The ABCs of CBT (Cognitive Behavior Therapy): Evidence-Based Approaches to Child Anxiety in Public School Settings

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This study evaluated a locally developed cognitive behavior therapy (CBT) intervention program in a public elementary school. In the prevention approach, 118 children were randomly assigned either to an 8-week intervention or to a wait-list control. Results of statistical analysis indicated that the manualized CBT intervention did not reduce symptoms of anxiety on either self-reports or parent reports of anxiety symptoms in the general school population. Challenges to translational efforts to public school settings are discussed.

Anxiety disorders are well recognized as the most common psychological problem of children, adolescents, and adults. Pediatric prevalence rates of anxiety vary from 10% to 22% (Dadds, Spence, Holland, Barrett, & Laurens, 1997; Muris, Merckelbach, Mayer, & Prins, 2000), with a lifetime rate estimation of 28.8% (Kessler et al., 2005). Kendall (1994) and others suggested that anxiety disorders are not transient and, in the absence of treatment, can be associated with negative long-term complications (Kendall, Suveg, & Kingery, 2006; Sareen et al., 2005). By the time a child presents for treatment, deleterious effects have most probably already occurred in subtle ways (e.g., lower self-confidence, increased feelings of frustration) and may well lead to more gross and negative trajectories; childhood anxiety is predictive of other anxiety disorders, major depression, suicide attempts, alcohol abuse, and nicotine dependence (for review, see Ost & Treffers, 2003).

Anxiety symptoms in children can be relentless as they gradually interfere with or steal away normative, developmentally appropriate activities, relationships, and achievements. Parents, exhausted by trying to parent these sensitive children, vacillate between natural attempts to comfort them and complete exasperation when, for example, their child will not go to school in the morning. The school is frustrated with the episodic attendance of these youth. Parents feel blamed; often they are suspected of poor parenting skills or of having "something wrong at home," thus increasing their feelings of incompetence and despair. Anxiety disorders have a familial pattern as well, compounding family feelings of culpability.

Given the high prevalence of anxiety in children, the likely persistence of the disorder over time, the association with depression and other distressful outcomes, and the significant cost to the health care system (Stephens & Joubert, 2001), it is important to recognize anxiety early and to implement prevention programs. Researchers, clinicians, and the community are increasingly implementing and evaluating prevention efforts targeting mental health concerns in school settings. The research base for prevention programs reveals that there are significant challenges involved in implementing evidence-based mental health programming in the schools. Evans and Weist (2004) have reviewed not only the many challenges of introducing evidence-based approaches into school settings but also the program evaluation concerns of moving treatments from research trials (efficacy), to clinics (effectiveness), to schools (see also Owens & Murphy, 2004). Success of prevention programs is mixed, despite being widely implemented (e.g., the failure of the widely implemented and fully funded Drug Abuse Resistance Education [DARE] program; Ennett, Tobler, Ringwalk, & Flewelling, 1994). Merry, McDowell, Hetrick, Bir, and Muller (2003) reviewed four studies of depression prevention and found that a universal school-based approach was not effective in preventing depression. Sheffield et al. (2006) reached a similar conclusion in their study of approaches to prevention of depression among adolescents.

There is clearly an appetite in schools for psychosocial programming, a documented need to attend to children's social/emotional development and its resultant academic effect, and a call for a model of transporting evidence-based psychological approaches to larger populations in a preventive fashion. Federal policies are increasingly requiring the use of evidence-based programs in schools (Robertson, David, & Rao, 2003). This convergence of (a) recognition of increased mental health concerns in youth populations, specifically anxiety disorders; (b) a focus on prevention programming in school settings; (c) the development of a model to support evidence-based approaches;

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and (d) recent governmental policy initiatives makes examination of school-based prevention programs and translation efforts focused on school children with anxiety an important task.

