



Factors associated with practitioners' use of exposure therapy for childhood anxiety disorders



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ABSTRACT

The current study examines factors related to use of exposure therapy by clinicians who treat children with anxiety disorders. A sample of 331 therapists from a variety of backgrounds (i.e., social workers, doctoral psychologists, masters level counselors, and marriage and family therapists) completed a survey regarding use of exposure and other treatment techniques for childhood anxiety disorders, as well as beliefs about exposure and child resiliency. Although the majority of therapists endorsed a CBT orientation (81%) and use of CBT techniques, exposure therapy was rarely endorsed. Holding a PhD in psychology as well as more positive beliefs about exposure and child resiliency were associated with greater use of exposure. The results suggest that exposure-based therapy is rarely offered in community settings and that dissemination should focus on individual evidence-based principles and correcting therapist misconceptions.

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1. Introduction

With lifetime prevalence rates up to 30%, anxiety disorders are the most common mental health diagnoses (Kessler et al., 2005). Anxiety disorders in childhood generally follow an unremitting course leading to additional psychopathology and often interfere with social, emotional, and academic development (Bittner, Egger, Costello, & Angold, 2007; Ezpeleta, Keeler, Erkanli, Costello, & Angold, 2001). Exposure-based cognitive-behavioral therapy (CBT) is considered a preferred evidence-based treatment (EBT) for childhood anxiety disorders (CADs; AACAP, 2007; Chorpita et al., 2011). CBT for CADs traditionally begins with 6–9 sessions of anxiety management strategies (AMS; e.g., emotion identification, relaxation training, problem solving) followed by 6–8 sessions of exposure to feared stimuli (for a review see Ale, McCarthy, Rothschild, & Whiteside, 2015). There is consensus among experts that exposure is the active ingredient in treating anxiety disorders (Barlow, 2002; Carey, 2011; Kazdin & Weisz, 1998; Kendall et al., 2005). However, the incremental value of AMS is unclear, as exposure alone may be more efficient and effective than the combination (Adams, Brady,

Lohr, & Jacobs, 2015; Ale et al., 2015; Deacon & Abramowitz, 2004; Whiteside et al., 2015).

Despite the empirical support for exposure-based CBT, it is unknown how many children in community settings receive this intervention. The current literature suggests that very few adults with anxiety disorders are offered CBT, much less exposure (Stein et al., 2011; Wolitzky-Taylor, Zimmermann, Arch, De Guzman, & Lagomasino, 2015). Although mental health therapists endorse frequent use of CBT to treat anxiety, they typically report using cognitive restructuring (>93%) and relaxation strategies (>75%) rather than in session *in vivo* exposure (<33%; Hipol & Deacon, 2013). Even fewer therapists report using other forms of exposure, such as interoceptive exposure for panic (Hipol & Deacon, 2013) or imaginal exposure for PTSD (Becker, Zayfert, & Anderson, 2004). This low utilization of exposure also applies to practitioners with specialized training (van Minnen, Hendriks, & Olf, 2010) and is found in therapist surveys despite that fact that therapists may overestimate their use of exposure (Böhm, Förstner, Külz, & Voderholzer, 2008). Unfortunately, infrequent use of exposure-based CBT suggests that most adults with anxiety disorders do not receive this first line treatment, which may result in protracted symptom duration and inefficient use of healthcare resources.

Common barriers limiting use of exposure with anxious adults appear to be therapist beliefs about exposure, lack of training, and the perception that exposure is not a necessary component of

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evidence-based CBT (Becker et al., 2004; Gunter & Whittal, 2010). Many therapists believe that exposure may exacerbate their clients' anxiety, cause clients undue harm, or damage the therapeutic alliance (Becker et al., 2004; Deacon et al., 2013; Gunter & Whittal, 2010; van Minnen et al., 2010). Such negative beliefs are associated with the underutilization of exposure among community therapists predominately working with adult clients (Deacon et al., 2013; Meyer, Farrell, Kemp, Blakey, & Deacon, 2014). In addition, lack of training in the delivery of exposure has been found to be a barrier to its use (Becker et al., 2004; van Minnen et al., 2010). Finally, therapists may forego use of exposure due to the perception that it is not a necessary component of evidence-based CBT. Treatment manuals for child anxiety disorders tend to include multiple CBT techniques, devote the initial therapy sessions to non-exposure techniques, and provide little guidance regarding the relative importance of exposure and other CBT techniques. Exposure may thus be seen as one of numerous "tools" the clinician may use in the application of CBT. Clinicians who lack training in exposure, or who possess negative beliefs about it, may choose to emphasize non-exposure CBT techniques such as cognitive and arousal-reduction strategies in their work with anxious children.

The available literature consistently suggests that exposure-based CBT is under-utilized in community settings, at least within the United States. However, because surveys have primarily included adult therapists, the extent to which these findings generalize to child clinicians is unclear. In addition, previous work has predominately focused on doctoral-level psychologists who make up only 16% of mental health professionals (Hamp, Stamm, Christidis, & Nigrinis, 2014), and thus little is known about exposure use among the other professions (e.g., social workers and clinicians with master degrees) that provide the majority of real world therapy. Similarly, despite the predominance of eclectic theoretical orientations (Cook, Biyanova, Elhai, Schnurr, & Coyne, 2010), little is known about differences in practice between therapists who subscribe to a "pure" CBT orientation versus multiple or eclectic orientations.

