

**THE RELATIONSHIP BETWEEN THERAPIST BEHAVIORS DURING  
EXPOSURE TASKS AND TREATMENT OUTCOMES  
FOR ANXIOUS YOUTH**

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## ABSTRACT

**Background:** Exposure tasks—where an individual confronts a feared stimulus or situation—are known to be a key element of the treatment for youth anxiety. However, optimal therapist behaviors during these exposure tasks and the specifics of how therapist should conduct exposure tasks have not been determined. The current study examined the relationship between therapist behaviors that (a) increased, (b) decreased or (c) maintained the youth’s anxiety during exposures and treatment outcomes. **Methods:** Participants were youth ( $N = 107$ ) ages 7 to 17 who received cognitive behavioral therapy for anxiety. Youth and their primary caregiver(s) completed a diagnostic interview and self- and parent-report measures pre- and post-treatment. Exposure session videos were rated by observers trained to reliability on a coding system evaluating therapist behaviors. Hierarchical regression analyses examined the role of therapist behaviors in predicting treatment outcomes. Logistic regression assessed the ability of therapist behaviors to predict treatment responder status (i.e., being a treatment responder versus a non-responder). Exploratory analyses examined the relationship between the individual therapist behaviors (within the three overall categories of behaviors) and treatment outcomes. **Results:** Youth showed significant improvement over the course of treatment. The three categories of therapist behaviors used during exposure tasks (increase, decrease and maintain the youth’s anxiety) were not associated with treatment outcomes. **Discussion:** Findings indicate that so long as exposure tasks are conducted, the therapist behaviors during the exposures may not be as important for predicting outcomes. Clinical implications, study limitations, and future directions are discussed.

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# CHAPTER 1

## INTRODUCTION

Anxiety disorders are highly prevalent among children and adolescents, with lifetime prevalence rates in youth estimated to be between 10% and 32% (Costello, Mustillo, Erkanli, Keeler, & Angold, 2003; Merikangas et al., 2010). Anxiety disorders are characterized by avoidance of the feared stimulus or situation, which is thus reinforced as the avoidance temporarily reduces the associated anxiety. Cognitive behavioral therapy (CBT) is an empirically supported treatment, considered a “well established” intervention for youth with anxiety (Hollon & Beck, 2013). However, the mechanisms of change, active ingredients, and specific features that differentially predict treatment outcome still largely remain unknown (King, Heyne, & Ollendick, 2005; Palitz & Kendall, 2020). The exposure component of CBT, in which the youth confronts the feared stimulus or situation, is considered key in the treatment (Gryczkowski et al., 2013; Hudson, 2005; Kendall et al., 2005; King et al., 2005; McKay & Whiteside, 2013; Peris et al., 2017; Peris et al., 2015) although there remains debate over the mechanisms by which this operates (Gosch, Flannery-Schroeder, Mauro, & Compton, 2006).

Both theory and research findings indicate the importance of exposure to the feared stimulus or situation (Palitz, Davis, & Kendall, 2019). Two prominent theories exist that guide exposure in CBT and hold that exposure is important for the treatment of anxiety: Emotional Processing Theory (EPT; Foa & Kozak, 1986; Foa & McNally, 1996; Rachman, 1980) and Inhibitory Learning Theory (ILT; Craske et al., 2008). Although both consider exposure tasks to be central to anxiety treatment, the two theories diverge

in their proposed mechanisms of action during the tasks (Gosch et al., 2006).

Accordingly, different therapist behaviors are proscribed and prescribed for optimal outcomes depending on the theoretical approach.

According to EPT, extinction is the primary mechanism by which exposure leads to positive treatment outcomes. EPT holds that continued anxiety is derived from fear structures embedded in memory. These fear structures contain information about and surrounding the feared situation, which thus determines the individual's fear response in a given situation (Foa & Kozak, 1986; Lang, 1977). Activation of the fear structure generally leads the individual to employ avoidance so as to deactivate the fear structure. This successfully reduces the associated anxiety in that moment; however, over the long-term, this strategy works in an antithetical way and maintains the fear structure and thus the anxiety. The role of exposure tasks in therapy is to activate the fear structure while preventing avoidance behaviors so that the individual can learn new information that can then modify the original fear structures embedded in memory. In this way the anxiety associated with the memory decreases over time and the activation of the memory does not cause the person to employ avoidance strategies (Foa & Kozak, 1986). Thus, EPT maintains that behaviors that increase the fear that is activated by an exposure task as well as those that increase habituation should improve treatment outcomes (Foa & Kozak, 1986).

In contrast, ILT holds that improvements in anxiety do not require habituation but instead derive from creating new, competing learning (Craske et al., 2008).

Correspondingly, ILT suggests that the goal and function of exposure is to create and

strengthen a new association between the feared stimulus and a non-threatening or non-aversive outcome, such that this new association becomes more likely to be activated by contact than the old anxiety-provoking meaning. From this perspective, then, the anxiety need not decrease so long as the feared expectations are violated during exposure; thus, toleration of the distress rather than reduction of the distress is what is important. The role of exposure tasks in therapy is to create these new associations and make them more accessible and retrievable so that when the situation or stimulus is encountered, this new association inhibits the old anxiety-provoking association. According to ILT, behaviors that promote competing associations with the feared stimulus or situation that are not threatening should improve treatment outcomes (Craske, Treanor, Conway, Zbozinek, & Vervliet, 2014; McGuire & Storch, 2018).

Although EPT and ILT implicate different approaches to exposure to optimize treatment outcomes, both align in presuming that therapist behaviors that increase anxiety are beneficial to exposure outcomes and those that decrease anxiety (e.g., encouragement of the use of safety behaviors) are detrimental (Himle, 2015). Additionally, both hold that overt or subtle therapist behaviors that indicate anxiety is dangerous or intolerable are disadvantageous (Himle, 2015). Both EPT and ILT suggest that what occurs during the exposure task impacts the efficacy of the exposure, but research in this area has been limited.

Research has evaluated some characteristics of exposure tasks and exposure sessions that relate to outcome for youth with anxiety. *In vivo* exposure tasks have been found to yield better outcomes than imaginal or vicarious exposure tasks (Menzies &

Clarke, 1993; Ultee, Griffioen, & Schellekens, 1982) and processing the exposure afterwards has been associated with better treatment outcomes (Tiwari, Kendall, Hoff, Harrison, & Fizur, 2013), although many other features of exposure, including group versus individual format, presence or absence of modeling, preparation for the exposure, frequency of exposure tasks, and level of therapist training have not been found to differentially predict outcomes (Chorpita & Southam-Gerow, 2006; Silverman, Kurtines, Ginsburg, Weems, Rabian, et al., 1999). Studies of how parental presence in exposure tasks relates to treatment outcome have yielded mixed results, with one study indicating that having a parent present negatively related to treatment outcome (Öst, Svensson, Hellström, & Lindwall, 2001) and others research indicating no differential effects of parental presence (Chorpita & Southam-Gerow, 2006; Hedtke, Kendall, & Tiwari, 2009).

During exposure, greater peaks in distress and greater emotional variability have been found to predict better outcomes (Waters, Potter, Jamesion, Bradley, & Mogg, 2015). The association between decreases in anxiety during exposure and outcomes has not been consistent, with some studies indicating that decreases predict better outcomes (Waters et al., 2015) and other studies finding no significant relationship (Peterman, Carper, & Kendall, 2016). Additionally, across CBT some differences in outcome have been noted among therapists with some therapist characteristics (e.g., more prior clinical experience; Podell et al., 2013) and therapeutic styles (e.g., collaborative "coach" style as opposed to a didactic "teacher" style; Podell et al., 2013) predicting better youth outcomes.

Does what occurs while conducting an exposure task meaningfully relate to the youth's outcomes? Exposure process variables are defined herein, consistent with previous work (Benito, Conelea, Garcia, & Freeman, 2012), as therapist, youth, and parent behaviors that may function to increase or decrease the youth's anxiety during an exposure task. These variables have the ability to greatly affect the exposure and thus may play a role in treatment outcome. Indeed, a greater use of safety behaviors has been found to predict worse outcomes, whereas coping behaviors have not significantly predicted outcomes, although treatment responders were found to use more of these behaviors than non-responders (Hedtke et al., 2009). But what might a *therapist* be doing that could affect outcomes?

It has been noted that variations in the delivery of the exposure and therapist behaviors during exposure tasks may account for some variations in outcome (Himle, 2015; Kircanski & Peris, 2015). Although much of what occurs during the exposure task cannot be controlled (e.g., what the youth does, how the outcomes turn out for a real-world exposure, etc.), the therapist's behavior is one component that he or she can control, and thus it is important to understand how it might enhance or hinder the youth's outcomes. Understanding what therapist behaviors help or hinder an exposure task has the potential to improve CBT for youth with anxiety who currently remain symptomatic or do not show improvements following treatment (e.g., Ginsburg et al., 2011).

Furthermore, this information on proscribed and prescribed therapist behaviors would support greater dissemination of exposure practices (Chu et al., 2015; Conelea & Freeman, 2015; McKay & Whiteside, 2013) by providing therapists with clearer

guidelines for conducting exposure tasks. This advancement would be particularly valuable given that exposure tasks are infrequently implemented in community practice despite their strong empirical support (Freiheit, Vye, Swan, & Cady, 2004; Hipol & Deacon, 2013; Whiteside, Deacon, Benito, & Stewart, 2016). Providing guidance to therapists as to how to conduct an exposure task could increase the quality of exposure and thus provides the potential to decrease the science-to-service gap that currently exists for CBT for anxiety (Benito et al., 2018).

