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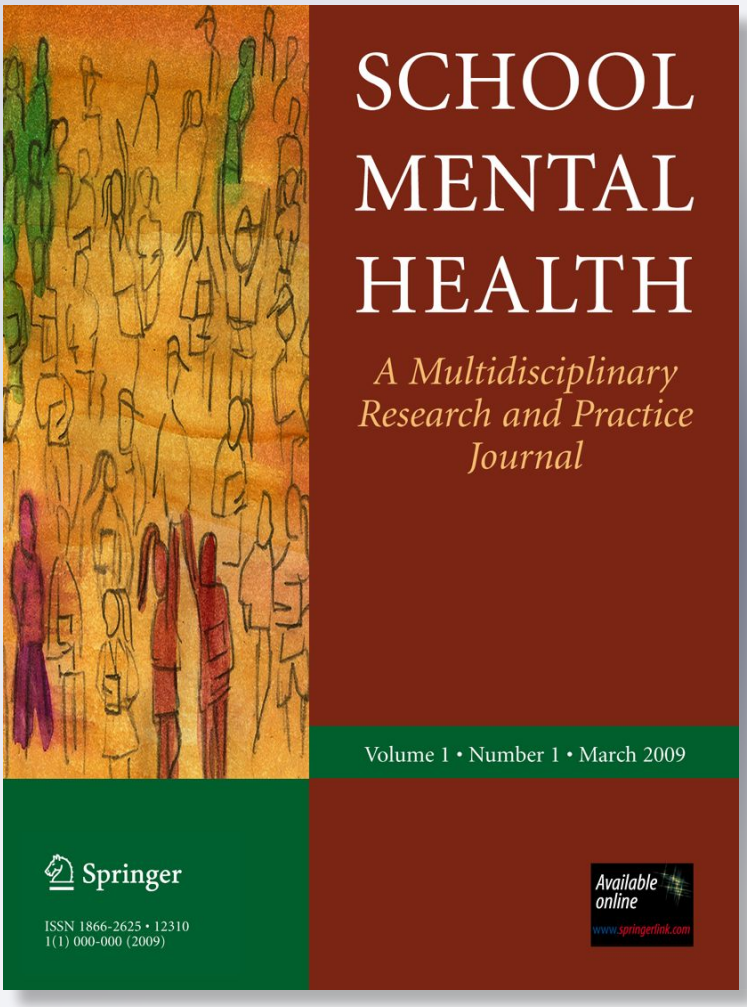

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ORIGINAL PAPER

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Abstract Anxiety disorders are among the most prevalent mental health difficulties experienced by youth. A well-established literature has identified cognitive-behavior therapy (CBT) as the gold-standard psychosocial treatment for youth anxiety disorders. Access to CBT in community clinics is limited, but a potential venue for the provision of CBT for child anxiety disorders is the school setting. The present study examined a subset of data from a larger study in which therapists from a variety of settings, including schools, were trained in CBT for child anxiety ($N = 17$). The study investigated the relationship between provider- and organizational-level variables associated with training and implementation among school mental health providers. The present findings indicate a positive relationship between provider attitudes and adherence to CBT. Self-reported barriers to implementation were also identified. Integrating CBT into school mental health providers' repertoires through training and consultation is a critical step for dissemination and implementation of empirically supported psychosocial treatments.

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Introduction

Anxiety disorders are the most common mental health problem in youth (Albano, Chorpita, & Barlow, 2003; Costello, Mustillo, Erkanli, Keeler, & Angold, 2003). Although anxious children may be perceived as less troublesome than those exhibiting hyperactive or oppositional behavior, they are nevertheless distressed and impaired (Ialongo, Edelsohn, Werthamer-Larsson, Crockett, & Kellam, 1995). Anxiety disorders increase vulnerability to the development of comorbid conditions and, if left untreated, may persist into adulthood and lead to the development of substance abuse problems (Kendall, Safford, Flannery-Schroeder, & Webb, 2004; Woodward & Fergusson, 2001). Estimates suggest that of the 20 % of youth in need of mental health care, only 20 % of those receive such services—a finding referred to as the "20/20" problem (Healthy Development, 2009). This situation is especially troublesome with regard to anxiety disorders; given that such problems are often less visible to parents and teachers as compared to externalizing conditions (e.g., ADHD). Further exacerbating this issue is that few individuals receiving services are actually administered empirically supported treatments (ESTs) that research has deemed "efficacious" (Chambless & Ollendick, 2001). For example, cognitive-behavioral therapy (CBT) is an EST for the treatment of anxiety disorders (Silverman, Pina, & Viswesvaran, 2008). Unfortunately, access to CBT in the community is limited, and furthermore, those who receive it often receive suboptimal CBT (Shafran et al., 2009). The Research Network on