There are also a number of important questions regarding use of exposure that have not yet been explored. Although research indicates that negative beliefs about exposure are related to less use of this technique (Deacon et al., 2013; Meyer et al., 2014), these findings have not been extended to child therapists. Moreover, there has been no direct examination of the degree to which therapists' concerns about their clients' resilience affects use of exposure versus other treatment techniques. It is possible that therapists who view their clients as resilient would be more likely to use an exposure-based treatment approach as opposed to emphasizing techniques intended to reduce immediate distress. Finally, given recent work suggesting increased therapeutic benefit from focusing predominately on exposure as opposed to including it as one tool among many in multi-component CBT (Ale et al., 2015; Whiteside et al., 2015), it is important to explore the use of exposure relative to other techniques.

The current study was designed to extend the previous literature regarding the use of exposure for anxiety disorders to child therapists and therapists from diverse professional backgrounds. In addition, we broadened the therapy techniques examined to include interventions that are used with children (e.g., play therapy; Bratton, Ray, Rhine, & Jones, 2005) and techniques of questionable utility that are often associated with CBT (e.g., thought stopping; Abramowitz, Tolin, & Street, 2001). We hypothesized that exposure would be used infrequently compared to other therapy techniques. In addition, we hypothesized that factors such as doctoral training in psychology, an exclusive CBT-orientation, fewer negative beliefs about exposure, and a stronger belief in the

resiliency of anxious children would be associated with greater use of exposure relative to other techniques.

2. Methods

2.1. Participants

The sample consisted of 331 clinicians who reported providing outpatient therapy for children with anxiety disorders. This same sample was also used to examine evidence based assessment practices in a study reported elsewhere (Whiteside, Sattler, Hathaway, & Vickers Douglas, 2016). Two hundred and sixty-eight of the respondents provided their profession, which included social workers ($n = 115$, 42.9%), doctoral level psychologists (PhD; $n = 50$, 18.7%; PsyD; $n = 31$, 11.6%), masters degree licensed counselors ($n = 43$, 16.0%), and marriage and family therapists ($n = 29$, 10.8%). Just under half of the sample (46.6%) endorsed specializing in childhood anxiety disorders (inclusive of former anxiety disorders OCD and PTSD), which did not differ significantly between professions. Respondents reported practicing for an average for 15.63 years ($SD = 10.3$, range 1–43 years). Approximately 95% of the sample reported practicing for at least three years. Years of experience differed significantly by profession with respondents holding a PsyD ($M = 10.81$, $SD = 7.3$) or degree in MFT ($M = 12.9$, $SD = 9.9$) being newer to the field than social workers ($M = 15.31$, $SD = 10.2$), PhD psychologists ($M = 17.98$, $SD = 11.8$), and masters level therapists ($M = 19.05$, $SD = 9.6$), $F(4, 262) = 4.24$, $p = 0.002$.

Respondents were asked to endorse all applicable theoretical orientations from the following list: (1) CBT, including solely cognitive and behavioral approaches; (2) psychodynamic, encompassing psychoanalytical, (3) family systems, (4) client centered, including humanistic, supportive, Rogerian, and experiential approaches, and (5) eclectic. The number of orientations endorsed was based on the sum of the first four categories (i.e., excluding eclectic). The 266 respondents who provided this information generally endorsed two distinct orientations (mean = 2.01, $SD = 1.11$, median = 2, mode = 2), most commonly including CBT (81.2%). Clinicians were grouped into one of three categories: (1) pureCBT if they only endorsed CBT, (2) CBTplus if they endorsed CBT and another perspective, or (3) Other-orientation if they did not endorse CBT, but did endorse another orientation. The proportion of therapists in each orientation category differed significantly by profession, with the largest number of PhDs endorsing pureCBT (46%) while the other professions tended to endorse CBTplus (62.1% to 73.8%), $\chi^2 = 44.91$, $p < 0.001$.

Finally, therapists were asked whether they generally worked with children individually or included parents. On average, therapists worked primarily with children individually (58.9% of the time), followed by the parent and children together (27.5%) and parents alone (13.7%). The percentage of time that therapists worked with children individually differed by orientation, $F(2, 263) = 3.46$, $p < 0.05$, with those endorsing Other-orientation spending significantly more time individually with the child ($M = 65.80$, $SD = 20.69$) than those endorsing pureCBT ($M = 54.67$, $SD = 24.39$) or CBTplus ($M = 58.52$, $SD = 20.93$), p 's < 0.05 . Percentage of time spent with the child individually did not differ significantly by profession, $F(4, 263) = 0.56$, $p = 0.69$.

