TESTNG PROBLEM-BASED LEARNING AS TRAINING ABOUT ACCOMMODATION IN YOUTH ANXIETY

A Dissertation
Submitted to
the Temple University Graduate Board

In Partial Fulfillment
of the Requirements for the Degree
DOCTOR OF PHILOSOPHY

By
Katherine Elizabeth Holland, M.A.
August 2023

Examining Committee Members:

Dr. Philip C. Kendall, Advisory Chair, Department of Psychology and Neuroscience
Dr. Deborah Drabick, Department of Psychology and Neuroscience
Dr. Michael McCloskey, Department of Psychology and Neuroscience
Dr. Tania Giovannetti, Department of Psychology and Neuroscience
Dr. Robert Fauber, Department of Psychology and Neuroscience
Dr. Elizabeth Gosch, Department of Clinical Psychology, PCOM

ABSTRACT

Background: Anxiety and anxiety disorders are common among youth. Accommodation refers to ways in which parents/teachers/schools modify their behavior to alleviate a youth's anxious distress. Although many anxious youths receive mental health services through schools, limited research has examined accommodation in the school setting and no study to date has examined the instruction of school-based mental health providers in evidence-based practices (EBPs) around accommodation. The present study compared two training conditions: problem-based learning (PBL) and training as usual (TAU) in their ability to increase (a) knowledge of, (b) attitudes/beliefs towards and (c) intended implementation of EBPs.

Methods: Graduate students in school psychology (N=110) were randomized to workshops. Workshops used either PBL or didactic (TAU) strategies to educate trainees about EBPs for youth anxiety as they relate to accommodation. Trainees attended a 4-hour workshop and completed self-report measures assessing knowledge, attitudes and intended EBP use immediately before training, immediately after training and at 3-month follow-up.

Results: Linear Mixed Models examined changes in outcome measures both across time and between training conditions. There were significant increases in workshop-specific knowledge and in beliefs about and intentions to use EBP from pre- to post-training. However, there were no significant differences between training conditions on outcome measures other than overall knowledge of EBPs. Pretraining instruction in, or attitudes about EBPs, did not significantly predict differential training outcomes.

Discussion: Findings suggest that workshops can successfully improve workshop-specific knowledge, attitudes towards EBPs and intended use of EBPs in trainees seeking to become school-based practitioners. Further, results indicate principle-based training can successfully increase knowledge without being highly resource- or time-intensive. Further research is needed to identify optimal training approaches in dissemination of EBPs.

ACKNOWLEDGEMENTS

It is with the support, encouragement, and guidance of many that this dissertation was made possible. Above all, I am grateful for the mentorship of Phil Kendall both throughout graduate school and this project. Thank you for giving me the freedom to dream big. I am also grateful for the support and guidance of my core dissertation committee members, Deb Drabick and Mike McCloskey and would also like to thank my dissertation committee members Elizabeth Gosch, Tania Giovannetti and Rob Fauber for their feedback on this project.

To my many incredible supervisors and mentors throughout the years, thank you for imparting your clinical prowess and research acumen, which came together to form the idea for and execution of this dissertation. Thank you for taking a chance on me, never faltering in your encouragement and pushing me beyond my own expectations for myself. It takes a village, and my completion of this degree would not have been possible without all of you.

To my lab and cohort mates, thank you for your constant support, willingness to field questions and thorough feedback. Thank you especially to Marin for being so giving and patient with your time, statistical knowledge and most of all your friendship. This project truly would not have come together without you.

Finally thank you to my loved ones. Mom, Dad, Hannah and Sarah, none of this would be possible without your infinite support and interest in my (sometimes esoteric) pursuits – thank you! To my roommates, thank you for providing a constant source of support, friendship and perspective over the past five years. And to Taylor, you have been my rock, sounding board and place of solace throughout this entire process. Thank you for always sticking with me, I love you so much.

TABLE OF CONTENTS

Page

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

Anxiety disorders are highly prevalent among youth, with estimates that 20% meet diagnostic criteria (Cartwright-Hatton et al., 2006). Analysis of pooled data has indicated that incidence has increased in the presence of the current COVID-19 pandemic and associated precautions (e.g., lockdown; Courtney et al., 2020; Orgiles et al, 2020; Racine et al., 2021). Without intervention, these disorders rarely remit and can lead to long-term adverse sequelae, including educational underachievement, poor social relationships, suicidality and increased substance use/abuse (Albano et al., 2003; Kendall et al., 2004; Swan & Kendall, 2016; Wolk et al., 2015; Woodward & Fergusson, 2001). Youth anxiety creates a public health burden and is associated with disability (Sareen et al., 2006), loss of workforce productivity (Miller et al., 2004) and health care costs (Coker, 2010). Anxiety is particularly impairing among school-age youth where students with anxiety disorders often display difficulty with concentration, avoidance around novel learning, less positive affect in the classroom, below grade-level academic performance and interference with their motivation to succeed academically (Bernstein et al., 2008; Ialongo et al., 1995; Mychailyszyn et al., 2010; Wood, 2006).

There has been meaningful work to transport evidence-based practices (EBPs) for youth anxiety to school settings. Cognitive-behavioral therapy (CBT) has been deemed an empirically supported treatment for youth anxiety (e.g., Hollon & Beck, 2013), achieving response rates of 60% in large trials (e.g., Kendall et al., 2008; Walkup et al., 2008). Numerous EBPs have proven to be effective in school settings across a wide range of treatment targets, including depressive symptoms (e.g., Mufson et al., 2004; Shirk et

al., 2009), anxiety symptoms (e.g., Masia-Warner et al., 2007) and behavioral difficulties (e.g., Owens et al., 2005). In particular, studies demonstrate that EBP targeting youth anxiety can be successfully implemented in schools (Mychailyszyn et al., 2011; Neil & Christensen, 2009). Additionally, evidence-based CBT for youth anxiety can be effectively delivered by school personnel without extensive formal CBT backgrounds (Ginsburg et al, 2008; Mufson et al., 2004; Stein et al., 2003). Unfortunately, few of these programs have been successfully maintained outside the context of controlled research studies (Herschell et al., 2004; LoCurto et al., 2020; Reinke et al., 2010). In the case of EBPs for anxiety, the limited success may be due to exposure tasks and addressing accommodation (key ingredients of EBP for youth anxiety) remaining underutilized in schools (Durlak et al., 2008; Mufson et al., 2004; Owens et al., 2014). In addition, barriers to the maintenance of EBPs in school settings have been identified such as difficulty implementing them with high fidelity (Fixsen et al., 2005) and the inherent complexity of school environments among others (see Kratochwill, 2007; Shernoff et al., 2003).

Accommodation

One barrier to the sustainability of EBPs in school settings may be related to the use of accommodation. Accommodation describes ways in which parents/teachers/schools modify their behavior to try to alleviate a child's anxious distress (Calvocoressi et al., 1995). Accommodation (e.g., providing excessive reassurance, modifying routines; Kagan et al., 2017; Lebowitz et al., 2013; Storch et al., 2015) occurs in nearly all families with a child with an anxiety disorder (Benito et al., 2015; Lebowitz et al., 2013; Lebowitz et al., 2014; Thompson-Hollands et al., 2014).

Accommodation acts similarly to avoidance behavior; it allows the child to physically or mentally avoid a fear-inducing situation (be it worry around uncertainty or a tangible object or situation). As a result, accommodation prevents opportunities for exposure and the subsequent reduction of anxiety. Accommodation is negatively reinforcing (maintains the avoidance by temporarily reducing distress) and increases a child's expectation of continued accommodation in the future (Abramowitz & Jacoby, 2014). In anxiety disorders, accommodation has been linked to increased anxiety symptom severity, functional impairment, caregiver burden and poorer treatment outcomes (Benito et al., 2015; Kagan et al., 2016; Kagan et al., 2017; Lebowitz et al., 2013; Thompson-Hollands et al., 2014). However, less is known about the accommodation of anxiety that occurs in schools and how to address it.

In the context of education, the term "accommodation" often has a different connotation (Green, et al., 2016) than when used in anxiety contexts. In schools, accommodations provide adjustments or supports to improve access to educational material, in line with federal and state regulations (Atkins et al., 2017; Green et al., 2018). These accommodations are legally outlined and overseen through documents such as Individualized Education Plans (IEP) and 504 Plans. Further, some accommodations (or changes to requirements, the classroom setting, etc.) may occur outside of formalized plans. Only a few studies have examined the nature of accommodations and supports in schools or have characterized the types of formal school-based supports (SBS) received by anxious students. In one study, Green and colleagues (2016) examined anxiety-related SBS received by anxious youth in school via parent report. Most youth in this sample were receiving at least one SBS (e.g., permission to leave the classroom when anxious).

Conroy et al. (2020) studied self-reported school staff usage of SBS, with 92.5% of school staff surveyed reporting using at least one SBS rated by an expert panel as highly avoidance oriented. In another study, Phillips et al. (under review) found that SBS received by anxious youth seeking treatment in a specialty clinic varied widely in type and quality (i.e., avoidance versus approach oriented). These findings suggest a lack of education or training around anxiety and accommodation among school staff tasked with creating such supports.

EBP Training

At present, no study has examined the potential of providing training to school-based mental health professionals in EBPs regarding accommodation and anxiety. However, research has characterized common trainings in intervention (such as CBT) provided to school mental health professionals. The introduction and improvement of EBPs in schools is widely supported, with use of EBPs recommended by professional organizations (e.g., American Psychological Association (APA), National Association of School Psychologists (NASP)) and required by federal legislation (e.g., Individuals with Disabilities Education Improvement Act, 2004; Every Student Succeeds Act, 2015). Despite this, most graduate students in school psychology still view the training they receive in EBPs as inadequate (Dillman et al. 2009; Hicks et al., 2014; Shernoff et al., 2003). Fortunately, the proportion of these students indicating adequate training in EBPs has increased over time (Hicks et al., 2014) and 75% of school psychology training programs provide coursework on EBPs (Reddy et al., 2017). Despite this, 89% of Nationally Certified School Psychologists reported *rarely* or *never* adopting behavioral EBPs (Hicks et al., 2014).

Research has addressed training mental health professionals in EBPs. In a recent review of training in EBPs (Frank et al., 2019), the authors examined the questions of what type of training improves both EBP (a) knowledge and (b) use. Consistent with previous reviews (Beidas & Kendall, 2010; Herschell et al., 2010; Rakovshik & McManus, 2010), Frank and colleagues found that therapist knowledge and attitudes toward EBPs improve after attending a workshop, but workshops alone were unlikely to increase actual EBP use. The passive learning strategies used in many trainings are not ideal training methods (El-Tannir, 2002; Miller et al. 2004). Conversely, active learning, including modeling, practice opportunities and behavioral role plays (e.g., for suicide prevention efforts; Cross et al. 2007, and motivational interviewing; Miller et al. 2004) have been found to lead to improved knowledge and skill development. Experiential training strategies (e.g., exposure to spiders during training in CBT for anxiety; Frank et al., 2020) have been employed to increase EBP usage. Although findings showed preliminary success, it is not clear that this strategy is effective enough to justify the time and expense of enhanced training particularly in school settings with limited time and resources. One less time consuming and less costly, active learning strategy is problem-based learning.

Problem-based Learning

Problem-based learning (PBL) was developed in the late 1960s to better integrate academic elements of curricula with placement experiences (Barrows & Tamblyn, 1980; Barrows, 1996). PBL involves the central tenets of problem-solving, self-directed learning and group interaction, with the fundamental principle being to equip students with an investigative approach and foster a greater sense of responsibility for their own

learning (Wiggins et al., 2016). It is a student-centered pedagogical approach where a central question, which may be presented as a puzzle, a scenario or a case study, is investigated, discussed and analyzed (Barrett et al., 2011). In this approach there are no fixed or ultimate solutions; rather, there are numerous ways to solve these problems. This approach allows students to study the same problem and yield different solutions, thus learning different things from their engagement with it (Wiggins et al., 2016).

PBL has been successfully implemented across diverse disciplines such as professional education in social work, engineering, architecture, business, law, economics, education and agriculture (Dunsmuir & Fredrickson, 2014). Numerous evaluative studies over a range of domains have found that PBL is advantageous over conventional (often didactic) programs regarding outcomes in critical thinking (Şendağ & Odabaşi, 2009), self-directed learning (Blumberg, 2000), problem solving and communication/teamwork (Koh et al., 2008; Wiggins et al., 2016). PBL has shown excellent outcomes compared to conventional learning in long-term retention (Dochy et al., 2003; Strobel & van Barneveld, 2009) and application of knowledge to practice (Dunsmuir et al., 2017; Gijbels et al., 2005). Although conventional instruction is associated with greater short-term knowledge retention, this effect appears to reverse over time, with PBL proving to be superior in terms of long-term retention (Dochy et al., 2003; Strobel & van Barneveld, 2009).

There is relatively little research addressing how effective PBL is for training in school mental health services (see for example, Dunsmuir & Fredderickson, 2014; Kiernan et al., 2008; Norman & Schmidt, 1992). Dunsmuir, Frederickson and Lang (2017) reported a study addressing strengths and weaknesses of a national study in the

United Kingdom of 13 school psychology programs who used PBL. The results suggested advantages, including increases in ability to handle uncertainty and development of critical-thinking skills, as well as a weakness of logistical difficulties in evaluating individual students' contributions. Favorable reports, although limited in scope (e.g., small sample sizes, qualitative study design) have been published reflecting PBL used across various psychology graduate programs such as clinical psychology (Kiernan et al., 2008; Nel et al., 2008; Stedmon et al., 2005; Wiggins, et al., 2016), educational psychology (Bozic & Williams, 2011; Chernobilsky et al., 2004; Razzak, 2012) and forensic psychology (Hays & Vincent, 2004; Kiernan et al., 2008). These studies represent both the potential of PBL in the graduate education of school mental health workers, as well as the need for additional experimental research in the area. It has been strongly suggested that graduate education in psychology needs to include both didactic and competency training in the practical application of skills (McHugh & Barlow, 2012). Graduates of school psychology graduate programs frequently report inadequate preparation to implement interventions (Bramlett et al., 2002; Forman et al., 2009; Hicks et al., 2014) and PBL represents an avenue through which to enhance competency and readiness for intervention, or alternatively consultation around accommodation, in the field.

The present study examined how PBL training and didactic training (training as usual; TAU) in EBP for youth anxiety with a focus on accommodation differentially affects a number of training targets in school psychology graduate students. The training targets were: (a) knowledge (as measured by the Knowledge of Evidence-Based Services Questionnaire [KESBQ; overall knowledge of EBPs] and Knowledge Test [knowledge

specific to the workshop]), (b) attitudes/beliefs (as measured by the Evidence-Based Practice Attitude Scale; EBPAS) and (c) intended implementation of EBP strategies pertaining to accommodation (as measured by the Evidence-Based Treatment Intentions Scale; EBTI). Training targets were measured immediately following training and at a 3-month follow-up. Further, it explored how pretraining trainee characteristics were differentially related to posttraining outcomes.

It was hypothesized that although both training conditions would have a significant impact on increasing overall and workshop-specific knowledge from pretraining to post-training, trainees in the PBL condition would show greater overall and workshop-specific knowledge at follow-up than trainees in the TAU condition. Second, it was hypothesized that trainees in the PBL condition would show greater improvement in (a) attitudes/beliefs about EBP and (b) intended use of EBP from pretraining to both posttraining and follow-up, relative to trainees in the TAU condition (i.e., there would be a significant interaction between time and condition). Finally, it was hypothesized that attitudes and instruction in EBPs would be differentially related to increases in intention to use and attitudes about EBPs at post training, with greater pretraining attitudes predicting greater increases in intention and more pretraining instruction predicting greater increases in posttraining attitudes.

CHAPTER 2

METHODS

Participants

Participants were 110 graduate students (hereafter referred to as trainees; M_{age} = 25.61, SD = 3.86 years; 102 females and 8 males). The sample was 74.55% White, 10.00% Black, 8.18% Asian, 1.82% Native/Pacific Islander and 3.64% Biracial or Other. The sample was 12.72% Latinx and 86.36% other ethnicities. Participants were recruited via email from National Association of School Psychology (NASP) accredited School Psychology graduate programs in the United States. Current degree programs represented in the sample were Master of Arts (MA; 55.45%), Doctor of Philosophy in School Psychology (PhD; 23.64%), Doctor of Psychology (PsyD; 5.45%), Doctor of Education (EdD; 10.00%) and Education Specialist (EdS; 4.55%). Trainees were eligible for participation if they were willing to provide an email or mailing address to complete study-related surveys, able to read and speak English, 21 years of age or older and had not attended a prior workshop ($\geq$3.5 hours) on accommodation as it is related to youth anxiety. Trainee demographics are presented in Table 1.