Findings from the literature on treating youth Obsessive-Compulsive Disorder (OCD) suggest possible therapist exposure process variables that may play a role in outcomes for youth anxiety. Specifically, evidence suggests that therapist behaviors thought to increase anxiety are associated with more optimal outcomes, whereas those thought to decrease anxiety predict less favorable outcomes (Benito et al., 2012). OCD and anxiety are not identical disorders and have different structures to their gold-standard treatments, so it cannot be assumed that what applies to youth OCD will automatically apply to youth anxiety. The literature on youth and adult anxiety, alike, are currently lacking in research on proscribed and prescribed therapist behaviors for exposure tasks. Indeed, few empirically evaluated guidelines currently exist for *how* to conduct an exposure task and what therapist exposure process variables may be important, although the great need for such research has been noted (e.g., Benito et al., 2018; Benito & Walther, 2015; Crawford, Frank, Palitz, Davis, & Kendall, 2018; Himle, 2015; Jordan, Reid, Guzick, Simmons, & Sulkowski, 2017; Kendall & Choudhury, 2003; Peterman, Read, Wei, & Kendall, 2015).

The present study evaluated whether therapist exposure process variables differentially predict continuous independent evaluator (IE), parent-reported, and youth-reported treatment outcomes. Additionally, the study examined if therapists' use of behaviors thought to (a) increase, (b) decrease, or (c) maintain anxiety during exposure tasks predicted treatment responder status (i.e., being a treatment responder versus a non-responder). Given the existing literature on research and theory, it was hypothesized that therapist behaviors that increase or maintain the youth's anxiety would predict better treatment outcomes whereas therapist behaviors that decrease the youth's anxiety would predict less favorable outcomes. It was also hypothesized that exposure tasks that contain the use of more therapist behaviors to increase or maintain anxiety and fewer to decrease the anxiety will predict treatment response. Exploratory analyses examined whether specific therapist behaviors within these three categories of exposure process variables related to treatment outcomes or treatment-response status.

## CHAPTER 2

### METHODS

#### Participants

Participants were 107 youth ages 7 to 17 ( $M_{age} = 11.80$ ,  $SD = 2.97$  years; 52 females; 79.4% Caucasian) who attended CBT treatment at the Child and Adolescent Anxiety Disorders Clinic (CAADC), an outpatient clinic at Temple University. Youth were eligible for therapy if they met diagnostic criteria for a DSM-5 principal diagnosis of an anxiety disorder. In the present sample, these principal diagnoses included Agoraphobia ( $n = 1$ ), Generalized Anxiety Disorder (GAD,  $n = 57$ ), Panic Disorder (PD,  $n = 1$ ), Separation Anxiety Disorder (SepAD,  $n = 4$ ), Social Anxiety Disorder (SocAD,  $n = 35$ ), Specific Phobia (SP,  $n = 8$ ), and Other Specified Anxiety Disorder ( $n = 1$ ). Diagnoses were determined by diagnosticians using the Anxiety Disorders Interview Schedule for DSM-5 – Child and Parent Versions (ADIS-5-C/P), separately. Exclusion criteria included current active suicidality and a primary presenting concern other than anxiety, as gathered from the ADIS-5-C/P interviews. To be included in the current study, youth needed to have attended at least one exposure session with a recording available for coding. Participants did not need to have completed a full course of therapy to be included in the present study although they did need to have had a post-treatment evaluation.

#### Therapy

Youth received up to 16 weekly sessions of manualized CBT. Youth were assigned to receive the age-appropriate *Coping Cat* (Kendall & Hedtke, 2006) or *C.A.T.*

*Project* (Kendall, Choudhury, Hudson, & Webb, 2002) protocol or to receive the *Coping Cat – Accommodation Reduction Intervention* (CC-ARI; Kagan, Frank, & Kendall, 2016) protocol, a modified version of the *Coping Cat* protocol that targets parental accommodation (i.e., ways in which the parents change their behavior due to the youth's anxiety so as to reduce the youth's anxiety). All treatment protocols included the same content for the youth, presented in slightly different ways and in slightly different orders for the psychoeducation portion of treatment. Regardless of treatment protocol, the first nine sessions were focused on psychoeducation and skill building. In these sessions, youth received developmentally appropriate training in identifying emotions and somatic symptoms of anxiety, relaxation techniques, changing self-talk, problem-solving, and self-evaluation and rewards. To help the youth remember these skills and to aid them in implementing the skills when feeling anxious, youth learned the F.E.A.R. plan (**F**eeling Frightened?, **E**xpecting bad things to happen?, **A**ttitudes and Actions that can help, **R**esults and Rewards) during this portion of treatment as well. All parent sessions occurred during the first nine sessions. The next seven sessions focused on gradual exposure to feared situations specific to the individual youth's anxiety. In this portion of treatment, youth practiced approaching rather than avoiding their feared situations with the support of their therapist, generally following the hierarchy of feared situations the youth, therapist, and parents had worked to create. As all treatment protocols require the same use of exposure tasks and outcomes have not been found to differ between the treatment protocols (Kagan, Frank, & Kendall, 2018; Kagan, Frank, Palitz, & Kendall,

*under review*), analyses were performed collapsing across participants who received the various protocols.<sup>1</sup>

## **Measures**

*Anxiety Disorder Interview Schedule for DSM-5 – Child and Parent Versions* (ADIS-5-C/P; Albano & Silverman, *in press*). The ADIS-5-C/P is a clinician administered semi-structured interview that assesses youth anxiety and mood disorders and screens for other forms of child psychopathology. Youth and parent interviews are conducted separately by reliable diagnosticians who then provide a clinician severity rating (CSR) to indicate the interference and distress associated with symptoms for the disorders assessed. Composite CSRs are then determined by integrating the youth and parent interviews; specifically, the higher of the two CSRs from the youth and the parent interviews is selected as the composite CSR. CSR scores range from 0 (no interference) to 8 (extreme interference). CSR scores of 4 or greater indicate the level needed for a diagnosis. The principal diagnosis is identified as the disorder with the highest composite CSR. If multiple diagnoses have the same highest CSR, the principal diagnosis is determined to be the diagnosis of those that is causing the most distress or interference. The ADIS-5-C/P is an update from the ADIS for DSM-IV – Child and Parent Versions (ADIS-IV-C/P; Silverman & Albano, 1996) to address the minor changes and generate diagnoses consistent with the current diagnostic system. The ADIS-IV-C/P has demonstrated strong psychometric properties with regard to convergent and discriminant

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<sup>1</sup> When analyses were performed with treatment version included as a covariate, results did not significantly differ.

validity (Wood, Piacentini, Bergman, McCracken, & Barrios, 2002), retest reliability, and  $\kappa$  coefficients ranging from .80 to .92 for different anxiety disorders (Silverman, Saavedra, & Pina, 2001). The ADIS-IV-C/P has also demonstrated sensitivity to treatment effects in youth with anxiety disorders (e.g., Kendall et al., 1997; Silverman, Kurtines, Ginsburg, Weems, Lumpkin, et al., 1999). The CAADC diagnosticians have achieved  $> .90$  (ICC) inter-rater reliability on the ADIS-5-C/P.

*Clinical Global Impression – Improvement Scale (CGI-I; Guy, 1976).* The CGI-I is a 1-item scale rated by an IE to assess improvement. The scale ranges from 1 (very much improved) to 7 (very much worse) to indicate the change in anxiety symptoms from pre- to post-treatment. Consistent with previous studies (e.g., Caporino et al., 2013; Palitz et al., 2018; Peris et al., 2017; Walkup et al., 2008), treatment response was defined as a 1 or a 2 on the CGI-I. These scores reflect positive and meaningful clinical improvement in anxiety (Podell et al., 2013; Walkup et al., 2008). The CAADC diagnosticians have achieved  $> 90$  percent inter-rater agreement on identifying responder status.

*Clinical Global Impression – Severity Scale (CGI-S; Guy, 1976).* The CGI-S is a similar 1-item scale rated by an IE to assess severity of psychopathology. This scale ranges from 1 (not at all ill) to 7 (extremely ill) to indicate the severity of anxiety symptoms. This measure has been found to correlate ( $r = .78$ ) with the Pediatric Anxiety Rating Scale (PARS; Research Units on Pediatric Psychopharmacology Anxiety Study Group, 2002) and is widely used as an outcome measure (Peris et al., 2015).

*Multidimensional Anxiety Scale for Children – Child and Parent Reports (MASC-C/P; March, Parker, Sullivan, Stallings, & Conners, 1997).* The MASC-C/P is a 39-item youth- and parent-report questionnaire designed specifically for the assessment of anxiety symptoms in youth. Items are rated on a 4-point scale ranging from 0 (Never: Hardly ever true about me/my child) to 3 (Often: True about me/my child a lot of the time), with total scores ranging from 0 to 117 and higher scores indicating greater anxiety. The MASC has been found to have strong psychometric properties, demonstrating concurrent and discriminant validity (Baldwin & Dadds, 2007; March et al., 1997) and to have acceptable diagnostic accuracy (Dierker et al., 2001; Grills-Taquechel, Ollendick, & Fisak, 2008; Villabø, Gere, Torgersen, March, & Kendall, 2012; Wei et al., 2014).

*Coding Manual.* Observer-rated therapist behaviors were assessed with a slightly modified and augmented version of the Exposure Guide (EG; Benito et al., unpublished). The EG was developed based on a coding system derived from theory to assess therapist behaviors during exposure tasks in youth with OCD (Benito et al., 2012). The EG includes ten therapist behaviors rated on use during the exposure task as 1 (none), 2 (some) and 3 (a lot). The behaviors are each classified as a behavior thought to increase anxiety (Encourage Approach, Intensify the Exposure, and Reduce Family Accommodation), decrease anxiety (Changing Anxious Thoughts, Relaxation, Accommodation, Unrelated Talk, and Non-Exposure Teaching) or maintain the current level or have no effect on anxiety (Exposure Consistent Teaching, and Externalizing). The EG has been found to have good construct validity with the full coding system it was derived from which includes more coded variables (Benito et al., unpublished). The full

coding system has been found to predict outcomes (Benito et al., 2012). See appendix A for the coding manual that was used.