2.2. Procedures

Clinicians were identified and recruited through a series of two electronic surveys. The first survey was used to identify therapists who work with anxious children. The survey was emailed directly to all psychologists and social workers who had supplied an email address to the state of Minnesota licensing boards and to

all mental health professionals practicing within a regional health system ($N = 7273$). A link to the survey was also included in email newsletters sent to the members of the statewide professional organizations for psychologists, social workers, and marriage and family therapists (e.g., Minnesota Psychological Association). An initial invitation and two reminders were sent through each channel. The survey inquired about the populations of clients to which the clinician provided treatment. Because the link was included in newsletters it is not known how many clinicians viewed the invitation. A total of 2869 clinicians responded to the survey.

Of the respondents to the initial identification survey, 1002 clinicians reported treating anxious youth and were emailed a second survey about their assessment and treatment practices used in the current study. Responses to the survey were described as confidential because any identifiable information provided by the clinicians was removed by the institution's survey research center that administered the survey. To keep the survey to a manageable length and based on previous work finding consistent technique endorsement across diagnoses (Hipol & Deacon, 2013), anxiety disorders were grouped together and included separation anxiety, generalized anxiety, social anxiety, specific phobia, panic, and agoraphobia, as well as disorders previously classified under anxiety that are treated with exposure, obsessive compulsive disorder and post-traumatic stress disorder. A total of 331 respondents completed the treatment measures and were included in the current study. An additional 75 began the survey, but did not complete enough items to be included. A response rate of 33% (331 of 1002) is comparable to previous surveys (e.g., 27–30%; Addis and Krasnow, 2000; Becker et al., 2004).

2.3. Measures

2.3.1. Treatment techniques

Respondents were first asked to endorse the frequency with which they used a variety of treatment techniques when working with anxious children (0–never used, 1–rarely used, 2–moderately used, 3–often used, 4–always used). The list of techniques from Hipol and Deacon (2013) was augmented with additional techniques implemented with children (e.g., play therapy) and pseudo-CBT techniques (e.g., thought stopping).

The items were then combined into the following treatment categories: (a) Exposure (Exp): exposure therapy techniques as described in the literature (e.g., Abramowitz, Deacon, & Whiteside, 2011) that represent the presumed active ingredient in CBT (Barlow, 2002; Carey, 2011; Kazdin & Weisz, 1998; Kendall et al., 2005), including therapist-assisted and client-directed exposure in vivo, imaginal, interoceptive exposure as well as elimination of safety behaviors; (b) Anxiety Management Strategies (AMS): non-exposure techniques included in traditional CBT protocols for child anxiety disorders (i.e., Kendall, 2000; Walkup et al., 2008), problem solving, identifying emotions, breathing retraining, muscle or breathing relaxation, cognitive restructuring, (c) CBT-related: a variety of other techniques that are not included in traditional CBT protocols for anxiety but have some topographical relation to CBT through targeting thoughts, behavior, or mindfulness (i.e., mindfulness, meditation, biofeedback, motivational interviewing, replacing negative thoughts with positive thoughts, thought stopping, distraction, positive imagery); and (d) Non-CBT: techniques that are not part of CBT, are more experiential in nature, are not included in evidence-based treatment manuals for child anxiety, and do not topographically relate to CBT techniques (client centered, nondirective, family systems, music therapy, art therapy, sand tray therapy, play therapy, attachment, psychodynamic, hypnosis). Eye-movement Desensitization and Reprocessing (EMDR) and Acceptance and Commitment Therapy (ACT) were not included in any category because these approaches

include multiple techniques that would be classified in multiple categories (i.e., exposure, AMS, and CBT-related).

To estimate the degree to which therapists used exposure versus other techniques, the categories were compared as proportions of total technique use. First, the items within each of the four categories were averaged to control for the varying number of items within each category. Second, the four average scores were summed to form a total technique use score. Third, each category average score was divided by the total score to form a proportional score. As such, the degree to which each therapist focused on exposure compared to other techniques could be examined. Proportional technique use was only computed for clinicians who provided a response for all techniques ($n = 319$). Finally, after completing the list of techniques respondents were provided with a brief description of exposure and asked whether or not they provided this therapy to anxious children.

2.3.2. Therapist beliefs about exposure scale (TBES; Deacon et al., 2013)

The TBES is a 21-item questionnaire that assesses therapist beliefs about the safety, tolerability, and ethicality of exposure therapy. Participants use a 5-point scale ranging from 0 (disagree strongly) to 4 (agree strongly) to indicate their agreement with statements illustrating potential therapist concerns about exposure (e.g., “Most clients perceive exposure therapy to be unacceptably aversive”). Higher scores indicate greater negative beliefs about using exposure therapy to treat anxious clients. The TBES has previously demonstrated excellent internal consistency ($\alpha = 0.95$), six-month test-retest reliability ($r = 0.89$), and good construct validity (Deacon et al., 2013). The internal consistency in the current sample was excellent ($\alpha = 0.91$).

