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An Open Trial Investigation of Emotion Detectives: A Transdiagnostic Group Treatment for Children with Anxiety and Depression

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UNIVERSITY OF MIAMI

AN OPEN TRIAL INVESTIGATION OF EMOTION DETECTIVES:
A TRANSDIAGNOSTIC GROUP TREATMENT FOR CHILDREN WITH ANXIETY
AND DEPRESSION

By

Emily Laird Bilek

A THESIS

Submitted to the Faculty
of the University of Miami
in partial fulfillment of the requirements for
the degree of Master of Science

Coral Gables, Florida

June 2011

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AND DEPRESSION

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Anxiety and depressive disorders are prevalent among youth and are often experienced concurrently or sequentially during development (Kroes et al., 2001; Costello, Erklani, & Angold, 2006). These disorders are also associated with weaker cognitive behavioral treatment (CBT) outcomes when experienced simultaneously in youth (e.g. Berman, Weems, Silverman, & Kurtines, 2000). Treatment research has begun to investigate the feasibility and efficacy of treating comorbid emotional disorders using transdiagnostic treatment approaches (Barlow et al., 2010; Ehrenreich et al., 2008). Evidence from adult and adolescent populations indicates that these more broadly focused treatment programs may offer benefits above and beyond disorder- and domain-specific protocols, leading to improvements in diagnostic severity and emotion regulation across a range of disorders and emotions (Ellard, Fairholme, Boisseau, Farchione, & Barlow, 2010; Ehrenreich-May & Remmes, 2010). The current study extends transdiagnostic treatment research to school-age children, ages 7-12, in a mental health clinic setting by investigating preliminary post-treatment outcomes and treatment acceptability in a recent open trial (N enrolled= 16; N completed treatment=13) of the *Emotion Detectives Treatment Protocol* (EDTP; Ehrenreich-May & Laird, 2009). Results

revealed that participants experienced significant improvements in clinical severity ratings of principal and all related diagnoses, as well as in parent reported anxious and parent and child reported depressive symptoms at the post-treatment assessment. Additionally, parents reported gains in child coping and improvements in dysregulation across emotional domains (including worry, sadness, and anger). The EDTP had good retention rates, moderately good attendance, and parents and children reported high levels of treatment satisfaction. The results of this open trial provide preliminary evidence for the utility and acceptability of a transdiagnostic group protocol to treat both clinical anxiety disorders, as well as self- and parent-reported anxious and depressive symptoms for youth within a mental health setting. These results suggest that children may uniquely benefit from a more generalized, emotion-focused treatment modality, such as the EDTP, that can offer flexibility in its treatment targets to families as well as mental health clinicians.

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CHAPTER 1: INTRODUCTION

Anxiety and depressive disorders are highly prevalent among youth populations. Recent estimates indicate that anxiety disorders may affect as many as 24% of school-age children (Kroes, et al., 2001). In childhood, the prevalence of depressive disorders is much lower, affecting as few as 0.5% of youth (Costello, Mustillo, Erkanli, Keeler & Angold, 2003). This discrepancy diminishes during the transition to adolescence, as the prevalence of anxiety remains stable, while the incidence of depressive disorders increases (Cartwright-Hatton, McNicol, & Doubleday, 2006). During this transition, the comorbidity between anxiety and depressive disorders also increases (Williamson, Forbes, Dahl, & Ryan, 2005). Because anxiety disorders are a risk factor for future depression, individuals with anxiety disorders, especially Generalized Anxiety Disorder, Panic Disorder, or Social Phobia, are particularly at risk for experiencing this comorbidity between emotional disorders (Horn & Wuyek, 2010).

Although emotional disorders are associated with significant impairment when experienced individually, this impairment is compounded when these disorders are experienced concurrently (Fichter, Quadflieg, Fischer & Kohlboeck, 2009). Additionally, comorbid emotional disorders are associated with heightened levels of overall emotional intensity and dysregulation (Treatment for Adolescents with Depression Study [TADS] Team, 2004; Suveg & Zeman, 2004; O'Neil, Podell, Benjamin & Kendall, 2010). The negative trajectory and outcomes associated with youth anxiety and depression symptoms suggest that research on effective intervention modalities is vital. The current study investigated the preliminary outcomes for and feasibility of a novel transdiagnostic

treatment program for anxious youth who may also be experiencing depressive symptoms.

Although evidence-based models of treatment for youth anxiety and depression exist, the majority of research on these models has focused on disorder- or domain-specific protocols (e.g., those focusing on anxiety vs. depressive disorders, or one type of anxiety/depressive disorder, more specifically), with little overt attention to the common overlap between these problem areas. Anxiety-specific CBT protocols for youth have enjoyed relatively strong support for their efficacy (e.g., Kendall, Chu, Pimentel, & Choudhury, 2000; Compton et al., 2010; Walkup et al., 2008). However, recent studies have indicated that available psychotherapy treatments for depression in youth may lag behind treatments for other internalizing disorders in terms of outcome, effect size, and long-term maintenance of treatment gains (Weisz, McCarty & Valeri, 2006; TADS, 2004). For example, a multi-site, randomized controlled trial found that after 12 weeks of treatment, CBT was not significantly better than a pill placebo in the treatment of adolescent depression (TADS, 2004). In a meta-analysis of 35 studies examining a variety of behavioral and psychosocial treatments for youth depression, Weisz and colleagues (2006) found that a year after completion, there was essentially no difference between individuals who had received treatment and those who had not.

These investigations suggest that child and adolescent depression, when experienced alone, is associated with a weaker treatment response; however, depression is rarely experienced in isolation (Sorenson, Nissen, Mors & Thomsen, 2005). Thus, it is important for treatment research to examine the common comorbidity between emotional disorder symptoms. Treatment research indicates that emotional disorders are especially

difficult to treat when they are experienced concurrently (Berman, Weems, Silverman, & Kurtines, 2000; Brent et al., 1998). Brent and colleagues (1998) found that depressed youth with comorbid anxiety disorders demonstrated a relatively weaker treatment response to depression-focused CBT than their non-anxious peers. Additionally, there is comparable evidence indicating that treatment for anxiety is negatively impacted by the co-occurrence of depression (Berman et al., 2000). Berman and colleagues (2000) examined differential outcomes for children (mean age = 9.96) completing CBT for anxiety with and without a clinical diagnosis of depression. Results indicated that comorbid clinical depression and child-report of depressive symptoms had a negative impact on treatment outcome.

In contrast to previous research, a recent investigation of both child-focused and family-based CBT for anxiety disorders found that youth (ages 7-14) with comorbid depressive disorders demonstrated equivalent treatment outcomes to their non-depressed peers with anxiety disorders (O'Neil & Kendall, 2010). However, children who reported higher levels of depressive symptoms on dimensional measures evidenced weaker outcomes at post-treatment than children with low levels of self-reported depression symptoms. Furthermore, maternal report of depressive symptoms on dimensional measures was also associated with poorer outcomes, but only at a 12-month follow-up assessment following treatment completion (O'Neil & Kendall, 2010). Overall, these results indicate that anxious youth with concurrent depression symptoms may be at particular risk for poor outcomes when receiving otherwise efficacious cognitive behavioral approaches to anxiety disorders. Given the impairment and treatment complications associated with anxiety and comorbid depressive symptoms, these results

also indicated that disorder- or domain-specific approaches may not be fully sufficient for the treatment of youth with co-occurring anxiety and depression symptoms (Axelson & Birmaher, 2001; Birmaher et al., 1996).

Emotion Regulation

Disorder-specific protocols may also inadequately address the full range of emotional regulation deficits associated with anxiety and depressive disorders (Suveg, Sood, Comer & Kendall, 2009). Emotion regulation refers to the ways people experience, express and manage their emotions (Gross, 1998). Research indicates that adaptive emotion regulation is associated with positive affect, good interpersonal functioning, and increased wellbeing among adults and children (Gross & John, 2003). Alternatively, maladaptive emotion regulation strategies are associated with lower levels of positive emotion, higher levels of negative emotions, poorer interpersonal functioning and lower levels of wellbeing (Gross & John, 2003).

A recent meta-analysis regarding emotion regulation across psychopathology indicates that individuals with anxiety and/or depressive disorders are likely to engage in those emotion regulation strategies that are considered to be less adaptive, such as suppression, rumination and avoidance (Aldao, Nolen-Hoeksema & Schweizer, 2010). Additional research demonstrates that youth with emotional disorders have deficits in adaptive regulation strategies, such as cognitive reappraisal (Carthy, Horesh, Apter & Gross, 2010; Garnefski, Legerstee, Kraaij, van den Kommer & Teerds, 2002). Taken together, these results indicate that individuals suffering from emotional disorders such as

anxiety and depression are more likely to engage in maladaptive regulation strategies than those that are considered adaptive.

Recent studies have begun to clarify the extent to which these emotion regulation deficits are associated with anxiety disorders. Children with anxiety tend to implement maladaptive regulation strategies in response to anxiety as well as other emotions (Campbell-Sills & Barlow, 2007; Southam-Gerow & Kendall, 2000). In a study examining emotion regulation skills in children ages 8 to 12, Suveg and Zeman (2004) found that clinically anxious children had significantly greater difficulty managing not only anxiety, but also anger and sadness, than children without psychopathology. These results indicate that experiencing even a single emotional disorder may be associated with deficits in emotion regulation across several emotions.

Moreover, disorder- or domain-specific treatments may not adequately address this range of dysregulation in youth (Suveg et al., 2009). Suveg and colleagues (2009) assessed change in emotion management among children (ages 7 to 15) following CBT for anxiety disorders. Results indicated that while children demonstrated significant improvements in the emotional management of worry, they did not experience improvements in sadness or anger management (Suveg et al., 2009). These results provide further rationale for the investigation of treatment options that could offer more generalized benefits than disorder or domain-specific protocols for children with and without emotional disorder comorbidities.

Common Features

Anxiety and depressive disorders share many common features, including etiology, factor structure and neurological activation. From a diagnostic perspective, anxiety and depressive diagnoses are characterized by overlapping symptoms, such as excessive worry, rumination, irritability and psychomotor agitation (DSM-IV-TR, 2000). In addition to etiological research demonstrating that anxiety may be a risk factor for depression (Horn & Wuyek, 2010), there is evidence that anxiety and depression also share additional risk factors, even when controlling for the symptomatic overlap between these disorders (Brozina & Abela, 2006; Siegle, Thompson, Carter, Steinhauer & Thase, 2007). High levels of negative affect and low levels of positive affect underlie both anxiety and depressive disorders (Brown, Chorpita & Barlow, 1998). Finally, studies from the domain of neuroscience suggest that activation of neural structures associated with negative affect, such as the amygdala and insula, is heightened among individuals with either anxiety or depressive disorders, as compared to healthy controls (Etkin & Wager, 2007; Goldapple et al., 2004).