Table 1. Trainee Characteristics (N = 110)

	PBL (*n* = 55)		TAU (*n* = 55)		Test Statistics	Effect Sizes
	Mean or n	*SD or %*	*Mean or n*	*SD or %*		*Cohen's D or φ*
Age (*M, SD*)	25.71	3.86	25.51	5.40	F (2, 108) = 0.18, p = .671	.043
Gender (*n, %)*					χ^2 = 0.54, p = .463	-.070
Male	5	9.09	3	5.55		
Female	50	90.91	52	94.55		
Other						
Race (*n, %)*					χ^2 = 3.50, p = .623	.180
Asian	4	7.27	5	9.09		
Black	6	10.91	5	9.09		
Native/Pacific Islander	2	3.64	0	0		
White	41	74.55	41	74.55		
Biracial or Other	2	3.64	2	3.64		
Not reported	0	0	2	3.64		
Ethnicity (*n, %)*					χ^2 = 0.00, p = .971	-.004
Hispanic	7	12.73	7	12.73		
Non-Hispanic	48	87.72	47	85.45		
Not reported	0	0	1	1.82		
Degree Program (*n, %)*					χ^2 = 13.78, p = .008	.356
Ph.D.	10	18.18	16	29.6		
M.A.	32	58.18	29	53.7		
Psy.D.	0	0	6	10.91		
Ed.S.	4	7.27	1	1.82		
Ed.D.	9	16.36	2	3.64		
Not reported	0	0	1	1.82		
Doctoral Program (*n, %)*					χ^2 = 0.74, p = .391	.082
Yes	20	36.36	24	43.64		
No	35	63.64	30	54.55		
Not reported	0	0	1	1.82		

Note: TAU = Treatment as Usual Training Condition; PBL: Problem-Based Learning Training Condition; Degree programs included in "Doctoral Program" category include Ph.D., Psy.D. and Ed.D.

Procedure

Trainees were randomized to PBL (n = 55) or TAU (n = 55) conditions. Trainees attended a 4-hour training (including 30 minutes for the completion of pretraining and posttraining questionnaires, respectively) on EBP for youth anxiety as is relevant to school-based providers. Nine workshops were conducted with between eight and 21 trainees each (M= 14.22, SD= 4.58). One trainer, a doctoral candidate in clinical psychology with a Master's degree, conducted all workshops. The workshops addressed youth anxiety from a consultative role (one of school-based providers' three main roles). Both training conditions covered four areas: psycho-education about youth anxiety, identifying youth anxiety in the school setting, EBPs and appropriate referrals for youth anxiety and accommodation as it applies to anxiety in schools. The first three areas (psycho-education about youth anxiety, identifying youth anxiety in the school setting and EBPs and appropriate referrals for youth anxiety) were taught using a didactic format in both training conditions. All four areas were specifically tailored for school-based mental health providers. Both training conditions additionally included the use of four clinical vignettes. The vignettes provided trainees with details about hypothetical students and prompted trainees to address presenting difficulties as they would in a consultative role. The trainings occurred virtually, via Zoom, to ensure accessibility and trainee health and safety in light of continuing COVID-19 restrictions. Measures regarding trainees' knowledge about, attitudes toward and intended use of EBPs were administered prior to and immediately after training. Further, trainees were asked to complete measures at 3-month follow-up to observe how knowledge, attitudes and intended use changed over time. All measures were completed via RedCap. Participants were entered in a lottery

with the chance to win one of six $50 Amazon gift cards and winners were drawn after follow-up data collection was completed for all participants. All trainees completed all measures at pre- and post-training timepoints. At the follow-up timepoint, 69.09% of trainees completed all follow-up measures (TAU *n* = 38, PBL *n* =38). No trainees partially completed measures at any timepoint. All procedures were conducted under the approval of Temple University's Institutional Review Board.

Training Conditions

Training as Usual. The TAU condition comprised of a didactic workshop. The trainer provided information and examples verbally and using PowerPoint slides. Questions were addressed but there were no interactive learning activities. This instruction style was used to address all four areas (psycho-education about youth anxiety, identifying youth anxiety in the school setting, EBPs and appropriate referrals for youth anxiety and accommodation as it applies to anxiety in schools). Trainees were guided to engage in clinical vignettes following a traditional didactic approach. Vignettes presented hypothetical situations involving student background information, anxiety symptoms and accommodations currently being provided. The trainees were prompted to build a plan to identify and implement appropriate accommodations as well as remove accommodations that may be maintaining anxiety symptoms. The trainer presented each vignette, prompted the group for suggestions and then presented the correct answers with relevant theoretical rationale.

Problem-Based Learning. The PBL condition employed a didactic style, as in TAU, to provide instruction in the following training areas: psycho-education about youth anxiety, identifying youth anxiety in the school setting, EBPs and appropriate

referrals for youth anxiety. Trainees were then guided to engage in clinical vignettes using a PBL approach. Problem-solving, self-directed learning and group interaction are fundamental principles of PBL. These principles were facilitated through break-out groups and trainer's guidance. The vignettes included the same content (and allotted workshop time) as for the TAU condition and were presented as open ended with no fixed or ultimate solutions provided. This approach allowed break-out groups (containing three to four trainees each) to study the same problem and yield different solutions, thus learning different things from their engagement with the vignette. Groups presented their individual solutions to the entire groups following return from break-out groups. No ultimate or correct responses were offered by the workshop leader. Break-out groups were randomly assigned and changed with each vignette.

Measures

Evidence-Based Practice Attitude Scale -36 (EBPAS-36; Rye et al., 2017). The EBPAS is 36-item self-report measure, adapted from the original Aarons et al. (2005) measure that assesses therapists' attitudes toward the adoption and implementation of EBPs. It yields a total score (Cronbach's $\alpha = .79$; Rye et al., 2017) representing the respondent's global attitude towards EBP. This measure has displayed adequate psychometric properties in both US and European samples, indicating cross-cultural validity. Further, the original measure maintained in factor structure and convergent and discriminant validity when examined in a sample of school-based mental health workers (Cook et al., 2018). This measure was administered at pretraining, posttraining and 3-month follow-up (present sample at pretraining, Cronbach's $\alpha = 0.85$).

Evidence Based Treatment Intentions Scale (EBTI; Williams, 2015). The EBTI is a five-item measure developed to assess intent to utilize EBP amongst community mental health clinicians. Each item is accompanied by a scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) or a scale ranging from 0 (*strongly disagree*) to 10 (*strongly agree*). The measure displays excellent internal consistency (Cronbach's α =0.92). It yielded predictive validity with measures of later workshop attendance and EBP adoption. Further, it displayed discriminant validity with a measure of climate functionality, stress and clinician engagement (Williams, 2015). This measure was administered at pretraining, posttraining and 3-month follow-up (present sample at pretraining, Cronbach's α =0.80).

The Knowledge of Evidence-Based Services Questionnaire (KESBQ; Stumpf et al., 2009). The KESBQ is a 40-item self-report instrument where each item measures knowledge of an EBP technique. Techniques include practice elements (e.g., exposure, problem solving) that comprise evidence-based treatments for a given clinical presentation. Items query whether each practice element is included in evidence-based treatment protocols for any of the following clinical presentations (anxious/avoidant, depressed/withdrawn, disruptive behavior, attention/hyperactivity, or none). Knowledge is measured on a continuum from 0–160. Higher scores are indicative of more knowledge of EBP. Psychometric data suggest temporal stability, discriminant validity and sensitivity to training (Stumpf et al., 2009). As items are considered orthogonal, no measure of internal consistency value was warranted (Stumpf et al., 2009). This measure was administered at pretraining, posttraining and 3-month follow-up.

Knowledge Test (Beidas et al., 2009). This measure is adapted from the original version, which focused on CBT for anxious youth (Cronbach's α = .76; Beidas et al., 2009), but asks about the four areas included in both workshops: psycho-education about youth anxiety, identifying youth anxiety in the school setting, EBPs and appropriate referrals for youth anxiety and accommodation as it applies to anxiety in schools, with a primary focus on accommodation in the context of youth anxiety. All items address accommodation or closely related concepts (e.g., avoidance, approach). It contains a similar format as the original (10 true/false; 10 multiple-choice questions). This measure was administered at pretraining, posttraining and 3-month follow-up (present sample, Cronbach's α =0.68).

Manipulation Check. This questionnaire asks three questions to confirm that the trainees in the PBL (experimental) and TAU (control) conditions received different training strategies. The questions address the presence/absence of PBL strategies in both training conditions. Each item response yields either 1 or 0 points, resulting in a total score of 0, 1, 2, or 3 for each respondent. Average scores in each training condition were calculated and *t*-tests were conducted to establish that average scores were significantly different between training conditions. This measure was administered at posttraining.

Therapist Background Questionnaire (TBQ; Higa-McMillan et al., 2015). The original measure was developed for a study assessing the practices, knowledge and beliefs of community-based mental health workers. This measure was adapted by the author for use with students in school psychology graduate programs. Specifically, it was edited to include items measuring coursework (both number of courses and total hours) in EBP. Items retained from the original measure assess basic demographic information

(age, gender, ethnicity/race, ethnic identity); training and experience information (degrees earned, state license, professional specialty, theoretical orientation, years of clinical training, years of clinical experience); and work setting information (agency name/type, position, clinical setting, current caseload, hours of supervision per week). Variations of the TBQ have been used in numerous research studies examining therapist attitudes and behaviors (e.g., Higa-McMillan et al. 2015; Hill & Nakamura, 2020). This measure was administered at pretraining.

Statistical Analyses

All analyses were conducted using SPSS Version 28 (International Business Machines Corporation, 2021). Linear mixed-effects models (LMMs) were used to test changes in overall knowledge (KESBQ), workshop-specific knowledge (Knowledge Test), attitudes about EBPs (EBPAS-36) and intended use of EBPs (EBTI) across time. Specifically, changes in outcome variables were assessed from pre- to post-training and from pre- to follow-up. LMMs were also employed to test moderators of change as a function of training condition. Random intercepts were included in the models and restricted maximum likelihood estimation was used to address missing data across time-points so cases with missing data were not excluded. LMMs were used for these analyses, rather than traditional regression techniques, because the observations were clustered within individuals, and if this nesting was not accounted for, the probability of committing a Type I error would increase and less efficient coefficients would be estimated. LMM effect sizes were calculated as marginal pseudo R-squared (Nakagawa et al., 2017).

To ensure that assumptions of multiple regression were met, the independent variables were examined for multicollinearity. Tolerance statistics below .1 and variance inflation factor statistics above 10 may indicate problems with multicollinearity (Fields, 2005). Linear regression models tested whether (a) amount of training in EBP (hours of instruction in EBP measured using the TBQ) at pretraining significantly predicted attitudes towards EBP at posttraining, controlling for attitudes towards EBP (EBPAS-36) at pretraining and (b) attitudes towards EBP (EBPAS-36) at pretraining significantly predicted intended EBP use (EBTI) at posttraining, controlling for intended EBP use (EBTI) at pretraining.

CHAPTER 3

RESULTS

Descriptive analyses assessed the characteristics of participants in different training conditions and found no significant between condition differences on age, race or ethnicity (Table 1). Additionally, chi-square analyses tested if current degree programs of trainees differed significantly between conditions. Although overall conditions differed significantly by proportion of degree programs, there was no significant difference between conditions on proportions of trainees in doctoral versus non-doctoral programs (Table 1). Similarly, a manipulation check was employed to ensure training conditions were sufficiently separable. Results indicated that 94.54% of participants in the PBL condition and 80.01% of participants in the TAU condition answered three out of three questions correctly on the MC, $t(108) = -16.43$, $p < 0.001$. Pretraining correlations between outcome variables are presented in Table 2.

Table 2. Pretraining Correlations Between Outcome Variables

	KT	KBESQ	EBTI	EBPAS
KT	—			
KBESQ	.41**	—		
EBTI	.20*	.21*	—	
EBPAS	.11	.06	.30**	—

Note. KT = Knowledge Test; KBESQ = Knowledge of Evidence Based Services Questionnaires; EBTI: Evidence Based Treatment Intention; EBPAS = Evidence Based Practices Attitudes Scale; * $\rho < .05$, two-tailed. ** $\rho < .01$, two-tailed.

We examined whether participants in the PBL condition differed from those in the TAU condition on the KESBQ, KT, EBPAS-36 and EBTI from pre- to post-training and from pretraining to follow-up. To examine within- and between-condition changes across time points, we ran LMMs with time (pretraining, posttraining and follow-up) and condition (PBL and TAU) as the predictors. Following the models examining main effects, identical models were estimated that also included the two-way interaction between conditions and timepoints. When probing the effects of significant interactions, timepoints were considered the focal predictors and conditions were considered the moderator. Visual inspection of residual plots did not reveal any obvious deviations from homoscedasticity or normality for any of the assessed measures (Singer & Willet, 2003). Outcomes are summarized in Table 3.

Table 3. **Results of Linear Mixed Models for** Training Outcomes Over Time

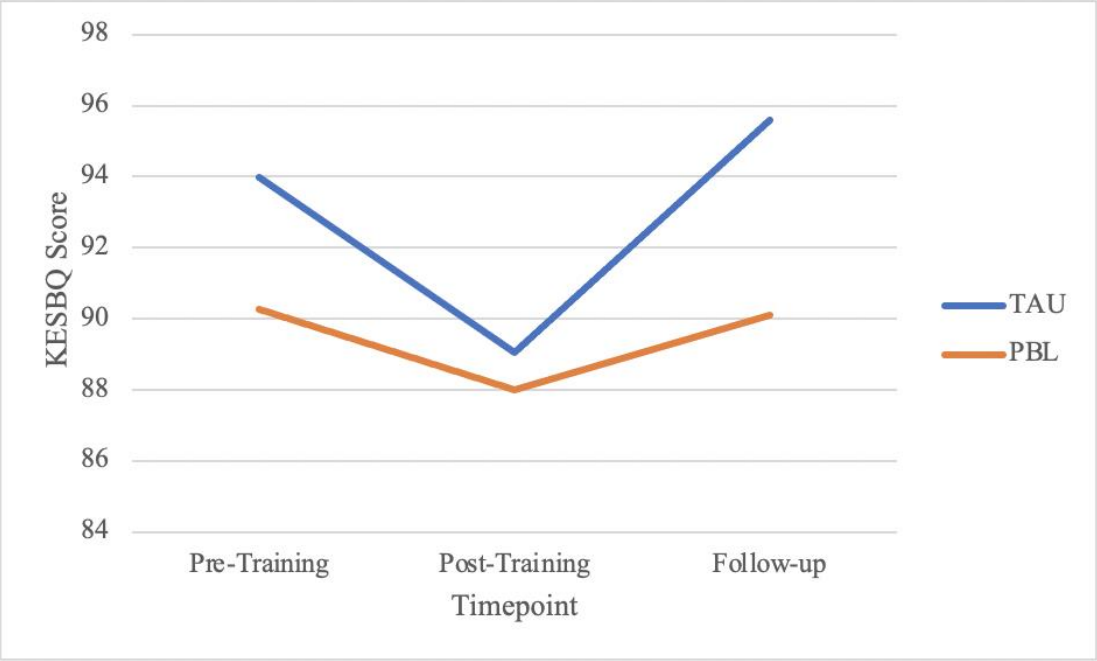
	Dependent variable:			
	Overall knowledge	Workshop specifical knowledge	Attitudes about EBPs	Intended use of EBPs
	B *(SE)*	*B* *(SE)*	*B* *(SE)*	*B* *(SE)*
PBL vs TAU Condition	-3.09* (1.41)	-0.43 (0.35)	-0.30 (0.06)	-0.35 (0.25)
Pretraining vs Posttraining	-3.58** (0.94)	2.24** (0.20)	0.11** (0.03)	0.81** (0.11)
Pretraining vs Follow-up	0.73 (1.06)	1.60** (0.24)	-0.01 (0.025)	0.39* (0.13)
Posttraining vs Follow-up	4.31** (1.06)	-0.63** (0.24)	-0.11** (0.03)	-0.42** (0.23)
Constant	93.98** (1.24)	13.98** (0.29)	3.10** (0.05)	5.06** (0.20)
Observations	294	29	294	294
R^2 (Marginal)	0.07	0.18	0.03	0.07
Random Effects	*Variance Components*			
Person Level, τ_{00}^2	36.65	2.44	0.07	1.50
Observation Error, σ^2	47.42	2.29	0.04	0.64

Note. KT = Knowledge Test; KBESQ = Knowledge of Evidence Based Services Questionnaires; EBTI: Evidence Based Treatment Intention; EBPAS = Evidence Based Practices Attitudes Scale; TAU = Treatment as Usual Training Condition; PBL= Problem-Based Learning Training Condition; Unstandardized coefficients are presented with standard errors in parentheses from multilevel model regressions. *p<0.05, **p<0.01 (according to profile confidence interval for τ_{00}^2)

KT scores increased significantly from pre- to post-training, B = 2.24, SE = 0.20, p < .001 and from pretraining to follow-up, B = 1.60, SE = 0.24, p < .001. KT scores decreased significantly from posttraining to follow-up: B = -0.63, SE = 0.24, p = .008. However, PBL scores were not significantly different than the TAU training condition's scores, B = -0.43, SE = 0.35, p = .22. The Time x Condition (PBL vs. TAU) interaction was not significant, p = 0.21.