Unique Issues Affecting Youth

Anxiety has both private and public symptom expression and, thus, can be tricky to diagnose, especially in youth. The child may not recognize the physiological symptoms and may misinterpret them as illness, and family members may view the refusal behavior or temper tantrums as oppositionality. Children with anxiety do not overtly affect non-family members and tend to be avoidant and often ashamed; they are frequently underrecognized and untreated. In contrast, externalizing disorders such as attention-deficit/hyperactivity disorder or oppositional difficulties tend to be more disruptive, are more easily observed, and may have a direct effect on others. Individuals affected with externalizing disorders are recognized and referred to mental health practitioners more often than individuals with anxiety disorders and have also been the topic of considerable research focus (Compton et al., 2004; In-Albon & Schneider, 2007).

Two treatment approaches for dealing with anxiety disorders currently have empirical support: pharmacological and psychological. Pharmacological intervention, for example, use of antidepressant selective serotonin reuptake inhibitors, is receiving much negative press because of alarming side effects in young people. The effects of increased suicidality in adolescents with depression have resulted in this largest class of medications recommended for anxiety treatment for children and youth now carrying a "black box" warning (Bridge et al., 2007). This has resulted in an increased demand for psychological service. Families in general demonstrate a preference for nonmedication interventions for their children at initial evaluation (Walker et al., 2001). Cognitive behavior therapy (CBT) is the psychological treatment of choice for internalizing disorders for most children (Compton et al., 2004; In-Albon & Schneider, 2007). As the medication debate simmers, the problem of treatment is exacerbated by the well-documented lack of CBT therapists (Andrews & Wilkinson, 2002).

How to Transport Clinical Treatments to School Sites?

The majority of the research on childhood anxiety has focused on individual cognitive behavioral treatment in clinical settings, showing that CBT can be effective for as many as 70% of clinically referred children with anxiety (see In-Albon & Schneider, 2007). Recently, group CBT has been adapted and evaluated as a group school-based intervention (Barrett, & Turner, 2001; Masia, Klein, Storch, & Corda, 2001; Stallard, Simpson, Anderson, Hibbert, & Osborn, 2007).

However, as Andrews and Wilkinson (2002) in Australia rightly suggested, "the problem is not efficacy (CBT works), but effectiveness in routine practice" (p. S98). As more treatments for many behavioral health issues are "translated" from the clinical settings to schools, the evidence for effectiveness is mixed. Depression, obesity, conduct disorder, bullying, and other targets of intervention with preventive approaches are being studied. Although many school prevention programs are showing promise across these domains, research is still preliminary and inconclusive. Many groups have been studying this research-to-practice gap, or the question of how to translate efficacious programs from research to school and community settings (see Andrews & Wilkinson, 2002). Essentially, the same factors worthy of investigation in clinical trials (e.g., treatment fidelity, therapist characteristics, client characteristics, dose/response) are relevant in school trials.

Pros and Cons of School Setting Factors for Treatment Intervention

The school system is primarily concerned with the academic training of children. Teachers are not trained in mental health identification or remediation and will vary regarding their valuation of affective or prevention programs, their preparation of related lessons, their commitment to delivering these lessons with enthusiasm, and their ability to engage all students in the classroom. School counselors may be better prepared to offer social emotional curricula because of their training in psychoeducational programming, their ability to estimate ethical concerns, and their comfort with emotional topics.

Classroom intervention for anxiety has practical significance, however. First, teachers are in a unique position to help identify anxiety in children and to implement early intervention. Classroom teachers may have an advantage over school counselors merely because they see students in classrooms more frequently given the lower teacher:student ratios versus counselor:student ratios. Second, school is the children's natural environment, so having treatment in this setting "should provide optimal opportunity for meaningful change" (Masia et al., 2001, p. 783). Furthermore, the teachers will know what skills and techniques the children are learning, offering repeated opportunity to practice newly acquired skills. Teachers may also have an advantage over school counselors who often split time between various elementary schools or have caseloads of hundreds of youngsters. Third, by allowing school staff to disseminate the intervention program through the classroom, it becomes "a cost- and time-efficient means of service delivery" (Barrett & Turner, 2001, p. 401). Finally, having the intervention in school provides access to peer support; talking about anxiety while experiencing mutual support from their friends may provide the children with a sense of acceptance, a sense of belonging, and a decreased sense of isolation as their fears are normalized.