## **Procedure**

Informed consent and assent for the assessments, therapy and video recording were obtained from all parents and youth, respectively. All youth and their parent(s) completed an initial diagnostic assessment with the ADIS-5-C/P to determine eligibility as well as a post-treatment assessment for those who were deemed eligible and participated in therapy. This post-treatment assessment took place following the 16 sessions of the treatment protocol or earlier if the family terminated therapy. At these pre- and post-treatment assessments, diagnosticians assigned CSRs for each diagnosis and determined a composite CGI-S score. At the post-treatment assessment, the diagnosticians additionally determined a composite CGI-I score. Youth and parents completed self- and parent-report measures, which included the MASC-C and the MASC-P, at both assessments.

All coded exposure tasks took place in the therapy room or were video or audio recorded outside the therapy room. For each youth, three exposure sessions were randomly chosen to be coded; recordings were initially sought such that these three sessions would include one low anxiety exposure, one medium anxiety exposure and one high anxiety exposure as defined by the session goals (sessions 10 and 11 for low anxiety, sessions 12 and 13 for medium anxiety, and sessions 14, 15 and 16 for high anxiety). When a chosen recording was not available for coding (e.g., the exposure happened out of the room and was not video or audio recorded, poor audio or video

quality such that it could not be rated, no recording existed), a new session for that exposure level was chosen. In cases where there was no exposure session available for one of those levels of anxiety, another exposure from a different level was coded if possible.

**Observer training and coding.** Seven undergraduate coders were trained to reliability ( $ICC \geq .75$ ) prior to rating. Coders were trained as a group with the exposure coding manual and a sample of recordings; coders watched five tapes with the trainer, during which ratings were discussed. Coders then watched 10 tapes while referencing the already made ratings for those tapes, followed by watching 10 tapes in which coders made their own ratings and then checked their ratings against the master codes for those tapes. Between these two sets of 10 tapes and following the completion of this training phase, coders met with the trainer to discuss questions and the ratings. Following this training, coders watched tapes independently until reliability ( $ICC \geq .75$ ) with the trainer was achieved. The trainer and coders additionally met to discuss questions and reasoning behind ratings as needed.

All coders were blind to the youth's treatment outcome, symptom severity, and diagnoses. Coders were randomly assigned exposure sessions across participants. Coders watched the session through the end of exposure, or through the end of the first exposure that could be coded if multiple exposures took place in the session. The end of the first exposure was defined as when there was a meaningful break in the session shifting away from the exposure. That is, if the therapist stated that the exposure was over or the exposure stimulus was withdrawn without subsequent reintroduction or

continuation of that line of exposure, the one exposure to be coded was considered complete. If the therapist continued with the same line of exposures within five minutes of the prior exposure ending, simply increasing the difficulty, this was counted as within the same exposure and was thus coded. However, if the therapist switched the focus of the exposure (e.g., from an exposure to a specific phobia, such as vomit, to an exposure to a GAD fear, such as getting in trouble), these were counted as two separate exposures and thus only the first of the two was included for coding. After watching the complete exposure, coders gave ratings for each therapist behavior. Coders were permitted to pause or rewind the recording to re-watch the tape or sections of the tape when desired.

Inter-rater reliability was determined by having the trainer double-code 15% of randomly selected tapes. Ratings within each category of therapist behavior—behaviors thought to (a) increase anxiety, (b) decrease anxiety, and (c) maintain the current levels of anxiety—were summed to get a score for each of the categories for each session. Coders maintained  $> .75$  (ICC) inter-rater reliability for the three categories of behaviors (behaviors to increase the youth's anxiety, ICC = .76; behaviors to maintain the youth's current level of anxiety, ICC = .96; behaviors to decrease the youth's anxiety, ICC = .94). All individual therapist behaviors coded maintained reliability with ICCs  $\geq .76$ .

### **Data Analytic Plan**

Hierarchical linear regressions (Cohen, Cohen, West, & Aiken, 2013) tested the hypotheses that the three categories of therapist behaviors (i.e., increase, decrease, and maintain anxiety) would predict outcomes. In the first model the dependent variable was post-treatment CSR score for the principal anxiety disorder (model 1); in the second

model the dependent variable was post-treatment CGI-S score (model 2); in the third model the dependent variable was post-treatment MASC-P score (model 3); in the fourth model the dependent variable was post-treatment MASC-C score (model 4). For each of these models, the first step included the pre-treatment score for the respective outcome measure (i.e., the dependent variable) for that model. The next step of the model included the average for behaviors thought to increase anxiety, the average for behaviors thought to decrease anxiety, and the average for behaviors thought to maintain the current levels of anxiety. A logistic regression model tested the hypothesis that the three categories of therapist behaviors would predict treatment responder status (model 5).

Exploratory analyses examined the relationship between the specific therapist behaviors coded and treatment outcomes. Correlations examined the relationship among the individual therapist behaviors (Encourage Approach, Intensify the Exposure, Exposure Consistent Teaching, Externalizing, Changing Anxious Thoughts, Relaxation, Accommodation, and Unrelated Talk) and treatment outcomes (changes from pre- to post-treatment on the principal anxiety diagnosis CSR, CGI-S score, MASC-P score, and MASC-C score). A logistic regression model evaluated if the individual therapist behaviors predicted treatment responder status (model 6). All data management and analyses were conducted in IBM Statistical Package for the Social Sciences (SPSS), Version 26.

## CHAPTER 3

### RESULTS

#### Missing Data

Of the 107 youth who had completed pre- and post-treatment assessments, youth with more than 33% missing data on the MASC-P or the MASC-C were not included in that specific analysis. Youth who had some missing data but less than 33% on those measures were included; for these youth, total scores for each of these measures were calculated by using the average of the questions they had answered. When youth with some versus no missing data were compared on outcome measures and the primary independent measures of interest, *t*-tests and a chi-squared test indicated there to be no significant difference between youth with and without missing data.

#### Preliminary Analyses

All variables in the primary analyses were normally distributed (i.e., skewness and kurtosis within acceptable range). Table 1 shows the means and standard deviations of the outcome variables and their pre-treatment measures. Youth demonstrated significant improvement from pre- to post-treatment as measured by the principal anxiety disorder CSR (mean change = 2.29, SD = 1.93,  $t(106) = 12.29$ ,  $p < .001$ ,  $d = 1.19$ ), the CGI-S (mean change = 1.11, SD = 1.14,  $t(105) = 9.99$ ,  $p < .001$ ,  $d = 0.98$ ), the MASC-P (mean change = 14.02, SD = 17.08,  $t(98) = 8.17$ ,  $p < .001$ ,  $d = 0.82$ ), and the MASC-C (mean change = 16.35, SD = 20.97,  $t(99) = 7.80$ ,  $p < .001$ ,  $d = 0.78$ ). Three variables in the exploratory analyses (Intensifying the Exposure, Exposure Consistent Teaching, and

Relaxation) evidenced significant departure from normality and thus non-parametric statistics were used in the exploratory analyses of these variables.

Table 1

*Means and standard deviations of pre-treatment and post-treatment scores on outcome measures*

Measure	Pre-treatment Mean ( <i>SD</i> )	Post-treatment Mean ( <i>SD</i> )
CSR	5.16 (0.66)	2.87 (1.93)
CGI-S	4.42 (0.57)	3.31 (1.04)
MASC-P	56.16 (14.40)	42.37 (19.21)
MASC-C	54.84 (18.64)	38.48 (19.92)
Responder Status	---	65.71% treatment responder

*Note.* CSR = Clinician Severity Rating for the principal anxiety disorder; CGI-S = Clinical Global Impressions – Severity Scale; MASC-P = Multidimensional Anxiety Scale for Children – Parent Report; MASC-C = Multidimensional Anxiety Scale for Children – Child Report.

One-way analyses of variance (ANOVAs) evaluated differences in the three categories of therapist behaviors between low, medium and high anxiety exposure tasks. No significant differences were found in therapist behaviors thought to maintain or decrease the youth’s anxiety depending on the difficulty of the exposure ( $F(2,265) = 0.54, p = .59$ , and  $F(2,265) = 0.88, p = .42$ , respectively). One-way AVOVA indicated

that therapists' use of behaviors to increase the youth's anxiety did differ with a small effect size depending on the difficulty of the exposure ( $F(2,265) = 3.15, p = .04, \omega^2 = .02$ ), with post-hoc analyses indicating that therapists used slightly more behaviors thought to increase the youth's anxiety during medium anxiety exposures compared to low anxiety exposures ( $p = .013$ ). However, there was no difference in the therapists' use of behaviors to increase the youth's anxiety when comparing low anxiety exposures to high anxiety exposures ( $p = .30$ ) or comparing medium anxiety exposures to high anxiety exposures ( $p = .15$ ). Notably, the designation of an exposure as a low, medium or high anxiety exposure was determined solely by the session number and the associated exposure difficulty dictated in the manual. One-way ANOVA evaluating differences in the youth's anxiety, as rated by the coder ( $ICC = .74$ ), indicated no significant differences in the youth's anxiety depending on the classification of the exposure being low, medium or high anxiety ( $F(2,265) = 1.19, p = .31$ ). Consequently, the designation of low, medium or high anxiety exposure may not be meaningful. Given the general lack of significant differences in therapist behaviors that were used depending on the difficulty of the exposure and the lack of significant differences in the youth's anxiety depending on the designated difficulty of the exposure, the category score for each therapist behavior was averaged across the sessions to create one overall rating per each behavior category for each youth to be used in the subsequent analyses.<sup>2</sup> All variables averaged were not

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<sup>2</sup> When the primary analyses were run without averaging across the sessions coded, results were similar and therapist behaviors to increase the youth's anxiety during low anxiety, medium anxiety, and high anxiety exposures remained unassociated with outcomes as was true when the sessions were averaged.

rounded so that the variability was not reduced. All analyses excluded two coding variables with low frequency: Reduce Accommodation (used 6 times across all coded tapes) and Non-Exposure Teaching (used 1 time across all coded tapes); see Table 2 for the frequency, means, and standard deviations of the different therapist behaviors that were used across all tapes.