Youth Mental Health acknowledges the weaknesses in current mental health care for youth, stating that "little is known about the nation's infrastructure for children's mental health services, the capacity of that infrastructure to support the implementation of ESTs, and factors affecting that capacity"(Schoenwald et al., 2008, p. 85).

Given the problems with access to and delivery of quality psychological treatment for youth, one commonly suggested solution is to incorporate mental health services into school systems, the context in which youth spend the majority of their time (Fisher, Masia-Warner, & Klein, 2004; Ryan & Masia-Warner, 2012). Indeed, the need for schools to play a larger role in the emotional and psychological well-being for youth is widely noted (e.g., Weist et al., 2003). The former Surgeon General's Report on Children's Mental Health promoted "cost-effective, proactive systems of behavior support at the school level" and a strengthening of schools' capacity to be "a key link to a comprehensive, seamless system of school- and community-based identification, assessment and treatment services" (U.S. Department of Health and Human Services, 2000). The President's New Freedom Commission on Mental Health echoed these sentiments, emphasizing the dynamic interplay between emotional well-being and academic success, and encouraging schools to act as partners in the mental health care of children (President's New Freedom Commission on Mental Health, 2003). The link between children's mental health and academic success provides a natural avenue for collaborative efforts between professionals in psychology and education (Mufson, Dorta, Olfson, Weissman, & Hoagwood, 2004), as research has documented the negative effects of psychopathology on youth's school functioning (Jaycox et al., 2009; Mychailyszyn, Mendez, & Kendall, 2010).

There are a number of potential advantages to providing mental health services in schools. First and foremost, school is the most youth-accessible location because school is where children and adolescents congregate to spend most of each day. From an ecological perspective (Bronfenbrenner, 1979), school constitutes one of the most important proximal influences in a youth's contextual environment. As such, the school setting allows youth to receive interventions "where they are" (Weist et al., 2003), which can help to eliminate common obstacles that prevent youth from receiving care (Flaherty, Weist, & Warner, 1996). Another crucial advantage to providing services in schools is that they are one of the main settings in which youth display impairment (Ginsburg, Becker, Kingery, & Nichols, 2008). For anxious youth, many of the situations that cause disorder-related interference are interwoven within the school experience. For example, a youth who experiences separation anxiety may have great difficulty attending school and remaining focused during the school day. Thus, school-based interventions are uniquely poised to enhance generalizability by encouraging practice and fostering growth in the very situations that lead to difficulty. Trained school-based mental health practitioners can intervene with youth and process problematic situations on a real-time basis. The naturalistic setting of schools may also have the capacity to reduce the stigma that often accompanies mental health treatment in the greater community (Storch & Crisp, 2004). Of particular importance to school systems located in less economically advantaged areas, school-based clinicians can offer programs that are significantly more affordable than traditional private-practice outpatient or hospital-based services. Indeed, research indicates that youth are actually more likely to utilize mental health services provided through the education sector than those that are offered through the specialty mental health sector (Farmer, Burns, Philips, Angold, & Costello, 2003).

Given the reasons described above, a major goal in the mental health field is to disseminate and implement (DI) ESTs for psychosocial difficulties in school settings. Dissemination includes the purposeful distribution of relevant information and materials to school mental health providers, whereas implementation refers to the adoption and integration of ESTs into practice in the school setting (Lomas, 1993). Two initial trials suggest the potential of disseminating and implementing school-based CBT for treating anxious adolescents (Masia-Warner et al., 2005; Masia-Warner, Fisher, Shrout, Rathor, & Klein, 2007). One critical step necessary for effective DI is to train school mental health providers in the provision of ESTs. Recent literature reviews demonstrate the importance of incorporating training and ongoing consultation into DI efforts across a variety of settings (Beidas & Kendall, 2010; Herschell, Kolko, Baumann, & Davis, 2010; Rakovshik & McManus, 2010).