2.3.3. Connor-Davidson Resilience Scale: Therapist (CD-RISC:T)

The CD-RISC:T is an adaption of the Connor-Davidson Resilience Scale (Connor & Davidson, 2003) designed to measure clinician perceptions about the resiliency of children with anxiety disorders. The original CD-RISC is a 25-item scale that measures resilience (i.e., the ability to cope with stress and adversity) across five factors and has good psychometric properties (Connor & Davidson, 2003). To assess therapist perceptions, the original items were reworded from self-report (i.e., I am able to . . .) to therapist report (i.e. Children with anxiety disorders are able to . . .). In addition, the items were limited to 16 from the first three factors that relate to (a) personal competence and tenacity, (b) tolerance of stress and negative affect, and (c) acceptance of change. Items related to final two factors (control and spiritual influences) were deemed less applicable to the acceptability of exposure and were not included. Items were rated on a scale from 0 (not true at all) to 4 (true nearly every time) with higher scores indicating greater perceived resilience. The internal consistency in the current sample was good ($\alpha = 0.87$). The CD-RISC:T was randomly alternated with another measure (not included here) and thus was only completed by a subset of the sample ($n = 131$).

2.4. Analytic plan

The use of exposure versus other techniques was examined descriptively (i.e., means and frequencies) and compared using a series of paired samples *t*-tests. To estimate the availability of exposure based CBT, we examined the percentages of therapists whose proportional use (a) consisted generally of the content in traditional CBT protocols (i.e., exposure + AMS endorsement greater than 50% of total endorsement), (b) emphasized exposure as recommended in the literature (i.e., exposure highest proportional endorsement), or (c) included parents in exposure sessions consistent with a novel method for improving CBT (i.e., exposure as the highest endorsement and worked with the child and parents together at least

Table 1
Therapist endorsement of specific techniques to treat childhood anxiety disorders.

	M (SD)	Never	Rarely	Moderately	Often	Always
Problem Solving	3.21 (0.87)	2.1%	1.2%	13.3%	40.3%	43.0%
Identify Emotions	3.20 (0.98)	2.4%	3.9%	13.3%	31.5%	48.8%
Breathing Relaxation Techniques	3.17 (0.97)	2.4%	3.0%	16.0%	32.6%	45.9%
Breathing Retraining	2.89 (1.16)	6.7%	6.1%	14.3%	37.4%	35.6%
Replace Negative Thoughts with Positive Thoughts	2.85 (1.15)	5.8%	7.0%	18.5%	33.7%	35.0%
Client-Centered Therapy	2.76 (1.15)	6.8%	7.7%	18.8%	36.1%	30.6%
Mindfulness Techniques	2.75 (1.03)	3.6%	7.0%	26.1%	37.9%	25.5%
Cognitive Restructuring	2.70 (1.08)	6.1%	4.9%	26.8%	37.5%	24.7%
Progressive Muscle Relaxation	2.61 (1.06)	4.9%	9.1%	26.7%	38.6%	20.7%
Thought Stopping	2.58 (1.14)	8.6%	6.7%	23.3%	40.8%	20.6%
Thought Distraction Techniques	2.42 (1.16)	9.8%	8.9%	27.2%	37.6%	16.5%
Family Systems Therapy	2.15 (1.15)	11.2%	13.6%	35.5%	27.9%	11.8%
Motivational Interviewing	2.09 (1.20)	14.4%	13.1%	32.7%	28.1%	11.6%
Positive Imagery	2.09 (1.24)	15.5%	13.1%	31.1%	27.1%	13.1%
Client in vivo Exposure	2.09 (1.18)	13.1%	16.2%	29.9%	30.8%	10.1%
Therapist Imaginal Exposure	2.04 (1.16)	15.7%	11.4%	33.3%	32.4%	7.1%
Meditation	1.90 (1.11)	13.2%	22.2%	31.7%	27.7%	5.2%
Client Imaginal Exposure	1.75 (1.22)	21.1%	19.9%	27.5%	25.7%	5.8%
Elimination of Safety Behaviors	1.64 (1.23)	23.2%	22.9%	28.4%	17.7%	7.6%
Nondirective/Supportive Therapy	1.63 (1.22)	22.3%	25.7%	24.8%	20.7%	6.5%
Play Therapy	1.49 (1.36)	34.2%	18.5%	20.3%	17.6%	9.4%
Therapist in vivo Exposure	1.47 (1.21)	26.4%	28.5%	23.6%	15.0%	6.4%
ACT	1.28 (1.21)	37.5%	19.7%	22.2%	18.1%	2.5%
Art Therapy	1.24 (1.16)	35.5%	24.8%	23.5%	13.1%	3.1%
Attachment Therapy	1.12 (1.22)	43.3%	21.3%	20.4%	9.8%	5.2%
Psychodynamic/Analytical	0.85 (1.14)	54.0%	22.0%	13.1%	7.0%	4.0%
Music Therapy	0.76 (0.95)	50.5%	31.6%	11.2%	5.2%	1.5%
Client Interoceptive Exposure	0.72 (1.01)	58.2%	21.5%	12.7%	5.8%	1.8%
Therapist Interoceptive Exposure	0.66 (0.98)	59.8%	22.4%	11.3%	4.6%	1.8%
Sand Tray Therapy	0.59 (1.01)	69.6%	10.3%	13.1%	5.5%	1.5%
EMDR	0.47 (0.96)	76.2%	9.1%	6.7%	7.0%	0.9%
Biofeedback	0.47 (0.89)	73.7%	11.6%	9.5%	4.6%	0.6%
Hypnosis	0.30 (0.79)	83.5%	8.0%	4.6%	2.8%	1.2%