Measures of overall knowledge of EBPs (measured by KESBQ scores) decreased significantly from pre- to post-training, B = -3.58, SE = 0.94, p < .001. Scores did not show a significant change from pretraining to follow-up, B = 0.73 SE = 1.06, p = 0.50. However, KESBQ scores increased significantly from posttraining to follow-up, B = 4.31, SE = 1.06, p < .001. KESBQ differed significantly between training conditions, B = -3.09, SE = 1.41, p = .030, but the Time x Condition (PBL vs. TAU) interaction was not significant, p = 0.14 (see Figure 1).

Figure 1. Overall knowledge of EBPs across timepoints.



Note. Y-axis begins at 84, rather than zero, to better visualize changes in KESBQ score from pretraining to follow-up.

EBPAS-36 scores increased significantly from pre- to post-training, B = 0.11, SE = 0.03, p < .001, but not from pretraining to follow-up, B = -0.01, SE = 0.03, p = 0.98. EBPAS-36 scores decreased significantly from posttraining to follow-up, B = -0.11, SE =

0.03, p <.001. However, PBL scores were not significantly different than the TAU training condition's scores, B = -0.30, SE = 0.06, p = .58. The Time x Condition (PBL vs. TAU) interaction was not significant, p = 0.77.

Finally, EBTI scores increased significantly from pretraining to posttraining, B = 0.81, SE = 0.11, p < .001, and from pretraining to follow-up, B = 0.39, SE = 0.13, p = .002. EBTI scores decreased significantly from posttraining to follow-up, B = 0.42, SE = 0.23, p < .001. However, PBL scores were not significantly different than the TAU training condition's scores, B = -0.35, SE = 0.25, p = .17. The Time x Condition (PBL vs. TAU) interaction was not significant, p = 0.23.

An examination of the tolerance statistics and variance inflation factor statistics indicated that there was not multicollinearity among predictor variables. Standardized betas are reported. There was not a significant relationship between hours of training in EBPs at pretraining and EBPAS-36 scores at posttraining (controlling for EPBAS-36 scores at pe-training; b=0.04, t(98)=0.59, p= .558). Similarly, attitudes about EBPs at pretraining were not significantly related to intended use of EBPs at posttraining when controlling for intended use as reported at pretraining; b=0.40, t(107)=1.36, p= 0.177.

CHAPTER 4

DISCUSSION

This study is the first to examine the instruction of school-based mental health providers in EBPs related to youth anxiety and accommodation. As hypothesized, both training conditions resulted in significant increases in workshop-specific knowledge, attitudes about EBPs and intention to utilize EBPs in future practice at posttraining. However, significant increases in general knowledge about EBPs were not observed from pre- to post-training and gains in attitudes about EBPs were not maintained at follow-up (no significant difference between EBPAS scores from pretraining to follow-up). Contrary to *a priori* hypotheses, outcomes did not significantly differ between training conditions on measures of workshop-specific knowledge, attitudes or intended use, but did differ significantly on measures of general knowledge of EBPs (although there was not a significant interaction effect). Baseline trainee characteristics did not predict differential changes in outcomes variables between trainees. Namely, more pretraining instruction in EBPs was not differentially associated with increases in posttraining attitudes about EBPs and more favorable attitudes towards EBPs at pretraining were not differentially related to increases in posttraining intended use of EBPs.

The present findings, similar to previous findings (Beidas & Kendall, 2010; Herschell et al., 2010; Rakovshik & McManus, 2010) indicate that practitioners' (workshop-specific) knowledge of, intended use of and attitudes toward EBPs improve after attending a workshop (as indicated by the KT, EBPAS and EBTI). This finding is particularly important in reference to the subject matter of accommodation and anxiety given that accommodation is linked to numerous negative outcomes (Benito et al., 2015;

Lebowitz et al., 2013; Thompson-Hollands et al., 2014) and school-based interventions and supports may often serve to accommodate and subsequently maintain student anxiety (Conroy et al., 2020; Green et al., 2017; Phillips et al., under review). Further, although evidence-based interventions for youth anxiety can be effectively delivered by school personnel (Ginsburg et al, 2008; Mufson et al., 2004; Stein et al., 2003), these programs are frequently not sustained outside of the context of research (i.e., discontinue following the conclusion of research protocols; Herschell et al., 2004; LoCurto, et al., 2020; Reinke et al., 2010). The present findings are promising because the workshop provided instruction in broadly applicable principles rather than a single intervention, which is thought to be a less resource-intensive way to increase competency and possibly sustainability (Beidas et al., 2011). The findings indicate that a principle-based workshop can significantly increase knowledge of, intended use of and attitudes toward EBPs.

Although trainees in both training conditions displayed increases in workshop specific knowledge, attitudes toward and intended use of EBPs at posttraining, these gains were only maintained in the areas of workshop-specific knowledge and intended use. Numerous training studies have yielded improvement in attitudes towards EBPs, this change does not appear to be directly related to proficiency in or adoption of the target treatment (e.g., Beidas et al. 2012b; Deacon et al. 2013; Lim et al. 2012). However, research does suggest that intentions are an important determinant of implementation of EBPs (Godin et al., 2008; Presseau et al., 2014) with models indicating that strong intention is a necessary precursor for behavior change to occur (Williams & Glisson, 2014). This highlights the particular importance of present findings displaying significant

improvement in intended EBP use, over attitudes toward EBPs, not only from pre- to post-training but also from pretraining to follow-up.

Despite training successfully increasing workshop-specific knowledge, intended use and attitudes, contrary to hypothesis the PBL condition did not differentially increase trainees' scores across these measures. This outcome is surprising in light of findings that suggest that passive learning strategies are not ideal training methods (El-Tannir, 2002; Miller et al., 2004). However, a number of factors may explain the lack of between-condition differences in trainee outcomes at posttraining and follow-up. It is possible that the TAU condition was a more active training condition than didactic workshops described in previous literature. Following prescribed PBL format (see Barrett et al., 2011), the PBL condition presented a central question in the form of a clinical vignette and allowed groups to come up with various unique solutions, without the presentation of fixed or ultimate solutions from the workshop leader. However, the TAU condition similarly used clinical vignettes as a training tool. This inclusion was in an effort to maintain comparable content while modifying training approach (to prevent study confound). Despite using different training styles as well as presenting the TAU trainees with fixed solutions to the presented vignettes, it is possible that the discussion of said solutions created a training environment that was similar to the PBL condition. These similarities would not be identified in the Manipulation Check as they arose from organic conversation and questioning in the TAU condition, rather than similarities between the conditions in information presentation and solution analysis (which were probed in the Manipulation Check). Future studies may be better able to test PBL's potential value as a training approach by limiting trainee discussion and collaborative problem solving in

comparison training conditions. These features of the TAU condition may also explain why, contrary to previous findings about the limitations of didactic training approaches, the TAU condition was successful in improving training targets from pre- to post-training.

Although training conditions did not differ across measures of workshop-specific knowledge, attitudes towards EBPs and intentions to utilize EBPs, results did show significant differences in overall knowledge of EBPs (as measured by the KBESQ) between conditions. Namely, both conditions' trainees displayed decreased overall knowledge from pre- to post-training, but knowledge increased from posttraining to follow-up. Further, trainees in the TAU condition saw a greater increase in overall knowledge from pretraining to follow-up. This pattern may result from the nature of discussion between the two training conditions. Given trainees in the PBL condition worked in small groups it is possible their discussions were circumscribed to the scope of the workshop, EBPs for youth anxiety. However, when TAU trainees were provided with specific solutions and subsequently evidence-based explanations for the solutions when probed, more broadly applicable principles (e.g., relevant to other areas of youth psychopathology) may have arisen. Overall, decreases from pre- to post-training may be explained by an increased awareness of which interventions are evidence-based and which are not, or even an increase in discernment when considering the KBESQ's prompts. This may have led to a hesitance to label any intervention as evidence-based without gathering further knowledge. Further, the subsequent increase in knowledge might be explained by an increase in awareness of the importance of evidence based

treatments and trainees independently increasing their knowledge (e.g., asking questions of instructors, independent reading, seeking out additional training experiences).

Potential limitations merit consideration. First, it is possible that the virtual nature of the trainings limited the generalizability of previous research to the present study, as well as the generalizability of findings from the present study. However, due to consistency between conditions (both were virtual) and COVID-19 restrictions, this was a necessary step to ensure (a) the safety of the trainer and trainees and (b) recruitment achieved the needed sample size. Second, the present sample had a significantly higher proportion of doctoral-levels trainees (PhD, PsyD and EdD) than is present in the current workforce (22.60% in the workforce versus 40.00% in the present study, $p < 0.001$; Goforth et al., 2021). It is likely that students who are enrolled in programs that emphasize research may be more likely to participate in research. Future studies might increase generalizability by specifically targeting more masters- and specialist-level trainees in recruitment as they represent the largest proportion of school psychologists in the workforce (8.8% and 68.6%, respectively; Goforth et al., 2021). Third, workshop-specific knowledge was measured with the Knowledge Test, which was amended specifically for the present study. Although it displayed reliability, further research is warranted to examine its psychometric properties. Finally, use of trainees rather than practicing school psychologists limited our ability to measure actual EBP use (versus intended use). The use of passive assessment strategies (self-report measures) rather than active assessment strategies limited our ability to measure understanding and ability outside of rote knowledge. Future studies would benefit from using behavioral role plays

as well as observational measures to quantify the effect of training on knowledge, skill and actual implementation of EBPs.

Altogether the results of this study lend promising evidence to the body of research concerning training in EBPs. The present findings suggest that workshops can successfully improve workshop-specific knowledge, attitudes towards EBPs and intended use of EBPs in trainees seeking to become school-based practitioners. Further, it lends credence to idea that principle-based training (versus manual- or protocol-based trainings) can successfully increase knowledge without being highly resource- or time-intensive. Despite encouraging results, future research is warranted to more specifically identify benefits of PBL strategies over more traditional training strategies. Additionally, future studies would benefit from examining outcomes of skill and actual EBP use through measurement strategies such as coding behavioral role plays and observational data collection.

REFERENCES CITED

Aarons, G. A. (2005). Measuring provider attitudes toward evidence-based practice: Consideration of organizational context and individual differences. *Child and Adolescent Psychiatric Clinics*, *14*(2), 255-271.

Abramowitz, J. S., & Jacoby, R. J. (2014). Obsessive compulsive disorder in the DSM-5. Clinical Psychology: Science and Practice, 21, 221–235. doi:10.1111/cpsp.12076

Achenbach, T. M. (1999). The Child Behavior Checklist and related instruments.

Albano, A. M., Chorpita, B. F., & Barlow, D. H. (2003). Childhood anxiety disorders.

Albano, A. M., & Silverman, W. K. (1996). The Anxiety Disorders Interview Schedule for Children for DSM-IV: Clinician manual (child and parent versions). *San Antonio, TX: Psychological Corporation*.

Alegría, M., Green, J. G., McLaughlin, K. A., & Loder, S. (2015). Disparities in child and adolescent mental health and mental health services in the US. *New York, NY: William T. Grant Foundation*.

Allen, J. L., & Lerman, R. (2018). Teacher Responses to Anxiety in Children Questionnaire (TRAC): psychometric properties and relationship with teaching staff characteristics. Emotional and Behavioural Difficulties, 23(2), 154-168.

Atkins, M. S., Cappella, E., Shernoff, E. S., Mehta, T. G., & Gustafson, E. L. (2017). Schooling and children's mental health: realigning resources to reduce disparities and advance public health. *Annual Review of Clinical Psychology*, *13*, 123-147.

Barrett, T., D. Cashman, and S. Moore. 2011. *Designing Problems and Triggers in Different Media in New Approaches to Problem-based Learning Revitalising Your Practice in Higher Education*. Abingdon: Routledge.

Barrows, H. S. (1996). Problem-based learning in medicine and beyond: A brief overview. *New directions for teaching and learning*, *1996*(68), 3-12.

Barrows, H. S., & Tamblyn, R. M. (1980). *Problem-based learning: An approach to medical education* (Vol. 1). Springer Publishing Company.

Beck, A. T., Epstein, N., Brown, G., & Steer, R. A. (1988). An inventory for measuring clinical anxiety: psychometric properties. *Journal of consulting and clinical psychology*, *56*(6), 893.

Beidas, R. S., Barmish, A. J., & Kendall, P. C. (2009). Training as Usual: Can Therapist Behavior Change After Reading a Manual and Attending a Brief Workshop on Cognitive Behavioral Therapy for Youth Anxiety?.

Beidas, R. S., Edmunds, J. M., Marcus, S. C., & Kendall, P. C. (2012b). Training and consultation to promote implementation of an empirically supported treatment: A randomized trial. *Psychiatric Services*, *63*(7), 660-665.

Beidas, R. S., & Kendall, P. C. (2010). Training therapists in evidence-based practice: A critical review of studies from a systems-contextual perspective. *Clinical Psychology: Science and Practice*, *17*(1), 1-30.

Beidas, R. S., Koerner, K., Weingardt, K. R., & Kendall, P. C. (2011). Training research: Practical recommendations for maximum impact. *Administration and Policy in Mental Health and Mental Health Services Research*, *38*(4), 223-237.

Beidas, R. S., Marcus, S., Wolk, C. B., Powell, B., Aarons, G. A., Evans, A. C., ... & Mandell, D. S. (2016). A prospective examination of clinician and supervisor turnover within the context of implementation of evidence-based practices in a

publicly-funded mental health system. *Administration and Policy in Mental Health and Mental Health Services Research*, *43*(5), 640-649.

Beidas, R. S., Mychailyszyn, M. P., Edmunds, J. M., Khanna, M. S., Downey, M. M., & Kendall, P. C. (2012a). Training school mental health providers to deliver cognitive-behavioral therapy. *School mental health*, *4*(4), 197-206.

Benito, K. G., Caporino, N. E., Frank, H. E., Ramanujam, K., Garcia, A., Freeman, J., ... & Storch, E. A. (2015). Development of the pediatric accommodation scale: Reliability and validity of clinician-and parent-report measures. *Journal of Anxiety Disorders*, *29*(1), 14-24.

Bernstein, G. A., Bernat, D. H., Davis, A. A., & Layne, A. E. (2008). Symptom presentation and classroom functioning in a nonclinical sample of children with social phobia. *Depression and anxiety*, *25*(9), 752-760.

Blau, G. M., Huang, L. N., & Mallery, C. J. (2010). Advancing efforts to improve children's mental health in America: A commentary. *Administration and Policy in Mental Health and Mental Health Services Research*, *37*(1-2), 140-144.

Blumberg, P. (2000). Evaluating the evidence that problem-based learners are self-directed learners: A review of the literature.

Bozic, N., & Williams, H. (2011). Online problem-based and enquiry-based learning in the training of educational psychologists. *Educational Psychology in Practice*, *27*(4), 353-364.

Bradley, R., Henderson, K., & Monfore, D. A. M. (2004). A national perspective on children with emotional disorders. *Behavioral Disorders*, *29*(3), 211-223.

Bramlett, R. K., Murphy, J. J., Johnson, J., Wallingsford, L., & Hall, J. D. (2002). Contemporary practices in school psychology: A national survey of roles and referral problems. *Psychology in the Schools*, *39*(3), 327-335.

Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American psychologist*, *32*(7), 513.