Table 2

*Frequency, means, and standard deviations of behaviors used by therapists*

Therapist Tools	None	Some	A lot	Mean ( <i>SD</i> )
Therapist tools to increase anxiety	--	--	--	2.07 (0.31)
Encourage Approach	13	183	72	2.22 (0.52)
Intensifying the Exposure	23	242	3	1.95 (0.30)
Reduce Family Accommodation	262	6	0	1.02 (0.15)
Therapist tools to maintain or have no effect on anxiety	--	--	--	1.17 (0.29)
Exposure Consistent Teaching	230	38	0	1.14 (0.35)
Externalizing	213	55	0	1.21 (0.40)
Therapist tools to decrease anxiety	--	--	--	1.39 (0.30)
Changing Anxious Thoughts	170	94	4	1.38 (0.52)
Relaxation	227	39	2	1.16 (0.39)
Accommodation	136	130	2	1.50 (0.52)
Unrelated Talk	148	99	21	1.53 (0.64)
Non-Exposure Teaching	267	1	0	1.00 (0.06)

### **Prediction of Treatment Outcomes<sup>3</sup>**

Table 3 shows the results of the hierarchical multiple regression predicting post-treatment CSR scores for the principal anxiety disorder (model 1). The first step of this model did not account for a significant amount of the variance in post-treatment CSR scores, indicating that pre-treatment CSR scores for the principal anxiety disorder did not predict post-treatment CSR scores. The addition of the three categories of therapist behaviors in the second step of the model did not significantly increase the percentage of variance accounted for in post-treatment CSR scores. In this step of the model, there remained no significant predictors of post-treatment CSR scores. This full model accounted for 4.72% of the variance in post-treatment CSR scores.

Table 4 shows the results of the hierarchical multiple regression predicting post-treatment CGI-S scores (model 2). The first step of this model did not account for a significant amount of the variance in post-treatment CGI-S scores, indicating that pre-treatment CGI-S scores did not predict post-treatment CGI-S scores. The addition of the three categories of therapist behaviors in the second step of the model did not significantly increase the percentage of variance accounted for in post-treatment CGI-S scores. In this step of the model, there remained no significant predictors of

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<sup>3</sup> Analyses were also conducted with the three categories of behaviors treated dichotomously (i.e., the presence or absence of behaviors to increase anxiety, maintain anxiety, and decrease anxiety in each session coded) and results were largely consistent. The only divergent result was in the logistic regression (model 5) in which the model significantly predicted responder status with 69.23% of individuals correctly classified, and the use of behaviors to increase the youth's anxiety were associated with decreased odds of being a treatment responder ( $b = -5.12$ ,  $SE = 2.39$ ,  $t = -2.14$ ,  $p = .03$ ,  $OR = [0.00 - 0.65]$ ).

Table 3

*Hierarchical multiple regression of post-treatment severity of the youth's principal anxiety diagnosis from pre-treatment (Clinician Severity Rating for the principal anxiety diagnosis)*

Step of the Model		<i>b</i>	SE	<i>t</i> ( <i>p</i> )	$\beta$
Step	Pre CSR	0.52	0.28	1.86 (.07)	0.18
One					
Model i		$F(1,105) = 3.47 \quad p = .07$			
		$R^2 = .03$			
Step	Pre CSR	0.56	0.29	1.94 (.06)	0.19
Two	Increase	0.46	0.83	0.56 (.58)	0.06
	Maintain	-0.79	0.85	-0.92 (.36)	-0.10
	Decrease	-0.36	0.88	-0.41 (.69)	-0.04
Model ii		$F(4,102) = 1.26 \quad p = .29$		$\Delta F(3,102) = 0.54 \quad p = .65$	
		$R^2 = .05$		$\Delta R^2 = .02$	

*Note.* Pre CSR = Pre-treatment Clinician Severity Rating for the principal anxiety disorder; Increase = Average of therapist behaviors thought to increase the youth's anxiety; Maintain = Average of therapist behaviors thought to maintain or have no effect on the youth's anxiety; Decrease = Average of therapist behaviors thought to decrease the youth's anxiety.

Table 4

*Hierarchical multiple regression of youth's post-treatment severity (Clinical Global Impressions – Severity Scale)*

Step of the Model		<i>b</i>	SE	<i>t</i> ( <i>p</i> )	$\beta$
Step	Pre CGI-S	0.16	0.18	0.91 (.37)	0.09
One					
Model i		$F(1,104) = 0.83 \quad p = .37$			
		$R^2 = .01$			
Step	Pre CGI-S	0.18	0.18	1.01 (.32)	0.10
Two	Increase	0.27	0.45	0.60 (.55)	0.06
	Maintain	-0.30	0.47	-0.65 (.52)	-0.07
	Decrease	-0.56	0.48	-1.17 (.24)	-0.13
Model ii		$F(4,101) = 0.92 \quad p = .46$		$\Delta F(3,101) = 0.42 \quad p = .42$	
		$R^2 = .04$		$\Delta R^2 = .03$	

*Note.* Pre CGI-S = Pre-treatment Clinical Global Impressions – Severity Scale; Increase = Average of therapist behaviors thought to increase the youth's anxiety; Maintain = Average of therapist behaviors thought to maintain or have no effect on the youth's anxiety; Decrease = Average of therapist behaviors thought to decrease the youth's anxiety.

post-treatment CGI-S scores. This full model accounted for 3.51% of the variance in post-treatment CGI-S scores.

Table 5 shows the results of the hierarchical multiple regression predicting post-treatment MASC-P scores (model 3). The first step of this model significantly accounted for 26.76% of the variance in the post-treatment MASC-P scores, indicating that pre-treatment MASC-P scores were associated with post-treatment MASC-P scores. The addition of the three categories of therapist behaviors in the second step of the model did not significantly increase the percentage of variance accounted for in the post-treatment MASC-P scores. In this step of the model, pre-treatment MASC-P scores remained the only significant predictor of post-treatment MASC-P scores. This full model significantly accounted for 29.65% of the variance in post-treatment MASC-P scores.

Table 6 shows the results of the hierarchical multiple regression predicting post-treatment MASC-C scores (model 4). The first step of this model significantly accounted for 16.74% of the variance in the post-treatment MASC-C scores, indicating that pre-treatment MASC-C scores were associated with post-treatment MASC-C scores. The addition of the three categories of therapist behaviors in the second step of the model did not significantly increase the percentage of variance accounted for in the post-treatment MASC-C scores. In this step of the model, pre-treatment MASC-C scores remained the only significantly predictor of post-treatment MASC-C scores. This full model significantly accounted for 17.41% of the variance in post-treatment MASC-C scores.

Table 5

*Hierarchical multiple regression of parent-reported post-treatment youth anxiety (Multidimensional Anxiety Scale for Children – Parent Report)*

Step of the Model		<i>b</i>	SE	<i>t</i> ( <i>p</i> )	$\beta$
Step	Pre MASC-P	0.68	0.11	5.95 (<.01)**	0.52
One					
	Model i	$F(1,97) = 35.44^{**}$ $p < .01$			
		$R^2 = .27$			
Step	Pre MASC-P	0.67	0.11	5.83 (<.01)**	0.51
Two	Increase	-8.15	7.36	-1.11 (.27)	-0.10
	Maintain	-10.67	7.56	-1.41 (.16)	-0.14
	Decrease	3.98	8.11	0.49 (.63)	0.05
	Model ii	$F(4,94) = 9.907^{**}$ $p < .01$		$\Delta F(3,94) = 1.29$	$p = .28$
		$R^2 = .30$		$\Delta R^2 = .03$	

\*\*  $p \leq .001$

*Note.* Pre MASC-P = Pre-treatment Multidimensional Anxiety Scale for Children – Parent Report; Increase = Average of therapist behaviors thought to increase the youth's anxiety; Maintain = Average of therapist behaviors thought to maintain or have no effect on the youth's anxiety; Decrease = Average of therapist behaviors thought to decrease the youth's anxiety.

Table 6

*Hierarchical multiple regression of self-reported post-treatment youth anxiety (Multidimensional Anxiety Scale for Children – Child Report)*

Step of the Model		<i>b</i>	SE	<i>t</i> ( <i>p</i> )	$\beta$
Step	Pre MASC-C	0.45	0.10	4.44 (<.01)**	0.41
One					
Model i		$F(1,98) = 19.70^{**}$ $p < .01$			
		$R^2 = .17$			
Step	Pre MASC-C	0.43	0.10	4.17 (<.01)**	0.40
Two	Increase	5.13	8.29	0.62 (.54)	0.06
	Maintain	2.41	8.38	0.29 (.78)	0.03
	Decrease	-5.99	8.72	-0.69 (.49)	-0.07
Model ii		$F(4,95) = 5.01^{**}$ $p < .01$		$\Delta F(3,95) = 0.26$	$p = .86$
		$R^2 = .17$		$\Delta R^2 = .01$	

\*\*  $p \leq .001$

*Note.* Pre MASC-C = Pre-treatment Multidimensional Anxiety Scale for Children – Child Report; Increase = Average of therapist behaviors thought to increase the youth's anxiety; Maintain = Average of therapist behaviors thought to maintain or have no effect on the youth's anxiety; Decrease = Average of therapist behaviors thought to decrease the youth's anxiety.

Table 7 shows the results of the logistic regression predicting treatment responder status (model 5). Results of this model indicated that therapist behaviors thought to increase, maintain or decrease the youth’s anxiety were not significantly associated with increased or decreased odds of being a treatment responder. This model correctly predicted 65.7% of response status (8.3% of treatment non-responders were correctly classified and 95.7% of treatment responders were correctly classified).