Note: ACT=Acceptance and Commitment Therapy. EMDR=Eye Movement Desensitization and Reprocessing. Exposure techniques appear in bold text.

half the time; Ale et al., 2015). Factors predicting use of exposure and the proportional technique categories were examined with chi-square analyses, analyses of variance (ANOVAs), independent samples *t*-tests, and correlations, as appropriate. Rather than correcting for family-wise error involved in examining multiple predictors, omnibus logistic and linear regression analyses were conducted to examine the relative contribution of each variable to the use of exposure and proportional technique categories. A *p* value of 0.05 was used to indicate statistical significance.

3. Results

3.1. Use of exposure and other techniques

The majority of the therapists ($n=202$, 61.4%) responded yes to the direct question regarding providing exposure therapy. The mean and frequency of endorsement for each technique are presented in Table 1. The four most commonly endorsed techniques were cognitive and relaxation procedures. The most commonly endorsed exposure technique (client assigned in-vivo exposure), was the 15th most frequently used out of 33 techniques and fell below techniques without empirical support for anxiety disorders (e.g., client centered and family systems therapy). The endorsement rate for five out of the seven exposure and response prevention items fell in the bottom half of frequencies.

The proportional use of each category (see methods section for calculation) is presented in Table 2. A series of paired samples *t*-tests indicated that exposure was used less often than AMS ($t[318]=25.03$, $p<0.05$, $d=2.33$) or CBT-related ($t[318]=10.51$, $p<0.05$, $d=1.02$) and more often than Non-CBT ($t[318]=2.80$, $p<0.05$, $d=0.27$). Regarding use of exposure-based CBT, 79.6% of respondents had endorsement of manualized CBT components (i.e.,

AMS plus exposure) account for greater than half of their total technique endorsement, 5.3% had exposure as the highest proportional endorsement, 1.9% had exposure as the highest endorsement and worked with the child and parents together at least half the time, and 1.6% had exposure account for greater than half of their total technique endorsement.

3.2. Predictors of exposure and other technique use

3.2.1. Profession

The percentage of therapists endorsing exposure differed by profession, $\chi^2=24.18$, $p<0.001$, with PhD psychologists most likely to endorse providing exposure (86.0%), followed by PsyD psychologists (67.7%), social workers (49.6%), MAs (48.8%), and MFTs (44.8%). Table 2 presents the proportional technique use by profession. The proportional technique use differed significantly by profession for exposure, $F(4, 261)=11.64$, $p<0.001$; and Non-CBT, $F(4, 261)=8.50$, $p<0.001$; trended toward significance for CBT-related, $F(4, 261)=2.41$, $p=0.05$; but was not significant for AMS, $F(4, 261)=1.26$, $p=0.28$. Post-hoc tests indicated that PhD psychologists endorsed greater proportional use of exposure and less use of Non-CBT techniques than all other professions, all p 's <0.01 , d 's range from 0.62 to 1.17. In addition, PsyD psychologists endorsed greater proportional use of exposure than MFTs, $p<0.05$, $d=0.54$. Effect sizes for non-significant between groups comparisons were all below 0.55.

3.2.2. Orientation

The percentage of therapists endorsing exposure differed by orientation, $\chi^2=16.09$, $p<0.001$. Those ascribing to a pure CBT orientation were most likely to endorse providing exposure (76.1%), followed by CBTplus (58.8%), and other-orientation (36.0%). The

Table 2
Proportional use of different categories of therapy techniques: Association with therapist characteristics.

Group	N	Proportional Technique Use			
		Exp*	AMS	CBT-related	Non-CBT*
Total	319	0.19 (0.10)	0.38 (0.06)	0.27 (0.07)	0.16 (0.08)
Profession					
PhD	48	0.27 (0.12) ^a	0.37 (0.06)	0.25 (0.06)	0.11 (0.06) ^a
PsyD	31	0.20 (0.10) ^b	0.38 (0.05)	0.25 (0.05)	0.17 (0.08) ^b
MA	43	0.18 (0.13) ^{bc}	0.38 (0.09)	0.29 (0.13)	0.16 (0.07) ^b
MFT	29	0.14 (0.12) ^c	0.40 (0.05)	0.28 (0.07)	0.18 (0.08) ^b
SW	111	0.16 (0.08) ^{bc}	0.38 (0.05)	0.28 (0.05)	0.18 (0.07) ^b
Orientation					
PureCBT	44	0.25 (0.15) ^a	0.38 (0.09)	0.28 (0.13)	0.09 (0.06) ^a
CBTplus	167	0.19 (0.09) ^b	0.38 (0.05)	0.27 (0.05)	0.17 (0.06) ^b
Other	49	0.13 (0.09) ^c	0.39 (0.05)	0.27 (0.07)	0.21 (0.09) ^c