Translation of the Clinical Manual to a Classroom Prevention Curriculum Guide

In discussing implementation of a manualized program for anxiety disorders with children and youth, Albano and Kendall (2002) recommended a "flexible, clinically sensitive, and

developmentally appropriate" (p. 131) application of CBT. Other program developers have recommended a culturally sensitive approach to materials to enhance social validity. Taming Worry Dragons (TWD; Garland & Clark, 2000) is a locally developed clinical CBT program for anxiety disorders that uses language, pictures, and images familiar to North American children. Because TWD has been established as clinically effective, the authors of the program made the program materials available to school environments. Increasingly, school counselors and community clinicians have adopted the program, despite the lack of any evidence of its effectiveness in the school setting. As a research project, we modified the TWD clinical booklets (i.e., the leader's manual and the child workbook) for use in a school friendly classroom program. The research we present in this article supports the authors of the American School Counselor Association (2003) National Model, who have suggested that accountability data must be collected to appraise the efficacy of program interventions, activities, and services.

Lowry-Webster, Barrett, and Dadds (2001) had established that teachers demonstrated efficacy equivalent to that of clinical psychologists as program leaders in private schools using a CBT manualized program in Australia. Our study was to be conducted in the public school domain, with teachers as program leaders. The locally developed program was widely used and recognized in our community, which we anticipated would increase school adoption.

The TWD clinical program's main orientation presumed a familiarity both with anxiety as a mental health issue and with running clinical mental health groups for children. The revised clinical manual, modified for public school classrooms, shifted the emphasis from clinician to classroom teacher and his or her classroom management skills and ability to deliver new information to a population larger than what is normally experienced in the clinical setting. To accommodate this shift in emphasis, the classroom manual was reformatted by providing an introductory section on information about anxiety, establishing a table of contents, constructing a common curriculum for each classroom session (e.g., appropriate warm-up, new skill, review of last week's lesson), suggesting tips for classroom implementation, anticipating time allotments for each activity, and providing reproducible materials for the children's "detective" work (e.g., homework). The clinical language used in the original TWD program was removed and was replaced with more teacher friendly language, such as changing the phrase "clinical levels of disorder" to "elevated symptoms of anxiety."

Method

Participants

We contacted the superintendents of eight school districts within geographic driving distance in a large metropolitan area to take part in the study. Only one district agreed to bring the research opportunity to their district personnel for consideration (other districts declined because of calendar pressures, focus on other curricular interventions, too many changes in personnel, etc.). Thirty-five elementary school principals (K–7) in the participating large suburban school district were invited to enroll in this research project. Of the 35 elementary schools, 17 expressed interest in participation. Three of these schools were then randomly selected and randomly assigned to either the TWD program protocol condition or to the wait-list control condition. This school district's demographics indicated a population that spoke English in 88% of homes, had 14% single-parent households, and an unemployment rate of 5.5%.

Parents of all children ($N = 162$) from the classes were informed of this project by a letter and were asked to give their consent for their children to participate. All children in the classroom received the program, but data were used only from children whose parents had given consent. The university ethical review board approved this procedure.

The final sample of participants in the study consisted of 116 students (46 children did not return consent forms to participate in the study, for reasons unknown): 73 students in the TWD intervention group and 43 in the wait-list control group (imbalance in groups was attributed to randomization by school, which produced different numbers of classrooms involved in each of the conditions). Of the 116 participants, 58 were girls and 58 were boys, average age = 9.75 years (a range of 7 to 12 years).