Table 7

*Logistic regression predicting treatment response (Clinical Global Impressions Scale – Improvement)*

Predictor	<i>b</i>	SE	<i>Wald (p)</i>	<i>Odds Ratio</i>	95% C.I.	
					Lower	Upper
Increase	-1.39	0.98	2.02 (.16)	0.25	0.04	1.69
Maintain	2.17	1.13	3.69 (.06)	8.72	0.96	79.43
Decrease	0.37	2.15	0.13 (.72)	1.45	0.19	11.14

$$X^2(3) = 6.26 \quad p = .10$$

Percent Classified Correctly = 65.7%

*Note.* Increase = Average of therapist behaviors thought to increase the youth’s anxiety; Maintain = Average of therapist behaviors thought to maintain or have no effect on the youth’s anxiety; Decrease = Average of therapist behaviors thought to decrease the youth’s anxiety.

## **Relationship of Specific Therapist Behaviors with Outcomes**

Pearson correlations examined the relationship among the five individual therapist behaviors that were normally distributed (Encourage Approach, Externalizing, Changing Anxious Thoughts, Accommodation, and Unrelated Talk). Correlations for the three individual therapist behaviors that departed significantly from normality (Intensifying the Exposure, Exposure Consistent Teaching, and Relaxation) were determined using Spearman's rho. The therapist using externalizing statements related to greater improvement in severity from pre to post-treatment (change in CSR of the principal anxiety disorder,  $r = .20$ ,  $p = .04$ , and change in CGI-S,  $r = .23$ ,  $p = .02$ ). The therapist encouraging use of relaxation similarly related to greater improvement in severity from pre- to post-treatment (change in CGI-S,  $\rho = .21$ ,  $p = .04$ ). No other of the therapist behaviors were found to correlate with changes in the outcome variables from pre- to post-treatment.

Table 8 shows the results of the logistic regression predicting treatment responder status with the individual therapist behaviors (model 6). Results of this model indicated that the use of therapist behaviors to intensify the exposure was significantly associated with decreased odds of being a treatment responder ( $b = -4.18$ ,  $SE = 1.64$ ,  $t = 2.55$ ,  $p = .01$ ,  $OR = 0.02$  [0.001 – 0.38]). No other behaviors were significantly associated with increased or decreased odds of being a treatment responder. This model correctly predicted 74.3% of response status (47.2% treatment non-responders were correctly classified and 88.4% of treatment responders were correctly classified).

Table 8

*Logistic regression predicting treatment response with the individual therapist behaviors (Clinical Global Impressions Scale – Improvement)*

Predictor	<i>b</i>	SE	<i>Wald (p)</i>	<i>Odds Ratio</i>	95% C.I.	
					Lower	Upper
EA	0.02	0.60	0.001 (.97)	1.02	0.31	3.34
Intensify	-4.18	1.64	6.52 (.01)**	0.02	0.001	0.38
ECT	0.50	0.95	0.28 (.60)	1.65	0.26	10.59
Externalize	0.63	0.85	0.55 (.46)	1.88	0.36	9.92
CAT	0.84	0.73	1.34 (.25)	2.31	0.56	9.58
Relax	1.88	1.06	3.19 (.07)	6.58	0.83	52.10
Accom	-0.68	0.68	1.02 (.31)	0.50	0.13	1.91
UT	-0.36	0.52	0.49 (.49)	0.70	0.25	1.93

$X^2(8) = 21.10^{**}$      $p < .01$

Percent Classified Correctly = 74.3%

\*\*  $p \leq .01$ .

*Note.* EA = Average of therapist encouraging approach; Intensify = Average of therapist intensifying the exposure; ECT= Average of therapist engaging in exposure-consistent teaching; Externalize = Average of therapist using externalizing statements; CAT = Average of therapist encouraging the use of cognitive strategies to change anxious thoughts; Relax = Average of therapist encouraging the use of relaxation; Accom = Average of the therapist providing accommodation; UT = Average of the therapist engaging in unrelated talk.

## **CHAPTER 4**

### **DISCUSSION**

Although exposures are considered key in the successful treatment of youth anxiety, the specifics of how therapists should conduct exposure tasks to optimize youth outcome have not been fully evaluated. The present study addressed this gap in the literature and sought to identify therapist behaviors during exposures that yield greater or reduced youth improvement. The primary hypothesis—that therapist behaviors that increase or maintain the youth’s anxiety would predict better outcomes whereas those that decrease the youth’s anxiety would predict less favorable outcomes—was not supported. Results indicated that the evaluated therapist behaviors did not significantly predict differential post-treatment IE-rated severity (CSR for the principal anxiety disorder and CGI-S), parent-reported anxiety (MASC-P) or youth-reported anxiety (MASC-C). Additionally, therapists’ use of behaviors to increase, decrease or maintain the youth’s anxiety was not significantly predictive of treatment responder status.

Exploratory analyses indicated that of the specific therapist behaviors examined, greater therapist use of externalizing statements and encouragement of relaxation strategies were associated with greater improvements in the youth’s severity over the course of treatment, although these effects were small to medium in size. The use of more therapist behaviors to intensify the exposure negatively predicted responder status. Interestingly, these exploratory findings about relaxation and intensifying the exposure were in the opposite direction than expected. This may indicate that the effects are, in fact, in the opposite direction, or it may indicate that the findings are more nuanced than

was able to be tested. For example, it is possible that therapists encouraged relaxation strategies when youth were too anxious to engage in the task at hand, and thus the relaxation enabled the youth to complete a more difficult exposure task, rather than simply making the exposure task easier or less anxiety provoking. These exploratory findings, when compared to the non-significant findings evaluating the three overarching categories of behaviors, suggest that the individual behaviors within the same category may have different effects on outcome and might benefit from being studied separately. Although there are some potential explanations for these exploratory findings (e.g., implementing relaxation during the exposure may make the youth more willing to approach more difficult exposures faster, as has been posited to be possible for safety behaviors in adults; Blakey et al., 2019; Hood, Antony, Koerner, & Monson, 2010), the findings should be interpreted with caution. These three behaviors (externalizing, relaxation, and intensifying) warrant future study to further understand their role in treatment outcome.

The results of the present study are consistent with recent work evaluating patient exposure process variables, which similarly did not find a significant effect. Specifically, when comparing outcomes of adults with a specific phobia of spiders, no significant difference was found between those who used safety behaviors judiciously and those who did not use any safety behaviors (Blakey et al., 2019). Similarly, the present study did not find significant outcome differences of therapist exposure process variables thought to decrease anxiety. More generally, it is possible that when behaviors to increase, decrease, or maintain anxiety are used judiciously, they do not have an effect on

outcome. As the therapist behaviors seen in this study were generally used judiciously (means of the three main categories near 2 or below, where 2 is the mean of the possible values), future work is needed to examine more extreme uses of the different therapist behaviors and evaluate if greater amounts or intensities of them predict outcome in a way that judicious use did not.

Findings from this study diverge from those identified in youth with OCD.

Whereas in youth with OCD, therapist behaviors that increase anxiety have been found to be associated with more optimal outcomes and those that decrease anxiety predicted less favorable outcomes (Benito et al., 2012), this pattern was not found to be true in youth with an anxiety disorder. It may be that the two classes of disorders are different enough that the approach to exposures has different influences on treatment outcomes. Indeed this possibility aligns with the varied gold standard treatment approaches for these two classes of disorders: whereas well researched and widely used treatment protocols for youth anxiety generally spend meaningful time and sessions teaching youth coping strategies before beginning exposures (e.g., cognitive restructuring, relaxation; Palitz et al., 2019), those for youth OCD begin exposures much sooner, skipping over instruction in these anxiety management strategies (e.g., Piacentini, Langley, & Roblek, 2007). Another possibility is that similar findings do exist in youth anxiety, but they are more nuanced, have smaller effect sizes than those in youth OCD, or require greater sensitivity in the outcome measure, and thus were not detected in the current study.

The results of the present study have relevance for understanding of exposures as guided from both an EPT and ILT framework. In contrast to what both EPT and ILT

propose, therapist behaviors that increase the youth's anxiety were not found to be beneficial to outcomes, nor were those that decrease anxiety detrimental to outcomes. Perhaps in youth, these therapist behaviors do not have as large of a differential influence as they might in adults, or perhaps the amount that these behaviors increased or decreased the youth's anxiety was minimal and thus was not predictive of outcomes. More objective measures of anxiety (e.g., measurement of physiological symptoms of anxiety) may provide insight into this question.

The exposures assessed in this study did not conform strictly to one of the two prominent theories guiding exposures in CBT, but instead had elements aligned with each. The progression of exposure tasks in this study aligns more closely with EPT in its gradual advancement towards more anxiety-provoking situations. However, many of the exposures that were carried out lent themselves better to the goals of exposures guided by ILT, namely expectancy violation rather than habituation. For example, an exposure in which the youth has a conversation with someone new for three minutes (variations of which were common in exposures coded in this study for individuals with SocAD) allows for expectancy violation if the youth fears the person will become bored in that time (among other possibilities). Expectancy violation is also possible in this exposure if the youth is unsure of the specific feared outcome and simply believes he/she cannot get through three minutes or thinks he/she cannot come up with anything to say when anxious. Indeed, when working with youth, the expectation that may often be targeted is that the youth cannot get through the situation or continue to function while experiencing the associated anxiety (Vinograd & Craske, 2020). However, three minutes (or setting

any time limit for that matter) may not allow for habituation to occur, as EPT suggests would be important. Thus, although the exposures in this study do not cleanly correspond with one theoretical approach, considering both theories allowed the examination of the different elements of these exposures and the function such choices in the exposures' designs may play in promoting positive youth outcomes.