Note: *Omnibus ANOVAs significant, $p < 0.05$. Proportion of endorsed techniques consisting of exposure (Exp), anxiety management strategies (AMS), other techniques related to CBT (CBT-related), and techniques unrelated to CBT (Non-CBT). PureCBT = endorsement of only CBT orientation; CBTplus = endorsement of CBT and at least one other orientation; Other = endorsement of another orientation without endorsement of CBT. Values computed only for clinicians who provided a response for all techniques. Significant differences are indicated by values in the same column with different superscripts, $p < 0.05$.

proportional endorsement also differed significantly by theoretical orientation (see Table 2) for exposure, $F(2, 259) = 17.86$, $p < 0.001$; and for Non-CBT, $F(2, 257) = 39.42$, $p < 0.001$; but not AMS, $F(2, 257) = 1.26$, $p = 0.29$; or CBT-related, $F(2, 257) = 0.25$, $p = 0.77$. Post-hoc tests indicated that the proportional endorsement of exposure (Pure CBT vs. CBT plus $d = 0.57$, Pure CBT vs. CBTplus $d = 0.98$, CBTplus vs. Other $d = 0.67$) and Non-CBT techniques differed significantly between each of the three groups (Pure CBT vs. CBT plus $d = -1.33$, Pure CBT vs. CBTplus $d = -1.55$, CBTplus vs. Other $d = -0.59$), all p 's < 0.001 . Effect sizes for non-significant between groups comparisons were all below 0.25

3.3.3. Years and expertise

Years in practice was unrelated to the dichotomous endorsement of using exposure, $t(265) = 0.86$, $p = 0.39$. Years in practice had a small association with proportional use of AMS ($r = -0.16$, $p < 0.05$) and CBT-related techniques ($r = 0.18$, $p < 0.01$), but not with exposure or Non-CBT use, p 's > 0.20 . Proportional use of exposure did not differ based on self-identification of possessing an expertise in childhood anxiety disorders (63.4% vs. 60.6%), nor did proportional endorsement of any other technique, all p 's > 0.17 .

3.2.4. Therapist beliefs

Clinicians who endorsed providing exposure had more positive beliefs about exposure ($M = 30.15$, $SD = 9.67$) than those that did not provide exposure ($M = 43.93$, $SD = 10.47$), $t(262) = 11.03$, $p < 0.001$, $d = 1.37$, and viewed children as more resilient ($M = 30.67$, $SD = 7.12$ vs. $M = 27.92$, $SD = 5.64$), $t(129) = 2.32$, $p = 0.02$, $d = 0.42$. Correlational analyses ($n = 258$) indicated that more negative beliefs about exposure were related to less proportional use of exposure ($r = -0.59$, $p < 0.001$), as well as more use of AMS ($r = 0.15$, $p < 0.05$), CBT-related ($r = 0.23$, $p < 0.001$), and Non-CBT techniques ($r = 0.51$, $p < 0.001$). Belief in the resiliency of children ($n = 128$) was related to more use of exposure ($r = 0.18$, $p < 0.05$) and less use of AMS ($r = -0.22$, $p < 0.05$), but was not significantly to CBT-related or Non-CBT technique use, p 's > 0.70 .

3.3. Combined analyses

Regression analyses were conducted to examine the relative contribution of variables significantly related to technique use: years of practice, profession (dichotomized as yes/no PhD), orientation (dichotomized as yes/no pureCBT), TBES, and CD-RISC:T (see Table 3). Because the CD-RISC:T was only completed by a subset of the sample, models were run with and without this variable. To maximize sample size, when the CD-RISC:T was not

significantly related to the outcome variable, the model for the full sample excluding the CD-RISC:T is reported. The inclusion of the CD-RISC:T did not affect the significance of any omnibus tests or individual predictors. A logistical regression predicting the dichotomous use of the exposure variable (yes/no) was significant, Cox & Snell $R^2 = 0.35$, $p < 0.01$. Linear regression significantly predicted the proportional use of exposure, $R^2 = 0.41$, $p < 0.001$, the proportional use of AMS, $R^2 = 0.17$, $p < 0.01$, the proportional use of CBT-related, $R^2 = 0.11$, $p < 0.001$, and the proportional use of Non-CBT, $R^2 = 0.43$, $p < 0.001$. The contribution of individual predicting variables are presented in Table 3. Overall, TBES was most frequently related to technique use (all except AMS). Exposure was also predicted by profession, while CBT-related was also predicted by years of practice and orientation, Non-CBT was also predicted by orientation and CD-RISC:T, and AMS was only predicted by years of practice and CD-RISC:T.