TWD Program Leaders and Training

Five female teachers and one female school counselor (who was not available to facilitate the program because of other obligations) were trained in a 1-day, 6-hour workshop of the newly revised TWD program for classrooms. The teachers were all "veterans," with an average classroom teaching history of 9 years. No other demographic data were collected from the teachers. A clinical psychologist (fourth author, also one of the program authors) from the local children's hospital conducted this full-day workshop. The training day was largely didactic instruction provided by the program author. The morning consisted of explaining the etiology of anxiety, overview of subtypes, behavioral descriptions of each subtype, research results from early intervention programs, and a brief overview of cognitive behavioral principles. In the afternoon, a step-by-step instruction in each lesson allowed the teachers to practice the TWD program via role plays and actual activities. During the course of the program, the research team (first and second authors) made weekly telephone calls to each teacher in the intervention to clarify any points in the program, to help negotiate problems (these were largely administrative problems, such as needing more workbooks or having to delay the program 1 week because of testing and field trips), and to maintain his or her enthusiasm.

Assessments

Data were collected to screen for participants' anxiety symptoms at two time points: prior to implementation of the program and 9 weeks following the active treatment (i.e., TWD intervention). The Multidimensional Anxiety Scale for Children (MASC; March, 1997) is a 39-item self-report checklist for children that measures physiological symptoms, worry, and inattentiveness associated with anxiety problems and produces an overall anxiety score and a lie score. The MASC has a test–retest reliability of .79 in clinical samples and .88 in school-based samples (March, Sullivan, & Parker, 1999).

The Behavior Assessment System for Children–Parent Rating Scales (BASC-PRS; Reynolds, & Kamphaus, 1992) is an easily administered and quick to score measure for parents that assesses their perception of a wide range of child behavior, with a test–retest reliability of .70 to .88; the internal consistencies of the scales are in the middle .80s to low .90s. Types of scores produced are both percentile ranks and T scores. This study only made use of the BASC-PRS subscales for internalizing disorders; the instrument quantifies internalizing problems into the following subscales: Anxiety, Depression, and Somatization (collectively named the Internalizing Composite [BASC-PRS-IC]).

Information sheets outlining the aims and objectives of the study and describing the prevention program, the consent forms, and the assessment instruments (i.e., BASC-PRS, MASC) were sent home to all parents via each child. The children returned the forms in a sealed envelope (provided with the package) and placed it in a bag in their classroom to be collected by the researcher. The teachers did not know which children were active study participants (i.e., had parental consent for data collection). The data were not analyzed for the children whose parents did not consent to being part of the project (the TWD program was applied during class time). No parents asked to have their child withdrawn from the program. All children completed the confidential MASC questionnaire in class, administered by the research team. The school counselor's role was only to help organize time for the assessments.

Intervention

TWD is a CBT clinical program that teaches children to deal with anxiety using physiological, cognitive, and behavioral strategies (Garland & Clark, 2000). The group-based treatment program focuses on assisting children to learn and to practice various tools (e.g., thought-stopping, distraction, physical exercise, changing self-talk, and exposure) to cope with anxiety. The psychoeducational component of the program includes teaching children the connections between life experiences and anxious habits or negative cognitions to increase self-awareness. A cognitive component helps the children realize how negative self-talk and catastrophizing perpetuate anxiety, as well as how to make more accurate and positive evaluations and predictions about day-to-day life experiences. The program helps to externalize the children's anxiety; it involves an imaginative reconceptualization that allows the children to talk about worries separate from themselves.

The program uses positive reframing and creative imagery to conjure up the idea of "worry dragons" that are in children's minds and, therefore, need to be tamed using a variety of tools taught in the program (Garland, 2002). The implication in the program is that "worry dragons" need to be tamed, not slain, because at controlled levels, anxiety is an adaptive emotion and behavior.