Given the numerous shared characteristics and etiological risk factors between anxiety and depressive disorders, disorder- or domain-specific treatment protocols for anxiety and depressive disorders may be overly specific, and inefficient. Thus, a treatment protocol that addresses emotional disorders in general may provide a more efficient treatment option for individuals experiencing anxiety, depression or some combination of both (Ellard, Fairholme, Boisseau, Farchione & Barlow, 2010).

Transdiagnostic Protocols

Research indicates that disorder- and domain- specific protocols may not adequately address emotional comorbidity, along with findings demonstrating that these disorders share many common factors. Thus, investigators have begun to investigate the feasibility and efficacy of transdiagnostic treatment protocols for anxiety and depressive disorders. Two such protocols, the Unified Protocols (*The Unified Protocol for the Treatment of Emotional Disorders*, [UP] Barlow et al., 2010; *The Unified Protocol for the Treatment of Emotional Disorders in Youth*, [UP-Y] Ehrenreich, et al., 2008), were recently developed to treat emotional concerns in adults and adolescents, respectively. These protocols have demonstrated feasibility and/or preliminary efficacy in treating emotional disorders in these adolescent and adult populations (Ellard, et al., 2010; Ehrenreich-May & Remmes, 2010). In contrast with results of disorder- or domain-specific CBT studies (e.g., Berman et al., 2000, etc.), participants who completed the UP experienced equivalent improvements in principal diagnosis regardless of comorbidity status at intake (Davis, Barlow & Smith, 2010). Additionally, participants experienced improvements in the severity of both clinical and subclinical comorbid conditions after completing the UP (Davis et al., 2010).

Similarly, in a recent open trial of the UP-Y, participants experienced improvements in the clinical severity of their principal disorders, secondary disorders, and subclinical symptoms (Trosper, Buzzella, Bennett, & Ehrenreich, 2009; Laird, Buzzella & Ehrenreich, 2009). In addition to experiencing improvements in clinical severity and symptoms, preliminary results from an on-going randomized controlled trial indicate that the UP-Y is also associated with improvements in coping across a range of

emotions, including worry, sadness and anger. This suggests that the UP-Y may address a wider range of emotion regulation deficits than disorder- or domain-specific protocols (Ehrenreich-May & Remmes, 2010). Taken together, these results provide evidence that a transdiagnostic treatment program may offer more generalized disorder-, symptom- and emotion regulation-focused improvements than disorder- or domain-specific treatments.

In addition to trials investigating the efficacy of transdiagnostic protocols for adolescents and adults in clinical settings, there have been initial investigations of such programs targeting children with anxiety and depressive symptoms in non-clinic settings. Chu and colleagues (2009) examined the feasibility of offering the school-based, *Group Behavior Activation Therapy* (GBAT) program to youth (ages 12-14) with anxiety and depression (Chu, Colognori, Weissman, & Bannon, 2009). The GBAT program addresses these emotional disorders in a brief, 13-session intervention emphasizing behavior activation. Five high school students participated in an initial feasibility investigation of GBAT (Chu et al., 2009). Participants reported general satisfaction with the GBAT program (Chu et al., 2009). Additionally, results of this trial indicated that 60% of participants no longer met diagnostic criteria for their primary or secondary diagnosis at post-treatment (Chu et al., 2009). These results indicated that adolescents with anxiety and/or depression may benefit from and be receptive to a school-based transdiagnostic treatment protocol (Chu et al., 2009).

Transdiagnostic treatments have also received attention within primary care settings. Weersing and colleagues (2008) developed an eight-session intervention, the *Integrated Brief Behavioral Therapy* (IBBT) program, for the treatment of anxiety and depression for youth (8-17), intended for administration in primary health care settings.

Each session of IBBT includes a 30-minute child directed component, and an additional 15-minute parent check-in. The brevity of the program allows clinicians to address mild to moderate emotional concerns using core behavioral activation skills (Weersing, Gonzalez, Campo & Lucas, 2008). Individuals with more severe concerns, who do not significantly improve in eight initial sessions, can then pursue additional care within the primary care setting. In a recent open trial, IBBT was provided to 54 participants by primary care clinicians. Initial case studies indicated that IBBT was associated with reductions in child- and parent-reported anxiety and depressive symptoms (Weersing et al., 2008). Therefore, IBBT may be a feasible and acceptable brief treatment option for youth presenting with emotional disorders in primary care facilities (Weersing et al., 2008). Notably, these child-focused transdiagnostic protocols are still in their infancy. However, these investigations, along with studies of the unified protocols, provide preliminary evidence for the feasibility and potential benefits of offering transdiagnostic interventions to families seeking intervention services for children with anxiety and depression symptoms.

Acceptability and Feasibility

While there is evidence demonstrating the initial efficacy of transdiagnostic treatments for adults and adolescents, as well as evidence demonstrating feasibility for transdiagnostic treatments geared toward child populations, these treatment components have yet to be presented in this way for children seen in more typical clinical settings, such as research clinics, private practice settings or community mental health centers (Ellard et al., 2010; Ehrenreich-May & Remmes, 2010; Chu et al., 2009; Weersing et al., 2008). The development and investigation of a treatment within this environment requires

both an evaluation of initial treatment outcomes, and feasibility for participants in this novel setting.

Previous research investigating CBT programs for youth have reported context specific feasibility based partially on attendance and retention of participants (Siqueland, Rynn & Diamond, 2005; Stanley et al., 2009; West et al., 2009). In a recent trial investigating the feasibility of a combined CBT and attachment-based family treatment (ABFT) program for adolescents 12-17, Siqueland and colleagues (2005) indicated that 91% of participants reached treatment completer status (as determined by attendance at least 75% of sessions). Similarly, an investigation examining the feasibility of a CBT program for pediatric bipolar disorder reported retention rates of approximately 70% (as determined by any attrition before completion of the 12 session program; West et al., 2009). These rates are consistent with evidence from CBT programs for anxious youth, which typically evidence dropout rates ranging from 7 – 27% (Arch & Craske, 2009).

While the feasibility of a treatment program within a particular context can be concretely defined by attendance and retention (in a particular setting), the assessment of treatment acceptability is often determined by treatment satisfaction questionnaires (Stanley et al., 2009; West et al., 2009). In response to a questionnaire about the degree to which parents believed a pediatric bipolar CBT program had helped their child manage his mood symptoms and disorder, parents reported average satisfaction rates of 85% (2.7 on a scale from 1 to 3; West et al., 2009). In a study investigating the acceptability of a mindfulness-based cognitive therapy for children, (Lee, Semple, Rosa & Miller, 2008) parents and children responded to a program satisfaction questionnaire. Eighty-eight per cent of parents reported having high satisfaction with the program, while 94% of children

reported liking the program (Lee et al., 2008). In an investigation of CBT for suicidal adolescents, 100% of youth completing an exit interview reported feeling that the program was helpful, and 42% reported that they would make no changes to the program (Stanley et al., 2009). These results indicated that an average satisfaction rate of at least 85% is consistent with other acceptability trials for youth CBT programs.

Treatment Development

Drawing from treatment development research in the transdiagnostic and feasibility literatures, the Emotion Detectives treatment program (EDTP) was developed to provide group treatment for school-age children experiencing a principal anxiety disorder with and without co-occurring depressive symptoms. Emotion Detectives was developed as a downward extension and adaptation of the Unified Protocols for adults and adolescents (Barlow et al., 2010; Ehrenreich et al., 2008). These unified protocols draw heavily from research in emotion science, cognitive therapies and behavioral management principles (Barlow, Allen & Choate, 2004). From this research base, the UP and UP-Y identified three core treatment strategies that are thought to be especially relevant in the treatment of emotional disorders: 1) altering antecedent cognitive reappraisals, 2) the prevention of emotional avoidance, and 3) modifying behavioral action tendencies (Allen, Ehrenreich, & Barlow, 2005; Barlow et al., 2004).

The first core skill, altering antecedent cognitive reappraisals, refers to the evaluation and analysis of potentially problematic cognitions in the antecedent condition, or before the onset of an intense emotion. This strategy does not necessarily require an individual to reject these automatic thoughts in favor of another ‘more correct’ cognition; instead, it suggests that they should think critically about what else could be true in

addition to his/her current appraisal. Evidence indicates that engaging in this reappraisal process during the antecedent condition is associated with positive treatment outcomes (Gross, 1998).

The second skill, preventing emotional avoidance, refers to effortful engagement in experiencing uncomfortable emotions. By fully experiencing uncomfortable emotions, clients learn that they can cope with these emotions effectively without avoiding or escaping them. The final skill, managing behavioral action tendencies, requires clients to alter the problematic behavioral patterns that are currently associated with their emotional disorder. Through engaging in emotional exposures that are tailored to each client's particular difficulties, clients begin approaching previously avoided activities. Emotion-focused exposures are especially relevant in a transdiagnostic protocol, because they allow participants to experience success with the specific situations they have previously avoided, while simultaneously allowing for generalization of the skill across other emotions.

Given the initial success of the unified protocols based upon these principles (Ellard et al., 2010; Ehrenreich-May & Remmes, 2010), the EDTP was developed with the goal of infusing these skills in a treatment for children receiving services in a traditional clinic setting. To maximize the acceptability, feasibility and relevance of this protocol to a younger population, the EDTP implements the core unified protocol skills in a developmentally sensitive manner within a group treatment context that emphasizes peer interaction, parent involvement and emotional education (for more information about the development of the EDTP, see Ehrenreich-May & Bilek, in press).

Aims and Hypotheses for the Current Investigation

Specific aim 1. The current study proposed to extend transdiagnostic treatment research to children (ages 7-12) in a mental health clinic setting by establishing initial post-treatment outcomes associated with the use of the EDTP (Ehrenreich-May & Laird, 2009).

Hypothesis 1. It was hypothesized that child participants would experience a reduction in principal anxiety diagnosis severity, as well as a reduction in total emotional diagnostic severity, following completion of the EDTP. Additionally, it was hypothesized that participants would evidence a significant reduction in anxiety symptoms on self- and parent-report questionnaire measures post-treatment, as compared to pre-treatment levels.

Hypothesis 2. It was further hypothesized that participants would experience a significant reduction in depressive symptoms via self- and parent-report questionnaires, relative to pre-treatment scores, at a post-treatment assessment.