Burns, B. J., Costello, E. J., Angold, A., Tweed, D., Stangl, D., Farmer, E. M., & Erkanli, A. (1995). Children's mental health service use across service sectors. *Health affairs*, *14*(3), 147-159.

Calvocoressi, L., Lewis, B., Harris, M., Trufan, S. J., Goodman, W. K., McDougle, C. J., & Price, L. H. (1995). Family accommodation in obsessive-compulsive disorder. *The American Journal of Psychiatry*.

Cartwright-Hatton, S., McNicol, K., & Doubleday, E. (2006). Anxiety in a neglected population: Prevalence of anxiety disorders in pre-adolescent children. *Clinical psychology review*, *26*(7), 817-833.

Chernobilsky, E., DaCosta, M. C., & Hmelo-Silver, C. E. (2004). Learning to talk the educational psychology talk through a problem-based course. *Instructional Science*, *32*(4), 319-356.

Chorpita, B.F., Yim, L., Moffitt, C., Umemoto, L.A., & Francis, S.E. (2000). Assessment of symptoms of DSM- IV anxiety and depression in children: A revised child anxiety and depression scale. *Behaviour Research and Therapy*, *38*, 835–855.

Coker, P. (2010). Effects of an experiential learning program on the clinical reasoning and critical thinking skills of occupational therapy students. *Journal of Allied Health*, 39, 280.

Conroy, K., Greif Green, J., Phillips, K., Poznanski, B., Coxe, S., Kendall, P. C., & Comer, J. S. (2020). School-based accommodations and supports for anxious youth: benchmarking reported practices against expert perspectives. *Journal of Clinical Child & Adolescent Psychology*, 1-9.

Cook, C. R., Davis, C., Brown, E. C., Locke, J., Ehrhart, M. G., Aarons, G. A., ... & Lyon, A. R. (2018). Confirmatory factor analysis of the Evidence-Based Practice Attitudes Scale with school-based behavioral health consultants. *Implementation Science*, *13*(1), 1-8.

Corso, A., Cunningham, A., Sposato, R., & Buchhofer, R. (2010, August). *Development of a Web-Based Training Program for Cognitive Therapy* . Poster session presented at the annual American Psychological Association Conference. C.A.: San Diego

Costello, E. J., He, J. P., Sampson, N. A., Kessler, R. C., & Merikangas, K. R. (2014). Services for adolescents with psychiatric disorders: 12-month data from the National Comorbidity Survey–Adolescent. *Psychiatric services*, *65*(3), 359-366.

Courtney, D., Watson, P., Battaglia, M., Mulsant, B. H., & Szatmari, P. (2020). COVID-19 impacts on child and youth anxiety and depression: challenges and opportunities. *The Canadian Journal of Psychiatry*, *65*(10), 688-691.

Creed, T. A., Jager-Hyman, S., Pontoski, K., Feinberg, B., Rosenberg, Z., Evans, A., ... & Beck, A. T. (2013). The Beck Initiative: Training school-based mental health staff in cognitive therapy. *The International Journal of Emotional Education*, *5*(2), 49-66.

Cross, W., Matthieu, M. M., Cerel, J., & Knox, K. L. (2007). Proximate outcomes of gatekeeper training for suicide prevention in the workplace. *Suicide and Life-Threatening Behavior*, *37*(6), 659-670.

Deacon, B. J., Farrell, N. R., Kemp, J. J., Dixon, L. J., Sy, J. T., Zhang, A. R., & McGrath, P. B. (2013). Assessing therapist reservations about exposure therapy for anxiety disorders: The Therapist Beliefs about Exposure Scale. *Journal of Anxiety Disorders*, *27*(8), 772-780.

Derogatis, L. R., & Melisaratos, N. (1983). The Brief Symptom Inventory: An introductory report. *Psychological Medicine,* 13, 595–605.

Dillman, D. A., Smyth, J. D., & Christian, L. M. (2009). *Internet, mail, and mixed-mode surveys: The tailored design method* (3rd ed.). Hoboken, NJ: Wiley.

Dimeff, L. A., Koerner, K., Woodcock, E. A., Beadnell, B., Brown, M. Z., Skutch, J. M., ... & Harned, M. S. (2009). Which training method works best? A randomized controlled trial comparing three methods of training clinicians in dialectical behavior therapy skills. *Behaviour research and therapy*, *47*(11), 921-930.

Dochy, F., Segers, M., van den Bossche, P., & Gijbels, D. (2003). Effects of problem based learning: A meta-analysis. *Learning and Instruction*, *13*(5), 533–568. doi:10.1016/S0959-4752(02)00025-7

Duchesne, S., Larose, S., Guay, F., Vitaro, F., & Tremblay, R. E. (2005). The transition from elementary to high school: The pivotal role of mother and child characteristics in explaining trajectories of academic functioning. *International Journal of Behavioral Development*, *29*(5), 409-417.

Dunsmuir, S., & Frederickson, N. (2014). Problem-based learning in professional training: Experiences of school psychology trainers in the United Kingdom. *Training and Education in Professional Psychology*, *8*(2), 127.

Dunsmuir, S., Frederickson, N., & Lang, J. (2017). Meeting current challenges in school psychology training: The role of problem-based learning. *School Psychology Review*, *46*(4), 395-407.

Durlak, J. A., & DuPre, E. P. (2008). Implementation matters: A review of research on the influence of implementation on program outcomes and the factors affecting implementation. *American journal of community psychology*, *41*(3-4), 327.

El-Tannir, A. A. (2002). The corporate university model for continuous learning, training and development. *Education+ Training*.

Evans, S. W., Langberg, J., & Williams, J. (2003). Achieving generalization in school-based mental health. In *Handbook of school mental health advancing practice and research* (pp. 335-348). Springer, Boston, MA.

Every Student Succeeds Act of 2015, Pub. L. No. 114-95.

Farmer, E. M., Burns, B. J., Phillips, S. D., Angold, A., & Costello, E. J. (2003). Pathways into and through mental health services for children and adolescents. *Psychiatric services*, *54*(1), 60-66.

Fields, A. (2005). Discovering statistics using SPSS. London, UK: Sage.

Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M., Wallace, F., Burns, B., ... & Shern, D. (2005). Implementation research: A synthesis of the literature.

Flessner, C. A., Freeman, J. B., Sapyta, J., Garcia, A., Franklin, M. E., March, J. S., & Foa, E. (2011). Predictors of parental accommodation in pediatric obsessive-compulsive disorder: Findings from the pediatric obsessive-compulsive disorder treatment study (POTS) trial. *Journal of the American Academy of Child & Adolescent Psychiatry*, *50*(7), 716-725.

Flessner, C. A., Sapyta, J., Garcia, A., Freeman, J. B., Franklin, M. E., Foa, E., & March, J. (2011). Examining the psychometric properties of the family accommodation scale-parent-report (FAS-PR). *Journal of psychopathology and behavioral assessment*, *33*(1), 38-46.

Forman, S. G., Fagley, N. S., Steiner, D. D., & Schneider, K. (2009). Teaching evidence-based interventions: Perceptions of influences on use in professional practice in school psychology. *Training and Education in Professional Psychology*, *3*(4), 226.

Frank, H. E., Becker-Haimes, E. M., & Kendall, P. C. (2020). Therapist training in evidence-based interventions for mental health: A systematic review of training approaches and outcomes. *Clinical Psychology: Science and Practice*, *27*(3), e12330.

Frank, H. E., Becker-Haimes, E. M., Rifkin, L. S., Norris, L. A., Ollendick, T. H., Olino, T. M., ... & Kendall, P. C. (2020). Training with tarantulas: A randomized feasibility and acceptability study using experiential learning to enhance exposure therapy training. *Journal of Anxiety Disorders*, *76*, 102308.

Futh, A., Simonds, L. M., & Micali, N. (2012). Obsessive-compulsive disorder in children and adolescents: parental understanding, accommodation, coping and distress. *Journal of Anxiety Disorders*, *26*(5), 624-632.

Garland, A. F., Brookman-Frazee, L., Hurlburt, M. S., Accurso, E. C., Zoffness, R. J., Haine-Schlagel, R., & Ganger, W. (2010). Mental health care for children with disruptive behavior problems: A view inside therapists' offices. *Psychiatric Services*, *61*(8), 788-795.

Garland, A. F., Lau, A. S., Yeh, M., McCabe, K. M., Hough, R. L., & Landsverk, J. A. (2005). Racial and ethnic differences in utilization of mental health services among high-risk youths. *American Journal of Psychiatry*, *162*(7), 1336-1343.

Gee, B., Reynolds, S., Carroll, B., Orchard, F., Clarke, T., Martin, D., ... & Pass, L. (2020). Practitioner Review: Effectiveness of indicated school-based interventions for adolescent depression and anxiety–a meta-analytic review. *Journal of Child Psychology and Psychiatry*, *61*(7), 739-756.

Gijbels, D., Dochy, F., Van den Bossche, P., & Segers, M. (2005). Effects of problem-based learning: A meta-analysis from the angle of assessment. *Review of educational research*, *75*(1), 27-61.

Ginsburg, G. S., Becker, K. D., Drazdowski, T. K., & Tein, J.-Y. (2012). Treating anxiety disorders in Inner City Schools: Results from a Pilot Randomized Controlled Trial Comparing CBT and Usual Care. *Child & Youth Care Forum*, **41**, 1–19.

Ginsburg, G. S., Drake, K. L., Muggeo, M. A., Stewart, C. E., Pikulski, P. J., Zheng, D., & Harel, O. (2021). A pilot RCT of a school nurse delivered intervention to reduce student anxiety. *Journal of Clinical Child & Adolescent Psychology*, *50*(2), 177-186.

Goforth, A. N., Farmer, R. L., Kim, S. Y., Naser, S. C., Lockwood, A. B., & Affrunti, N. W. (2021). Status of school psychology in 2020: Part 1, demographics of the NASP membership survey. NASP Research Reports, 5(2), 1-17.

Green, J. G., Comer, J. S., Donaldson, A. R., Elkins, R. M., Nadeau, M. S., Reid, G., & Pincus, D. B. (2016). School functioning and use of school-based accommodations by treatment-seeking anxious adolescents. Journal of Emotional and Behavioral Disorders, 25(4), 220–232.

Green, J. G., Guzmán, J., Didaskalou, E., Harbaugh, A. G., Segal, N., & LaBillois, J. (2018). Teacher identification of student emotional and behavioral problems and provision of early supports: A vignette-based study. Journal of Emotional and Behavioral Disorders, 26(4), 225–242.

Grover, R. L., Ginsburg, G. S., & Ialongo, N. (2007). Psychosocial outcomes of anxious first graders: A seven-year follow-up. *Depression and Anxiety*, *24*(6), 410-420.

Guy, W., 1976. Clinical Global Impressions. ECDEU Assessment Manual for Psychopharmacology, Revised (DHEW Publ. No. ADM 76-338). National Institute of Mental Health, Rockville, MD, pp. 218–222.

Harned, M. S., Dimeff, L. A., Woodcock, E. A., & Skutch, J. M. (2011). Overcoming barriers to disseminating exposure therapies for anxiety disorders: A pilot randomized controlled trial of training methods. *Journal of Anxiety Disorders*, *25*(2), 155-163.

Hays, J., & Vincent, J. P. (2004). Students' evaluation of problem-based learning in graduate psychology courses. *Teaching of Psychology*.

Herschell, A. D., McNeil, C. B., & McNeil, D. W. (2004). Clinical child psychology's progress in disseminating empirically supported treatments. *Clinical Psychology: Science and Practice*, *11*(3), 267-288.

Herschell, A. D., Kolko, D. J., Baumann, B. L., & Davis, A. C. (2010). The role of therapist training in the implementation of psychosocial treatments: A review and critique with recommendations. *Clinical psychology review*, *30*(4), 448-466.

Hicks, T. B., Shahidullah, J. D., Carlson, J. S., & Palejwala, M. H. (2014). Nationally Certified School Psychologists' use and reported barriers to using evidence-based

interventions in schools: The influence of graduate program training and education. *School Psychology Quarterly*, *29*(4), 469.

Higa-McMillan, C. K., Nakamura, B. J., Morris, A., Jackson, D. S., & Slavin, L. (2015). Predictors of use of evidence-based practices for children and adolescents in usual care. *Administration and Policy in Mental Health and Mental Health Services Research*, *42*(4), 373-383.

Hill, K. A., Mah, A. C., & Nakamura, B. J. (2020). Where Does It Begin? Community-Based Therapists' Intentions for Treating Non-comorbid Youth. *Administration and Policy in Mental Health and Mental Health Services Research*, 1-15.

Hoagwood, K., Burns, B. J., Kiser, L., Ringeisen, H., & Schoenwald, S. K. (2001). Evidence-based practice in child and adolescent mental health services. *Psychiatric services*, *52*(9), 1179-1189.

Hoagwood, K., & Johnson, J. (2003). School psychology: A public health framework: I. From evidence-based practices to evidence-based policies. *Journal of School Psychology*, *41*(1), 3-21.

Hollon, S. D., & Beck, A. T. (2013). Cognitive and cognitive-behavioral therapies. (p 393-432). In *Bergin and Garfield's handbook of psychotherapy and behavior change*, M. Lambert (ed) (3rd Ed). Majwah, NJ: Wiley.

Hunt, C., Andrews, G., Sakashita, C., Crino, R., & Erskine, A. (2009). Randomized controlled trial of an early intervention programme for adolescent anxiety disorders. *Australian & New Zealand Journal of Psychiatry*, *43*(4), 300-304.

Ialongo, N., Edelsohn, G., Werthamer-Larsson, L., Crockett, L., & Kellam, S. (1995). The significance of self-reported anxious symptoms in first grade children: Prediction

to anxious symptoms and adaptive functioning in fifth grade. *Journal of Child Psychology and Psychiatry*, *36*(3), 427-437.

Individuals with Disabilities Education Improvement Act, H.R. 1350, 108th Congress (2004).

Kagan, E. R., Frank, H. E., & Kendall, P. C. (2017). Accommodation in youth with OCD and anxiety. *Clinical Psychology: Science and Practice*, 24, 78–98. HD080097

Kagan, E. R., Peterman, J. S., Carper, M. M., & Kendall, P. C. (2016). Accommodation and treatment of anxious youth. *Depression and Anxiety*, *33*(9), 840-847.

Kaufman, J., Birmaher, B., Brent, D., Rao, U. M. A., Flynn, C., Moreci, P., ... & Ryan, N. (1997). Schedule for affective disorders and schizophrenia for school-age children-present and lifetime version (K-SADS-PL): initial reliability and validity data. *Journal of the American Academy of Child & Adolescent Psychiatry*, *36*(7), 980-988.

Kendall, P. C., Hudson, J. L., Gosch, E., Flannery-Schroeder, E., & Suveg, C. (2008). Cognitive-behavioral therapy for anxiety disordered youth: a randomized clinical trial evaluating child and family modalities. *Journal of consulting and clinical psychology*, *76*(2), 282.

Kendall, P. C., Robin, J. A., Hedtke, K. A., Suveg, C., Flannery-Schroeder, E., & Gosch, E. (2005). Considering CBT with anxious youth? Think exposures. *Cognitive and Behavioral Practice*, *12*(1), 136-148.

Kendall, P. C., Safford, S., Flannery-Schroeder, E., & Webb, A. (2004). Child anxiety treatment: outcomes in adolescence and impact on substance use and depression at 7.4-year follow-up. *Journal of consulting and clinical psychology*, *72*(2), 276.

Kennedy, E. K., Cameron, R. J., & Monsen, J. (2009). Effective consultation in educational and child psychology practice: Professional training for both competence and capability. *School Psychology International*, *30*(6), 603-625.

Keogh, E., Bond, F. W., & Flaxman, P. E. (2006). Improving academic performance and mental health through a stress management intervention: Outcomes and mediators of change. *Behaviour research and therapy*, *44*(3), 339-357.

Kiernan, M. J., Murrell, E., & Relf, S. (2008). Professional education of psychologists using online problem-based learning methods: Experience at Charles Sturt University. *Australian Psychologist*, *43*(4), 286-292.

Klein, R. G., Koplewicz, H. S., & Kanner, A. (1992). Imipramine treatment of children with separation anxiety disorder. *Journal of the American Academy of Child & Adolescent Psychiatry*, *31*(1), 21-28.

Koh, G. C. H., Khoo, H. E., Wong, M. L., & Koh, D. (2008). The effects of problem-based learning during medical school on physician competency: a systematic review. *Cmaj*, *178*(1), 34-41.