4. Discussion

Consistent with the literature examining adult therapists (Freiheit, Vye, Swan, & Cady, 2004; Hipol & Deacon, 2013; Wolitzky-Taylor et al., 2015) the current study found that therapists working with childhood anxiety disorders rarely provide exposure therapy. Despite being the likely active ingredient of CBT (Barlow, 2002; Carey, 2011; Kazdin & Weisz, 1998), 40% of therapists stated that they did not provide exposure therapy at all. Exposure techniques comprised less than one-fifth of the total techniques child therapists endorsed using. Individually, no exposure technique fell in the top third of endorsement, and the most frequently used form of exposure (client assigned in-vivo exposure) was ranked 15th of the 33 techniques examined. Exposure that was directed by the therapist in-session or involved more advanced understanding of the procedure (e.g., interoceptive exposure) was used rarely or never by more than half the sample. This is particularly striking given that client-directed exposures alone are not sufficient to produce treatment response in the absence of therapist-directed exposures (Franklin et al., 2011). Furthermore, with only 5% of therapists endorsing more use of exposure than other techniques, it is likely exceedingly difficult for families to find therapists who provide exposure-based CBT in a manner consistent with clinical practice guidelines (Connolly & Bernstein, 2007; Kazdin & Weisz, 1998).

Rather than offering exposure, the current data suggest that therapists primarily provide other CBT strategies. At a theoretical level, 81% of therapists endorsed following a CBT orientation, more than any other orientation. At the implementation level, the

Table 3
Therapist characteristics as predictors of proportional use of different categories of therapy techniques.

Outcome	Effect	B	SE	Exp(B)	Wald	p-value
Exp (yes/no) R ² = 0.35*	Years	-0.02	0.02	0.98	1.59	0.207
	Profession	-1.54	0.60	0.22	6.55	0.011
	Orientation	-0.22	0.50	0.81	0.19	0.662
	TBES	-0.15	0.02	0.86	50.75	0.000
Outcome	Effect	B	SE	Beta	t	p-value
Exp R ² = 0.41†	Years	0.00	0.00	0.01	0.22	0.826
	Profession	-0.05	0.02	-0.19	-3.59	0.000
	Orientation	-0.03	0.02	-10	-1.80	0.073
	TBES	-0.01	0.00	-0.52	-10.06	0.000
AMS R ² = 0.17*	Years	-0.00	0.00	-0.32	-3.74	0.000
	Profession	0.01	0.02	0.09	0.93	0.354
	Orientation	0.00	0.02	0.01	0.07	0.948
	TBES	0.00	0.00	-0.02	-0.24	0.809
	CD-RISC:T	-0.00	0.00	-0.23	-2.61	0.010
CBT-related R ² = 0.11†	Years	0.00	0.00	0.19	3.05	0.003
	Profession	0.03	0.01	0.13	1.96	0.051
	Orientation	-0.03	0.01	-0.13	-2.03	0.044
	TBES	0.00	0.00	0.22	3.46	0.001
Non-CBT R ² = 0.43†	Years	0.00	0.00	0.07	0.90	0.368
	Profession	0.01	0.01	0.05	0.68	0.501
	Orientation	0.06	0.01	0.33	4.37	0.000
	TBES	0.00	0.00	0.50	6.68	0.000
	CD-RISC:T	0.00	0.00	0.16	2.12	0.036

Exp (yes/no) = yes/no provide exposure in the treatment of childhood anxiety disorders. Proportion of endorsed techniques consisting of exposure (Exp), anxiety management strategies (AMS), other techniques related to CBT (CBT-related), and techniques unrelated to CBT (Non-CBT). Years = Years of practice. Profession = PhD vs. others. Orientation = pure CBT vs. combined CBT-plus and Non-CBT. TBES = Therapist Beliefs about Exposure Scale; CD-RISC:T = Connor-Davidson Resilience Scale: Therapist.

* Significant R², p < 0.01.

four most commonly endorsed techniques (i.e., problem solving, identifying emotions, and two breathing procedures) and the most prominent set of techniques (i.e., anxiety management strategies) correspond to the initial sessions of traditional CBT manuals for CADs (for a review see Ale et al., 2015). In fact, for the majority of therapists (80%), CBT components (AMS plus exposure) constituted the majority of total technique endorsement. As such, therapists appear to be aware that CBT is the preferred treatment for child anxiety and primarily use such techniques.

However, adherence to CBT in general may not be sufficient to provide optimal treatment. Because therapy is time limited, a therapist's decision to use one technique comes at the cost of not implementing another. This conclusion is consistent with data gathered from client medical records in which use of AMS was negatively related to use of exposure (Vande Voort, Svecova, Brown Jacobsen, & Whiteside, 2010). These non-exposure CBT components likely prolong therapy and decrease effectiveness (Adams et al., 2015; Ale et al., 2015; Whiteside et al., 2015). In addition to lack of exposure, the coherence among techniques and quality of technique implementation may suffer when clinicians emphasize the use of multiple therapeutic components in CBT manuals. To illustrate, a number of techniques endorsed more often than exposure in the present study are misapplications of cognitive strategies (e.g., thought stopping, replace negative thoughts with positive, distraction) that constitute avoidance and thus cannot be coherently integrated with exposure techniques. In addition, the data collected here indicate that when clinicians do provide exposure, it tends to be in its less effective client self-directed form instead of an emphasis on therapist-assisted exposure.