Consistent with an ecological approach, another important step in implementation of ESTs in school settings is examining whether contextual variables, such as individual- and organizational-level variables, predict school mental health provider training outcomes (i.e., adherence and skill) and implementation of ESTs (Beidas & Kendall, 2010). School mental health provider attributes such as demographics and attitudes may influence training success and eventual implementation. In the broader training literature, evidence regarding therapist variables and training outcomes is inconsistent. One study found that therapist variables, such as interpersonal style, influenced therapist adherence and skill (Henry, Schacht, Strupp, Butler, & Binder, 1993), whereas another study found no effect of therapist interpersonal styles, personality variables, or prior experience on adherence and skill (Miller, Yahne, Moyers, Martinez, & Pirritano, 2004). Attitudes toward ESTs as predictors of training outcomes and implementation should also be examined (Aarons, 2005) given findings that

therapists who held more positive views toward treatment manuals had higher ratings of adherence (Henggeler, Sheidow, Cunningham, Donohue, & Ford, 2008).

Recent research also suggests that organizational factors influence the implementation of ESTs. A number of models consistent with an organizational perspective have been applied to implementation of mental health services in community settings (Glisson et al., 2010; Weiner, Lewis, & Linnan, 2009). Constructs of particular interest include organizational culture and climate. Organizational culture is defined as shared beliefs and expectations of a work environment, whereas organizational climate is defined as shared perceptions about the work environment's impact on worker well-being (Glisson & James, 2002). For example, organizational climate has been found to be associated with youth outcomes in child welfare systems, such that youth served by agencies with higher rated organizational climates demonstrate better outcomes (Glisson & Green, 2011). Much of the research to date on organizational culture and climate as it relates to implementation of ESTs has focused on child welfare and community mental health settings. Research in schools examining organizational culture among mental health treatment providers has lagged behind, despite the acknowledgment that schools are a ripe environment for dissemination of ESTs (Storch & Crisp, 2004). Qualitative research has identified a number of organizational factors as pertinent to the implementation process for school staff, specifically principal/administrator support, teacher support, financial resources, high-quality training and consultation, alignment of the intervention with school philosophy, ensuring that outcomes are visible to stakeholders, and developing ways to address turnover in staff (Forman, Olin, Hoagwood, Crowe, & Saka, 2009).

To date, much of the DI literature has examined attitudinal and organizational predictors of training outcomes and implementation in community mental health clinics, but not within the school context. One recent preliminary study completed in the school setting found that attitudes did not influence training outcomes in school mental health providers, whereas organizational-level constructs such as organizational climate were important for school mental health provider engagement (Lyon, Charlesworth-Attie, Vander Stoep, & McCauley, 2011). Thus, more research on individual- and organizational-level predictors of training outcomes and implementation is needed, particularly because the context of schools is different than that of community mental health clinics (e.g., focused on academic achievement).

In the present study, we examine a subset of data from a larger study in which therapists from a variety of settings, including schools, were trained in CBT for child anxiety, an EST (Beidas, Edmunds, Marcus, & Kendall, in press). The primary aim of the present study was to quantitatively identify provider- and organizational-level variables associated with training and implementation outcomes in school mental health providers. We were also interested in identifying school mental health provider-level reported barriers in implementation of CBT for child anxiety.

Method

Procedure

Recruitment and Screening

The Institutional Review Board at a large northeastern university approved all procedures (see Beidas and colleagues (in press) for details). Participants were recruited from the community via in-services, professional Listservs, directors of clinical training programs, and word of mouth. Therapists with varying levels of clinical experience who were likely to work with anxious children were included ($N = 115$).

Inclusion Criteria For the overall study, therapists had to (a) work in the community, (b) currently or in the future plan to work with children aged 8–17 with DSM-IV anxiety disorders, (c) identify with having received training within the mental health field, (d) volunteer to participate in the workshop and follow-up consultation, (e) read and speak English, and (f) have access to a computer or telephone for consultation. Participants from the larger sample were included in this study if they reported that their primary clinical setting was the school setting ($N = 17$).