Koschmann, E., Abelson, J. L., Kilbourne, A. M., Smith, S. N., Fitzgerald, K., & Pasternak, A. (2019). Implementing evidence-based mental health practices in schools: Feasibility of a coaching strategy. *The Journal of Mental Health Training, Education and Practice*.

Kratochwill, T. R. (2007). Preparing psychologists for evidence-based school practice: Lessons learned and challenges ahead. *American Psychologist*, *62*(8), 829.

Lacayo, N., Sherwood, G., & Morris, J. (1981). Daily activities of school psychologists: A national survey. *Psychology in the Schools*, *18*(2), 184-190.

Langley, A. K., Falk, A., Peris, T., Wiley, J. F., Kendall, P. C., Ginsburg, G., ... & Piacentini, J. (2014). The child anxiety impact scale: examining parent-and child-reported impairment in child anxiety disorders. *Journal of Clinical Child & Adolescent Psychology*, *43*(4), 579-591.

Lebowitz, E. R., Panza, K. E., Su, J., & Bloch, M. H. (2012). Family accommodation in obsessive–compulsive disorder. *Expert Review of Neurotherapeutics*, *12*(2), 229-238.

Lebowitz, E. R., Scharfstein, L. A., & Jones, J. (2014). Comparing family accommodation in pediatric obsessive-compulsive disorder, anxiety disorders, and nonanxious children. *Depression and Anxiety*, *31*, 1018-1025.

Lebowitz, E. R., Woolston, J., Bar-Haim, Y., Calvocoressi, L., Dauser, C., Warnick, E., ... & Vitulano, L. A. (2013). Family accommodation in pediatric anxiety disorders. *Depression and Anxiety*, *30*, 47-54.

Lim, A., Nakamura, B. J., Higa-McMillan, C. K., Shimabukuro, S., & Slavin, L. (2012). Effects of workshop trainings on evidence-based practice knowledge and attitudes among youth community mental health providers. *Behaviour research and therapy*, *50*(6), 397-406.

LoCurto, J., Pella, J., Chan, G., & Ginsburg, G. (2020). School-Based Clinicians Sustained Use of a Cognitive Behavioral Treatment for Anxiety Disorders. *School Mental Health*, *12*(4), 677-688.

Lyon, A. R., Ludwig, K. A., Vander Stoep, A., Gudmundsen, G., & McCauley, E. (2013). Patterns and predictors of mental healthcare utilization in schools and other service sectors among adolescents at risk for depression. *School mental health*, *5*(3), 155-165.

March, J. S., Parker, J. D., Sullivan, K., Stallings, P., & Conners, C. K. (1997). The Multidimensional Anxiety Scale for Children (MASC): factor structure, reliability, and validity. *Journal of the American academy of child & adolescent psychiatry*, *36*(4), 554-565.

Masia, C., Beidel, D.C., Albano, A.M., Rapee, R.M., Turner, S.M., Morris, T.L., & Klein, R.G. (1999). Skills for academic and social success. New York: Child Study Center.

Masia Warner, C., Colognori, D., Brice, C., Herzig, K., Mufson, L., Lynch, C., ... & Klein, R. G. (2016). Can school counselors deliver cognitive-behavioral treatment for social anxiety effectively? A randomized controlled trial. *Journal of Child Psychology and Psychiatry*, *57*(11), 1229-1238.

Masia Warner, C., Fisher, P. H., Shrout, P. E., Rathor, S., & Klein, R. G. (2007). Treating adolescents with social anxiety disorder in school: An attention control trial. *Journal of Child Psychology and Psychiatry*, *48*(7), 676-686.

McHugh, R. K., & Barlow, D. H. (2010). The dissemination and implementation of evidence-based psychological treatments: A review of current efforts. *American Psychologist*, *65*(2), 73.

Merikangas, K. R., He, J. P., Burstein, M., Swanson, S. A., Avenevoli, S., Cui, L., ... & Swendsen, J. (2010). Lifetime prevalence of mental disorders in US adolescents: results from the National Comorbidity Survey Replication–Adolescent Supplement (NCS-A). *Journal of the American Academy of Child & Adolescent Psychiatry*, *49*(10), 980-989.

Miller, L. D., Laye-Gindhu, A., Liu, Y., March, J. S., Thordarson, D. S., & Garland, E. J. (2011). Evaluation of a preventive intervention for child anxiety in two randomized attention-control school trials. *Behaviour Research and Therapy*, **49**, 315–323.

Miller, W. R., Yahne, C. E., Moyers, T. B., Martinez, J., & Pirritano, M. (2004). A randomized trial of methods to help clinicians learn motivational interviewing. *Journal of Consulting and Clinical Psychology*, 72, 1050–1062.

Mufson, L. H., Dorta, K. P., Olfson, M., Weissman, M. M., & Hoagwood, K. (2004). Effectiveness research: Transporting interpersonal psychotherapy for depressed adolescents (IPT-A) from the lab to school-based health clinics. *Clinical Child and Family Psychology Review*, *7*(4), 251-261.

Mychailyszyn, M. P., Méndez, J. L., & Kendall, P. C. (2010). School functioning in youth with and without anxiety disorders: Comparisons by diagnosis and comorbidity. *School Psychology Review*, *39*(1).

Mychailyszyn, M. P., Beidas, R. S., Benjamin, C. L., Edmunds, J. M., Podell, J. L., Cohen, J. S., & Kendall, P. C. (2011). Assessing and treating child anxiety in schools. *Psychology in the Schools, 48*, 223-232. R34 MH080788

Nail, J. E., Christofferson, J., Ginsburg, G. S., Drake, K., Kendall, P. C., McCracken, J. T., ... & Sakolsky, D. (2015, June). Academic impairment and impact of treatments among youth with anxiety disorders. In *Child & Youth Care Forum* (Vol. 44, No. 3, pp. 327-342). Springer US.

Nakagawa, S., Johnson, P. C., & Schielzeth, H. (2017). The coefficient of determination R 2 and intra-class correlation coefficient from generalized linear mixed-effects

models revisited and expanded. *Journal of the Royal Society Interface*, *14*(134), 20170213.

Neil, A. L., & Christensen, H. (2009). Efficacy and effectiveness of school-based prevention and early intervention programs for anxiety. *Clinical Psychology Review*, *29*, 208–215.

Nel, P. W., Keville, S., Ford, D., McCarney, R., Jeffrey, S., Adams, S., & Uprichard, S. (2008). Close encounters of the uncertain kind: Reflections on doing problem-based learning (PBL) for the first time. *Reflective Practice*, *9*(2), 197-206.

Norman, G. T., & Schmidt, H. G. (1992). The psychological basis of problem-based learning: A review of the evidence. *Academic medicine*, *67*(9), 557-565.

Okamura, K. H., Benjamin Wolk, C. L., Kang-Yi, C. D., Stewart, R., Ruin, R. M., Weaver, S., ... Mandell, D. S. (2018). The price per prospective consumer of providing therapist training and consulta- tion in seven evidence-based treatments within a large public be- havioral health system: An example cost-analysis metric. *Frontiers in Public Health*, *5*, 356. https://doi.org/10.3389/fpubh.2017.00356

Orgilés, M., Morales, A., Delvecchio, E., Mazzeschi, C., & Espada, J. P. (2020). Immediate psychological effects of the COVID-19 quarantine in youth from Italy and Spain. *Frontiers in psychology*, *11*, 2986.

Owens, J. S., Richerson, L., Beilstein, E. A., Crane, A., Murphy, C. E., & Vancouver, J. B. (2005). School-based mental health programming for children with inattentive and disruptive behavior problems: First-year treatment outcome. *Journal of Attention Disorders*, *9*(1), 261-274.

Owens, J. S., Lyon, A. R., Brandt, N. E., Warner, C. M., Nadeem, E., Spiel, C., & Wagner, M. (2014). Implementation science in school mental health: Key constructs in a developing research agenda. *School mental health*, *6*(2), 99-111.

Peris, T. S., Bergman, R. L., Langley, A., Chang, S., McCracken, J. T., & Piacentini, J. (2008). Correlates of accommodation of pediatric obsessive-compulsive disorder: parent, child, and family characteristics. *Journal of the American Academy of Child & Adolescent Psychiatry*, *47*(10), 1173-1181.

Phillips, K.E., Conroy, K., Pinney, E., Comer, J.S., & Kendall, P.C. (under review). School accommodations amongst anxious youth; a characterization and qualification of school-based accommodations received by anxious youth in an outpatient setting. *Journal of Anxiety Disorders.*

Racine, N., McArthur, B. A., Cooke, J. E., Eirich, R., Zhu, J., & Madigan, S. (2021). Global prevalence of depressive and anxiety symptoms in children and adolescents during COVID-19: a meta-analysis. *JAMA pediatrics*, 175(11), 1142-1150.

Rakovshik, S. G., & McManus, F. (2010). Establishing evidence-based training in cognitive behavioral therapy: A review of current empirical findings and theoretical guidance. *Clinical Psychology Review*, *30*(5), 496-516.

Razzak, N. A. (2012). Problem-Based Learning in the Educational Psychology Classroom: Bahraini Teacher Candidates' Experience. *International Journal of Teaching and Learning in Higher Education*, *24*(2), 134-143.

Reddy, L. A., Forman, S. G., Stoiber, K. C., & Gonzalez, J. E. (2017). A NATIONAL INVESTIGATION OF SCHOOL PSYCHOLOGY TRAINERS'ATTITUDES AND

BELIEFS ABOUT EVIDENCE-BASED PRACTICES. *Psychology in the Schools, 54*(3), 261-278.

Reinke, W. M., Herman, K. C., Stormont, M., Brooks, C., & Darney, D. (2010). Training the next generation of school professionals to be prevention scientists: The Missouri Prevention Center model. *Psychology in the Schools, 47*(1), 101-110.

Reynolds, C. & Kamphaus, R. (1992). Behaviour assessment system for children: Manual.

American Guidance Service, Circle Pines, MN

Reynolds, C. R., & Richmond, B. O. (1997). What I think and feel: A revised measure of children's manifest anxiety. *Journal of abnormal child psychology, 25*(1), 15-20.

Rones, M., & Hoagwood, K. (2000). School-based mental health services: A research review. *Clinical child and family psychology review*, *3*(4), 223-241.

Rye, M., Torres, E. M., Friborg, O., Skre, I., & Aarons, G. A. (2017). The Evidence-based Practice Attitude Scale-36 (EBPAS-36): a brief and pragmatic measure of attitudes to evidence-based practice validated in US and Norwegian samples. *Implementation Science, 12*(1), 1-11.

Sareen, J., Jacobi, F., Cox, B. J., Belik, S. L., Clara, I., & Stein, M. B. (2006). Disability and poor quality of life associated with comorbid anxiety disorders and physical conditions. *Archives of internal medicine, 166*(19), 2109-2116.

Schniering, C. A., & Rapee, R. M. (2002). Development and valida- tion of a measure of children's automatic thoughts: The Children's Automatic Thoughts Scale. Behaviour Research and Therapy, 40(9), 1091–1109.

Şendağ, S., & Odabaşı, H. F. (2009). Effects of an online problem based learning course on content knowledge acquisition and critical thinking skills. *Computers & Education*, *53*(1), 132-141.

Settipani, C. A., & Kendall, P. C. (2013). Social functioning in youth with anxiety disorders: association with anxiety severity and outcomes from cognitive-behavioral therapy. *Child Psychiatry & Human Development*, *44*(1), 1-18.

Shaffer, D., Gould, M. S., Brasic, J., Ambrosini, P., Fisher, P., Bird, H., & Aluwahlia, S. (1983). A children's global assessment scale (CGAS). *Archives of General psychiatry, 40*(11), 1228-1231.

Shernoff, E. S., Kratochwill, T. R., & Stoiber, K. C. (2003). Training in evidence-based interventions (EBIs): What are school psychology programs teaching?. *Journal of School Psychology*, *41*(6), 467-483.

Shirk, S. R., Kaplinski, H., & Gudmundsen, G. (2009). School-based cognitive-behavioral therapy for adolescent depression: A benchmarking study. *Journal of Emotional and Behavioral Disorders*, *17*(2), 106-117.

Sholomskas, D. E., Syracuse-Siewert, G., Rounsaville, B. J., Ball, S. A., Nuro, K. F., & Carroll, K. M. (2005). We don't train in vain: a dissemination trial of three strategies of training clinicians in cognitive-behavioral therapy. *Journal of consulting and clinical psychology*, *73*(1), 106.

Shortt, AL, Barrett, PM, Fox, TL. Evaluating the FRIENDS program: a cognitive-behavioral group treatment for anxious children and their parents. J Clin Child Psychol 2001; 30: 525–535.

Singer, J. D., Willett, J. B., & Willett, J. B. (2003). *Applied longitudinal data analysis: Modeling change and event occurrence*. Oxford university press.

Smith, D. K., & Lyon, M. A. (1985). Consultation in school psychology: Changes from 1981 to 1984. *Psychology in the Schools*, *22*(4), 404-409.

Spitzer, R. L., Kroenke, K., Williams, J. B., Patient Health Questionnaire Primary Care Study Group, & Patient Health Questionnaire Primary Care Study Group. (1999). Validation and utility of a self-report version of PRIME-MD: the PHQ primary care study. *Jama*, *282*(18), 1737-1744.

Spitzer, R. L., Kroenke, K., Williams, J. B., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: the GAD-7. *Archives of internal medicine*, *166*(10), 1092-1097.

Stedmon, J., Wood, J., Curle, C., & Haslam, C. (2005). Development of PBL in the training of clinical psychologists. Psychology Learning and Teaching, 5, 52–60.

Stein, B. D., Jaycox, L. H., Kataoka, S. H., Wong, M., Tu, W., Elliott, M. N., & Fink, A. (2003). A mental health intervention for schoolchildren exposed to violence: A randomized controlled trial. *JAMA*, *290*, 603-611.

Storch, E. A., Merlo, L. J., Larson, M. J., Geffken, G. R., Lehmkuhl, H. D., Jacob, M. L., ... & Goodman, W. K. (2008). Impact of comorbidity on cognitive-behavioral therapy response in pediatric obsessive-compulsive disorder. *Journal of the American Academy of Child & Adolescent Psychiatry*, *47*(5), 583-592.

Storch, E. A., Salloum, A., Johnco, C., Dane, B. F., Crawford, E. A., King, M. A., ... & Lewin, A. B. (2015). Phenomenology and clinical correlates of family

accommodation in pediatric anxiety disorders. *Journal of Anxiety Disorders, 35*, 75-81.

Strobel, J., & Van Barneveld, A. (2009). When is PBL more effective? A meta-synthesis of meta-analyses comparing PBL to conventional classrooms. *Interdisciplinary Journal of Problem-based Learning, 3*(1), 44-58.

Stumpf, R. E., Higa-McMillan, C. K., & Chorpita, B. F. (2009). Implementation of evidence-based services for youth: Assessing provider knowledge. *Behavior Modification, 33*(1), 48-65.

Swan, A. J., & Kendall, P. C. (2016). Fear and missing out: Youth anxiety and functional outcomes. *Clinical Psychology: Science and Practice, 23*(4), 417-435.

Tang, M. H., Hill, K. S., Boudreau, A. A., Yucel, R. M., Perrin, J. M., & Kuhlthau, K. A. (2008). Medicaid managed care and the unmet need for mental health care among children with special health care needs. *Health services research,* 43(3), 882-900.

Tello, F. P. H., Moscoso, S. C., García, I. B., & Chaves, S. S. (2006). Training Satisfaction Rating Scale: Development of a measurement model using polychoric correlations. *European Journal of Psychological Assessment, 22*(4), 268.

Thompson-Hollands, J., Kerns, C. E., Pincus, D. B., & Comer, J. S. (2014). Parental accommodation of child anxiety and related symptoms: Range, impact, and correlates. *Journal of Anxiety Disorders, 28*, 765-773.

Walker, L. S., Beck, J. E., Garber, J., & Lambert, W. (2009). Children's Somatization Inventory: Psychometric properties of the revised form (CSI-24). Journal of Pediatric Psychology, 34(4), 430–440.

Walkup, J., Albano, A. M., Piacentini, J., Birmaher, B., Compton, S., … & Kendall, P. C. (2008). Cognitive behavioral therapy, sertraline, or a combination in childhood anxiety. *New England Journal of Medicine*, *359*, 2753-2766. U01 MH64107

Weems, C. F., Scott, B. G., Taylor, L. K., Cannon, M. F., Romano, D. M., Perry, A. M., & Triplett, V. (2010). Test anxiety prevention and intervention programs in schools: Program development and rationale. *School mental health*, *2*(2), 62-71.