Hypothesis 3. It was hypothesized that those with higher levels of self- and parent-reported depressive symptoms reported at intake would have similar treatment outcomes to those with lower levels of depressive symptoms, as assessed by change in the clinical severity of their principal diagnosis over time.

Hypothesis 4. It was also hypothesized that participants and/or their parents would report improvements in emotion regulation skills in general, and reduced intensity of emotional experience across a range of emotions, from the pre- to post-treatment interval.

Specific aim 2. The second aim of this investigation was to assess the feasibility and acceptability of implementing the EDTP for anxiety and depression in a mental health clinic setting.

Hypothesis 1. It was hypothesized that the EDTP would be feasible for participants and their parents, as evidenced by at least 80 percent of participants achieving treatment completer status (attendance at least 11 out of 15 sessions; ~73% of sessions offered).

Hypothesis 2. It was further hypothesized that the EDTP would be acceptable to participants, as evidenced by child and parent participants reporting an average satisfaction rate of 85% (6.8 out of 8) or greater on an End of Program satisfaction questionnaire.

CHAPTER 2: METHOD

Participants

A total of 16 child participants (mean age = 9.78; 44% female) were initially recruited to this open trial. Of the 16 research participants enrolled (see Table 1), three participants ceased attending sessions prior to the end of treatment. Two participants dropped out after completing three and five sessions, respectively, due to scheduling conflicts that arose on the night EDTP was offered. A third participant discontinued treatment after completing five sessions to pursue individual rather than group therapy. Therefore, a final completer sample consisted of 13 children. The ethnicity of participants for whom intent-to-treat (ITT) analyses were then conducted was: 56.3% Hispanic, 25.0% White Non-Hispanic, 6.3% African American, and 12.5% Other or Not Specified. ITT participants reported an average annual family income of \$63,964 ($SD=2,927$). Table 2 describes participant demographics for both completers and ITT participants.

Inclusion criteria for this investigation were assignment of a principal diagnosis of an anxiety disorder on the Anxiety Disorders Interview Schedule for the DSM-IV, Child and Parent Report (ADIS-IV-C/P; Albano & Silverman, 1996). Those with one of the following principal (or co-principal) anxiety diagnoses were eligible for inclusion: Generalized Anxiety Disorder, Social Phobia, Separation Anxiety Disorder, Obsessive Compulsive Disorder, Posttraumatic Stress Disorder, Specific Phobia, and Anxiety Disorder, Not Otherwise Specified. Study exclusion criteria included: 1) inability of at least one parent or legal guardian to attend the majority of assessment and treatment sessions; 2) inability of the child or a primary caregiver to speak, read and understand

English well enough to complete study procedures; 3) a positive diagnosis of schizophrenia, bipolar I or II disorder, pervasive developmental disorder, organic brain syndrome, mental retardation (or severe learning disorder that may prevent basic comprehension of questionnaire or treatment materials); and/or 4) severe current suicidal/homicidal ideation.

Participants were not excluded if they presented with depressive symptoms or secondary depressive diagnoses. Principal anxiety disorder diagnoses for the 16 participants in the ITT sample included: Generalized Anxiety Disorder ($n = 6$), Social Phobia ($n = 6$), Specific Phobia ($n = 2$), and Separation Anxiety Disorder ($n = 2$). At intake, five of these participants met criteria for a secondary depressive diagnosis, three of whom met criteria at a clinical level. The frequencies of principal diagnoses as well as additional comorbid diagnoses are included in Table 3. Additionally, at intake, nine participants had elevated depressive symptoms, as defined as having a score equal to or greater than 12 on the Children's Depression Inventory, by either child or parent report (CDI, Kovacs, 2001).

Procedure

First, approval was obtained from the University of Miami's Institutional Review Board (IRB). Participants were recruited through consecutive referrals to the Child and Adolescent Mood and Anxiety Treatment (CAMAT) program at the University of Miami. Referrals were facilitated via flyers, direct mailings to community providers, and announcement of the study's availability on list-serves for local community mental health agencies and a local hospital.

Prior to enrollment, participants completed a pre-treatment evaluation to determine eligibility for the EDTP. Participants received either three or four assessments, depending on time of entry. All participants received a pre-treatment, post-treatment and three-month follow-up evaluation. Participants who received a pre-treatment evaluation more than one-month prior to the beginning of treatment completed an abbreviated form of the diagnostic interview measure (the “Mini” form of the Anxiety Disorders Interview Schedule for the DSM-IV, Child Version; Mini ADIS-IV-C/P; Albano & Silverman, 1996) to confirm treatment eligibility in the two weeks prior to the group’s initial session. At this assessment time point, only one participant failed to meet clinical criteria for an anxiety disorder. This participant was offered the intervention, regardless of current diagnostic status; however, data only for individuals who still met criteria at this latter evaluation were used. This resulted in a total of 16 participants eligible for analyses, as noted above. A graduate student clinician, trained in the administration of the diagnostic interview and other intake measures, conducted all evaluations. This evaluator was blind to the general follow-up point conducted and independent of the experiment from the post-treatment assessment point forward. Parents and children completed all self-report questionnaires independently.

In the current trial, EDTP clinicians included current graduate students, postdoctoral fellows and licensed clinical psychologists who had been trained in the program. Training consisted of an intensive workshop including instruction on the EDTP manual and review of the manual. Ongoing training was provided via weekly supervision. One of the treatment developers (EB or JEM) was the lead child-group clinician for all treatment groups in this open trial. New therapists were generally

assigned a secondary role in the parent or child group the first time they participated as a group clinician, and then given a leadership role in subsequent groups. A total of 3 Ph.D.-level clinicians and 6 graduate students enrolled in a Clinical Psychology Ph.D. program participated as clinicians in this study. Participants received 15 sessions of the EDTP without cost. To maximize attendance, treatment was scheduled for a week night and took into account both clinician and participant availability.

Measures

Anxiety Disorders Interview Schedule for the DSM-IV, Child Version (ADIS-IV-C/P; Albano & Silverman, 1996). The ADIS-IV-C/P (Albano & Silverman, 1996) is a downward extension of the Anxiety Disorders Interview Schedule for DSM-IV (Brown, Di Narlo & Barlow, 1994). The ADIS-IV-C/P is a semi-structured interview for children ages 6 to 17. This measure allows for assignment of DSM-IV diagnoses, including all anxiety, mood and externalizing disorders, and provides screening items for several other concerns (e.g. eating disorders), including exclusionary criteria for this investigation. During the administration of the ADIS-IV-C/P, a trained clinician interviewed the child and parent separately. For each symptom cluster, parents and children provide ratings of current severity and interference on a Likert-type scale of 0 (none) to 8 (extreme). Taken together, these ratings allowed the clinician to complete a diagnostic evaluation of the participant's current clinical and subclinical disorders. Each diagnosis was assigned a clinical severity rating (CSR) from 0 (none) to 8 (extreme) with CSRs of 0-3 indicating subclinical diagnoses, and CSRs of 4-8 indicating clinical diagnoses. The ADIS-IV-C/P has demonstrated good inter-rater reliability (Silverman & Eisen, 1992). In the current study, trained faculty or graduate students administered the full ADIS-IV-C/P as part of

the initial assessment. As noted, after the initial pre-treatment evaluation, an abbreviated version of the ADIS-IV-C/P (i.e., the Mini ADIS-IV-C/P), was administered during all subsequent assessments. One clinician, blind to treatment status, administered all Mini ADIS-IV-C/P assessments.

Screen for Child Anxiety Related Emotional Disorders, Child and Parent Reports (SCARED; Birmaher, et al., 1997). The SCARED is a 41-item questionnaire assessing both the child and parent's report of the youth's fear or anxiety symptoms during the past three months. Children and parents indicated how frequently and severely the child experienced fear symptoms during this time period on a three point, Likert-type scale, ranging from Not True/Hardly Ever True (0) to Very True/Often True (2). The scale provides an overall score of anxiety symptoms and five subscales assessing more specific anxiety and fear domains including: Panic, Social, School Avoidance, Separation Anxiety and Generalized Worry. Psychometrics for the SCARED have been validated with children ranging in age from 7 to 19 (Hale, Crocetti, Raaijmakers & Meeus, 2011). The SCARED child and parent versions have demonstrated moderate to strong internal consistency ($\alpha = .74$ to $.93^1$), test-retest reliability, (ICCs ranging from .70 to .90) and moderate parent-child agreement (Birmaher et al., 1997; 1999).

Children's Depression Inventory, Child and Parent Reports (CDI; Kovacs, 2001). This 27-item questionnaire measured the child's depressive symptoms during the past two weeks. This instrument was developed for use with children ages 7 to 17 (Kovacs, 2001). Children and parents were instructed to indicate how frequently the child

¹ Given the small sample size, internal consistency was not calculated for measures administered in the current trial

or experienced depressive symptoms on a three point, Likert scale, ranging from rarely/none of the time (0) to most/all of the time (2). The measure provides an overall score (0-54) with a score above 12 typically indicating significant depressive symptoms (Kovacs, 2001). The CDI self-report has demonstrated strong reliability ($\alpha = .83-.89$; Smucker, Craighead, Craighead & Green, 1986). The parent-report form of the CDI is highly correlated with the self-report form and has good internal consistency (Wierzbicki, 1987).

Emotion Regulation Questionnaire – Child and Adolescent (ERQ-CA; MacDermott, Betts, Gullone, & Allen, under review). This 10-item child-report questionnaire assesses a child's perceptions of his ability to regulate emotions effectively. Children were instructed to respond to questions about how they cope with different emotions and situations. They were asked to indicate the degree to which they agree with each statement on a five point Likert-type scale, ranging from strongly disagree (0) to strongly agree (4). Item measures included: "When I want to feel happier, I think about something different," and "When I want to feel less bad about something, I change the way I am thinking about it." The questionnaire provides two regulation scales: Reappraisal and Suppression. The ERQ-C/A has demonstrated moderate to strong internal consistency (Reappraisal $\alpha = .81$, Suppression $\alpha = .69$; MacDermott et al., under review).

Children's Emotion Management Scales (CEMS; Zeman, Shipman & Penza-Clyve, 2001). The CEMS is a 36-item questionnaire used to assess the parent's report of the child's ability to regulate and manage emotions effectively. Parents were instructed to respond to questions about how their child manages fear, anger and sadness. For each

emotion, the measure provides three subscale scores: Inhibition, Dysregulation and Coping. The scale also produces overall Inhibition, Dysregulation and Coping scales. The CEMS has demonstrated moderate internal consistency ($\alpha=.62-.77$) and test-retest reliability (ICCs=.61 to .80) for each scale (Zeman et al., 2001).