Participants

Demographics Participants were 17 school mental health providers from the northeast United States. School mental health providers ranged in age from 25 to 57 ($M = 34.94 \pm 9.43$) and were 82 % female ($n = 14$). With regard to ethnicity/race, participants identified as Caucasian (88.2 %, $n = 15$), Hispanic/Latino (6 %; $n = 1$), and Asian (6 %, $n = 1$). School mental health providers reported that on average, they had 94.5 ± 99.5 months of experience (range = 0–331 months). Participants reported the following job titles: school psychologist (47.1 %), guidance counselor (35.3 %), school social worker (11.8 %), and school psychiatrist (5.9 %).

Measures

Provider-Level Characteristics

Clinician Demographics and Attitudes Questionnaire (CDAQ; Beidas, Barmish, & Kendall, 2009) The CDAQ

is a 15-item questionnaire that assesses demographics, prior experience with CBT for youth anxiety, and attitudes toward CBT for youth anxiety.

Evidence-Based Practice Attitude Scale (EBPAS; Aarons, 2005) The EBPAS, a 15-item questionnaire, assesses participants' attitudes toward the adoption and implementation of evidence-based practice via four subscales: appeal, requirements, openness, and divergence (Aarons, 2005). Each subscale score ranges from 0 to 4. Appeal (Chronbach's $\alpha = .80$) refers to the extent to which a therapist will adopt a new practice if it is intuitively appealing. Requirements (Chronbach's $\alpha = .90$) refer to the extent to which a therapist will adopt a new practice if required by the organization or legally mandated. Openness (Chronbach's $\alpha = .78$) is the extent to which a therapist is generally receptive to using new interventions. Divergence (Chronbach's $\alpha = .59$) is the extent to which a therapist perceives research-based treatments as lacking clinical utility (Aarons, 2005). Divergence was recoded in this study so that it was in the same direction as the 3 other subscales for ease of interpretation. The EBPAS demonstrates good internal consistency (Aarons, 2005) with subscale alphas ranging from .59 to .90 (Aarons & Sawitzky, 2006), and its validity is supported by its relationship with both therapist level attributes and organizational characteristics (Aarons, 2005). In our sample, internal consistency was strong (alpha = .81) for the EBPAS total score.

Organizational-Level Characteristics

Organizational Readiness for Change (ORC; Lehman, Greener, & Simpson, 2002) This 129-item instrument measures organizational characteristics on a Likert rating scale from 1 (*strongly disagree*) to 5 (*strongly agree*). The 18 scales comprise five major domains: (a) motivation, (b) resources, (c) staff attributes, (d) organizational climate, and (e) training climate. Psychometric properties for this instrument are strong (Lehman et al., 2002). Each domain score ranges from 10 to 50.

Training Outcomes

Knowledge Test (Beidas et al., 2009) This 20-item test assesses knowledge of CBT for youth anxiety and was previously developed and used in CBT training for a separate RCT (Walkup et al., 2008). Possible scores ranged from 0 to 20. Alternate forms were developed for use in repeated assessment and to prevent practice effects (Beidas et al., 2009). To ensure comparable difficulty, six child anxiety treatment experts rated the forms. Participants were randomly assigned a test order. Psychometrics on the knowledge test were obtained via repeated assessment with 10 second-year graduate students. Cronbach's α was .76, and Spearman Brown split-half reliability was .69. Retest reliability was .86, indicating temporal reliability. Students trained in CBT for child anxiety ($M = 19.33 \pm .58$) scored higher than untrained students ($M = 13.71 \pm 2.75$), (F (1, 9) = 11.51, $p = .01$).

Performance-Based Role-Play (PBRP) A structured PBRP (Dimeff et al., 2009) was used to assess participant adherence and skill in a simulated clinical setting. The PBRP consisted of a phone call with a standardized child client presenting for treatment for anxiety. Undergraduate research assistants blind to condition were trained to portray anxious youth. Therapist participants were asked to prepare the client for a treatment session that included an exposure task, a competency central to CBT. Three vignettes (Beidas et al., 2009) representative of anxious youth were created and rated by six child anxiety treatment experts to ensure comparability. Each participant was randomly assigned a vignette order for the three PBRPs. The role-plays were digitally recorded and later independently coded using the Adherence and Skill Checklist (Beidas et al., 2009).