Weersing, V. R., & Weisz, J. R. (2002). Community clinic treatment of depressed youth: benchmarking usual care against CBT clinical trials. *Journal of consulting and clinical psychology*, *70*(2), 299.

Weisz, J. R., Jensen-Doss, A., & Hawley, K. M. (2006). Evidence-based youth psychotherapies versus usual clinical care: a meta-analysis of direct comparisons. *American Psychologist*, *61*(7), 671.

Wiggins, S., Chiriac, E. H., Abbad, G. L., Pauli, R., & Worrell, M. (2016). Ask not only 'what can problem-based learning do for psychology?' but 'what can psychology do for problem-based learning?' A review of the relevance of problem-based learning for psychology teaching and research. *Psychology Learning & Teaching*, *15*(2), 136-154.

Wolk, C. B., Becker-Haimes, E. M., Fishman, J., Affrunti, N. W., Mandell, D. S., & Creed, T. A. (2019). Variability in clinician intentions to implement specific cognitive-behavioral therapy components. *BMC psychiatry*, *19*(1), 1-7.

Wolk, C. B., Kendall, P. C., & Beidas, R. S. (2015). Cognitive-behavioral therapy for child anxiety confers long-term protection from suicidality. *Journal of the American Academy of Child & Adolescent Psychiatry*, *54*(3), 175-179.

Wood, J. (2006). Effect of anxiety reduction on children's school performance and social adjustment. *Developmental psychology*, *42*(2), 345.

Woodward, L. J., & Fergusson, D. M. (2001). Life course outcomes of young people with anxiety disorders in adolescence. *Journal of the American Academy of Child & Adolescent Psychiatry*, *40*(9), 1086-1093.

APPENDIX A

EXPANDED LITERATURE REVIEW

Review of Research to Design an Accommodation-Focused Training

for School-Based Mental Health Providers

Preliminary Examination, July 2021

Anxiety disorders are highly prevalent among youth, with estimates that 20% meet diagnostic criteria (Cartwright-Hatton et al., 2006). This incidence is predicted (both by experts and initial findings) to increase in the presence of the current COVID-19 pandemic and associated precautions (e. g. lockdown; Courtney, et al., 2020; Orgiles, et al, 2020). Without intervention, anxiety disorders rarely remit and have been found to lead to long-term adverse sequelae, including educational underachievement, poor social relationships, depression, suicidality, and increased substance use/abuse (Albano et al., 2003; Kendall et al., 2004; Swan & Kendall, 2016; Wolk et al., 2015; Woodward & Fergusson, 2001). Youth anxiety creates a public health burden and is associated with disability (Sareen, et al., 2006), loss of workforce productivity (Miller et al., 2004), and health care costs (Coker, 2010).

Anxiety is particularly impairing among school-age youth where students with anxiety disorders often display difficulty with concentration, avoidance around novel learning, less positive affect in the classroom, below grade-level academic performance, and interference with their motivation to succeed academically (Wood, 2006; Ialongo, et al., 1995; Mychailyszyn et al., 2010; Bernstein, et al., 2008). Studies have found that the presence of anxiety symptoms in early elementary school predict poorer academic performance in subsequent elementary grades (Ialongo et al., 1995) in middle school

(Grover et al., 2007) and in high school (Duchesne, et al., 2005; Swan & Kendall, 2016). Research has also shown that decreases in anxiety are associated with improved school performance and social functioning over the course of treatment (Wood, 2006), improvement in overall school functioning (Nail et al., 2015), GPA (Weems et al., 2009) and greater achievement on standardized tests (Keogh et al., 2006).

Fortunately, there has been meaningful work to transport evidence-based practices (EBPs) for youth anxiety to school settings. Cognitive-behavioral therapy (CBT) has been deemed an empirically supported treatment for youth anxiety (e.g., Hollon & Beck, 2013), achieving response rates of 60% in large trials (e.g., Kendall et al, 2008; Walkup et al., 2008). However, high quality mental health care often does not reach the youth who need it most (Blau,et al., 2010; Tang, et al., 2008). Of the approximately 15 million children in the United States in need of mental health services, studies document that only 21% of those children receive said services (Merikangas et al., 2010). Additionally, when treatment is received, it is most often not an evidence-based approach (Garland, et al., 2010; Weersing & Weisz, 2002) and generally underperforms existing, evidence-based treatments (Weisz, et al., 2006).

Despite most mental health needs in youth going unmet, those who do receive mental health treatment often receive these services in school settings. Schools represent the largest mental health care provider in the United Stated, with more than half of youth who are treated for mental illness receiving services through the school system (Farmer, et al., 2003; Rones & Hoagwood, 2000). Altogether, one third of secondary students receive mental health services through schools (Farmer et al., 2003; Bradley, et al., 2004). Not only do schools represent the largest provider of mental care to youth, from an

ecological contextual perspective (Bronfenbrenner, 1977), schools are an ideal place to implement EBPs, as they are one of the most proximal environmental influences on a youth's life. Schools provide youth with the opportunity to practice skills in real world settings, therefore increasing the likelihood of skill generalization (Evans, et al., 2003). Because for many youth, school is the only environment in which they receive mental health interventions, schools are also uniquely poised to reach youth who may not present in other mental health settings (Hoagwood, et al., 2001, Hoagwood & Johnson, 2003). Research findings indicate that although specialty mental health services are underutilized by ethnic minority youth (Garland, et al., 2005), these discrepancies are not observed across ethnic groups in school-based services (Costello et al., 2014; Lyon, et al., 2013). Further, youth often prefer school-based mental health services over specialty mental health services (Burns, et al., 1995) and these services are often viewed as more acceptable to families (Alegria, et al., 2015; Farmer, et al., 2003; Aktins, et al., 2017). All in all, the findings indicate that availability of school-based mental health services may lead to less stigma around seeking mental health treatment and a subsequent reduction in discrepancies in service provision (Mufson, et al., 2004).

Numerous EBPs have been examined in school settings across a wide range of treatment targets, including depressive symptoms (e.g. Mufson et al., 2004; Shirk, et al., 2009), anxiety symptoms (e.g. Masia Warner, et al., 2007), and behavioral difficulties (e.g. Owens, et al., 2005). Unfortunately, few of these programs have been successfully maintained outside the context of controlled research studies (Reinke, et al., 2010; Herschell, et al., 2004; LoCurto, et al., 2020). A contributing factor to this is the roles that

mental health providers play in the school setting – namely that these professionals devote little time to individual and group intervention.

Despite limited research on the topic of consultation, consultation presents an opportunity to address factors that contribute to youth anxiety within the existing structures of school-based mental health providers' roles in schools. Consultation describes the practice of collaboration with parents, teachers, and other professionals to provide educational and mental health support to students. Although assessment consumes the largest portion of school psychologists working time, these providers spend more time in consultation than in direct or group intervention (Lacayo et al., 1981; Smith & Lyon, 1985; Bramlett, et al., 2002). Numerous responsibilities such as assessing students for a range of learning, developmental and psychological disorders, creating reports, serving on teams that create IEP's and 504 Plans, crisis management and collaborating with educators and parents may contribute to limited sustainability of evidence-based interventions in schools. However, school-based providers who focus on consultation see this process as key in the dissemination of non-intervention EBPs. Accommodation describes ways in which parents, teachers or schools modify their behavior in an effort to try to alleviate a youth's anxious distress (Calvocoressi et al., 1995). Accommodation includes actions such as providing excessive reassurance, modifying routines or reducing expectations (Kagan et al., 2017; Lebowitz et al., 2013; Storch et al., 2015) and occurs in nearly all families with a child with an anxiety disorder (Benito et al., 2015; Lebowitz et al., 2013; Thompson-Hollands et al., 2014; Lebowitz et al., 2014). Accommodation acts similarly to avoidance behavior; it allows the child to physically or mentally avoid a fear-inducing situation (be it worry around uncertainty or a

tangible object or situation). As a result, accommodation prevents opportunities for exposure, and the subsequent reduction of anxiety. Accommodation is negatively reinforcing (maintains the avoidance by temporarily reducing distress) and increases a youth's expectation of continued accommodation in the future (Abramowitz & Jacoby, 2014). In the context of education, the term "accommodation" often has a different connotation (Green, et al., 2016) than when used in anxiety contexts. In schools, accommodations and modifications provide adjustments or supports to improve access to educational material, in line with federal and state regulations (Atkins, et al., 2017; Green et al., 2018). These accommodations are legally outlined and overseen through documents such as Individualized Education Plans (IEP) and 504 Plans. Further, some accommodations (or changes to requirements, the classroom setting, etc.) may occur outside of formalized plans. Few studies have examined school-based accommodations and modifications in relation to youth anxiety and no research to date has addressed the degree to which these interventions may alleviate a child's anxious distress or maintain avoidance and reduce opportunities for mastery of anxiety through exposure. However, there are established EBPs that address the reduction of accommodation for anxious youth.

At present, no study has examined the potential of providing training in EBP to school-based mental health providers with regard to the provision of accommodation as it relates to youth anxiety. The introduction and improvement of EBPs in schools is widely supported, with use of EBPs recommended by professional organizations (e.g., American Psychological Association [APA], National Association of School Psychologists [NASP]) and required by federal legislation (e.g., Individuals with Disabilities Education

Improvement Act, 2004; Every Student Succeeds Act, 2015). Despite this, the majority of graduate students in school psychology still view the training they receive in EBP's as inadequate (Shernoff, et al., 2003; Hicks, et al., 2014). Fortunately, the proportion of these students indicating adequate training in EBP's has increased over time (Hicks, et al., 2014). However, training in its current form may not serve as a silver bullet, given that although 75% of school psychology training programs provide coursework on EBPs (Reddy, et al., 2017), only 89% of Nationally Certified School Psychologists reported *rarely* or *never* adopting behavioral EBPs (Hicks,et al., 2014). This review examines the extant literature in the areas of (a) accommodation and youth anxiety, (b) training of community and school-based providers in EBPs and (c) school-based interventions for youth anxiety. The findings considered in this review inform a foundation for the development of a training intervention to educate school-based mental health providers in the provision of EBPs as they pertain to accommodation and youth anxiety.

Accommodation

The most recent review on the subject of youth anxiety and accommodation examined the extant literature on the nature of accommodation as it occurs within families with anxious youth and its relationships to youth, family and treatment outcome factors (Kagan, et al., 2017). A number of conclusions regarding accommodation in youth anxiety were drawn. For example, accommodation is highly prevalent in families including anxious youth, with the vast majority of families endorsing participating a wide range of accommodating behaviors (Benito et al., 2015; Lebowitz et al., 2013; Thompson-Hollands, et al., 2014) with high frequency (Flessner, et al., 2011; Futh, et al.,

2012; Peris, et al., 2008). A similar majority of parents of anxious youth reported experiencing distress when accommodating, and associated impairment at home and in school (Lebowitz et al., 2013). Further, accommodation was found to be positively correlated with symptom severity in anxious youth (Benito et al., 2015; Lebowitz et al., 2013; Lebowitz et al. 2014).

Research has shown mixed finding about the prevalence of accommodation across different anxiety disorders (Thompson-Hollands, et al., 2014, Benito et al. 2015) with no particular diagnosis being consistently associated with greater accommodation. However, comorbid internalizing problems (e.g., depressive disorders) are associated with higher levels of accommodation (Benito et al., 2015). Similarly mixed findings arise when examining the relationship between accommodation and age (Lebowitz et al., 2014; Thompson-Hollands, et al., 2014). When examining parental factors, a review of the research established that parent anxiety and avoidance are associated with higher rates of accommodation (Flessner, et al., 2011; Storch, et al., 2008; Lebowitz, et al., 2012). Further, accommodation is positively associated with maternal distress (as well as youth distress) in treatment- seeking samples (Thompson-Hollands, et al., 2014; Settipani & Kendall, 2013).

Although research has explored a number of factors in relation to accommodation in anxious youth, nearly all studies have been limited to the home and treatment environments. Although important, this research misses the opportunity to examine how accommodation may occur in another salient environment, school. By the age of 18, youth have spent more than 13% of their waking hours in a school setting. This time is punctuated by frequent interactions with adults, all of which can possibly act as

accommodation. It follows, that given the pervasiveness of accommodation in the homes of anxious youth, that school staff may act in similarly accommodating ways when interacting with anxious students. An emerging body of research has sought to quantify and characterize the presence of accommodation of anxious youth in the school environment.

A study by Green and colleagues (2017) explored the types of SBSs received by anxious youth, relying on maternal- and self-report. The study examined reports of school functioning and school-based supports and accommodations among a sample of 51 anxious youth and their mothers seeking treatment at an outpatient clinic. Mothers reported that 56.9% of children received services through an IEP or 504 Plan. This report showed that more than half of mothers and students reported receiving SBSs, however the SBSs reported were frequently different between mother and child. Additionally, 82% percent of youth with an IEP or 504 Plan reported receiving at least one anxiety-related SBS at school compared with 39.3% of youth without an IEP or 504 Plan. The number of SBSs children reported they received was significantly associated with increased reports of social and academic impairment in school. Further, number of SBSs reported by mothers was significantly associated with scores on the Child Behavior Checklist (CBCL; Achenbach, 1999) Anxiety subscale. Of note, “paired” supports were noted where youth, for whom there were self- or mother-reported specific fears (e.g. taking tests), were more likely to report associated SBSs (e.g. extra time on tests) than youth, where the youth and mothers did not endorse anxiety in that area (e.g. not worried about taking tests).

A recent study (Conroy et al., 2020) surveyed a subset of school staff (elementary, middle and high school) who reported student anxiety as a primary concern (N=134). They answered questions about their use of 23 anxiety-focused school-based supports (SBSs) as well as their own mental health literacy and emotional exhaustion. A panel of youth anxiety experts (N=28) separately rated each of the 23 SBSs on separate scales indicating the degree to which the SBS promoted student avoidance of anxiety (avoidance-oriented) and promoted student approach toward anxiety-provoking situations (approach-oriented). This study characterized the types of SBSs endorsed by school staff by bench-marking each of the 23 SBSs against the expert ratings – yielding both an approach-promoting and an avoidance-promoting rating for each SBS. Findings indicated that school-staff endorsed a wide range of anxiety-focused SBSs. Overall, high avoidance-oriented SBSs were less frequently endorsed than high approach-oriented SBS (with 99.3% of school staff endorsing at least one high approach-oriented SBS versus 92.5% endorsing at least one high avoidance-oriented SBS) and the two most-frequently endorsed SBSs ("Provided more positive reinforcement" and "Had a conversation with the student to learn more about what was going on") were among the top five most approach-oriented SBS as rated by the expert panel. However, the fourth and the fifth most frequently endorsed SBSs ("Asked the student to take a break [e.g., go for a walk, go to the library]" and "Reduced the required work for the student"), were among the most highly rated as avoidance-oriented. Also, nearly half of respondents endorsed using the most highly avoidance-oriented rated SBS (e.g. letting anxious students just sit and not participate). Altogether, 99.3% of school staff reported engaging in at least one high approach- oriented SBS, but 92.5% of school staff participants nonetheless reported using

at least one high avoidance-oriented SBS. Additionally, higher levels of emotional exhaustion significantly predicted the endorsement of a greater number of high avoidance-oriented SBSs and higher levels of mental health literacy significantly predicted the endorsement of a greater number of high approach-oriented supports. Altogether this study highlights the variable nature of SBS assignment in schools.

A subsequent study by Phillips and colleagues (in preparation) used the same expert panel to characterize the types of SBSs received by youth seeking treatment for an anxiety disorder in an anxiety specialty clinic and identify potential correlates to SBS receipt. The study, using school documents (e.g. IEPs and 504 Plans), examined and quantified the types of SBSs being provided to youth (N = 76) diagnosed with an anxiety disorder. The study used an expert panel to rate 54 common SBSs on how much the support could promote *avoidance* of anxiety in the school setting and how much the support could promote *approach* towards anxiety-provoking situations or experiences in the school setting, yielding an average approach and avoidance rating for each SBS (see Conroy, et al., 2020). School documents were coded for the presence of SBSs and each received a total approach and a total avoidance score. Analyses revealed that approach-promoting and avoidance-promoting SBSs were differentially associated with diagnostic status: youth with a diagnosis of social anxiety disorder were more likely to receive SBSs promoting of avoidance and youth with a diagnosis of specific phobia were more likely to receive SBSs promoting of approach. Analyses also revealed, for a subset of participants who completed 16-weeks of CBT for youth anxiety (N=36), that higher SBS approach scores were significantly related to an increased likelihood of response to CBT. The

results indicted the presence of variability in the number, type and quality of SBSs received by youth with anxiety disorders.

