teens* total score, $t(1, 23) = 2.81, p = .01, d = .57$. In contrast, there was no significant difference detected for the parent measure, the *T-ASP* total score, $t(1, 7) = -.055, p = .598, d = -.10$. Refer to Table 1 for the results of the paired *t* tests. The effect sizes are interpreted using Cohen's (1988) convention with effect sizes $> .6$ considered to be "large," effect sizes between $.3$ – $.5$ considered to be "medium," and effect sizes $< .2$ considered to be "small."¹

Due to the significantly decreased total anxiety *T* score of the *MASC* at posttest, subsequent analysis of the subscales was conducted. There were significant differences detected between pre- and posttest *T* scores for three of the four *MASC* composites: the Social Anxiety composite, $t(1, 23) = 4.91, p < .001, d = .91$, the

Physical Symptoms composite, $t(1, 23) = 3.53, p < .05, d = .54$, and the Harm Avoidance composite, $t(1, 23) = 2.54, p < .05, d = .43$. There was no significant decrease in Separation/Panic scores at posttest.

Of the subscales within these composites, there were differences detected between pre- and posttest *T* scores for five subscales: the Performance Fears subscale, $t(1, 23) = 5.92, p < .001, d = .81$; the Humiliation/Fears subscale, $t(1, 23) = 4.05, p < .001, d = .83$; the Tense/Restless subscale, $t(1, 23) = 3.42, p < .05, d = .56$; the Somatic/Autonomic subscale, $t(1, 23) = 2.56, p < .05, d = .27$; and the Perfectionism subscale, $t(1, 23) = 2.81, p < .05, d = .37$. Only Anxious Coping (within the Harm Avoidance composite) did not show significant decrease, ($M = 8.50, SD = 3.0$, pretest; $M = 7.33, SD = 3.1$, posttest; $t(1, 23) = 1.70, ns$).

In order to assess responses by participants on the depression questionnaire to program participation (Research Question 1), a paired-samples *t* test was conducted to assess differences from pre- to posttest total scores for the *CES-DC*, which revealed statistically significant differences in adolescent-reported depression symptoms between pre- and postassessment, $t(1, 23) = 3.20, p = .004, d = .58$ (see Table 1).

In order to assess program social validity (Research Question 2), following the program, five of the six adult leaders (83%) and 8 of the 10 peer counsellors (80%) completed the evaluation forms. See Table 2 for average ratings on the program evaluation form.

Overall, the training program was well received and positively rated by adult leaders. Adult leaders reported that they liked the *SASS* program, and they provided positive feedback regarding the layout of the *SASS* program and instructions on how to deliver the program. Leaders also reported that they enjoyed the experience of cofacilitating a school-based prevention/intervention program and liked the opportunity to interact with students who experience high rates of anxiety. The peer counsellors reported being keen to learn about the symptoms of anxiety as well as to learn anxiety-management skills to support their peers in the *SASS* program.

All suggestions on how to improve the *SASS* program were related to the availability of materials, scheduling of sessions, and the format in which the *SASS* program was presented. Adult and peer leaders reported that they felt somewhat overwhelmed with the amount of information that they had to cover in the program.

Participant Evaluation

Participants were also asked to complete an evaluation form at the end of the *SASS* program to provide feedback on their experience. Of the 26 participants, 19 participants (73%) completed the postgroup evaluation. Overall, participants provided positive evaluation of the program (see Table 3).

Although the small sample limits conclusions, a review of the open-ended feedback shows that boys reported that they were more aware of internal anxiety cues ("learned how to make myself feel better" and "how to deal with anxiety and stress through breathing and relaxation techniques"). Girls, on the other hand,

¹ It is of note that corrections were not made to the multiple comparisons (i.e., using the Bonferroni correction or other mathematical approaches). Justifications for not correcting for multiple comparisons are discussed in Saville (1990).