Adherence and Skill Checklist (ASCL; Beidas et al., 2009) This measure was developed to assess both adherence to the content of CBT for youth anxiety and skill in delivery as performed in the PBRP. Adherence, the utilization of the procedures of a protocol in the treatment of a client (Perepletchikova, Treat, & Kazdin, 2007), was assessed by coding the presence of six core CBT competencies: (a) identification of somatic symptoms, (b) identification of anxious cognitions, (c) relaxation, (d) coping thoughts, (e) problem-solving, and (f) positive reinforcement. Possible scores ranged from 0 to 6. Skill, the level of competence shown by the therapist in the delivery of treatment (Perepletchikova et al., 2007), was evaluated using a Likert scale from 1 (*not well*) to 7 (*very well*). Skill was rated as follows: "How skillful was the clinician's performance in preparing the child for the exposure task using the cognitive-behavioral framework?"

Coders were one doctoral level psychology graduate student, two post-undergraduates, and one honors psychology undergraduate trained through readings, didactics, and supervised practice with feedback. Coders were blind to hypotheses, training condition, and time-point of the assessment. Rated adherence (ICC = .98) and skill (ICC = .92) demonstrated outstanding inter-rater reliability.

Implementation Outcomes

Identification and Treatment of Anxious Youth—Revised (ITAY-R) The ITAY-R, which is based off the ITAY

Table 1 Assessment, intervention, and consultation measurement schedule

Measure	Pre-training	Post-training	Post-consultation	Two-year follow-up
Demographics	X			
Knowledge	X	X	X	
Adherence	X	X	X	
Skill	X	X	X	
Attitudes	X			
Org. Characteristics	X			
Implementation			X	X
Qualitative interview				X

Pre-training assessment occurred at baseline, prior to training. Post-training assessment occurred immediately following training. Post-consultation assessment occurred immediately following 3 months of consultation. Two-year follow-up occurred 2 years following training

(Benjamin, Beidas, Edmunds, Cohen, & Kendall, 2010), is a self-report measure that assesses primary treatment setting, rates of treatment use since ending consultation, types of treatment modalities used, barriers of treatment use, and facilitators of treatment use. The measure involves a combination of close-ended questions and 7-point Likert scales. In this study, we defined implementation as the percentage of anxious youth treated with CBT over the past 3 months. Participants completed the ITAY-R 3 months following training (i.e., post-consultation assessment) using an online survey.

Assessment Procedure

At pre-training (i.e., baseline), participants completed measures of their knowledge of CBT for anxiety, demographics, attitudes, organizational characteristics, and the PBRP. Participants received an 1-day training and then immediately completed the post-training assessment that included an evaluation of their knowledge of CBT for anxiety and the PBRP. Following 3 months of consultation, participants completed an assessment evaluating their knowledge of CBT for anxiety, implementation of CBT for anxiety, and the PBRP (i.e., post-consultation assessment). Two years following completion of the original study, participants reported on implementation of CBT for anxiety, and barriers and facilitators of implementation, from which we pulled key quotations illustrating some of the challenges of implementing CBT in the school setting (see discussion). See Table 1 for an illustration of the assessment, intervention, and consultation measurement schedule.

Training and Consultation Strategy

Training Participants were randomized to one of three training conditions, which included (1) routine training: an 1-day workshop that covered the specific manual and procedures of CBT for child anxiety (i.e., training as usual), (2) computer training: computer training on CBT for child anxiety that was accomplished through a commercially developed interactive DVD, and (3) augmented training: an 1-day workshop that included a focus on principles of CBT and active learning (including behavioral role-play exercises). Given that no significant differences between the three conditions were identified on therapist adherence, skill, or knowledge, we chose to collapse across training conditions in our analyses. See (Beidas et al., in press) for an in-depth discussion of the training conditions. See Fig. 1 for a flowchart of the randomization, intervention, and consultation process.