Strengths of the present study include the use of an empirically supported treatment in an outpatient anxiety clinic with IE evaluations pre- and post-treatment. Additionally, the study is strengthened by the use of a structured and already established coding system, with coders maintaining reliability once trained to criterion. At the same time, study limitations merit mention. Both of the IE-rated outcomes have somewhat small ranges (0 to 8 for CSR, 1 to 7 for CGI-S), which may have hindered the ability to detect significant associations with the variables of interest and those outcomes. Secondly, codes of therapist behaviors only had three possible choices (None, Some, or A Lot); this range may have limited the ability to collect a more continuous measure of the use of each behavior in an exposure. Furthermore, as all the therapists were practicing in an anxiety specialty clinic and had notable training in treating anxiety, there may have been ceiling effects in the efficacy of the exposures that interfered with the ability to differentially predict outcomes. Future work is needed to test the study hypotheses in clinics with therapists with a wider range of training in CBT for youth anxiety, with a coding system that allows for a more variability (a continuous measure) of the therapist behaviors, and predicting to IE-rated outcomes with increased range and variability. Further research is also needed to evaluate more nuanced changes and additional

variables that may moderate analyses of differential outcomes. For example, the experience of habituation may moderate outcomes, as has been found to be the case in youth with OCD for the effect of higher peak fear and the number of exposure tasks carried out (Benito et al., 2018).

The current findings provide some suggestions for how therapists can conduct effective exposure tasks. Results suggest that judicious use of therapist behaviors that increase, decrease, or maintain the youth's anxiety do not negate the benefits and efficacy of conducting exposure tasks. This information may be valuable for increasing adoption of the use of exposure tasks in community practice as it may provide some reassurance to practicing clinicians that doing the exposure is most important and the specifics of what they do during the exposure task are less so. Additional work remains to evaluate if the use of these therapist behaviors in more extreme amounts differentially predicts outcome; this guidance is currently limited but would benefit the training of individuals just beginning to learn how to conduct exposures (Jordan et al., 2017). This study adds to past research that has indicated that the largest factor is that exposures take place, more so than the exposure process variables that occur within them. As the research in this area continues, so too must exposures.

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**APPENDIX A**  
**EXPOSURE CODING MANUAL**

*Coding Tracker*

- The coding tracker should be updated each time you code a video:  
<https://docs.google.com/spreadsheets/d/1eNJ0w670e9M73L5HnPMddHCRIdmNdWwyoFKfLFPnuik/edit?usp=sharing>
  - Make sure to use the sheet “Arranged by Coder”
- Please let Sophie know ASAP if a tape you were to code was not able to be coded (e.g., did not have an exposure in it, audio/video quality was so bad that you couldn’t code the exposure, etc.)

*Notes about the Exposure Section to be Coded*

- You will be coding the first exposure or section of exposures that happens in the therapy room or on the audio recorder. At the latest, you should begin watching the tape at the point in which the exposure or the fact that they will be doing an exposure that day is first mentioned (or they begin discussing the present session).
- The beginning of the exposure is considered when the therapist and/or youth have put things in motion to start the exposure. Specifically, this is not just about doing things to prepare, but about setting in motion the feared thing. Some possible examples (although these may not always be true):
  - If the exposure is the youth talking to a stranger, the start may be when the therapist says he/she is going to go get a stranger now.

- If the exposure is them doing a dance in front of the therapist, the start may be when the therapist has the youth stand up for his/her seat.
  - If the therapist says “Are you ready?!” and gets a yes response from the client or if the therapist says something like “Okay, let’s do it!”
- The end of the exposure is defined as when there is a meaningful break in the session that shifts away from the exposure. This may happen if the therapist states that the exposure is over or the exposure stimulus is withdrawn without subsequent reintroduction or continuation of that line of exposures. If the therapist continues with the same line of exposures, simply amping up the difficulty, this will be counted as within the same section of exposure but if there is a break between the two, they will count as multiple sub-exposures within that section (e.g., if the exposure has been the client looking at pictures of vomit and the therapists concludes this portion and moves on to showing the client fake vomit she/he has created, without a significant break in time, this will be considered all part of the same exposure). A significant break in time is defined as 5 minutes. If, however, the therapist switches the general focus of the exposure, this will count as two fully separate exposures and only the first will be included for coding (e.g., if the exposure has been the client looking at pictures of vomit to address a specific phobia of vomiting and the therapist concludes this portion and moves on to showing the client pictures of bees to address a specific phobia of bees, this will be considered two exposures and thus only the first will be coded).

- It will still be considered within the same exposure section of the session that you will code if the different sub-exposures still targets the same fear. This may be noted by their discussion of the task or by containing similar elements between the sub-exposures even if the sub-exposures differ in other ways. For example, if the first sub-exposure is to do a quiz in a time limit and the second sub-exposure is to show his/her work on the quiz problems to a stranger, they would be counted in the same line of exposures and both would be coded. However, if the exposures are not in the same line (i.e., not one amping up what it was or building off of that first one), even if they target the same core fear, the next one would not be coded. An example of this might be if the first exposure is the kid saying something awkward to a stranger they pass on the street and the second is the kid making farting noises in the bathroom, even though the core fear in both might be about them being awkward or other people thinking their weird, you would not code the second of these as it is not building on the first. If there is a break of more than 5 minutes between the end of one sub-exposure and the beginning of another sub-exposure, even if they are in the same line, you will not code the second since the 5 minute mark has been reached.
- How do you know if there are two separate sub-exposures versus if they are the same one? If there is any time where the therapist and client come out of contact with the stimulus (e.g., the stranger they're talking to leaves the room before the next stranger they're talking to comes in) or the therapist and client process how the exposure went (e.g., The therapist turns the discussion to how that exposure

went), that would mark the end of the first sub-exposure and indicate that there are sub-exposures rather than one fully continuous one.

- Watch the session through the end of the first exposure section in the therapy room. If you believe the exposure has ended, watch for 5 more minutes to make sure the exposure does not begin again in a way that would classify as still part of the first exposure, as defined above. If you code an exposure in the room that then is amped up by exposures that continue out of the room, watch for 5 more minutes after the therapist and child re-enter the room.
- Defining Exposures: What counts as an exposure?
  - Regardless of whether an exposure is planned or not, an exposure needs to contain relevant cues/behaviors from the therapist to consider an exposure.
    - An unplanned exposure that ends quickly without the therapist diving into it as the exposure (e.g., sticking with it, getting SUDs ratings, etc.) should *not* count as an exposure.
    - If an exposure task is agreed upon by the therapist and patient but it elicits no anxiety, this *should* be coded as an exposure.
  - If there is a stated exposure task to be completed that is not actually achieved once the exposure process begins because the exposure is too difficult, this attempt should still be coded as an exposure (and will likely get coded for some accommodation).
    - If the stimulus is visible and the original planned exposure is too difficult, this attempt at the original task *is* considered an exposure.

- If the stimulus is not visible, but even discussing it provokes anxiety (i.e., the “lowest rung” on the hierarchy), this *is* considered an exposure.
- If there is a stated exposure task to be completed that is not actually achieved once the exposure process begins because of logistics, this should still be coded as an exposure (e.g., the therapist was unable to find a stranger for the youth to talk to). This instance may not necessarily get coded for accommodation.
  - However if an exposure task was agreed upon but the exposure process doesn’t begin due to logistics (e.g., the therapist and youth agree the exposure will be watching a Youtube news clip but the internet goes out before the things are put in motion to watch the clip and thus they are unable to access Youtube news clips) this should not be coded as an exposure.
- If the therapist “tests” different types of exposures (i.e., “mini” exposures) for hierarchy development, this should *not* be coded as an exposure unless a specific task is continued as an anxiety-provoking exposure (i.e., testing a “mini” exposure becomes a “real” exposure)
- To identify if something counts as an imaginal exposure, think about what the feared thing is and if the kid is coming into contact with that feared thing. If, for example, the kid’s fear is that he/she will continue to have intrusive thoughts and is now worrying he/she may have intrusive

thoughts during his/her math test tomorrow, imagining taking the math test tomorrow while having intrusive thoughts could be an exposure. If the kid's fear is of doing well on the math test, if the therapist has the kid imagine taking the math test tomorrow and how he/she might be feeling could also be counted as an imaginal exposure. However, if they were to plan for how the kid will approach the math test tomorrow (not bringing about anxiety discussing this plan and engaging with it as an exposure), this would probably not count as an imaginal exposure.

Notes about SUDs Tracking Sheet

- Fill in the information at the top of this sheet in the same way you fill out those lines in the main coding sheet.
- For “First Exposure Start Time” write in what time the first exposure in the session you’re coding began. For “Last Exposure End Time” write in what time the last exposure in the session you’re coding ended. If there was only one exposure coded, this will be the same as for that one exposure.
- If the SUDs scale being used is the Feelings Thermometer, circle that on the sheet. If another scale is being used instead, write in what information you have about the SUDs scale being used.
- While watching the exposure and coding for therapist behaviors, use this sheet to keep track of the youth’s SUDs ratings. As the youth states them, write them down on this sheet along with the time in the video it occurred. If there are

multiple exposures in the session, you should note in the “Exposure Number” column on the left which exposure number the SUDs rating came from. You only need to write this for the first SUDs rating of each exposure, but you are free to write it for each rating if you like.

- If the exposure is an imaginal exposure and the therapist asks for SUDs of how the client imagines they will be feeling (e.g., “Okay so now your mom has turned off the lights and you’re alone in your bedroom, what do you think your number would be?”) don’t write that down on the SUDs sheet. But if the therapist asks for SUDs of how the client feels imagining the situation (e.g., “Okay, what’s your number right now as you’re imagining being alone in your bedroom after your mom has turned off the lights?) then do write that SUDs down.
- For “Time” you should always write the time the client said the SUDs rating. If the recording is broken into multiple files and the exposure is on two different files (e.g., this happens with some Summer 2017 video recordings), when you write down the time of a SUDs rating that is in the second tape, in the “Time” column you should write down the length of the full first tape + how far into the second tape the SUDs happened = the sum (ultimately, just that total sum is what will be entered into the database). So for example, if the SUDs was given at 00:00:05 on the second tape and the first tape was a total of 25 minutes, for that SUD’s “Time” you write “00:25:00 + 00:00:05 = 00:25:05”.
- Continue to write down any SUDs that were provided through the 5 minutes following the end of the exposure.