Table 1
Pre- and Posttest Paired Samples Results for MASC, T-ASP, Mobility Inventory, and CES-DC

Measures	Pretest <i>M</i> (<i>SD</i>)	Posttest <i>M</i> (<i>SD</i>)	<i>t</i>	<i>d</i>	<i>N</i>
MASC total	54.08 (15.9)	40.63 (19.2)	4.20**	0.76	24
MASC composites					
Separation/Panic	4.54 (3.2)	3.41 (4.0)	1.56		
Physical Symptoms	14.70 (9.0)	10.79 (8.9)	3.53*		
Harm Avoidance	16.16 (5.1)	13.87 (5.6)	2.54*		
Social Anxiety	18.66 (6.2)	12.54 (7.2)	4.91***		
T-ASP	20.88 (3.56)	21.25 (3.73)	-0.55	-0.10	8
Mobility	2.18 (0.62)	1.83 (0.61)	2.81**	0.57	24
CES-DC	25.88 (14)	18.04 (13.2)	3.20**	0.58	24

Note. MASC = Multidimensional Anxiety Scale for Children (T-score); T-ASP = Teen Anxiety Scale for Parents; Mobility = Mobility Inventory for Agoraphobia (adapted for adolescents); CES-DC = Center for Epidemiological Studies Depression Scale for Children.

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

reported that they were more responsive to social cues from the environment ("how to be assertive vs. aggressive" and "increased confidence").

Discussion

General Discussion of Findings

The overall goal of this study was to investigate the effectiveness, transportability, and dissemination of a school-based social-emotional intervention program (*Skills for Academic and Social Success*; SASS modified) on decreasing symptoms of anxiety and depression in at-risk adolescents. A secondary goal of this study was to gain an understanding of how the study and the modified SASS program were experienced by the adult and peer counsellor facilitators, and by the participants themselves in terms of practical implementation issues, satisfaction and relevancy, and perceived skills acquisition (i.e., social validity). The research findings revealed that after participating in the SASS program, participants reported a reduction in symptoms of anxiety on the MASC (with a large effect) and reduced anxious avoidance on the *Mobility Inventory* (with a medium effect.) Upon further analysis of the MASC, the greatest differences post intervention were found for the Social Anxiety composite, with large effect sizes detected across the two subscales (Humiliation Fears and Performance

Fears) within this composite. This was an important finding given that the SASS program specifically targeted social anxiety in adolescents. If this brief school program can lead to reductions in social anxiety symptoms, perhaps schools can help avert totally inhibiting anxiety leading to what Hofmann (2010) labels a type of self-imposed "prison."

It is worthwhile to note that significant changes (with medium effect sizes) were detected for the Physical Symptoms and Harm Avoidance composites. Within these two composites, there were also medium effect sizes detected for the Tense/Restless and Perfectionism subscales, respectively. Perfectionism, in particular, can be difficult to reduce; current treatments may result in bringing self-reported perfectionism into the normal range, but not with all research subjects. Driven teens who believe that they must be perfect may also harbor a host of other irrational beliefs that may exacerbate their distress and contribute to more anxiety and/or depression (Flett & Hewitt, 2008). The only two subscales that did not show significant change from pre- to posttesting were the Anxious Coping and Separation Anxiety subscales. The nonsignificant change from pre- to posttesting for the Anxious Coping subscale was surprising given that participants reported on the program evaluation form that felt they were better able to cope with their fears and worries. Similarly, students self-reported significantly decreased symptoms of depression (CES-DC), especially important given the high comorbidity between anxiety and depression and the research suggesting that anxiety can be a precursor or risk factor for mood disorder (Stein et al., 2001).

In contrast to these positive self-report results, the pilot instrument, *Teen Anxiety Scale for Parents* (T-ASP), did not show significant change in adolescent anxiety, as reported by parents. This can likely be due to a few factors. As the T-ASP was a pilot measure, there is no information concerning the psychometric strength of this measure. There were only 16 items used to capture DSM-IV criteria for an anxiety disorder; thus, it is unclear to what extent this measure was able to discriminate accurately and precisely between adolescents who are in the clinical range for an anxiety disorder and ones who are at a subclinical level.

Further, research shows discordance between parent and adolescent anxiety ratings, especially for social phobia (Grills & Ollendick, 2003). The findings from our study did not show a correlation between parent rated anxiety (T-ASP) and adolescent

Table 2
Means and Standard Deviations for Adult/Peer Leader Program Evaluation Data

Item	<i>M</i>	<i>SD</i>	<i>N</i>
University research staff accessible	4.50	(0.76)	8
Research staff helpful	4.30	(0.95)	10
I enjoyed delivering program	4.17	(0.58)	12
Think participants in group benefited from program	3.69	(0.75)	13
Manual well laid out and useful	3.62	(0.77)	13
Participants enjoyed program	3.50	(0.67)	12
Project well organized	3.38	(0.96)	13
Program easy to implement	3.33	(0.98)	12

Note. 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree.