Consultation Participants from all three conditions were provided weekly consultation via the WebEx virtual conferencing platform for 3 months following training. Participants could call in via telephone or computer to attend the 1-hour weekly virtual meeting. Those who used their computer were able to view a whiteboard and the individual leading the consultation via web camera. Consultation curriculum was designed with participant input and included case consultation, didactic topics (e.g., treating a client with comorbid depression), practice with concepts (e.g., relaxation), and assistance in implementation of the treatment within context (e.g., psychiatry clinic, school).

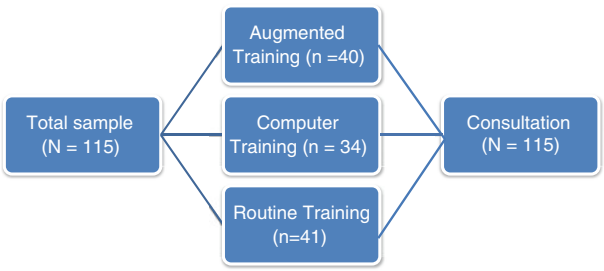

Fig. 1 Illustration of randomization, intervention, and consultation process. All participants completed the pre-training assessment, 113 completed the post-training assessment, and 100 completed the post-consultation assessment

Generally, consultation consisted of 30 min of client discussion and 30 min of didactics and behavioral rehearsal. Consultation included both instructor-led structured material and unstructured peer-guided material (Weingardt, Cucciare, Bellotti, & Lai, 2009). On average, the 108 consultation sessions lasted 52.57 ± 10.79 min (range = 22–65) and had an average of 7.83 ± 4.52 participants (range = 1–20). Number of cases discussed per call averaged 2.69 ± 1.90 (range = 0–7). Participants attended an average of 7.15 consultations ($SD = 3.17$; range = 0–10) in the three-month period following their training (i.e., between the post-training and post-consultation assessment).

Data Analysis

Descriptive analyses provide information regarding provider- and organizational-level characteristics, training and implementation outcomes, and barriers in implementing CBT for child anxiety. Repeated-measures ANOVA were conducted to investigate the impact of training on therapist training outcomes over time. Correlations describe provider- and organizational-level characteristics and their relationship with training and implementation outcomes.

Results

Participant Flow and Retention Individuals who completed pre-training assessment comprised the intent-to-train sample. Of the 17 intent-to-train participants, 17 (100 %) completed the post-training assessment and 14 (82 %) completed the follow-up assessment.

Descriptive Analyses See Table 2 for descriptive analyses of provider-level variables, organizational-level variables, and implementation outcomes. See Table 3 for descriptive analyses of training outcomes.

Training Outcomes

The RM-ANOVA demonstrated that there was a main effect of time such that school provider adherence (F (2, 28) = 10.76, $p < .001$) as measured by the ASCL and knowledge (F (2, 28) = 18.10, $p < .001$) of CBT for child anxiety as measured by the knowledge test improved after receiving the training and consultation package. There was no significant main effect of time on skill (F (2, 28) = 3.01, $p = .07$) as measured by the ASCL, although a trend was observed.

Table 2 Means, standard deviations, and ranges for provider- and organizational-level variables and implementation outcomes

Dependent variable	Pre-training M ± SD [range]
Provider-level attitudes ($N = 17$)	
EBPAS appeal	3.31 ± .45 [2.50–4.00]
EBPAS divergence	3.10 ± .49 [2.25–3.75]
EBPAS openness	3.00 ± .68 [1.75–4.00]
EBPAS requirement	2.53 ± 1.09 [.33–4.00]
Organizational-level variables ($N = 17$)	
ORC motivation for change	31.70 ± 6.02 [24.11–47.62]
ORC resources	33.10 ± 5.65 [25.24–44.69]
ORC staff attributes	36.68 ± 3.68 [30.42–43.21]
ORC organizational climate	32.04 ± 2.19 [27.86–37.33]
ORC training climate	23.34 ± 6.94 [11.92–36.08]
Implementation outcomes ($N = 8$*)	
Anxious youth treated with CBT/anxious youth treated with any treatment	85 + 21 % [50–100 %]

* Participants reporting not treating any anxious youth ($n = 6$), missing ($n = 3$); *EBPAS* Evidence-based practice attitude scale, *ORC* Organizational readiness for change scale