- Only write down SUDs the youth is providing for that moment, not prospective or retrospective ones. For example, if the therapist asks the youth, “If we made it harder by doing X, what do you think your SUDs would be?” do not write the SUDs the youth provides. However, if they make the exposure harder in that way and the therapist then asks, “What is your SUDs?” you should write down the number the youth provides.
- If after the exposure ends in the 5 minutes you watch following the end of the exposure, the therapist asks the client for his/her SUDs rating, you should record the SUDs rating as well as the time it happened, however in addition, in the Time column after you write the time, you should write “After Exposure SUDs”
- If after the exposure ends, the therapist asks the patient about their SUDs during the exposure, you should *not* write this in the chart, however you *should* write any information the client gives on his/her SUDs in this retrospective way in the “NOTES” section below the chart.

### **About the Client and Exposure:**

1. Subject ID #: Write down the youth’s OPC 4-digit ID number.
2. Rater: Write down your name.
3. Date Coded: Write down the date you coded the tape.

4. Session #: This is the session number in the treatment for the tape you are coding. This should be able to be determined from the recording name.
5. Session Exposure Difficulty: This is determined by the session number. As defined by the treatment protocols, Sessions 10 and 11 are “LOW,” Sessions 12 and 13 are “MEDIUM” and Sessions 14, 15, and 16 are “HIGH.”
6. Exposure Happened in the Room: Was there an exposure in the room for you to code? If an exposure begins in the room, it is only coded as happening in the room if what occurred in the room could be counted as a stand-alone exposure even if it continued in increased intensity or was practiced again outside of the room, or if what occurred in the room was at least half of the total exposure. This can be roughly determined by calculating how long the exposure happened in the room for and calculating how long the youth was out of the room before he/she returned to the room. If the youth was out of the room for a longer amount of time than he/she did the exposure *in* the room (and what happened in the room could not be counted as its own exposure), it is counted as not having at least half of the exposure in the room and thus this question is answered “NO.” However if another exposure happened in the session (see above for what counts as a separate exposure), please code that exposure as that is then counted as “the first exposure that happens in the therapy room.” If the exposure did not happen in the room but was recorded on an audio-recorder for that portion of the session, please circle “NO, but on recorder.” If a tape has multiple exposures happen in the session but some are in the room and some are on the audio recorder, continue coding the ones on the audio recorder (assuming the

exposures are still in the same “line” of exposures and thus fall under what you should continue coding) and circle “YES and some on the recorder.”

7. Parent Present: If the parent is present (i.e., in the therapy room, even if the parent is not within the view of the camera) for at least half of the exposure (as calculated by time), this variable is coded as “YES.” If YES, circle if it was a mother, father or other caregiver (e.g., grandparent) and write in the relationship of the “other” if it can be determined. If multiple parents/caregivers were present, you can circle multiple options.
8. Coded: Was the tape coded for use in the study? If “NO,” indicate why not.
  - a. Exposure not in room: The same criteria from number 6 in this section applies here.
  - b. Poor video quality: The video quality is so poor such that it is not possible to code the session.
  - c. Poor audio quality: The audio quality on the video is so poor such that it is not possible to code the session.
  - d. Unclear session number: The session number cannot be determined for the recording. For example, if a tape is labeled incorrectly and the content within the session cannot be determined and identified as corresponding to a specific session number.
  - e. Exposure did not happen in the session: No exposure took place in this session (neither in nor out of the room).

- f. Tape doesn't exist: The tape doesn't exist on SWAN, in the Summer 2017 video recordings folder or as an audio recording within this coding project's folder on the drive.
  - g. Other: Any other reason not captured by the options detailed above. Make sure to write/explain what the reason was.
9. If no, what tape was chosen instead: If the original tape you were supposed to be coding was not able to be coded (i.e., you answered "NO" to question 8 above and indicated a reason why), fill out the section below. Then use a *new* coding sheet to code that new tape
- a. Session #: This is the session number for the replacement tape coded since the original one chosen could not be coded.
  - b. Session Exposure Difficulty for this replacement: This is the difficulty of the exposure in the replacement tape coded, determined (like before) by the session number. As defined by the treatment protocols, Sessions 10 and 11 are "LOW," Sessions 12 and 13 are "MEDIUM" and Sessions 14, 15, and 16 are "HIGH."
  - c. Exposure Difficulty of Replacement Same in Difficulty as Original: Is the difficulty of the replacement tape (see 9b) the same difficulty as the original tape that could not be coded (5)? If no:
    - i. EASIER: The replacement tape exposure was easier than the original tape.

- ii. HARDER: The replacement tape exposure was harder than the original tape.

10. Total Number of Exposures in the Session: This is how many exposures happened within the portion of the session defined above as the “exposure to be coded.”
11. Total Exposure Length: This is the sum of the lengths of each of the individual sub-exposures (written below on the coding sheets).
12. Exposure Start Time: The exposure is considered to have started when any of the following happen: the therapist makes a statement indicating that the exposure is starting, there is clear presentation of the exposure stimulus or a feared situation is entered, the therapists asks the youth for their SUDs rating (or another assessment of their anxiety or difficulty in the present task) having gone through the FEAR plan already, or the therapist begins using the present as opposed to future tense to discuss the exposure or exposure situation/stimulus. For as many exposures as you’ve noted above (see number 10 above), you should have a separate start time. If the exposure begins in the room and continues on the audio recorder, in the start time space you should write the time it started and write “on video” after the time, even though when you enter it, you will only be able to enter the time. Then, in “Additional notes” at the end, you will include information about when the exposure started on the video, when you stopped being able to hear the therapist/client on the video, when it started on the audio-recorder and when it ended on the audio recorder to be able to calculate the length of the full exposure. If the recording is broken into multiple files and the exposure is on two different files (e.g., this happens with some Summer 2017 video

recordings), when you write down the time of something that is in the second tape, write down the sum of the full first tape plus how far into the second tape the thing happened. You should put an asterisk next to that total number and then in the “Additional Notes” section, write the specifics of the time. So for example, if the first exposure started at 00:00:10 on the second tape and the first tape was a total of 30 minutes, for “Exposure Start Time” you write “00:30:10\*” and then in the Additional Notes, you write “\*For exposure 1 start time: 00:30:00 tape 1 + 00:00:10 tape 2 = 00:30:10 total.”

13. Exposure End Time: The exposure is considered to be complete when any of the following happen: the therapist makes a statement that the exposure is over, the exposure stimulus is withdrawn (or the situation is ended) without subsequently being reintroduced, the focus of the session changes without reference to the exposure task continuing, or the therapist or patient begin to speak about the exposure in the past tense. For as many exposures as you’ve noted above (see number 10 above), you should have a separate end time. For sessions that are split between SWAN and the audio recorder or split between different files, see “12. Exposure Start Time” for instructions on how to handle this following the same procedures.
14. Length of Exposure: Please calculate by subtracting the exposure start time from the exposure end time. For as many exposures as you’ve noted above (see number 10 above), you should have a separate length. If the exposure begins in the room and continues on the audio recorder, you should have all the information written in the “Additional notes” at the end – as stated above in number 12, this should include

when the exposure started on the video, when you stopped being able to hear the therapist/client on the video, when it started on the audio-recorder and when it ended on the audio recorder. From that, you will calculate (written out in the “Additional notes” as well, how long the exposure was total based on the sum of how long the exposure was on the video plus how long the exposure was on the audio-recorder.

### **What the Therapist Did Surrounding the Exposure:**

#### **Preparing** to do an Exposure

In watching the part of the session in which the therapist and client are preparing to do an exposure, consider the following questions:

- a) Was the exposure practice item selected from the hierarchy that was developed previously in this or a prior session with the client’s input? This includes minor modifications to items on the hierarchy (e.g., 2 minutes instead of 1 minute; talking to a man instead of a woman), but should not be selected if the therapist suggests a completely new idea for an exposure that isn’t based on the hierarchy.
- b) Did the client participate in the selection of the practice item or agree to the selected exposure task? This should be selected if the therapist allows the client to give any input about the exposure task that is ultimately selected.
- c) Was the presentation of the practice item clear? Did the client and therapist both know what was expected during the exposure task? This may be as simple as the

therapist saying something like, “Okay, so now I’m going to go get someone and you will talk to that person for one minute.”

### **Practicing Exposures**

- Taking ratings: The coder considers whether the therapist has asked for CLIENT SUDs (Subjective Units of Distress Scale) prior to and during the exposure. These ratings indicate the client’s subjective anxiety. During the session, they may also be referred to as a “Thermometer rating,” “temperature,” or “number” (e.g., “What’s your number now?”). SUDs ratings typically range from 0 (no anxiety/fear/distress) to 8 (highest anxiety/fear/distress), although sometimes clients may use another scale or therapists may simplify the scale for young children. In order for this box to be checked, the therapist must have asked for some sort of rating during the exposure (i.e., asking before and/or after the exposure but never during is not enough). If the exposure is an imaginal exposure and the therapist asks for SUDs of how the client imagines they will be feeling (e.g., “Okay so now your mom has turned off the lights and you’re alone in your bedroom, what do you think your number would be?”) don’t check this box. But if the therapist asks for SUDs of how the client feels imagining the situation (e.g., “Okay, what’s your number right now as you’re imagining being alone in your bedroom after your mom has turned off the lights?) then do check this box.