Table 3
Means and Standard Deviations for Adolescent Program Evaluation Data

Item	<i>M</i>	<i>SD</i>	<i>N</i>
I will use the skills I learned in this group in the future	4.32	(0.89)	19
I like that the peer counsellors were part of the group	4.21	(0.98)	19
I feel more confident when speaking to strangers/authority	3.89	(0.74)	19
I am more aware of my negative thoughts	3.89	(1.15)	19
I would recommend this group to a friend	3.84	(1.34)	19
The social events were helpful in practicing my new skills	3.81	(0.83)	16
I know how to cope better with my worries and fears	3.76	(1.01)	19
Learning about thought intruders was helpful	3.74	(0.87)	19
I know how to calm myself down	3.68	(0.10)	19
I am more aware of my nonverbal behaviour	3.61	(1.24)	18
I feel more comfortable speaking up in class	3.50	(0.87)	19
The progressive muscle relaxation exercise was useful	3.22	(1.11)	18
The relaxed breathing exercise was useful	3.21	(1.13)	19
The group was a waste of time	1.37	(0.60)	19

Note. 1 = Totally Disagree; 2 = Disagree; 3 = Somewhat Agree; 4 = Agree; 5 = Totally Agree.

rated anxiety (*MASC*), thus concurring with some studies (Jensen et al., 1999). Although discrepancies are commonly found between adolescent and parent ratings of anxiety disorders, asking multiple informants to rate an adolescent's anxiety remains useful so that we can gain multiple perspectives of the problem and strategically plan for intervention (Grills & Ollendick, 2003; Jensen et al., 1999).

In the sample of 27 participants, seven students (26%) obtained a *MASC T* score at or above 65 at pretest; *MASC T* scores at or above 65 are considered to be in the "clinical range." At posttest, five of the original seven students no longer scored in the clinical range (i.e., $T < 65$), while two of the original seven continued to score in the clinical range and were therefore referred to local community-based mental health centers for additional intervention. Given the duration of the program (10 weeks) and the use of school staff and students with limited training in anxiety and program delivery specifically (i.e., counsellors/youth workers and peers), this finding of program effectiveness for five of seven of self-reporting clinically anxious students responding postintervention in the nonclinical range is exciting.

In a program evaluation survey conducted at the conclusion of the study, leaders reported liking and enjoying implementing the program, despite a "too school-like" format at times. A suggestion was made to increase the number of sessions so as not to feel so rushed through important skills and also to include more social exposure activities during school time. Adolescent participants reported learning consistent with the goals of the program and, in particular, liked having peer leaders involved and indicated their intention to use skills acquired in the *SASS* program in the future.

The use of peer counsellors in school-based intervention programs is a cost-effective way to address the increasing demands for school counselling service (Whiston & Sexton, 1998). Peer counselling is also a promising approach to delivering school-based interventions, given the positive effect peers can have on each other (e.g., acting as positive role models and providing exposure to positive peer relationships). Evidence suggests that the skills students learn in peer counselling are transferred to other settings outside of the school, such as using conflict resolution strategies in the school and home (Johnson, Johnson, Dudley, Ward, & Magnuson, 1995).

Transportation and dissemination of *SASS*. This study advances the use of evidence-based interventions in natural settings. The dissemination of evidence-based programs to larger populations in naturalistic settings such as schools and communities, and evaluating outcomes, is a key step in knowledge translation in demonstrating the effectiveness of an evidence-based program (Kratochwill & Shernoff, 2004).

There are four types of research that are needed to validate evidence-based practices in the schools: efficacy, transportability, dissemination, and system evaluation (Chorpita, 2008). Currently, efficacy studies are most prevalent in the field, with some examples of transportability studies. However, dissemination and systems evaluation evidence are much less frequent. The current study contributes to the transportability and dissemination evidence required to validate evidence-based practices when delivered in schools.

The results of the current study reveal that at-risk adolescents participating in the *SASS* program showed a reduction in anxiety, behavioural avoidance, and depression symptoms from pre- to posttesting. These positive findings with a Canadian sample replicate the results that have been documented by Masia-Warner and colleagues (2005) in the United States. Uniquely, the study provides preliminary evidence to support the role of peer counsellors in assisting with delivery of programming for social anxiety intervention.

Limitations and Future Directions

As an "open trial" with no control group, future studies would benefit from inclusion of such groups for comparison. Further, despite considerable interest at the recruitment stage and numerous referrals, the small final sample size limits the conclusions (Pentz, 2004; Smolkowski et al., 2005). Overall, students were reluctant to attend the *SASS* program, despite incentives (e.g., food) to participate. We did not inquire as to what contributed to low participation in this study. Given that outcomes have been found to be directly correlated to attendance in intervention groups (Beauchaine, Webster-Stratton, & Reid, 2005), there is a need to focus on increasing participation rates.