LoCurto and colleagues (2020) examined parent-report of the use of eight school services and supports (e.g., seen a school counselor for a mental health reason, placement in a special class for a behavior or emotional difficulty) and predictors of service utilization. Participants included anxious youth (N= 208) between ages 6 to 18 years who were enrolled in a school-based randomized controlled trial for anxiety treatment. Services and supports included "formal" services offered in schools (e.g., referred for special education) as well as "informal" supports a child might utilize (e.g., talking to a teacher about feelings and behaviors). Approximately two thirds of parents reported their children using some kind of school service or support. Poor global functioning (Children's Global Assessment Scale; Shaffer et al., 1983 [CGAS]), higher youth anxiety (Clinical Global Impression Scale – Severity; Guy, 1976 [CGI-S], Child Anxiety Impact Scale - Parent Version; Langley, et al., 2004 [CAIS-P], Revised Child Anxiety and Depression Scale; Chorpita, et al., 2000 [RCADS]), higher scores on measures of internalizing and externalizing (CBCL), higher caregiver strain, and greater overall parent psychological distress (as measured by the Brief Symptom Inventory [BSI]; Derogatis & Melisaratos, 1983) predicted using more school services and supports.

Allen and Lerman (2018) conducted a study based in the United Kingdom to evaluate a new measure, the Teacher Responses to Anxiety in Children (TRAC) in elementary school teachers (N=74). Findings indicated that the TRAC assesses three factors: Autonomy-Promoting, Anxiety-Promoting and Reward responses. The authors also explored teacher and student correlates to types of responses employed. Overall findings

indicated male teachers were significantly more likely than female teachers to use Anxiety-Promoting responses. Further, more experienced teachers (i.e. greater number of years teaching) reported significantly more reinforcement of anxious avoidance than less experienced teachers, and teaching assistants reported significantly fewer overprotective responses. Teaching staff reported significantly more Autonomy-Promoting responses in social anxiety or generalized anxiety/worry scenarios compared to separation anxiety scenarios.

Conclusions Regarding Accommodation

The findings on the relationship between youth anxiety and accommodation in the school setting are mixed and paint an incomplete picture. Results are consistent in that anxious youth frequently receive SBS in schools (Phillips, et al. in preparation; Green et al., 2017; LoCurto, et al., 2020). Results also support that schools use a wide range of SBSs when approaching anxious students that vary in quality (Phillips, et al. in preparation; Green et al., 2017; Conroy, et al., 2020). Per parent report, direct document analysis and teacher report, anxious students commonly receive SBSs that encourage both approach and avoidance (Phillips, et al. in preparation; Green et al., 2017; Conroy, et al., 2020). Consistent with existing literature highlighting approach in the form of exposure as a "key" ingredient in the treatment of anxiety (e.g., Higa-McMillan et al., 2015, Kendall et al., 2005) one study found receipt of approach-oriented SBSs to be positively correlated with response to CBT, however more research is needed (Phillips, et al., in preparation). A contrasting picture appears concerning youth correlates to SBS receipt with conflicting findings regarding diagnosis and receipt of approach- or avoidance-oriented SBS. However, there was consistency in teacher and staff correlates to SBS determination.

Conroy and colleagues (2020) found that emotional exhaustion significantly predicted the endorsement of a greater number of high avoidance-oriented SBSs while Allen and Lerman (2018) found that more experienced teachers reported significantly more reinforcement of anxious avoidance. These findings suggest that experience alone may not lead to better decision-making regarding SBS for anxious students and in fact associated burn-out may lead to more accommodating SBSs. However, the finding that teaching assistants reported significantly fewer overprotective responses (Allen & Lerman, 2018) in concert with Conroy and colleagues (2020) finding relating higher mental health literacy with approach-oriented SBSs is promising. This promising perspective suggests that early career educators may not be initially prone to accommodating anxious students and that increases in mental health training may be effective in preventing a shift towards promoting avoidance.

Research Limitations and Future Directions

Due to the limited scope of the existing literature on avoidance and anxious youth in the school setting, it is imperative that researchers continue to explore this avenue. One major limitation to the above research is reporter status. Many studies relied on teacher endorsement or parent-report (Allen & Lerman, 2018, Conroy et al., 2020, Green et al., 2017). Even studies that used primary information (e.g., Phillips, et al., in preparation; LoCurto, et al., 2020), relied on documents that show which SBSs were assigned but not which were implemented (Phillips et al., in preparation) or were not specific in characterizing the SBSs received (LoCurto, et al., 2020). Further, given the large number of SBSs endorsed on average per youth (Phillips, et al., in preparation) it is unlikely that youth regularly receive all of the SBSs outlined on formal or information accommodation

documents. As such it is important that future research is able to characterize the SBSs *received by each student* (not just included in a plan) in the school environment and quantify the frequency of receipt. This information in concert with severity of anxiety and the presence or absence of an anxiety diagnosis (and the specific type of diagnosis) would add meaningfully to the literature. Also needed are studies that establish temporal precedence between accommodations, diagnosis, development of symptoms, and treatment onset and completion. Longitudinal work would allow for conclusions regarding the relationship between accommodation that occurs in school and the course of anxiety in youth.

Training

Despite a large body of research on the training of providers in EBPs, little work has been done exploring the training of school-based mental health providers in EBPs that apply to youth psychopathology. The most recent review on the subject of training therapists in EBPs examined the extant literature on a variety of training approaches specifically intended to train community-based therapists (Frank, et al., 2020). Previous research led to the conclusion that self-study is generally ineffective in increasing EBP use (Fixsen, et al., 2005), whereas in-person and online training approaches are slightly more effective in increasing provider knowledge, but not in changing provider behavior or client outcome (e.g., Dimeff et al., 2009; McHugh & Barlow, 2010). Further, a previous review of the literature on training (Beidas & Kendall, 2010) established that active training strategies, such as behavioral rehearsal (role play), are the most effective in increasing adherence to and skill in EBPs. However, the same review found that these strategies do not always lead to meaningful behavior change in clinical practices. The review by Frank and

colleagues (2020) focused on 76 studies that examined various strategies, including in-person workshop only (n = 9), in-person workshop plus consultation (n = 21), online workshop (n = 20), train-the-trainer model (n = 4), and intensive (n = 22) training approaches, aimed at increasing knowledge and use of EBPs among community-based therapists. Outcomes were consistent with conclusions from prior reviews, indicating that therapists' knowledge and attitudes toward EBPs improve after attending a workshop; yet workshops alone are unlikely to increase EBP use. In particular, this systematic review suggested that online training strategies may be sufficient for training therapists in a single EBP, whereas the training of several components or more nuanced applications (e.g. Wolk et al., 2019) may benefit from using in-person strategies. Although intensive training strategies emerged as effective in increasing competence and use of EBPs, authors acknowledged the drawbacks (require many resources, high provider turnover) inherent to this approach (Beidas et al., 2016; Okamura et al., 2018). Further, review findings suggested that training is more effective at improving EBP competence and use when combined with consultation – highlighting the need for further research on effective training strategies that do not require significant on-going resources. The body of research surrounding training of community-based therapists is important to consider when considering training approaches for school-based mental health providers. Altogether the most recent review of training strategies (Frank et al., 2020) suggests mixed findings in terms of what factors contribute to successful increases in knowledge and use of EBPs. Although extant reviews focus on the training of primarily community-based therapists, many of the limitations and future directions highlighted in these outcomes are applicable to the school setting and school-based mental health providers.

Similar to providers in school settings, community clinicians come to training with a wide variety of educational and training backgrounds. Additionally, community mental health settings are similarly under-resourced (compared to schools) and frequently require providers to wear multiple hats (akin common expectations of school-based providers). Primarily, findings indicate that intensive trainings and those paired with consultation are most effective in increasing knowledge and use of EBPs. However, these types of trainings require extensive means such as time and financial resources. These findings highlight the need for further research identifying what types of EBPs school-based providers can be successful trained in and what types of training modalities increase EBP knowledge and uptake within the confines of resources available to schools. Limited research has examined the training of school-based mental health providers in EBPs. This small body of research is examined next.

One effort to train school-based mental health providers in EBPs examined training 25 therapists in Cognitive Therapy (CT; Creed et al., 2013). This project targeted participants who were employed by agencies contracted to provide mental health services at public schools in an urban center. Participants represented a variety of professional backgrounds with the majority (n = 23, 92%) of the sample possessing a master's degree. Participants are reported backgrounds in a variety of fields including counseling (n = 10, 40%), education (n = 1, 4%), psychiatry, (n = 1, 4%), psychology (n = 3, 12%), and social work (n = 10, 40%). A subset of the sample (n = 13), responded to optional questions regarding prior experience with CBT, resulting in the finding that all rated their familiarity with CBT as "only the basics" or less and only two identified their theoretical orientation as "behavioral" or "cognitive behavioral," (other reported orientations were

not reported). Training included 22 hours of workshop over four to five weekly sessions and six months of weekly 2-hour, small-group consultation, transitioning to a peer-led consultation group with periodic support from study instructors. Training materials emphasized embracing the flexibility inherent to CT, rather than modifying practices for the school setting. Specifically, training addressed collaboration with teachers, collaborative goal-setting, as an alternative to deficits-based service assignments, and case conceptualization using information from the school setting. No further details about training strategies were provided. The findings from this study provide evidence that school-based mental health providers with limited baseline knowledge of CT can be successfully trained to competently implement these EBPs. Findings indicated that 72% of participants achieved competency in CT by six months post-workshop (as evidenced by a score of 40 or above on the Cognitive Therapy Rating Scale; Young & Beck, 1980). Further, a subset of participants (n = 16) who completed the CT Knowledge Quiz (Corso, et al., 2010) at the beginning and end of training in CT demonstrated a statistically significant increase in their knowledge of CT, representing a large effect (Cohen's d = -0.69).

Another study investigated the relationship between provider-level variables and training and implementation of CBT for youth anxiety among school mental health providers (Beidas et al., 2012a). Participants were 17 school mental health providers who reported the following job titles: school psychologist, guidance counselor, school social worker, and school psychiatrist. These individuals represented a subset of school-based mental health providers who participated in a larger training study of CBT for youth anxiety. Participants were randomized to one of three training conditions, which included didactic

training (6-hour workshop including PowerPoint slides and example videos), computer training (6-hour self-guided online training including videos of treatment sessions, therapist tips, and links to research articles) and active learning training arms. The active learning arm consisted of a 6-hour workshop which incorporated behavioral role play of clinical skills with trainer feedback and interteaching, which is a strategy where trainees engage in small-group discussion with guided questions. However, given that no significant differences between the three conditions were identified on measures therapist adherence, skill, or knowledge at posttraining and follow-up, study authors collapsed across training conditions in their analyses (Beidas, et al., 2012b). All participants were provided weekly consultation for three months following the initial 1-day workshop. Analyses indicated that knowledge and adherence to CBT significantly improved after receiving the training and consultation package, but that skill (measured by independent coders observing behavioral role plays) did not. However, adherence was positively correlated with the pre-workshop attitudinal variables including appeal (the extent to which a therapist will adopt a new practice if it is intuitively appealing), openness (the extent to which a therapist is generally receptive to using new interventions), and divergence (the extent to which a therapist perceives research-based treatments as lacking clinical utility) measured using the Evidence Based Practice Attitude Scale (EBPAS; Aarons, 2005)

Koschmann, et al. (2019) enrolled 19 high-school level school-based mental health providers in a training program including didactic CBT training (1-day training workshop and two subsequent 2-hour seminars) paired with weekly coaching (12-16 weeks). Participants included guidance counselors, social workers, and school psychologists.

Following completion of CBT training, participants all led 10-12 session, CBT skills groups at their respective schools while receiving study coaching. These groups were also attended by a study coach who provided in-person, live support. These groups (led by study participants) lasted an average of ten sessions with a mean group size of eight students. Participant attitudes towards, perceptions of, confidence in and reported use of CBT all significantly improved over the course of the coaching period. Further, students attending the groups saw a significant reduction in anxiety and mood symptoms over the course of group sessions, measured using the Patient Health Questionnaire-9, Modified for Teens (PHQ-9T; Spitzer et al., 1999) and The General Anxiety Disorder-7 (GAD-7; Spitzer et al., 2006).

Conclusions Regarding Training

Outcomes from the three reviewed studies indicate that school-based mental health providers can be successfully trained in the EBPs for youth anxiety (Creed, et al., 2013; Beidas, et al., 2012a; Koschmann, et al., 2019), when measured by increased knowledge of EBPs.

Further, these studies yielded favorable results indicating didactic training strategies may be sufficient in increasing knowledge of EBPs. Contrary to previous findings, Beidas and colleagues (2012b; the only study to employ active learning strategies) saw no differences in trainees' outcomes across training intervention groups. However, despite employing relatively low-resource didactic training strategies, all three studies included regular consultation or coaching. Although this is in line with review findings that consultation can help maintain competence gains over time (Frank, et al., 2020) these types of training protocols can be cost-, resource- and time-intensive.

It is difficult to isolate the active feature in training protocols that include both didactic and consultation components. Further, despite leading to gains in knowledge, knowledge does not necessarily lead to (a) increased use or (b) therapist skill. As identified in Beidas and colleagues (2012a) although knowledge and adherence increased following training, skill, when role plays were coded by experts, did not. Although Beidas and colleagues (2012a) did not find increases in skill, both later studies did. Creed and colleagues (2013) employed the Cognitive Therapy Rating Scale where trainees submitted recorded therapy session to be assessed by expert coders. While Koschmann and colleagues (2019) did not expressly evaluate skill, trainees' intervention did lead to significant reductions in student mood and anxiety symptoms, suggesting clinical competence. Altogether, these findings suggest that school-based mental health providers can be trained in EBPs, leading to increases in competence and positive clinical outcomes (e.g. reduction in student anxiety).

Limitations and Future Directions

All three studies benefitted from behavioral coding of therapist competence or clinical outcomes (student symptom measures), rather than relying exclusively on self-report of knowledge, attitudes and intended use. However, due to all three study designs integrating workshops and consultation or coaching, there are limitations when interpreting outcomes. Although consultation models have been established as effective in maintaining competence in EBPs (Frank, et al., 2020) they are not without limitation. Consultation models are time- and resource-intensive. When used for the training of school-based metal health providers they require employment of an expert trainer to

conduct ongoing consultation, most-often requiring school districts to hire outside consultants at a cost.

Further studies would benefit from balancing existing knowledge (consultation and intensive training modalities lead to increased skill) with pragmatism (considering limited resources and personnel of varying training backgrounds) when investigating training strategies for school-based providers. This might include comparing less resource-intensive models (didactic training only) to more resource-intensive models (such as on-going consultation) to examine differential benefits in larger samples. Additionally, further studies would benefit from using randomized control designs. Only one study (Beidas, et al., 2012a) used randomization to different active conditions and an active control condition (didactic) in their design. The absence of randomization limits the conclusions that can be drawn about the relative effectiveness of the training strategies employed. Future studies would also benefit from more specific description of training strategies used during workshops to increase knowledge about the relative effectiveness of different training approaches (e.g. behavioral role play, interteaching).

School-Based Interventions

The most recent review on the subject of school-based interventions for youth anxiety examined the extant literature on a number of interventions (rather than prevention programs) focused on addressing student symptoms of anxiety and depression in the school setting (Gee, et al., 2020). For the purpose of this paper, conclusions regarding interventions targeting anxiety are summarized below. Gee and colleagues (2020) conducted a meta-analysis including 15 randomized control trials of anxiety interventions in the school setting. Of those studies 10 included CBT interventions and 12 were

conducted in a group (rather than individual) format. The Gee et al. analysis included data from 1,075 youth, 528 of whom were randomized to receive a school-based intervention. The school-based psychological interventions were found to be effective in reducing anxiety symptoms in comparison to control conditions at posttreatment. However, when subsets of the studies were assessed separately it was found that interventions delivered by school-staff did not result in significant reductions in anxiety symptoms postintervention. Although all included studies took place in the school setting, the majority of interventions were implemented by non-school personnel – namely researchers or graduate students in clinical psychology training programs. The outcomes of these studies speak to the feasibility and effectiveness of implementing interventions in the school setting, but they do not necessarily generalize to the feasibility or effectiveness of more sustainable school staff-implemented programs and even support the idea that there is still much to be done to elucidate how internal school-staff may effectively implement anxiety interventions. Below we focus specifically on findings from studies that examined the effectiveness of school-based interventions for youth anxiety implemented by school staff (not outside study personnel).