After the completion of the training workshop and the preintervention administration of assessments, the two schools randomly assigned as the treatment group (i.e., four classrooms) began implementing the TWD program (Garland, Clark, & Short, 2004). Each of the five trained teachers delivered the program to all the children in intact classrooms during the school day.

To determine the integrity of the intervention protocol, all teachers were required to complete a checklist at the end of each session indicating the level of compliance in following the manual's session content. They were asked to respond on a Likert scale with one of five possible responses: *strongly disagree, disagree, neutral, agree,* and *strongly agree.* All teachers reported not being able to complete the entire lesson in the time allotted and needed to extend the program beyond the week that had been designated.

Following the completion of the intervention program, all students (TWD intervention participants and wait-list control group) again completed the MASC questionnaire, using the same standardized instructions that were used for the prescreening, and a letter was sent home to participating students' parents for them to complete the postintervention BASC. Participating students returned the completed BASC in a sealed envelope. After the postintervention data were collected, the wait-list classes then received the TWD program.

After completion of the program by all students (i.e., TWD intervention participants and wait-list control group), the parents of children who had scored in the clinical range on the MASC (T = >70) were informed by telephone of the elevated score, and a follow-up letter was sent to them; the letter included further information on anxiety and contact information for community professionals who might offer support to their child.

Data Analysis and Results

This study investigated the impact of the TWD protocol by randomly assigning classrooms of 116 schoolchildren (Grades 3 to 7) to either a TWD intervention program (n = 73) or a wait-list control group (n = 43). (Differences in return rate of assessments [n = < 5] vary because of natural child absences in the classroom. See Table 1.) Potential differences between the two groups (TWD intervention program and wait-list

TABLE 1

Descriptive Statistics for Total Sample (N = 116) and At-Risk Participants (n = 33) According to Testing Condition and Time

	Total Sample					At-Risk Participants				
		Pretest		Posttest			Pretest		Posttest	
Variable	*n*	*M*	*SD*	*M*	*SD*	*n*	*M*	*SD*	*M*	*SD*
Taming Worry Dragons program protocol condition (n = 73)										
Multidimensional Anxiety Scale for Children	73	51.04	11.44	48.92	10.86	22	63.76	8.15	57.12	7.45
Behavior Assessment System for Children–Internalizing Composite	69	50.71	11.33	48.48	10.79	22	55.27	9.80	54.55	12.52
Wait-list control condition (n = 43)										
Multidimensional Anxiety Scale for Children	42	47.65	12.67	45.09	14.10	11	64.93	8.52	64.61	11.95
Behavior Assessment System for Children–Internalizing Composite	46	50.78	12.20	47.28	11.83	9	58.11	16.88	56.11	16.82

Note. At-Risk Participants = a subset of children whose Multidimensional Anxiety Scale for Children scores were in the at-risk range for developing an anxiety disorder or indicated that they were already symptomatic.

control) were assessed at pretest. No significant differences were found between the groups on age, gender, or symptom scores (MASC self-report or BASC-IC parent report).

Means and standard deviations for participants according to both group (testing condition) and testing time are presented in Table 1. To investigate the impact of the TWD protocol, we conducted 2 (time: pretest/posttest) × 2 (testing condition: TWD/wait-list control) mixed factorial analysis of variance (ANOVA) designs. When MASC scores were used as the dependent variable, neither the interaction nor the main effect of testing condition emerged as significant. A small main effect of time was found, $F(1, 113) = 7.97$, $p < .01$, $\eta^2 = .07$, with participants reporting lower MASC scores regardless of testing condition. Similar results were found with the BASC-IC scores as the dependent variable. The interaction and the main effect of testing condition were not significant, although time was significant, $F(1, 103) = 11.31$, $p < .001$, $\eta^2 = .10$, with reductions of BASC-IC scores again being reported at posttest.