End of Program Questionnaire. The End of Program Questionnaire was developed for this investigation to assess both parent and child satisfaction with treatment. This questionnaire includes 10 items with a nine point Likert scale inquiring to what degree the participant (parent or child) believes the child benefited from the program (responses range from 0= Not at All, to 8=Very Much). Sample items included: *How much do you think Emotion Detectives has helped you/your child deal with difficult emotions? How much would you/your child recommend this program to a friend who was having a tough time dealing with his emotions?* Participants were also asked to respond to an open-ended question asking whether they had any comments about the program. See Appendix A for the child version of this measure.

Intervention

The EDTP is a group program for children ages 7 to 12 that consists of 15 weekly, 90-minute sessions. Each session has both a child and a parent group component, with separate clinicians assigned to each. Throughout the course of the EDTP, children and their parents are introduced to the three core principles of the unified protocols. For optimal uptake of the material, these skills are broken down into five component parts that are introduced sequentially as the CLUES skills: **C**onsider how I feel, **L**ook at my thoughts, **U**se detective questions, **E**xperience my fears and feelings,

and Stay healthy and happy. Each skill introduces new treatment components while building off of the skills and techniques that the group has previously learned.

During the “Consider how I feel” section of treatment, participants receive general emotion education. They learn about the function and components of emotions. Emphasis in the EDTP is placed upon the normalization of emotions, and participants engage in activities that demonstrate the universality of emotions. Additionally, during this skill, participants begin to learn about the nature of avoidance and its negative consequences. During the “Look at my thoughts” section, participants are introduced to antecedent cognitive reappraisal and begin to practice flexible thinking, or evaluating ambiguous situations from multiple perspectives. In the “Use detective questions” section of treatment, participants expand upon the cognitive skills taught in “Look at my thoughts” and practice reevaluating emotionally charged situations and challenging their automatic interpretations. During the “Experience my fears and feelings” skill, participants engage in general, as well as individually tailored, emotional exposures and begin to approach previously avoided situations. Finally, the “Stay healthy and happy” section provides an opportunity for participants to review the skills they have learned and reflect on the progress they have made. Participants are encouraged to “become their own therapists”, and list ongoing goals they want to accomplish after completing treatment.

With the exception of the sessions dedicated to the “Experience my fears and feelings” skill², each session begins with the parents, children and clinicians convening to

² During sessions dedicated to the “Experience my fears and feelings” skill, the parent group does not meet and all of the clinicians are devoted to completing in-vivo personalized exposures with the child participants. The parent group reconvenes for the last session dedicated to the “S” skill.

discuss homework and progress from the prior session, as well as the treatment goals for the current session. The clinicians assigned to the parent group then lead this group in another room. For approximately 60 minutes, the two groups meet separately to accomplish their respective goals.

As previously mentioned, the overarching goals for the EDTP are in line with the goals of the UP and UP-Y, but given that the child participants in EDTP are significantly younger than those receiving the unified protocols, the child-group portion of the protocol was designed with careful consideration of child and family motivation and appropriate uptake of material. To maximize motivation and uptake of material, each child session incorporates didactic and experiential activities, skill repetition and reward structures.

Experiential activities were designed specifically to reinforce didactic components with the aim of aiding children's memory for skills discussed (Kolb, 1984). For example, during the "Consider how I feel" skill, children learn about the importance of preventing emotional avoidance and fully engaging in emotional experiences. The participants then practice this skill by engaging in "generalized emotion exposures," which are activities that produce low levels of emotions (e.g. watching an emotional film clip). To further encourage generalizability of skills, treatment concepts are reviewed using three levels of specificity: abstract, general and specific. During the "Look at my thoughts" skill, for instance, child participants are introduced to the concept of flexible thinking. To gain experience with this skill they look at optical illusions and practice generating multiple interpretations of ambiguous pictures. They then generalize this skill to emotions more generally, and brainstorm multiple interpretations of emotionally-valenced, but

ambiguous situations (e.g. seeing a group of girls laughing across the street). Finally, they practice applying the skill to specific situations that are personally relevant.

In addition to implementing experiential activities and skill repetition during each session, treatment material is reinforced through the implementation of consistent rewards for positive engagement, progress and group effort. During the first session participants learn that they have opportunities to earn both group and individual rewards. By consistently completing homework, participants each earn puzzle pieces. If they collectively earn all of the puzzle pieces by the last session of treatment, they can put the puzzle together to redeem the prize pictured on the puzzle. Within each session, participants can also work toward achieving individual rewards. Participants receive poker chips for following behavioral rules agreed upon by all group members during the first session. They can also receive chips for brave behavior and for being a supportive group member. Accrued poker chips are redeemable for developmentally appropriate rewards (e.g., stickers, bubbles and small toys) at several points throughout treatment.

While the children practice skills with clinicians in the child group, the parent group meets independently. The overarching goals of the parent group are to learn the skills that the children are practicing and to learn how to best support their children as they navigate the treatment process. Thus, in addition to learning the CLUES skills, parents also learn a set of parenting skills, the “ICE skills”, which were originally developed for use in the parent component of the UP-Y (Ehrenreich-May et al., 2008). The ICE skills include: **I**ndependence, **C**onsistency and **E**mpathy.

The “Independence” skill teaches parents techniques to encourage their children to engage in age-appropriate activities that promote independence. Anxious children may be especially avoidant of engaging in independence-building activities that involve some level of perceived distress or anxiety (Hudson & Rapee, 2002). Parents of these children may be prone to becoming over-involved and over-controlling of their child’s life in the context of this increased distress; however, such behavior can ultimately contribute to the child’s anxiety and avoidance (Rapee, 2001). The “Consistency” skill teaches parents to consistently offer positive reinforcement and maintain other behavioral strategies that encourage appropriate child behavior. A lack of consistent discipline strategy is associated with externalizing behaviors and may undermine the treatment process (Patterson, 1982). Additionally, there is evidence that inconsistent parenting strategies may also be associated with depressive symptoms in children (Kim et al., 2003). Children may also particularly benefit from praise and incentives to increase their motivation and dedication to a difficult treatment process (Kendall & Gosch, 1994). Thus, the “Consistency” skill teaches parents how to manage behavior at home and throughout treatment, primarily through positive reinforcement, provision of simple rules and consistent consequences for rule violation. Finally, the “Empathy” skill provides parents with insight into how to manage their child’s distress, and acknowledge progress throughout the treatment process.

In addition to learning the CLUES and ICE skills, time is reserved during each session for parents to speak openly about their experiences, and seek comfort and advice from the clinicians, as well as the other participating parents. This less structured portion of treatment allows the parents’ clinicians to address any concerns not specifically

targeted in treatment and allows the parents to bond with other individuals who are likely going through similar difficulties. Overall, these sessions provide parents with the skills to help themselves and their children navigate the difficult process of engaging in treatment for emotional disorders.

After approximately 60 minutes, the two groups reunite and spend the remainder of session reviewing the skills that were covered and introducing homework to be completed prior to the next session. Given that this program is in its initial stages of development, it is important that participants are offered multiple opportunities to offer qualitative feedback about their experience throughout. Therefore, sessions conclude with an opportunity to speak with clinicians about any concerns or questions regarding an individual child, group procedures or session content.

CHAPTER 3: RESULTS

Preliminary Analyses

As noted, three participants terminated participation in the EDTP prior to completing the program. Independent-samples t-tests revealed no significant differences between participants who completed the treatment program versus those who dropped out, in terms of pre-treatment principal anxiety disorder severity level ($t(14)=-1.19$, $p=.26$), or pre-treatment total clinical diagnosis severity level (the sum of all clinical anxiety and depressive disorder CSRs [those that were scored above a 4 at pre-treatment]; $t(14)=-1.08$, $p=.32$). There were also no significant differences between the two groups by parent- or child-report of depressive symptoms (parent: $t(14) = -.08$, $p=.93$; child: $t(15)= -.91$, $p=.38$). There was a significant difference between individuals who dropped out and those who completed treatment of anxiety symptoms by parent-report (parent: $t(15)=-2.46$, $p=.03$), with parents of individuals who discontinued treatment reporting a higher degree of anxiety symptoms at intake. This same discrepancy was not found between completers and dropouts by child-report of anxiety symptoms ($t(15) = -1.40$, $p = .19$). Post-treatment data was only available for one of the three dropouts. An intent-to-treat (ITT) strategy was employed for this investigation. Missing data was imputed using last observation carried forward (LOCF) for the two individuals without post-treatment data. Unless otherwise stated, all analyses described below are for the ITT sample.

Specific Aim 1: Establishing Preliminary Post-treatment Outcomes Associated With the Use of the *Emotion Detectives Treatment Protocol*

Aim 1, Hypothesis 1 was that participants would experience a reduction in primary anxiety diagnosis severity, total diagnostic severity and in self-/parent-reported anxiety symptom severity from pre- to post-treatment. Strong support was found for this hypothesis. At pre-treatment, all 16 participants met criteria for a clinical anxiety disorder, defined as having a CSR greater than 4 (average principal anxiety disorder CSR = 5.3) on the ADIS-IV-C/P. Among participants who completed Emotion Detectives ($n=13$), only two participants continued to meet criteria for a clinical anxiety disorder at post-treatment (average principal anxiety disorder CSR = 2.9). Additionally, among participants who were assigned a *clinical* depressive diagnosis at intake ($n=3$; average CSR=4.3), only one participant continued to meet criteria for a clinical depressive disorder at post-treatment (average depressive diagnosis CSR =2.7).

Paired-samples t-tests revealed a significant reduction in CSR for principal anxiety disorder diagnosis from pre- to post-treatment ($t(15) = 5.22, p<.001$). The magnitude of this effect was calculated using Cohen's d . Cohen's d for reduction in principal anxiety diagnosis was 1.7, indicating a very large effect. A Cohen's of 0.2 is considered a small effect, 0.5 is considered a medium effect, and 0.8 is considered a large effect (Cohen, 1973). There was also a significant reduction in total diagnostic severity for all clinical emotional disorders from pre- to post-treatment ($t(14) = 5.14, p<.001$, Cohen's $d = 1.4$).

Additional analyses assessed whether the EDTP was associated with a reduction in self- or parent-reported anxious symptomatology overall using questionnaire measures.