Ginsburg and colleagues (2012; included in Gee, et al., 2020) compared treatment outcomes following an in-school intervention implemented by school-based mental health providers. Providers were 11 school employees, the majority of whom held a Masters degree or higher, with various backgrounds including social work, counseling, psychology, and art therapy. More than half characterized their theoretical orientation as behavioral or cognitive behavioral (54.6%). The study enrolled 32 youth, who met diagnostic criteria for an anxiety disorder. The study sought to compare clinical outcomes

(using both self-report and semi-structured interview measures to assess anxiety symptoms) of students randomly assigned to receive either 12 sessions of CBT or usual care. Usual care represented the usual therapeutic practices for each individual provider, however providers were instructed how to avoid several CBT components including directly reinforcing approach behavior via a hierarchy and directly addressing fear-evoking cognition. CBT session adherence was measured by independent evaluators using the Treatment Adherence and Therapist Competence (TATC; Ginsburg, et al., 2012) and it was determined that CBT content was delivered in 100% of CBT sessions, compared to 55.6% of usual care sessions. No significant differences were found at posttreatment between students enrolled in the two treatment groups. A majority of students in both treatment groups were considered treatment responders at one-month posttreatment and one half of students in the CBT groups did not meet for any anxiety diagnoses immediately following treatment (versus 46.2% of youth in the usual care condition*).* Last, youth in both groups saw significant improvement on an independent evaluator completed measure of global functioning (CGAS; Shaffer et al. 1983) over the course of treatment. Altogether, there were no significant between group differences on measures of student anxiety at posttreatment.

Another study examined long-term outcomes, over the course of four years following a school-based mental health provider conducted group CBT intervention for anxiety (Hunt, et al., 2009; included in Gee, et al., 2020). This study, which took place in Australia, sought to replicate findings indicating the FRIENDS CBT for youth anxiety intervention/prevention program was effective when conducted by clinical psychologists in a school setting, when implemented by school counselors aided by support teachers

(Shortt, et al., 2001). The study randomized 260 youth aged 11-13 (M = 12.04 years) to either an intervention or monitored control condition. Students were identified through a multi-stage process that included indications of risk following the completion of the Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond 1997, >1 SD above the mean score of a normative sample) and identification by teachers as a student who displayed "interfering" anxiety symptoms in the classroom. Although meeting diagnostic criteria for an anxiety disorder was not inclusion criteria for the study, all participants completed the Schedule for Affective Disorders and Schizophrenia for School-age Children (K-SADS-P/L; Kauffman et al., 1997) at pre-intervention. The were no significant differences in the number of students meeting diagnostic criteria for an anxiety disorder between the invention and control conditions (30.8% and 22.0%, respectively) at preintervention. Students were randomized to an intervention or a monitored control condition. The intervention condition received 10, 50-minute group CBT sessions weekly, along with two booster sessions (at 1- and 3-months post group completion) and 1-2 parent sessions. Material covered included awareness of symptoms of anxiety, relaxation, challenging unhelpful thoughts, using graded exposure to overcome avoidance, and problem solving. Group leaders attended a two-day workshop ahead of beginning the intervention. Outcomes were assessed at 2- and 4-years post-completion of the group. Controlling for preintervention scores, there were no significant intervention effects at the 2-year follow-up on self-report measures of anxiety or depression. However, at 4-year follow-up group outcomes differed significantly on the RCMAS, indicating that students who participated in the intervention condition were experiencing fewer symptoms of anxiety. There were no significant between-group

differences in number of students who met diagnostic criteria for an anxiety disorder within 12-months leading up to the 4-year follow-up, with neither condition showing significant decreases in diagnostic status (i.e. comparable rates of anxiety disorder diagnoses to pre-intervention).

Masia Warner and colleagues (2016; included in Gee, et al., 2020) compared outcomes of a CBT intervention for youth with social anxiety disorder when implemented by psychologists versus by school-based mental health providers, both in a school setting. This study enrolled 138 students, in the ninth through eleventh grades (M = 15.42 years) who met diagnostic criteria for social anxiety disorder as assessed by the Anxiety Disorders Interview Schedule for DSM-IV: Parent and Child Versions (ADIS-P/C; Silverman & Albano, 1996). Students were randomized to either one of two active condition arms including a school-based CBT group intervention for social anxiety disorder called Skills for Academic and Social Success (SASS; Masia et al., 1999) conducted by a psychologist or a school-based counselor, or to a control condition with matched time commitments described as a nonspecific, manualized group program designed for school counselors. Both the psychologist-led and the counselor-led active conditions included the SASS program in addition to two individual sessions and two parent sessions (all conducted by the respective conditions' group leader) for each student. Counselors received a 5-hour workshop ahead of beginning the group intervention, co-led a 12-week intervention group with a psychologist (prior to implementing subsequent groups independently) and participated in continuous consultation over the course of their independent 12-week group. Providers in active conditions did not significantly differ in adherence or competence. Treatment response or

remission rates did not significantly differ between active treatment groups (counselor-implemented versus psychologist-implemented). Further, the counselor-implemented active condition yielded significantly more treatment responders (defined as a CGI-Improvement score of 3 or lower as compared by an independent evaluator; Klein, et al., 1992) at both posttreatment and follow-up and significantly more remitters (remission was defined as not meeting diagnostic criteria for social anxiety disorder as assessed using the ADIS-C/P) than the control condition at follow-up. The results indicate that school counselors can successfully implement a CBT-based group intervention for social anxiety disorder.

A study by Miller and colleagues (2011; included in Gee, et al., 2020) compared a CBT group intervention (the FRIENDS Program; Barrett, et al., 1992) delivered by a teacher paired with a school-based mental health provider to an attention control group. This study enrolled 191 students (M=10.1 years) who self-reported elevated anxiety (*T*-score of 56 or higher on the Multidimensional Anxiety Scale for Children [MASC]; March, et al., 1997). Students randomized to the active condition (versus attention control) participated in nine weekly, 50-minute, group sessions. Similar to Hunt et al. (2009) this study used the FRIENDS protocol. The attention control condition consisted of students attending time-matched read aloud time. Group leader training included a 6-hour interactive workshop that focused on the behavioral manifestations of anxiety, etiology of anxiety disorders, research support for psychological interventions, and FRIENDS implementation. Findings suggested that there were no significant group differences in postintervention and follow-up self-, parent- and teacher-report measures (the MASC and Behavioral Assessment System for Children Parent and Teacher Report

Forms [BASC]; Reynolds & Kamphaus, 1992) at 2.5- and 5-months following group completion, with students in both conditions displaying similar patterns of anxiety reduction over time.

The most recent study of school-based mental health providers implementing CBT to students with anxiety examined the effectiveness of a brief school nurse-administered intervention (Ginsburg, et al., 2021; not included in Gee, et al., 2020). This study randomized 54 students (M=8.0 years) to receive either a CBT intervention or a relaxation-based intervention, both implemented by school nurses. Both interventions consisted of six modules delivered over eight weeks of brief (M=22.01 min) sessions (M = 5.87 sessions received). Students with elevated anxiety symptoms were recruited and assessed using the ADIS-C/P, although a clinical diagnosis of an anxiety disorder was not required for study entry. Nurses received a one-day training workshop as well as consultation as requested over the course of conducting the group intervention. Students in both intervention groups showed a significant decrease in anxiety symptoms and interference over the course of treatment (measured by the CGI- S, CAIS-C/P, Children's Somatization Inventory [CSI-24; Walker, et al., 2009] Children's Automatic Thoughts Scale [CATS; Schniering & Rapee, 2002]). However, there were no significant between group differences at postintervention or 3-month follow-up. As such the results, indicate that while the CBT-based intervention did not show improved outcomes over the relaxation-based intervention, school nurses were successfully (as measured by decreased student anxiety) able to implement interventions for youth anxiety.

Conclusions Regarding School-Based Interventions

A close look at school-based intervention studies specifically implemented by school personnel yields mixed results. Although, most programs resulted in reduced student anxiety (Ginsburg, et al., 2012; Hunt, et al., 2009; Masia Warner, et al., 2016; Ginsburg, et al., 2021), few school-staff implemented interventions emerged superior to comparison non-school staff led conditions. A number of studies used active control conditions where students received treatment as usual implemented by a school mental health provider (Ginsburg, et al., 2012; Masia Warner, et al., 2016; Ginsburg, et al., 2021) whereas one study used an attentional control (read aloud; Miller, et al., 2011) and another used a monitored control (Hunt, et al., 2009). Of those studies using active controls, only one showed significant group differences when compared to the control condition (Masia Warner, et al., 2016). Additionally, Masia Warner and colleagues found that counselor-lead intervention showed comparable student outcomes to the same intervention led by psychologists. Of the studies reviewed, Masia Warner and colleagues (2016) provided the school-based mental health providers with the most robust training including a workshop, an opportunity to co-lead a group with a psychologist before leading independently and on-going consultation. This suggests that although resource-intensive, a multi-tiered training model may lead to greater competence among school-based mental health professionals. Of the remaining studies no active condition showed significant group differences when compared to the attentional or monitored control condition, or treatment-as-usual conditions (Miller, et al., 2011; Hunt, et al., 2009; Ginsburg, et al., 2012; Ginsburg, et al., 2021). Despite the lack of group differences, all results suggested that school-based mental health providers can successfully implement EBPs for youth anxiety in the school setting, when measured by reduction in student

anxiety. Unfortunately, only study that looked at adherence, with Ginsburg and colleagues (2012) finding that once trained, school-based mental health providers included CBT strategies in 100% of their sessions. As such, the absence of differential improvement in EBP conditions may be related to dose administered.

Limitations and Future Directions

Extant research investigating school-based mental health providers ability to effectively implement EBP's for youth anxiety raises a number of considerations. One consideration is training. Although some studies included a robust training plan, most other included minimal details as to what training strategies were used during "workshops." This lack of information denies us the opportunity to consider what types of instructional strategies may be effective in training school-based mental health providers in EBPs. It limits what conclusions can be drawn about training strategies as they relate to a number of outcomes such as increased knowledge, competence and intended and actual use. Further, review of these studies indicates that the study with the most promising findings (no group differences between student outcomes in school staff-led versus psychologist led interventions; Masia Warner, 2016) was the study with the most resource- and time- intensive training plan. This suggests that multiple strategies (e.g. didactic, co-leading, consultation) may be necessary to build competence for school-based mental health providers. However, such approaches may not be feasible in schools, specifically if they apply to an intervention that is viewed as non-generalizable (such as CBT specifically for youth anxiety versus a transdiagnostic approach). Future research would benefit from systematically comparing training components and training dose (number of hours, amount of on-going consultation, etc.). In the vein of dose, findings

from Ginsburg and colleagues (2012) raise an important question about necessary intervention dose. Their findings indicate that CBT intervention groups and care as usual (both implemented by school-based metal health providers) both significantly improved student anxiety (no significant group differences at postintervention). However, despite providing specific instruction as to how to avoid CBT strategies in the treatment-as-usual condition, 55% of treatment-as-usual sessions included CBT strategies (versus 100% in the CBT condition). Given the comparable student outcomes, these findings suggest that an effective dose of CBT in the school setting may be far below 100%. It would be beneficial for future studies to similarly code interventions for presence of EBPs to yield more conclusive findings comparing active and control (or treatment-as-usual) conditions. It is important to consider how findings about dose might effect training of school-based mental health providers, who often come from non-CBT backgrounds (Ginsburg, et al., 2012). Findings indicating that lower doses of EBP are effective in reducing anxiety symptoms may lend credence to the idea of principle-based training which suggests training practitioners in individual EBPs, rather than specific treatment manuals, increase competency (Beidas et al., 2011). Further, this finding (indicating the presence of CBT in the treatment-as-usual condition; Ginsburg, et al., 2012) is encouraging in its reflection on the quality of intervention that is typical in the school-setting.

Conclusion

For many years leading organizations in clinical and school psychology have issued calls to establish research-practice partnerships to improve dissemination, implementation, and continuous improvement of evidence-based mental health services.

This review examined the literature in the areas of (a) accommodation and youth anxiety, (b) training of community and school-based providers in EBPs and (c) school-based interventions for youth anxiety in order to form a foundation for the development of a training intervention to educate school-based mental health providers in the provision of EBPs as they pertain to accommodation and youth anxiety. The primary findings of this review are three-fold.

(a) A growing body of research indicates that accommodation is pervasive in households that contain an anxious youth. This accommodation not only leads to increased caregiver distress but also has negative implications for anxiety course and treatment response. A smaller body of research substantiates that many anxious youth are receiving supports and modifications in the school setting that are likely serving to accommodate their anxiety. Across studies it is clear that SBSs can serve to encourage avoidance but also to facilitate anxious students' approach to anxiety-provoking stimuli. Findings also suggest that increasing education in these areas, such as how accommodation functions in the context of youth anxiety, may bolster school staffs' ability to identify and implement approach-oriented SBSs.

(b) Broad evidence suggests that a range of intervention strategies (e.g. didactic workshops, online, consultation) are effective in increasing provider knowledge of EBPs, but increases in knowledge don't necessarily lead to increased skill development/competence or intended and actual use of EBPs (Beidas & Kendall, 2010). However, when individual skills or concepts are taught in isolation, didactic or workshop-only instruction may be sufficient. Within the school context, evidence suggest that school-based mental health providers can be successfully trained in EBPs related to

youth anxiety (when measured by competence and decreases in student anxiety), particularly when training includes both a workshop and a consultation or coaching component. However, the active ingredient in such training regimes is not evident given the limited research available.

(c) Robust evidence bears out that school-based interventions are effective at reducing student anxiety. School-staff led interventions are similarly effective at reducing student symptoms of anxiety but rarely out-perform control conditions. Those that do, consist of resource- and time-intensive staff training protocols that may not be generalizable to all districts where number of mental health providers and financial resources are frequently limited.

In keeping with the aim of this review, we seek to synthesize the reviewed literature to inform the design of an impactful training intervention, intended to instruct school-based mental health providers in EBPs pertaining to accommodation in youth anxiety. When making such design considerations, many factors must be considered. It is prudent to balance pragmatism with thorough measurement and specific training interventions to maximize generalizability. One must first consider the method of training itself. Although consultation and coaching models have positive findings regarding increasing competence and have been successfully used with school-based providers, this model is time- and resource-intensive, thus limiting its generalizability to a wide range of districts, particularly those with limited financial resources or small numbers of school-based mental health providers. As such, focusing on individual concepts (such as accommodation in youth anxiety) and related-EBPs, rather than more complex and broad reaching protocols is both more relevant to school-based providers existing job

responsibilities and yields a training concept that is better suited to a workshop-only training approach.

Limiting the training to a workshop-only format also enhances generalizability. The findings in this area are muddied by the combination of multiple approaches and poor explication of training strategies used in workshops. Thorough research methods such as indicating specific training strategies utilized in workshops and clearly delineating differences in training strategies between active and control groups will help us to better identify what the key ingredients are in training school-based mental health providers. These types of research methods maximize the ability to draw specific conclusions and add meaningfully to extant literature.

Mixed finding regarding the ability of school-based mental health providers to successfully implement interventions for youth anxiety are likely due to a number of factors. Namely most providers are expected to spend the majority of their time focusing on areas that do not include direct intervention. This situation is reflected in such professionals receiving limited training in intervention in graduate and continuing education settings. As such, it would be sensible to explore different avenues through which school-based mental health providers can be instrumental in reducing youth anxiety symptoms. In training these providers in EBPs relating to accommodation, this knowledge can be applied to consultation practices. Research suggests that SBS provided via consultation vary in quality. By increasing school-based provider competence around the concept of accommodation in youth anxiety, we can increase the likelihood of these providers identifying and implementing high-quality, approach-oriented SBS, thus reducing accommodation and leading to better student outcomes.

The conclusions of this review suggest a next-needed study that is aligned with the goals of establishing research that will both identify specific best-practices in training school-based mental health providers and consider current research pertaining to roles filled by such providers to create a program that is sustainable outside of an active research study. This focus on sustainability, will subsequently increase both dissemination and implementation of EBPs in the context of accommodation for youth anxiety. The reviewed research suggests that research focused on specific training strategies and individual components of EBP (e. g., accommodation in youth anxiety) has the potential to lead to successful implementation of such practices and yield findings that bring us closer to identifying what key ingredients are in the training of school-based mental health providers.