## **Coder Processing**

Rating the exposure difficulty: The “art” of exposure is the ability to titrate an exposure so that it is neither too difficult nor too easy. Rather, the therapist seeks a moderately challenging exposure so that the client has an opportunity to learn to experience anxiety/distress without needing to avoid the emotion.

### An exposure that is too difficult

Is one in which the client’s anxiety begins at a very high level (note: this is not just based off of the client’s SUDs rating), is not tolerable by the end of the session, and/or the client is unable to complete the exposure as planned.

### An exposure that is too easy

Is one in which the client’s anxiety is not activated or minimally activated and the client seemed to be able to complete the task with no difficulty AND there were no signs of avoidance or rituals.

### Client experienced some habituation

Habituation is a reduction in anxiety over time through the body’s natural mechanism for tolerating distress. Habituation can occur during the exposure if the client:

- a) reports a reduction in anxiety through a reduced SUDs rating AND/OR
- b) appears behaviorally to have experienced a reduction in anxiety from how the client appeared earlier in the exposure AND
- c) there is no evidence that avoidance behavior or rituals can primarily explain the anxiety reduction

If habituation happens between the sub-exposures within the same line of exposures you are coding, that counts as habituation.

## **Therapist Tools During Exposures:**

### *Notes about this section:*

- Begin coding in this section as soon as the exposure begins.
- If you find it helpful, you may keep an informal tally of how frequently each of these behaviors occur. This may be useful to help elucidate for you the patterns of statements made throughout the exposure. However, given that the ultimate ratings are not based on a number of times something happened but rather are taken in the context of the whole exposure, there is no direct or consistent way for tally marks to translate into the codes.

During an exposure, a therapist may choose to make a variety of statements or behaviors. Many statements serve to either increase, decrease, or maintain the client's anxiety level during exposure. Your job is to rate how much of each type of statement was used during the exposure. In general, a statement type, or tool, is applied "None" if the tool is not used at all during the exposure. A tool is applied "Some" if the tool is used at least once to about half of the therapist's statements. A tool is applied "A lot" if the tool comprises at least 50% of the therapist's statements and/or was the primary tool that the therapist

used during the exposure. Note: if the therapist's overall statements comprise less than 10% of the session (i.e., the therapist is "quiet"), a rating of "a lot" should not be used.

### **Tools to Increase Anxiety During Exposures**

**Encourage Approach:** The therapist verbally redirects the client to the exposure task, observes and/or discourages client rituals, and makes statement to keep the client physically and mentally focused on the exposure task. The therapist reorients or redirects the client to the present/to the exposure.

*Examples:*

- Redirects client to exposure task ("Keep looking over here").
- Draws client's attention to the exposure content ("Look at the video now").
- Asks client to verbalize thoughts ("What is Anxiety telling you right now?")
- Comments about observed rituals or avoidance ("I noticed you're wiping your hands on your pants").
- Asks client to identify rituals or avoidance ("What do you think Anxiety wants you to do right now?")
- Asks client for SUDS rating.
- Discourages avoidance
- The client asks to end the exposure and the therapist says no.

**Intensifying the Exposure:** The therapist makes statements that are likely to increase the client's experience of the core fear that is targeted in the moment by introducing new

ideas or changing the exposure to make it more difficult. The therapist does something to up the anti of the exposure.

*Examples:*

- “Wow...that was really dirty. I can’t believe you touched that.”
- “Let’s make the chair spin faster and get you REALLY dizzy.”
- “We’re never going to see that toy again...it’s in the trash forever.”
- “Now I want you to close the door so you can’t see your mom.”
- If the therapist amps up the exposure in the next sub-exposure, that is classified as intensifying the exposure as it essentially happens right at the beginning of the next exposure, even if it was discussed during a time between the exposures.

**Reduce Parent Accommodation:** The therapist makes statements to the parent or the client that decrease parent reduction of client anxiety in the moment OR that decrease the likelihood of parent accommodation later in the exposure.

*Examples:*

- “It’s important for you to stand next to this spot on the wall without holding your mom’s hand.”
- “Dad, this time I’m asking Sally to look at the picture without any help.”
- “I think Worry Bully is telling you to ask your mom if this is ok.”
- “We’re going to look at this movie and your parents aren’t going to say anything.”

## Tools to Maintain the Current Anxiety Level During Exposures

**CBT-Consistent Teaching:** The therapist illustrates a broad principle about OCD, anxiety, or exposures, over and above simply providing specific instruction for this exposure. Exposure consistent teaching could include problem-solving to approach the exposure stimulus or education about habituation.

*Examples:*

- “I know it is hard to resist ritualizing right now but remember that OCD cycle and how rituals feed anxiety and make it stronger over time.”
- “This is a good example of how you might try to get out of practicing this at home. It is important to practice exposures regularly...the more you practice the easier it gets.”
- “Remember that your job is to ride the wave and let the anxiety come and go on its own.”

**Externalizing:** The therapist makes statements in which OCD or anxiety is referred to as separate from the client.

*Examples:*

- “Throwing these papers away is really going to show OCD who’s boss!”
- “Green Goblin is almost dead now!”
- “I think your mom is mad at the worries.”
- “Germies is telling you that you’re going to be sick.”

## Tools to Reduce Anxiety During an Exposure

**Changing Anxious Thoughts:** The therapist leads the client to use a **cognitive** strategy to actively manage anxiety in the moment (i.e., thought-challenging or thought replacement)

*Examples:*

- Therapist leads the client in talking back to anxious thoughts (e.g., thinking about likelihood of feared consequence).
- Uses Socratic questioning/sequence of questions to elicit decreased evaluation of risk
- Prompts client to use pre-determined coping statements or coping “card”
- Points out that the client is falling into a thinking trap
- Motivational statements of a general nature (e.g., “I am brave”) are NOT included in this category

**Relaxation:** The therapist encourages the client to use relaxation techniques, such as taking deep breaths, relaxing, or imagining something pleasant.

*Examples:*

- “Just relax.”
- “Take a few deep breaths and this will be over soon.”
- “Imagine you are watching all your worries leave on the worry train”

**Accommodation:** The therapist makes a statement that is likely to reduce the client's anxiety related to the core fear targeted in the exposure or changed the exposure to reduce anxiety.

*Examples:*

- “You’ll be ok.”
- “This doesn’t have any poison in it.”
- The therapist participates in the client’s rituals (for example: therapist answers client’s questions about exposure stimulus in a way that reduces anxiety).
- Therapist reduces the difficulty of an exposure after the exposure has started (for example: allows client to stand farther away from the exposure stimulus).
- Therapist attempts to distract the client during the exposure (for example: “Imagine you’re playing a video game right now!”)
- The therapist provides reassurance to the client during the exposure (for example: “I’ve done this a lot before and I’ve never gotten sick.”)
- The client asks to end the exposure and the therapist says yes.
- The therapist offers to make the exposure easier (even if the client does not take the therapist up on the offer).

**Unrelated Talk:** The therapist talks about something that is not immediately related to the topic of the exposure. This talk can be distracting from the exposure, thus leading to a reduction in anxiety.

*Examples:*

- “Are you guys doing anything fun this week?”
- “Oh yeah, tell me about that math test you were worried about.”
- Playing a game
- Leading the client to talk about another topic
- Following the client or parent’s lead to talk about another topic besides just acknowledging what they said and redirecting them back to the exposure
- Discussing other intervention content during the exposure (such as psychoeducation, homework adherence or hierarchy building) that is not related to the current exposure or functions to distract the client from the current exposure

**Exposure Inconsistent Teaching:** The therapist teaches the client or parent a skill that is not consistent with CBT principles of exposure.

*Examples:*

- Teaching distraction as a common strategy during exposure (e.g., “If you’re too anxious, you can play a game during the exposure”).
- “Hand washing is necessary because he might get sick if he touches the door handle and doesn’t wash his hands.”
- “Great job! We don’t need to do the exposure again since you showed us you can do it this one time.”

- “In order for your anxiety to go down, you need to take deep breaths while you do your exposure practice.”

### **Rated After the Exposure:**

#### **How would you rate the therapist’s warmth, specifically how validating and encouraging he/she was?**

- Therapist displays warmth and respect toward the client. The therapist also offers praise and encouragement for the youth. The therapist also shows understanding and is validating of the youth’s thoughts, feelings, and behaviors (whether positively or negative valenced).
- This is rated on a likert-type scale ranging from 0 (None/Not or Rarely Present) to 4 (A Lot/A great deal).
- Please circle the number for the rating – the descriptions are given as anchors.

#### **How resistant did the client appear to be?**

- How much does the client push back against doing the exposure or continuing the exposure? Does he/she fully go along with everything the therapist suggests (maybe indicating Not At All Resistant)? Does he/she ask how much longer the exposure is? Does he/she ask if the exposure can be over (maybe indicating A Little Resistant)? Does he/she push back when the therapists suggest something or

tries to make the exposure harder (maybe indicating Somewhat Resistant)? Does he/she outright refuse to do or continue with the exposure (maybe indicating Very Resistant)?

- This is rated on a likert scale ranging from 1 (Not At All Resistant) to 7 (Very Resistant)

**Client Anxiety Rating:**

- Based on what you heard and saw in the video recording, provide a rating of how anxious the youth seemed doing the exposure. This may be based on statements of uncertainty, his/her general demeanor, anxious behaviors, or any other cues provided. Not all individuals are actually good reporters of how anxious they are so your rating of the youth's anxiety may not line up with SUDs ratings he/she provided during the exposure.
- This should basically be what level of difficulty the exposure was for the youth, thinking more about how anxious the youth was to do it and when it started, rather than how his or her anxiety decreased over the course of the exposure.
- This is rated on a 0 to 8 scale like the Feelings Thermometer.

**Notes on the Client:**

- Include any notes on the youth that are notable. Was the client particularly difficult? Disengaged? Etc.

**Notes on the Therapist:**

- Include any notes on the therapist that are notable. Did the therapist seem particularly anxious? Frustrated? Etc.