Table 3 Means and standard deviations for training outcomes

Dependent Variable	Pre-Training M ± SD	Post-Training M ± SD	Post-Consultation M ± SD
Adherence ($N = 17$)	1.82 ± 1.13	2.71 ± 1.31	3.35 ± 1.62
Skill ($N = 17$)	3.47 ± 1.33	4.00 ± 1.41	4.41 ± 1.62
Knowledge ($N = 17$)	16.00 ± 1.70	17.71 ± 1.65	18.71 ± 1.21

Adherence and skill were coded from the performance-based role-play using the Adherence and Skill Checklist; knowledge was measured using the knowledge test

Implementation Outcomes

Over the 3 months following training (i.e., the time period between the post-training and post-consultation assessment), participants reported treating 1.29 ± 1.33 anxious youth as measured by the ITAY-R. Clinicians reported providing CBT to 85 % of these youth. Other modalities used included peer support/group intervention ($n = 3$), supportive therapy ($n = 4$), play therapy ($n = 2$), relaxation by itself ($n = 5$), family therapy ($n = 2$), and other ($n = 3$). Participants reported that youth received about 5.23 + 5.18 sessions and that parents were somewhat involved (3.78 ± .97; 7 = highest involvement). Participants reported working with youth ages 5–7 (14 %), 8–12 (71 %) and 13–18 (14.3 %).

Relationship between Provider- and Organizational-Level Variables and Training Outcomes

Provider-Level Attitudes Improvement in adherence after receiving the full training and consultation package was positively correlated with the following attitudinal variables measured by the EBPAS prior to training: appeal ($r = .49$, $p = .04$), openness ($r = .51$, $p = .04$), and divergence ($r = .52$, $p = .03$). These findings suggest that there is a positive relationship between school mental health provider attitudes and improvement in adherence to an EST. Specifically, providers with higher attitudes regarding the appeal of evidence-based practice, openness to using evidence-based practice, and endorsement that evidence-based practices do not diverge from their current practice also demonstrated improvement in adherence following training in an EST. Change in skill and knowledge after receiving the full training and consultation package were not correlated with any attitudinal variables measured prior to training.

Organizational-Level Variables Change in adherence, skill, and knowledge after receiving the full training and consultation package were not correlated with any of the organizational constructs measured by the ORC prior to training.[1]

Relationship between Provider- and Organizational-Level Variables and Implementation

Provider- and organizational-level variables measured before training were not correlated with implementation (i.e., percentage of anxious youth treated with CBT) after receiving the full training and consultation package.

[1] A check of the data suggests that there was sufficient variability in the organizational-level data (i.e., scores ranged on average from 20 to 50).

Barriers

Of the 17 participants, 14 provided information at the post-consultation assessment on the ITAY-R. Of those 14, 6 participants did not provide treatment to anxious youth in the school setting. Of the remaining 8 who did, all identified that there were challenges to providing CBT in the school setting including "child needed more treatment than I had time for" (50.0 %; $n = 4$), "child was not engaged" (25.0 %, $n = 2$), "treatment did not work" (12.5 %, $n = 1$), "family was not supportive" (12.5 %, $n = 1$), and "other" challenges (37.5 %, $n = 3$). "Other" challenges included "child had interfering agenda and treatment is still in progress," "child gets over one particular thing that makes her anxious, but then adopts another," and "I needed more time per session (30-min per session was all I could do in a school)."

Discussion

Our findings suggest that school-based mental health professionals can improve their adherence and knowledge of an EST for childhood anxiety following training and consultation. Although preliminary, the findings are encouraging and support further investigation of techniques to promote and support provision of ESTs in school-based mental health services. Provider attitudes predicted improvement in adherence following training and consultation, whereas organizational variables did not predict training or implementation outcomes. Interesting findings emerged around implementation of CBT in the school setting, particularly barriers which necessitate consideration in future trials. Importantly, providers reported treating the majority of their anxious youth with CBT following training and consultation.