The current study offers some insight into factors affecting treatment delivery. Negative beliefs about the safety, tolerability, and ethicality of exposure therapy were strongly associated with less frequent use of exposure and greater use of non-EBT techniques. These findings are consistent with previous research documenting strong relationships between clinicians' negative beliefs about

exposure and the low utilization and poor implementation of this treatment with anxious clients (Deacon et al., 2013; Farrell, Deacon, Kemp, Dixon, & Sy, 2013; Meyer et al., 2014). Similarly, clinicians who viewed children as lower on characteristics of resilience were more likely to use non-exposure techniques. Unfortunately, treatment manuals that include multiple components (e.g., problem solving, identifying emotions, relaxation, exposure) may allow clinicians to pick and choose techniques they feel comfortable with, while still considering themselves to be using EBT. The present findings suggest that clinicians who hold negative beliefs about exposure and view their anxious child clients as lacking in characteristics of resilience are likely to forego exposure in favor of other techniques.

Therapist beliefs likely interact with training to influence technique use. Specifically, a doctoral degree in psychology and ascribing exclusively to a CBT orientation were associated with more use of EBT. However, the benefit of a CBT orientation diminished when therapists ascribed to multiple orientations. Perhaps just as AMS may crowd out the use of exposure, following multiple orientations may lead therapists to implement non-CBT techniques that also crowd out exposure. Therapist beliefs, profession, and training likely have a complex interaction as suggested by the fact that some variables significantly predicting technique use in isolation were no longer significant after controlling for other predictors. Future research to illuminate these inter-relations is indicated.

The current study has a number of limitations. To begin with, given the discrepancies between therapists' observed behavior and self-report (Brookman-Frazee, Garland, Taylor, & Zoffness, 2009; Garland et al., 2010; Ward et al., 2013), surveys such as the one used here may overestimate use of CBT. As a result the low use of exposure may actually be overly optimistic. Moreover, the techniques were presented as short-descriptors that may have been interpreted differently by individual therapists. For example, some therapists who denied using exposure on a dichotomous item endorsed some use of individual exposure techniques. Future

studies should provide specific operational definitions of therapy techniques or directly observe therapist behaviors. Similarly, the novel use of CD-RISC:T may not adequately capture relevant therapist perceptions and future studies should determine if more established measures of resilience or of other child characteristics more directly related to the use of exposure are more predictive of technique use.

In addition, the current study assessed therapist practices across a range of disorders for which exposure is a common treatment ingredient. Although previous studies have found consistency in clinician technique endorsement across disorders (Hipol & Deacon, 2013), assessing techniques specific to individual disorders may provide additional information about exposure use. For example, some therapists may not see children experiencing panic disorder and therefore do not endorse using interoceptive exposure. Moreover, it should be noted that the current study does not take into account practice setting or client-level variables (i.e. severity, comorbidity, motivation, SES, average length of treatment) that may influence therapists' practice or the type of therapist (e.g., MSW or PhD) that a client seeks in a community setting. For example, in settings with a low number of average sessions attended, therapists may be following treatment manuals in which exposure is not included until later sessions. However, this possibility underscores the importance of disseminating exposure as the primary CBT technique for anxious children. Finally, the current study is limited to clinicians in Minnesota and needs to be replicated in other regions. Although the present sample is limited in geographical diversity, participants recruited from a single state licensing board may better represent community clinicians than participants recruited nationally from specialized professional organizations whose membership has a disproportionately high percentage of PhD-level psychologists (e.g., Anxiety and Depression Association of America; Deacon et al., 2013).

Despite these limitations, by gathering information on community practice the current study provides some guidance for future efforts to disseminate evidence-based treatment for childhood anxiety disorders. To begin with, dismantling studies are needed to differentiate CBT components that are essential from those that are inert or even associated with reduced clinical gains. This is particularly critical in practice settings where length of treatment is likely to be limited, so that clinicians can optimize the dose of critical treatment ingredients. For example, a treatment protocol introducing parent-coached exposure by the third appointment may more clearly communicate the importance of exposure while being more effective and efficient than multi-component CBT (Whiteside et al., 2015). Over and above the role of AMS in CBT treatment packages, future studies should examine the role of AMS within exposure tasks. In particular, if future studies do not support the use of AMS within exposure tasks, researchers should focus on elucidating therapist techniques that are specifically prescribed in order to facilitate dissemination of quality exposures.

However, given the existing preponderance of evidence suggesting that exposure is the most critical component of CBT for anxiety disorders, successful dissemination of exposure will almost certainly require training approaches that do not rely solely on outcome data. Dissemination efforts need to directly address the negative beliefs held by clinicians about exposure (Farrell, Deacon, Dixon, & Lickel 2013). Indeed, strategies such as experiential learning (e.g., therapists engaging a group exposure task) and viewing client testimonials have been found to improve negative beliefs about exposure after didactic training (Farrell, Kemp, Blakey, Meyer, & Deacon, 2015). Future studies should investigate strategies that facilitate ongoing positive beliefs about exposure in order to support sustainability of exposure practice among community therapists. With additional empirical support for quantity and quality of exposures, as well as use of initial and long-term

strategies that effectively address therapist barriers to exposure use, the quality of typically-accessed treatment for anxious children can continue to improve.

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