Paired-samples t-tests revealed a significant reduction in parent-reported anxiety symptoms from pre- to post-treatment ($t(14) = 2.20, p = .045$, Cohen's $d = 0.46$). A trend in this same direction, but no significant effect, was found for child-report of anxiety symptoms on the SCARED ($t(13) = 1.74, NS$). See Table 4 for means and standard deviations for these results.

Specific Aim 1, Hypothesis 2 predicted that participants would indicate reductions in depressive symptoms from pre- to post-treatment via self- and parent-report questionnaire measures. Strong support was found for this hypothesis. Analyses revealed a significant decrease in both parent- and child-report of depressive symptoms from pre- to post-treatment (parent: $t(14) = 2.36, p = .03$, Cohen's $d = .48$; child: $t(14) = 2.71, p = .02$, cohen's $d = .54$). See Table 4 for means and standard deviations associated with these results.

Specific Aim 1, Hypothesis 3 stated that those with higher levels of self- and parent-reported depressive symptoms reported at intake would have similar treatment outcomes to those with lower levels of depressive symptoms, as assessed by change in the clinical severity of their principal diagnosis over time. Strong support was found for this hypothesis. Simple regression analyses revealed that neither parent- nor child-reported depressive symptoms on the CDI significantly predicted change in principal CSR (parent: $R^2 = .01, F(1,13) = 0.17; p = .68$; child: $R^2 = .08, F(1,14) = 1.13; p = .31$). This indicated that pre-treatment depressive symptoms were not associated with changes in principal anxiety disorder severity at post-treatment.

Specific Aim 1, Hypothesis 4 suggested that participants and/or their parents would report an improvement in emotion regulation skills in general, and intensity of

emotional experiences across a range of emotions, specifically. Moderate support was found for this hypothesis. Paired-samples t-tests revealed no change in child-reported use of reappraisal or suppression on the ERQ-CA from pre- to post-treatment assessment points (reappraisal: $t(13) = 0$, NS; suppression: $t(13) = .41$, NS). Additional analyses examined whether emotion regulation strategies improved across a range of emotions as assessed by the CEMS. Paired-samples t-tests revealed that parents-reported improvements in total dysregulation ($t(14) = 2.64$, $p = .02$, Cohen's $d = .68$), as well as anger dysregulation ($t(14) = 3.42$, $p = .004$, Cohen's $d = .64$). Parents also reported significant improvements in worry coping ($t(14) = -2.70$, $p = .02$, Cohen's $d = 1.03$). There were no significant changes reported on the following scales: worry dysregulation ($t(14) = 1.68$, NS), sadness dysregulation ($t(14) = 1.52$, NS), total coping ($t(14) = -1.93$, NS), sadness coping ($t(14) = -1.82$, NS), and anger coping ($t(14) = -.31$, NS). See Table 5 for means and standard deviations for these analyses.

Specific Aim 2: Assessing the Feasibility and Acceptability of Implementing the EDTP for Anxiety and Depression in a Mental Health Clinic Setting

Given that this is one of the first protocols to address emotional disorders from a transdiagnostic perspective for children in a clinical setting, a final aim was to explore the degree to which the EDTP was feasible with this child population and whether it was acceptable to participants. *Specific Aim 2, Hypothesis 1* stated that EDTP would be feasible for families in this setting, as assessed by attendance and retention. Moderate support was found for this hypothesis. Attendance ranged from 3 to 15 sessions ($M = 11$, $SD = 3.64$). Of the 16 research participants enrolled in the EDTP, 65% reached treatment completer status (attended at least 11 sessions).

Further analyses were conducted to examine whether attendance at a greater number of EDTP session affected observed outcomes. Regression analyses revealed that, of the 14 participants who provided post-treatment data (13 who completed treatment, one who dropped out but provided post-treatment data), those participants who attended more sessions of the EDTP experienced greater positive change on their principal anxiety disorder CSR from pre- to post-treatment than those who participated in EDTP but attended fewer treatment sessions ($R^2 = .28$, $F(1,13) = 4.99$, $p < .05$).

Specific Aim 2, Hypothesis 2 was that EDTP would be acceptable to participant children and parents. In support of this hypothesis, parents and children reported a high degree of satisfaction on the End of Program Questionnaire. Parent and child reports on all items relating to participant satisfaction on the End of Program Questionnaire were examined (using a Likert scale of 0-7 with 4 = somewhat satisfied). In response to the questions, “*How much do you think the program helped your child/you deal with fear/sadness/anger?*” parents reported a mean score of 7.1, 6.1, and 6.9 respectively, while children reported a mean score of 6.9, 5.1, and 5.2 respectively. In response to the question, “*How much would you recommend this program to a friend who was having a tough time dealing with their emotions?*” parents reported a mean score of 7.6 ($SD = 0.52$), and children reported a mean score of 5.6 ($SD = 1.73$). Means for individual items on this questionnaire are presented in Figure 1.

Finally, parents and children responded to an open-ended question on the End of Program Questionnaire asking for parents and children to provide any additional comments about the program. Overall, the comments were extremely positive. One parent responded: “I think the program has been very effective in the case of our child.

He succeeded in overcoming the fear of storms. He's making strides in controlling anger too. I also think that the group format is very appropriate both for the children and the parents.” Additionally, one child reported: “Emotion Detectives really helped me face my fears by doing many exposures. Also they explained what you shouldn't worry about. Emotion Detectives was awesome.” However, one participant raised a concern about the intensity of the exposures, and another participant felt the exposures were overly geared toward social anxiety versus generalized anxiety. A synopsis of parent and child comments is provided in Tables 6 and 7.

CHAPTER 4: DISCUSSION

The current study extended transdiagnostic treatment research to children (ages 7-12) in a clinical setting by establishing initial post-treatment outcomes for the EDTP. Results indicate that children experienced statistically significant and clinically meaningful improvements in terms of both remission of their principal anxiety disorder and overall severity of emotional disorder diagnoses on a clinical interview of these symptoms from pre- to post-treatment. These results were associated with very large effect sizes, highlighting the clinical relevance of these initial outcomes. Additionally, parent-reported levels of anxiety and both child- and parent-reported levels of depressive symptomatology also decreased from pre- to post-treatment, with moderate effect sizes. In addition, 11 out of 13 participants who completed treatment no longer met clinical criteria for any emotional disorder at post-treatment. These results are consistent with the hypothesis that the EDTP would provide an effective treatment for anxious individuals with and without co-occurring depressive symptoms.

Results also indicate that depressive symptoms were significantly reduced over time. Moreover, the presence of depressive symptoms did not predict poorer treatment response, as measured by change in principal clinical severity rating. This suggests that children in the current trial experienced equivalent reductions in the severity of their primary anxiety disorder, regardless of depressive symptom severity at pre-treatment. This finding is in contrast to results from trials of anxiety-specific protocols that have demonstrated poorer treatment outcomes for individuals with higher levels of depressive symptomatology (e.g. O'Neil & Kendall, 2010). Unlike domain- and disorder-specific protocols, the EDTP appears to be a viable treatment option for anxious individuals with

depressive symptoms. Thus, the EDTP may offer a more comprehensive and efficient treatment option for children experiencing anxiety and comorbid depressive symptoms than domain- or disorder- specific treatment protocols.

With regard to emotion regulation, children reported no change in their use of suppression or reappraisal skills from pre to post-treatment, as assessed by the ERQ-CA (Macdermott et al., in press). There may be several reasons for these null results. For one, the current study includes children across a broad age range. The children within this sample may be employing different strategies depending upon their developmental level. In a longitudinal study, Gullone and colleagues (2010) administered the ERQ-CA to a community sample of children and adolescents (ages 9-15) to assess emotion regulation strategy development and use across time. Results indicated that older adolescents engaged in reappraisal more frequently than did younger participants, while suppression use was more common in younger rather than in older participants (Gullone, Hughes, King & Tonge, 2010). Thus, it may be the case that participants within the current trial implemented different strategies depending on their developmental level, and changes in the use of these strategies were obscured when averaging across participants of diverse ages. Unfortunately, the current sample was too small to investigate age-specific changes in emotion regulation strategies.

Additionally, this investigation only examined self-report of suppression and reappraisal strategies, which may not provide the best estimation of their occurrence. Future research should include multi-modal assessments of emotion regulation strategies to better understand the developmental trajectory of these skills within school-age

individuals, as well as to examine how the use of these skills may be affected within the course of a cognitive behavioral treatment program such as Emotion Detectives.

Although there were no significant changes reported by children about their use of emotion regulation strategies, parents noted a number of improvements in their children's ability to cope with worry and their overall dysregulation. Moreover, parents reported improvements in anger dysregulation. Previous studies of anxiety-specific treatments have not demonstrated generalized improvements in dysregulation beyond the domain of worry (Suveg et al., 2009). This research provides preliminary evidence that the EDTP may be equipped to address a range of emotion regulation deficits typically experienced by children with anxiety alone, or with a range of emotional disorders (Suveg & Zeman, 2004). Given the range of deficits associated with poor emotion regulations skills, such as deficits in interpersonal functioning and lower overall well-being (Gross & John, 2003), there may be a strong rationale for investigating treatment programs such as the EDTP that appear to provide improvements across a broad range of emotion regulation deficits. Taken together, these results and robust effect sizes associated with them provide strong evidence for the preliminary efficacy of a transdiagnostic treatment to address anxiety, depressive symptoms, and associated emotion regulation deficits in school-age children.

Feasibility and Acceptability

The second aim of the current study was to examine the feasibility and acceptability of offering a transdiagnostic treatment program within a mental health clinic setting. Sixty-five percent of individuals who originally enrolled completed more than 70% of treatment sessions, and 18% of participants formally withdrew from the program.

Previous research examining treatment feasibility through has found that anxious children typically report dropout rates ranging from 7-27% (Arch & Craske, 2009). Although these rates are slightly lower than seen in trials of anxiety-specific protocols, the sample in the current study was multi-diagnostic, with a majority experiencing heightened depressive symptoms at pre-treatment. Comorbid depression is often associated with higher levels of treatment dropout and lower attendance (Arnow et al., 2007). Thus, the retention and attendance of the current trial appear to be sufficient to assume initial feasibility of the Emotion Detectives protocol. Given initial results indicating that higher levels of attendance was associated with better treatment outcomes, future evaluations of this program should include ongoing assessment and measurement of attendance and retention.

This investigation also evaluated acceptability via participant satisfaction with the program. Both parents and children reported high satisfaction. This positive sentiment was reinforced in parent and child qualitative comments, suggesting that even though the program required a time-commitment to complete, participants enjoyed it, found it to be effective, and would highly recommend it to other families. This reported satisfaction, coupled with the large effect sizes associated with clinical severity outcomes, suggests that the EDTP is likely a viable treatment option for children with emotional disorders.