We subsequently conducted the same statistical analyses post hoc, using only participants who were identified as either at risk or clinical (MASC T score > 56). Means and standard deviations for at-risk participants are presented in Table 1. We conducted a 2 × 2 mixed factorial ANOVA with MASC scores as the dependent variable, and neither the interaction nor the main effects emerged as significant. However, nonsignificant trends emerged for both time, $F(1, 31) = 3.31$, $p < .08$, $\eta^2 = .10$, and testing condition, $F(1, 31) = 2.79$, $p < .011$, $\eta^2 = .08$. When the BASC-IC scores were used, no significant differences were found for the interaction or for the main effects of time and testing condition.

Given that the sample size of at-risk participants (n = 33) was notably lower than the size of the total sample (N = 116), the power of the factorial ANOVA was reduced. Thus, we conducted additional analyses of covariance (ANCOVAs) to assess the impact of test condition (TWD group vs. wait-list control group) at posttest, with pretest scores as the covariate. We found a significant difference in MASC scores, $F(1, 30) = 4.67$, $p < .05$, with participants in the TWD group reporting lower scores at posttest than did wait-list control participants. When BASC-IC scores were used as the dependent variable, we found no significant difference between TWD and wait-list control participants at posttest, $F(1, 28) = 0.02$, *ns*.

Discussion

This study was carried out as an initial attempt to implement and evaluate a locally developed CBT intervention targeting anxiety symptoms for children (ages 7 to 12 years) in a universal public school classroom setting and delivered by teachers. The use of the cluster randomized control design indicated that the manualized CBT intervention did not show significant reduction in symptoms of anxiety within the general population of school-age children on either the self- or the parent report.

In an analysis of a subset of children whose scores fell into the at-risk range (for developing an anxiety disorder or already symptomatic), the results for the children who reported moderate to severe anxiety symptoms indicate that there was a trend toward symptom reduction. Only when we conducted a separate analysis (ANCOVA) did we see significant effect of the intervention, but this finding must be viewed with caution because of reduced power and limited sample size. Perhaps the most confident statement that can be made about the results is that TWD holds promise for symptomatic children in reducing self-report anxiety symptoms when the program is delivered in universal settings by teachers. The scores of the subset of at-risk children in the wait-list control condition did not change on the self-report measure during this time. If a trend toward symptom reduction can be determined such as was seen in this pilot study with a group format and with such a short window for symptom reduction (9 weeks), this should be acknowledged as hopeful.

The main effect of time for the groups (both intervention and wait-list control) demands attention. This program was offered in the second half of the school year. Quite possibly,

the environmental effects of a relaxed classroom atmosphere, increased confidence in a school grade, and maturational effects of participants that might be expected at this time during the school year need to be considered. A more subtle effect that was not evaluated was teachers' increased ability to recognize anxiety symptoms in children. It is already known that teachers are the most frequent sources of referral for children with attention-deficit/hyperactivity disorder (Sax & Kautz, 2003). It would make sense that the more teachers are able to better understand the behavioral symptoms of anxiety, the more likely they may be to refer children with anxiety to community counselors (see Miller, 2008, for fuller discussion of implications for counselors).

The results of this study do raise questions about the viability of this program, as administered by teachers, to induce a measurable benefit with a general class population in the public school system if finances and time constraints predominate. These findings suggest that it may be premature to determine for individual schools whether an intervention should focus on the at-risk and clinical subgroups within school populations or whether a universal (and therefore larger budget item) approach should be used, which may have less relevance to most students and may result in a false negative outcome in studies of efficacy.

We included in this study both a student and a teacher questionnaire to capture qualitative data (i.e., social validity) in response to the TWD program. A majority of the students reported that they enjoyed learning the relaxation techniques, especially deep breathing and imagining a peaceful place. Most of the students were able to identify at least one of the skills that they found helpful in the program, and a few commented that they were "less scared" now of things because they had ways to calm themselves.