There were several advantages to school-based services that many of our participants noted, including the ease of access for youth and convenience to children and families. There was also the added benefit of, as one participant noted, a "captive audience," which allows monitoring and intervening (including the ability to support completion of exposures and "homework") in the setting in which many symptoms manifest. However, all of the participants reported challenges and barriers to implementation as well. Some of the reported challenges are common to clinic-based CBT for child anxiety (i.e., engagement, access to "home" setting for exposures), while others are specific to the school context; involving organizational and systemic constraints including limited time, resources available per child (average number of sessions was 5 in 3 months; typical clinic-based treatment would include 12 sessions in 3 months) and, in some cases, the lack of support from

principals and administration. These findings are corroborated by previous studies conducted in the school setting (Forman et al., 2009; Langley, Nadeem, Kataoka, Stein, & Jaycox, 2010). These are real issues specific to the school context that require consideration. For example, most ESTs are designed to be delivered weekly for 1 hour. Provider feedback suggests that this was not feasible in the school setting. One provider noted, "I can't take a student out of class for an hour once a week, it is a lot of lost instructional time." Collaborating with providers to adapt ESTs to be more amenable to the school context is paramount.

We found a range in participant attitudes with regard to evidence-based practices and that individual differences in attitude were related to improvement in adherence. Providers who found evidence-based practices to be more appealing, who were more open to using evidence-based practices, and believed that evidence-based practices did not diverge from their current practice also demonstrated improvement in adherence following training in an EST. To our knowledge, this is the first study to demonstrate that school provider attitudes are predictive of training outcomes and is contrary to findings from a previous study (Lyon et al., 2011). However, attitudes have been found to be predictive of adoption in a previous study in a community setting (Henggeler et al., 2008). Interestingly, no other significant relationships were found between organizational- and provider-level variables and skill, knowledge, or implementation. Findings have been inconsistent regarding the impact of provider-level and organizational-level factors on training and implementation outcomes (Beidas & Kendall, 2010). Studies to date have been limited by small samples and varied methodologies, and therefore, further study is needed to investigate these relationships.

Our findings are consistent with previous studies (Garland et al., 2010), indicating that school-based providers are likely to use a broad array of treatment elements. In our school-based sample, therapists used several modalities in addition to CBT for anxiety including peer support/group intervention, supportive therapy, play therapy, relaxation by itself, and family therapy. The impact of mixing ESTs with other eclectic treatment components is unexamined, and little is known about how therapists adapt treatments for their settings. Future research should be dedicated to understanding clinical decision-making and what factors make components most likely to be adopted by school-based mental health providers.

Despite several strengths, there are study limitations. First, this study reports on a subset of motivated school mental health providers who volunteered for training in CBT for child anxiety, which may not be generalizable to other samples of school mental health providers. Of this subset, only 8 of the providers provided the treatment to anxious youth as the 6 other providers did not identify youth with anxiety disorders in their setting with whom they could work and 3 providers were lost to follow-up. There were limitations in the manner which we measured organizational variables and implementation. With regard to organizational variables, we did not have enough providers in each school to provide an aggregate measure of organizational variables. Thus, the organizational-level variables are more accurately described as the individual provider's impressions of organizational variables in their workplace. With regard to implementation, we asked participants to report on the number of anxious youth they treated overall and the number of anxious youth treated with CBT to generate a percentage that indicated implementation. However, more nuanced outcomes are necessary, and other implementation outcomes were not sampled (Proctor et al., 2011).

Schools are an ideal access point for youth and an ideal setting for early identification and intervention (Fisher et al., 2004; Ryan & Masia-Warner, 2012; Storch & Crisp, 2004). The goal to increase patient access to ESTs through the school setting is compatible with the mission of the Department of Education (Davy, Gantwerk, & Martz, 2009) "Intervention & Referral Services" plan to ensure that "in a substantial number of cases, students at-risk receive interventions designed to accommodate their individual learning, behavior and/or health needs in the context of the general education setting, without referral to special programs and services." School districts are responsible for providing support, guidance, and professional development to school staff who participate in planning and providing intervention and referral services. Research points to the need to create ESTs in collaboration with key stakeholders, in this case, school administration and providers. Developing a treatment within the school setting in partnership with staff and identifying outcomes that are appropriate for the school setting will accelerate the deployment of evidence-based interventions and support sustainability (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005).

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