Limitations and Future Directions

This study breaks new ground by demonstrating the initial efficacy and feasibility of implementing a transdiagnostic group treatment program for school-age children within a mental health context. However, it also has several limitations. First, the sample

size in the current investigation was small ($n=16$). While this small sample could have limited our ability to detect an effect within the current trial, the effect sizes associated with the clinical severity outcomes were large (e.g. $d= 1.7$ for change in principal CSR). Thus, even with a very small sample, significant effects were detected on several measures. The primary purpose of the current trial was to generate hypotheses and assess basic feasibility of the protocol. Thus, consistent with other feasibility trials, a multiple comparison adjustment was not used to control for Type I errors (e.g. Lee et al., 2008). Questions of efficacy in future randomized controlled trials will require greater caution with p-values. Specifically, it will be important to investigate whether the significant findings of the current trial are maintained in investigations a larger sample, and correcting for quantity of analyses.

The current trial found large effect sizes associated with outcomes in the EDTP; however, these outcomes were not evaluated in comparison to a control group. Given that this was an open trial investigation, investigating preliminary outcomes, feasibility and acceptability of the EDTP, a comparison condition was not included at this stage. Without the use of a control group it is not possible to determine whether the large effect sizes associated with treatment gains may, in part, be reflective of general improvement over time. However, comparisons to previous research suggest that the EDTP may be providing adequate treatment. A recent evaluation of a group cognitive behavior treatment for children with anxiety reported a Cohen's d of 1.6 (as compared to 1.7 found in the current study) for change in diagnostic severity in principal diagnosis (Hudson et al., 2009). This suggests that the EDTP may provide treatment effects on par with well-established protocols for child anxiety. Future research should include an active

treatment control condition to test this possibility. In addition, adherence measures are currently in development for the EDTP protocol. As these were not utilized in the current investigation, it is unclear to what degree fidelity to the protocol was maintained across groups. The presence of one of the treatment developers in each group likely maintained a fair degree of fidelity, but empirical evaluation of this will be necessary going forward.

Additionally, the current study did not include children who were experiencing primary depressive disorders. Research suggests that co-occurring depressive symptoms, as assessed via self- and parent-report questionnaires, rather than formal diagnosis of depressive disorders per se are predictive of poorer treatment outcome within an anxious sample (O'Neil & Kendall, 2010). To that end, the current study only examined outcomes for individuals with a principal diagnosis of anxiety and any level of self- and/or parent-reported depressive symptoms, regardless of the presence or absence of an additional depressive disorder diagnosis. In contrast to previous research, the frequency of such clinical depressive disorder diagnoses was moderate in the current sample (19%; Costello et al., 2003). These higher rates of depressive disorders allowed us to explore whether the EDTP was associated with gains for individuals with and without depressive diagnoses. Although the current sample was too small to conduct formal analyses comparing individuals with anxiety alone to individuals with comorbid clinical depressive diagnoses, visual analysis indicates that individuals with depressive disorders experienced improvements in diagnostic severity of both principal anxiety diagnosis as well as improvements in diagnostic severity of comorbid depressive disorders.

While the results of this trial offer preliminary evidence for the ability of the EDTP to address co-occurring depressive symptoms and diagnoses, future research will

need to examine whether the program can offer equivalent benefits to children with more severe manifestations of comorbid or principal depression. Similarly, while we did not formally exclude children with any particular principal anxiety disorder, the current sample, which employed a strategy using consecutive referrals to a specialty anxiety clinic, ultimately included youth with only one of four principal disorders: generalized anxiety disorder, social phobia, specific phobia and separation anxiety disorder. In a certain manner, this was a strength of this investigation as it lends comparability with existent protocols for more generalized child anxiety symptoms (e.g., Kendall, 1994; Silverman, et al. 1999; Rapee, Wignall, Hudson & Schniering, 2000,) that also focus on this group of common childhood anxiety disorders as the foci of their experiments. While several of the children in this investigation had additional comorbid anxiety disorders that occur with lesser frequency (e.g., obsessive-compulsive disorder), the present investigation is unable to illuminate the degree to which the current protocol is useful for these less common anxiety disorders, particularly when they are the principal concern. Further research will be required to better understand the limits of the EDTP protocol for the full spectrum of anxiety disorders in youth.

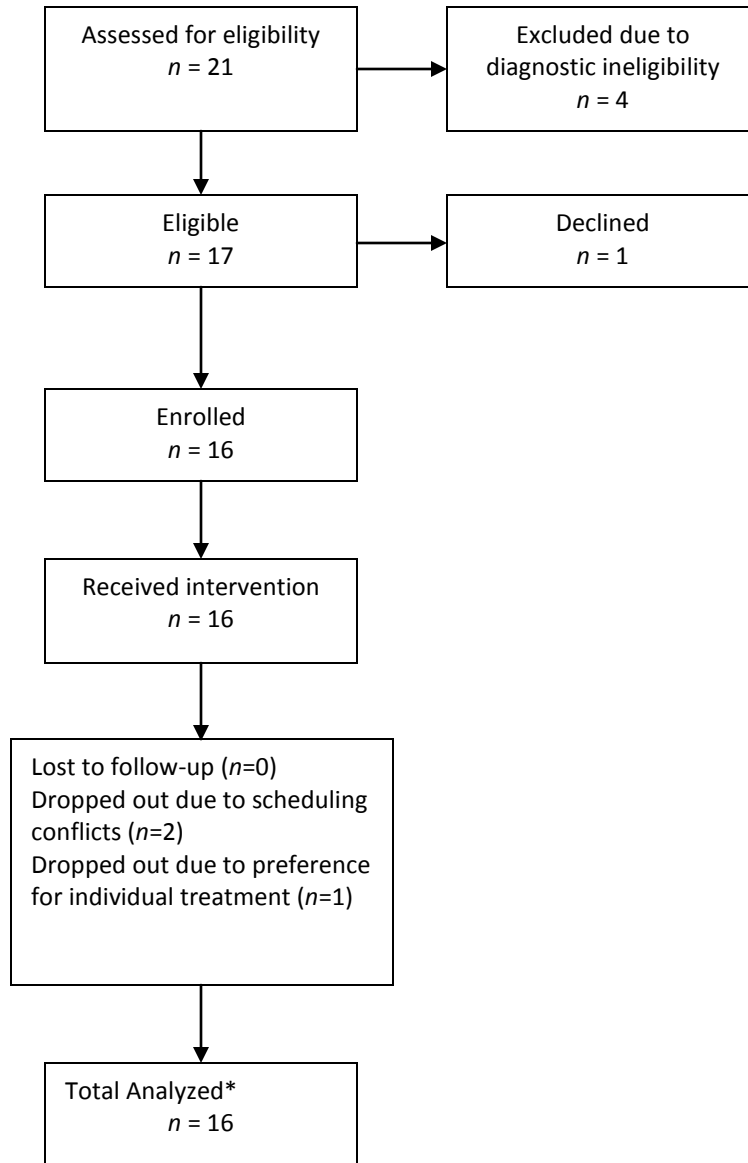
Given these limitations, the next step in the evaluation of this protocol would be to conduct a randomized controlled trial (RCT) comparing the EDTP to an active control condition. Such a RCT could determine how the EDTP addresses anxiety and depressive symptoms in comparison to a well-established treatment program for anxiety. This type of investigation could evaluate whether the EDTP is effective in treating individuals with comorbid emotional symptoms, and whether it may be as effective as other well-established treatments for anxiety alone. Additionally, the RCT could include individuals

with principal diagnoses of both anxiety and depressive disorders, to better examine how the EDTP addresses childhood depressive disorders. Finally, a future RCT could continue to assess the feasibility of the program and take steps to prevent barriers to attendance.

Conclusions

The current study provided preliminary evidence that a transdiagnostic treatment for anxiety and depression symptoms may be effective and feasible with a school-age population within a mental health setting. Future research will be needed to assess whether it can offer gains equivalent to other well-established treatment for anxiety. However, the current study does provide encouraging evidence regarding the potential efficacy of the EDTP for children with anxiety disorders to improve their disorder-, symptom-, and emotion regulation-specific concerns. With further research, transdiagnostic treatments such as the EDTP could potentially open the door to additional effective and efficient treatment options for children with a variety of emotional disorders.

Table 1. Participant Enrollment Flow Diagram



Note. This flowchart is an adaptation of the flowchart offered by the Consolidated Standard of Reporting Studies Group (CONSORT; Altman et al., 2001; Moher, Schulz, & Altman, 2001).

* Missing data at post-treatment was addressed using last observation carried forward (LOCF).

Table 2. Frequency of Diagnoses at Pre-treatment

Diagnosis	Principal Diagnosis (%)	Comorbid Diagnoses (%)
Generalized Anxiety Disorder	6 (37.5)	2 (12.5)
Social Phobia	6 (37.5)	6 (37.5)
Specific Phobia	2 (12.5)	7 (43.8)
Separation Anxiety Disorder	2 (12.5)	1 (6.3)
Obsessive Compulsive Disorder		1(6.3)
Anxiety Disorder NOS		1 (6.3)
Major Depressive Disorder		2 (12.5)
Depressive Disorder NOS		3 (18.8)
Adjustment Disorders		1 (6.3)
Attention Deficit/Hyperactive Disorder		2 (12.5)
Tic Disorder		2 (12.5)

Table 3. Participant Demographics

	<u>Intent-to-Treat (N=16)</u>		<u>Completers (N=13)</u>	
	N	%	N	%
Gender				
Female	7	43.8	6	46.2
Male	9	56.3	7	53.8
Race/ethnicity				
Hispanic	9	56.3	6	46.2
African American	1	6.3	1	7.7
Caucasian	4	25.0	4	30.8
Other	2	12.5	2	15.4
Age				
7	1	6.3	1	7.7
8	4	25.0	4	30.8
9	2	12.5	1	7.7
10	7	43.8	5	38.5
11	2	12.5	2	15.4

Table 4. Paired Sample T-Tests for Preliminary Outcome Measures

	<i>M (SD)</i>	
	Pre-treatment	Post-treatment
Principal CSR**	5.25 (0.86)	2.88 (1.78)
Clinical CSR**	8.53 (3.96)	2.67 (4.69)
Parent SCARED*	26.73 (8.88)	21.67 (13.04)
Child SCARED	19.86 (11.13)	14.64 (10.04)
Parent CDI*	11.40 (7.40)	7.93 (7.10)
Child CDI*	7.33 (5.39)	4.73 (4.08)