Comments from the five teachers included reports on how the program appeared to help students see that others have anxiety (normalization), to increase understanding of other people's feelings (empathy, especially in approaching children who are quite shy), and to provide a common language that allowed everyone in the class to talk about worries. Overall, the teachers reported a positive experience in teaching about the topic of anxiety. The teachers commented on the difficulty of getting students to complete the detective work component of the program because of parents' lack of understanding about the concept behind this homework technique.

Study Limitations

The use of multiple informants or other ways to identify improvements in a study is important. Self-reports may not be an accurate reflection of change; it may have been beneficial to also include a teacher's report of how children had changed in the classroom or a behavioral assessment (e.g., increases in the students' levels of participation in class or activities, or increases in the quality of personal interactions). This study did not screen for children with other mental health issues (e.g., attention-deficit/hyperactivity disorder, depression, or conduct disorder), which may have affected detection of the program anxiety symptoms. The small sample size and the absence of socioeconomic or cultural data were significantly limiting factors of the study.

The study was also limited by the lack of a follow-up. Weisz, Donenberg, Han, and Weiss (1995) noted that less robust treatment outcomes are often linked to posttreatment assessments that were administered too soon after treatment. Also, as noted by Donovan and Spence (2000), "universal studies, by definition, target an entire population including those not at risk, [so] they require large sample sizes and long-term follow-up to enable discernable differences between groups" (p. 521).

Implications for Counselors

As more universal programs directed at anxiety become institutionalized in schools, predictably more children should be identified as having anxiety (or any other social–emotional disorder) and, therefore, as being possible candidates for more intensive services. Clinicians are in a unique position to support universal prevention programs targeting anxiety by acting as a resource or giving brief talks to teachers, other staff, or parents on anxiety (i.e., etiology, prevalence, treatment approach, and benefit of treatment). These opportunities offer a chance, at a minimum, for accurate information regarding anxiety, evidence-based approaches, and universal intervention advantages.

A greater concern is that although the scientific community has provided ample evidence of the utility of cognitive behavioral approaches, many professionals are not inclined to practice evidence-based approaches (Shlonsky & Gibbs, 2004), instead preferring whatever method they were trained in or simply what "feels right." This situation must change, and perhaps it will be the marketplace, or public pressure, that will make clinicians more accountable and motivate them to use evidence-supported approaches. The family and the school are very important keys to helping a child learn to manage anxiety, and these management skills may be taught in universal school programs. Mental health clinicians, using evidence-supported approaches, may be the link between such universal programs and more intensive individualized treatment.

Conclusion

Despite the negative results for a universal application of a CBT approach to anxiety reduction, as found in this study, continued research in the area of primary prevention seems warranted. This method of intervention overcomes many of the barriers associated with the treatment of children who have already developed an anxiety disorder, such as cost, long waiting periods, and the risk of developing additional mental health issues. The children who go unnoticed because of low-level anxiety symptoms may acquire needed anxiety management skills in a universal application; however, the cost of a universal approach should be weighed against a more narrow

approach that might screen, identify, and offer services only to symptomatic children. Despite promising advances in the broad field of prevention, the research related to the few school-based programs offered by classroom teachers and that specifically target anxiety disorders exhibit problems that render conclusions about effectiveness uncertain, at best, because of a time effect, vague models of translational components, moving targets of program evaluation, and lack of follow-up.

There is a general lack of public interest in anxiety disorders. The medical system has been very effective in helping people reduce the incidence of contracting the flu through large-scale prevention efforts such as promotion of frequent hand washing. Could the mental health field perhaps enjoy a similar response to a large-scale (e.g., universal) prevention approach to anxiety disorders? Recent research presents a guardedly optimistic picture for such prevention approaches. Like the hand-washing campaign for flu prevention, teaching anxiety management skills to vulnerable people may truncate the anxiety trajectory and prevent anxiety symptoms from developing into more serious pathology.

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