Several initiatives are suggested to increase participation in the SASS program. One way is to deliver the program on a universal level (i.e., offered to the all students within the school system). Paying attention to specific issues that are related to contextual fit of a program is another way to increase participation rates (suggested by Castro, Barrera, & Martinez, 2004). One interesting way to advance understanding of the challenges specific to participation would be to employ a qualitative research framework to investigate barriers and reluctance to participate in SASS groups, as well as provide process data on implementation issues. Such research may provide information as to how implementation and sustainability of social-emotional programs in public schools can be improved in the future and whether systems supports (e.g., structuring school activities around SASS groups, providing transportation to and from meetings) would ensure greater participation. A focus on both the outcomes and the process of implementing evidence-based programs in school settings is warranted.

A final limitation with the SASS group has to do with the variability in how the SASS program was implemented, as there was no measure of implementation fidelity. Given that adult and peer leaders reported that they felt overwhelmed, at times, with the amount of information presented in the program, one 6-hr training session may be insufficient, and leaders may need more ongoing support and training, especially initially in program implementation. Future research should be directed at understanding how best to support school personnel in implementing school-based CBT programs.

Résumé

Les programmes de prévention/intervention pour les troubles anxieux, la forme la plus courante de détresse psychologique rapportée chez les enfants et les adolescents, sont cruciaux puisque l'anxiété a été associée à une multitude d'effets néfastes sur la vie. Cette étude vise à évaluer la possibilité de transporter et répandre le *Skills For Academic and Social Success (SASS)*, un programme d'intervention précoce qui peut être mis en place dans les écoles secondaires et qui vise à réduire les symptômes d'anxiété chez les adolescents. Un total de 27 adolescents de l'école secondaire ont participé. Les professeurs et des conseillers ont été entraînés pour mettre sur pied une version modifiée du SASS, sous forme de sessions de 60 minutes. Les résultats ont révélé que les adolescents à risque ayant participé au programme SASS montraient une réduction de leur anxiété, de leurs comportements d'évitement et de leurs symptômes dépressifs entre les pré- et post-tests, ce qui appuie la possibilité de transporter et répandre le programme SASS dans les écoles secondaires. Les limites de l'étude ainsi que les directions futures sont discutées.

Mots-clés : anxiété, dépression, adolescents, thérapie cognitive-comportementale, interventions en milieu scolaire

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(Appendix follows)

Appendix

ID#: _____

Date: _____

Mobility Inventory* Modified for Teens

Please indicate the degree to which you avoid the following places or situations because of discomfort or anxiety. Rate your amount of avoidance when you are alone. Do this by using the following scale:

1	2	3	4	5
Never Avoid	Rarely Avoid	Avoid about half the time	Avoid most of the time	Always Avoid

Write your score in the blanks for each situation or place when alone. Leave blank those situations that do not apply to you.

PLACES:

When alone

Movie Theatres*	
Classrooms	
Shopping malls or department stores*	
Restaurants	
Library*	
Elevators	
Auditoriums, stadiums, or gymnasium*	
Parking garages	
High Places (how high?)	
Enclosed spaces (e.g., tunnels)	
Arcades*	
Amusement Parks/Rides*	

OPEN SPACES:

When alone

A. Outside (e.g., fields, wide streets, courtyards)	
B. Inside (e.g., large rooms, lobbies)	

(Appendix continues)

1 2 3 4 5
 Never Rarely Avoid about Avoid most Always
 Avoid Avoid half the time of the time Avoid

RIDING IN:

When alone

Buses	
Trams (e.g., Sky tram or subways)*	
Airplanes	
Boats or ferry*	
Driving or riding in a car at any time	

SITUATIONS:

When alone

Standing in lines	
Crossing bridges	
Parties or social gatherings	
Walking on the street	
Staying at home alone	
Being far away from home	
School assemblies *	
Field/Class Trips (for the day)*	
Class Trips (overnight)*	
Eating in the Cafeteria*	
Eating alone*	
School dances*	
Playing Sports *	
Concerts*	
Getting Driver's License*	
Participating in Physical Education classes*	
Sleepovers*	
Waiting for school bus*	
Giving class presentations/speaking in front of others*	
Music-related Activities (e.g., band, choir)*	
Other (specify)	

* Denotes items added to Mobility Inventory for current research.

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