Note. * $p < .05$, ** $p < .001$; CSR=Clinical Severity Rating; SCARED= Screen for Child Anxiety Related Emotional Disorders; CDI= Children's Depression Inventory

Table 5. Paired Sample T-Tests for Emotion Regulation Measures

	<i>M (SD)</i>	
	Pre-treatment	Post-treatment
ERQ-CA: Reappraisal	15.21 (4.00)	15.21 (4.54)
ERQ-CA: Suppression	6.36 (2.62)	6.07 (3.52)
CEMS: Total dysregulation*	17.70 (3.70)	15.23 (3.60)
CEMS: Worry dysregulation	5.37 (1.91)	4.43 (1.66)
CEMS: Sadness dysregulation	6.13 (1.64)	5.60 (1.50)
CEMS: Anger dysregulation*	6.20 (1.78)	5.20 (1.32)
CEMS: Total coping	21.53 (4.24)	24.20 (3.65)
CEMS: Worry coping*	5.33 (1.50)	6.67 (1.05)
CEMS: Sadness coping	8.73 (1.71)	9.87 (2.23)
CEMS: Anger coping	7.47 (1.92)	7.67 (1.80)

* $p < .05$; ERQ-CA = Emotion Regulation Questionnaire – Children and Adolescents;
CEMS= Children’s Emotion Management Scales

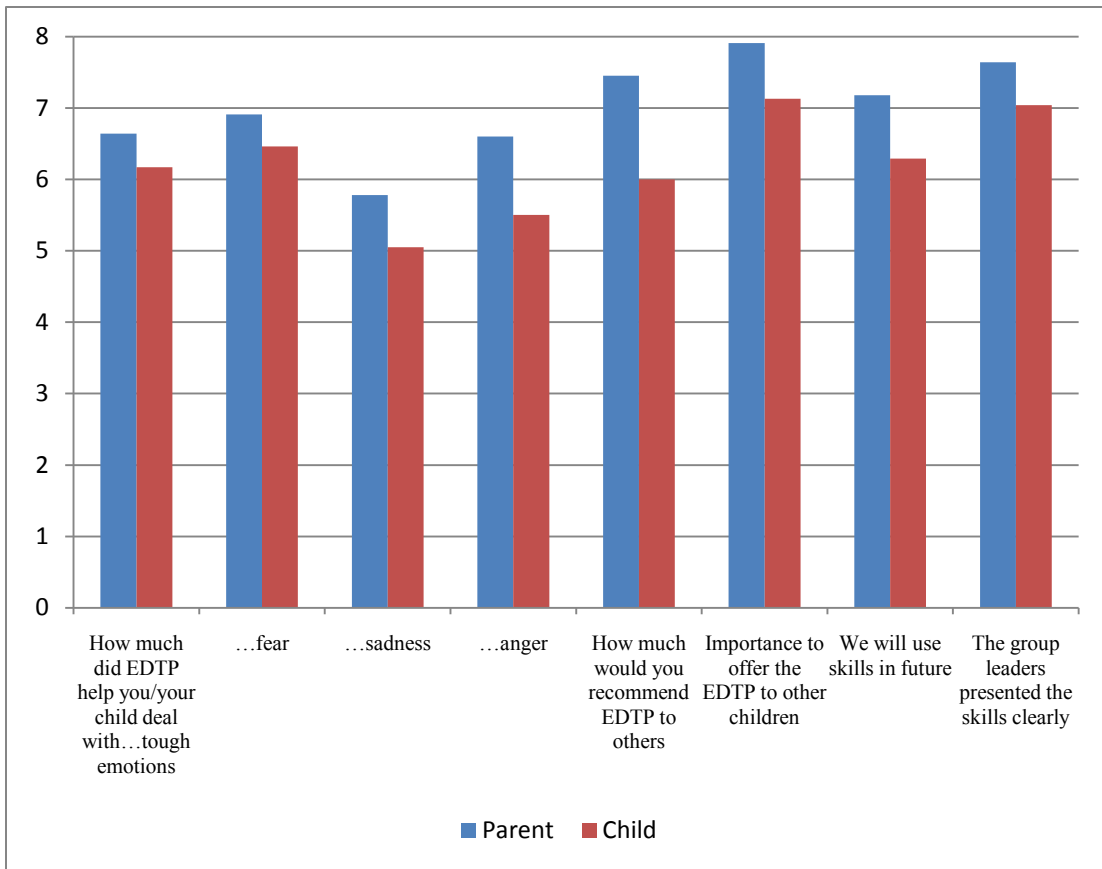
Table 6. Parent Comments on the End of Program Questionnaire

<p>“The exposures were great. The pictures of thinking traps made them concrete and easy to grasp. As a parent I learned and was empowered by the strategies that I will use in our future lives”</p>
<p>“Great program. Has reached the topics that I perceived my child needed help with”</p>
<p>“This program was very beneficial for me and my child to learn how to deal with her anxieties and how to face her fears in a realistic way. We are very happy we were able to participate in this program.”</p>
<p>“I thought this is a great program for children learn how to deal with those problems later in life.”</p>
<p>“My son has GAD and the exposures were geared more toward social anxiety. The exposures should be tweaked towards individual needs more.”</p>
<p>“Very effective. I think just the fact that the children get to see and meet other children with similar issues contributes to the success of the program”</p>
<p>“The program was helpful: 1) showed that she wasn't the only one with anxiety; 2) showed her real skills that can help her cope; 3) helped build her confidence; 4) helped me learn new ways to effectively communicate and try to understand what she's feeling; 5) built my confidence as a parent, showing that other parents have the same struggles.”</p>
<p>“Very cool program. My child got so happy every day coming here. So I want to say thanks.”</p>
<p>“I think the program has been very effective in the case of our child. He succeeded in overcoming the fear of storms. He's making strides in controlling anger too. I also think that the group format is very appropriate both for the children and the parents.”</p>

Table 7. Child Comments on the End of Program Questionnaire

“I like this program very much”
“The best part was thinking traps”
“Very good program. They explained the ideas well. Maybe they could make the exposure a little less devastating”
“Everything was perfectly fine”
“Emotion detectives really helped me face my fears by doing many exposures. Also they explained what you shouldn't worry about. Emotion detectives was awesome.”
“I think Emotion Detectives helped me with sadness and anger”
“Very good program.”

Figure 1. Parent and Child Report of Treatment Satisfaction



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Appendix A

Screen for Child Anxiety Related Disorders (SCARED) Child Report

Directions:

Below is a list of sentences that describe how people feel. Read each phrase and decide if it is “Not True or Hardly Ever True” or “Somewhat True or Sometimes True” or “Very True or Often True” for you. Then for each sentence, fill in one circle that corresponds to the response that seems to describe you for the last 3 months.

	0 Not True or Hardly Ever True	1 Somewhat True or Sometimes True	2 Very True or Often True
1. When I feel frightened, it is hard to breathe.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I get headaches when I am at school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I don't like to be with people I don't know well.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I get scared if I sleep away from home.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I worry about other people liking me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. When I get frightened, I feel like passing out.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I am nervous.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I follow my mother or father wherever they go.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. People tell me that I look nervous.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. I feel nervous with people I don't know well.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. I get stomachaches at school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. When I get frightened, I feel like I am going crazy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. I worry about sleeping alone.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. I worry about being as good as other kids.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. When I get frightened, I feel like things are not real.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. I have nightmares about something bad happening to my parents.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. I worry about going to school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. When I get frightened, my heart beats fast.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. I get shaky.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. I have nightmares about something bad happening to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Screen for Child Anxiety Related Emotion Disorders (SCARED) Parent Report

Directions:

Below is a list of statements that describe how people feel. Read each statement carefully and decide if it is "Not True or Hardly Ever True" or "Somewhat True or Sometimes True" or "Very True or Often True" for your child. Then for each statement, fill in one circle that corresponds to the response that seems to describe your child for the last 3 months. Please respond to all statements as well as you can, even if some do not seem to concern your child.

	0 Not True or Hardly Ever True	1 Somewhat True or Sometimes True	2 Very True or Often True
1. When my child feels frightened, it is hard for him/her to breathe.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. My child gets headaches when he/she is at school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. My child doesn't like to be with people he/she doesn't know well.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. My child gets scared if he/she sleeps away from home.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. My child worries about other people liking him/her.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. When my child gets frightened, he/she feels like passing out.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. My child is nervous.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. My child follows me wherever I go.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. People tell me that my child looks nervous.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. My child feels nervous with people he/she doesn't know well.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. My child gets stomachaches at school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. When my child gets frightened, he/she feels like he/she is going crazy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. My child worries about sleeping alone.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. My child worries about being as good as other kids.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. When he/she gets frightened, he/she feels like things are not real.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. My child has nightmares about something bad happening to his/her parents.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. My child worries about going to school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. When my child gets frightened, his/her heart beats fast.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. He/she gets shaky.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. My child has nightmares about something bad happening to him/her.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Children's Depression Inventory (CDI) Child Report

Kids sometimes have different feelings and ideas. This form lists the feelings and ideas in groups. From each group, pick one sentence that describes you best for the past two weeks. After you pick a sentence from the first group, go on to the next group. There is no right or wrong answer. Just pick the sentence that best describes the way you have been recently. Put a mark like this × next to your answer. Put the mark on the line next to the sentence that you pick.

Here is an example of how this form works. Try it. Put a mark next to the sentence that describes you best.

EXAMPLE: _____ I read books all the time.
 _____ I read books once in a while.
 _____ I never read books.

*** Remember, pick out sentences that describe your feelings and ideas in the past two weeks.

- 1) _____ I am sad once in a while.
 _____ I am sad many times.
 _____ I am sad all the time.

- 2) _____ Nothing will ever work out for me.
 _____ I am not sure if things will work out for me.
 _____ Things will work out for me okay.

- 3) _____ I do most things O.K.
 _____ I do many things wrong.
 _____ I do everything wrong.

- 4) _____ I have fun in many things.
_____ I have fun in some things.
_____ Nothing is fun at all.
- 5) _____ I am bad all the time.
_____ I am bad many times.
_____ I am bad once in a while.
- 6) _____ I think about bad things happening to me once in a while.
_____ I worry that bad things will happen to me.
_____ I am sure that terrible things will happen to me.
- 7) _____ I hate myself.
_____ I do not like myself.
_____ I like myself.
- 8) _____ All bad things are my fault.
_____ Many bad things are my fault.
_____ Bad things are usually not my fault.
- 9) _____ I do not think about killing myself.
_____ I think about killing myself but I would not do it.
_____ I want to kill myself.

- 10) _____ I feel like crying every day.
_____ I feel like crying many days.
_____ I feel like crying once in a while.
- 11) _____ Things bother me all the time.
_____ Things bother me many times.
_____ Things bother me once in a while.
- 12) _____ I like being with people.
_____ I do not like being with people many times.
_____ I do not want to be with people at all.
- 13) _____ I cannot make up my mind about things.
_____ It is hard to make up my mind about things.
_____ I make up my mind about things easily.
- 14) _____ I look O.K.
_____ There are some bad things about my looks.
_____ I look ugly.
- 15) _____ I have to push myself all the time to do my schoolwork.
_____ I have to push myself many times to do my schoolwork.
_____ Doing schoolwork is not a big problem.
- 16) _____ I have trouble sleeping every night.

- _____ I have trouble sleeping many nights.
_____ I sleep pretty well.
- 17) _____ I am tired once in a while.
_____ I am tired many days.
_____ I am tired all the time.
- 18) _____ Most days I do not feel like eating.
_____ Many days I do not feel like eating.
_____ I eat pretty well.
- 19) _____ I do not worry about aches and pains.
_____ I worry about aches and pains many times.
_____ I worry about aches and pains all the time.
- 20) _____ I do not feel alone.
_____ I feel alone many times.
_____ I feel alone all the time.
- 21) _____ I never have fun at school.
_____ I have fun at school only once in a while.
_____ I have fun at school many times.
- 22) _____ I have plenty of friends.
_____ I have some friends, but I wish I had more.

- _____ I do not have any friends.
- 23) _____ My school work is alright.
_____ My school work is not as good as before.
_____ I do very badly in subjects I used to be good in.
- 24) _____ I can never be as good as other kids.
_____ I can be as good as other kids if I want to.
_____ I am just as good as other kids.
- 25) _____ Nobody really loves me.
_____ I am not sure if anybody loves me.
_____ I am sure that somebody loves me.
- 26) _____ I usually do what I am told.
_____ I do not do what I am told most times.
_____ I never do what I am told.
- 27) _____ I get along with people.
_____ I get into fights many times.
_____ I get into fights all the time.

*** THE END ***

Children's Depression Inventory (CDI) Parent Report

Kids sometimes have different feelings and ideas. This form lists the feelings and ideas in groups. From each group, pick one sentence that describes your child best during the past two weeks. After you pick a sentence from the first group, go on to the next group. There is no right or wrong answer. Just pick the sentence that best describes the way your child has been recently. Put a mark like this × next to your answer. Put the mark on the line next to the sentence that you pick.

Here is an example of how this form works. Try it. Put a mark next to the sentence that describes your child best.

EXAMPLE: _____ My child reads books all the time.
 _____ My child reads books once in a while.
 _____ My child never read books.

***** Remember, pick out sentences that describe your feelings and ideas in the past **two weeks**.**

- 1) _____ My child is sad once in a while.
 _____ My child is sad often.
 _____ My child is sad all the time.

- 2) _____ My child feels like nothing will ever work out for him/her.
 _____ My child is not sure if things will work out for him/her.
 _____ My child feels that things will probably work out for him/her.

- 3) _____ My child feels he/she is good at most things.
 _____ My child feels he/she does many things wrong.
 _____ My child feels he/she does everything wrong.

- 4) _____ My child has fun in many things.

- _____ My child has fun in some things.
_____ Nothing is fun at all for my child.
- 5) _____ My child is bad all the time.
_____ My child is bad many times.
_____ My child is bad once in a while.
- 6) _____ My child thinks about bad things happening to him or her once in a while.
_____ My child worries that bad things will happen to him or her.
_____ My child is sure that terrible things will happen to him or her.
- 7) _____ My child hates him/herself.
_____ My child does not like him/herself.
_____ My child likes him/herself.
- 8) _____ My child believes that all bad things are his/her fault.
_____ My child believes that many bad things are his/her fault.
_____ My child believes that bad things are usually not his/her fault.
- 9) _____ My child does not think about killing him/herself.
_____ My child thinks about killing him/herself but would not do it.
_____ My child wants to kill him/herself.
- 10) _____ My child feels like crying every day.
_____ My child feels like crying many days.

- _____ My child feels like crying once in a while.
- 11) _____ Things bother my child all the time.
_____ Things bother my child many times.
_____ Things bother my child once in a while.
- 12) _____ My child likes being with people.
_____ My child does not like being with people many times.
_____ My child does not want to be with people at all.
- 13) _____ My child cannot make up his/her mind about things.
_____ It is hard for my child to make up his/her mind about things.
_____ My child makes up his/her mind about things easily.
- 14) _____ My child feels he/she looks O.K.
_____ My child feels there are some bad things about his/her looks.
_____ My child feels he/she looks ugly.
- 15) _____ My child has to push him/herself all the time to do his/her schoolwork.
_____ My child has to push him/herself often to do his/her schoolwork.
_____ Doing schoolwork is not a big problem for my child.
- 16) _____ My child has trouble sleeping every night.
_____ My child has trouble sleeping many nights.
_____ My child sleeps pretty well.

- 17) _____ My child is tired once in a while.
_____ My child is tired many days.
_____ My child is tired all the time.
- 18) _____ Most days my child does not feel like eating.
_____ Many days my child does not feel like eating.
_____ My child eats pretty well.
- 19) _____ My child does not worry about aches and pains.
_____ My child worries about aches and pains frequently.
_____ My child worries about aches and pains all the time.
- 20) _____ My child does not feel alone.
_____ My child feel alone frequently.
_____ My child feels alone all the time.
- 21) _____ My child never enjoys school.
_____ My child has fun at school only once in a while.
_____ My child has fun at school frequently.
- 22) _____ My child has plenty of friends.
_____ My child has some friends, but wishes he/she had more.
_____ My child does not have any friends.

- 23) _____ My child's school work is alright.
_____ My child's school work is not as good as before.
_____ My child does very badly in subjects he/she used to do well in.
- 24) _____ My child feels he/she can never be as good as other kids.
_____ My child feels he/she can be as good as other kids if he/she wants to.
_____ My child feels he/she is just as good as other kids.
- 25) _____ My child feels like nobody really loves him/her.
_____ My child is not sure if anybody loves him/her.
_____ My child is sure that somebody loves him/her.
- 26) _____ My child usually does what he/she is told.
_____ My child does not do what he/she is told most times.
_____ My child never does what he/she is told.
- 27) _____ My child gets along with people.
_____ My child gets into fights frequently.
_____ My child gets into fights all the time.

*** THE END ***

Emotion Regulation Questionnaire – Child and Adolescent (ERQ-CA)

These 10 questions are about how you feel inside, and how you show your emotions/feelings. Some of the questions may seem similar to one another, but they are different in important ways.

1. When I want to feel happier, I think about something different.	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree
2. I keep my feelings to myself	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree
3. When I want to feel less bad (e.g., sad, angry or worried), I think about something different.	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree
4. When I am feeling happy, I am careful not to show it.	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree
5. When I'm worried about something, I make myself think about it in a way that helps me feel better.	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree
6. I control my feelings by not showing them	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree
7. When I want to feel happier about something, I change the way I'm thinking about it.	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree
8. I control my feelings about things by changing the way I think about them.	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree
9. When I'm feeling bad (e.g., sad, angry, or worried), I'm careful not to show it.	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree
10. When I want to feel less bad (e.g., sad, angry, or worried) about something, I change the way I'm thinking about it.	Strongly Disagree	Disagree	Half and half	Agree	Strongly Agree

Children's Emotion Management Scales (CEMS) Parent Report

Instructions: Please circle the response that best describes your child/adolescent's behavior when he/she is feeling **mad**.

1.	When my child is feeling mad, he/she can control his/her temper.	Hardly Ever 1	Sometimes 2	Often 3
2.	My child holds his/her anger in.	Hardly Ever 1	Sometimes 2	Often 3
3.	My child stays calm and keeps his/her cool when he/she is feeling mad.	Hardly Ever 1	Sometimes 2	Often 3
4.	My child does things like slam doors when he/she is mad.	Hardly Ever 1	Sometimes 2	Often 3
5.	My child hides his/her anger.	Hardly Ever 1	Sometimes 2	Often 3
6.	My child attacks whatever it is that makes him/her very angry.	Hardly Ever 1	Sometimes 2	Often 3
7.	My child gets mad inside but doesn't show it.	Hardly Ever 1	Sometimes 2	Often 3
8.	My child can stop him/herself from losing his/her temper when he/she is mad.	Hardly Ever 1	Sometimes 2	Often 3
9.	My child says mean things to others when he/she is mad.	Hardly Ever 1	Sometimes 2	Often 3
10.	My child tries to calmly deal with what is making him/her mad.	Hardly Ever 1	Sometimes 2	Often 3
11.	My child is afraid to show his/her anger.	Hardly Ever 1	Sometimes 2	Often 3

Instructions: Please circle the response that best describes your child/adolescent's behavior when he/she is feeling **sad**.

1.	When my child is feeling sad, he/she can control his/her crying and carrying on.	Hardly Ever 1	Sometimes 2	Often 3
2.	My child holds his/her sad feelings in.	Hardly Ever 1	Sometimes 2	Often 3
3.	My child stays calm and doesn't let sad things get to him/her.	Hardly Ever 1	Sometimes 2	Often 3
4.	My child whines/fusses about what's making him/her sad.	Hardly Ever 1	Sometimes 2	Often 3
5.	My child hides his/her sadness.	Hardly Ever 1	Sometimes 2	Often 3
6.	When my child is sad, he/she does something totally different until he/she calms down.	Hardly Ever 1	Sometimes 2	Often 3
7.	My child gets sad inside but doesn't show it.	Hardly Ever 1	Sometimes 2	Often 3
8.	My child can stop him/herself from losing control of his/her sad feelings.	Hardly Ever 1	Sometimes 2	Often 3
9.	My child cries and carries on when he/she is sad.	Hardly Ever 1	Sometimes 2	Often 3
10.	My child tries to calmly deal with what is making him/her sad.	Hardly Ever 1	Sometimes 2	Often 3
11.	My child does things like mope around when he/she is sad.	Hardly Ever 1	Sometimes 2	Often 3
12.	My child is afraid to show his/her sadness.	Hardly Ever 1	Sometimes 2	Often 3

Instructions: Please circle the response that best describes your child/adolescent's behavior when he/she is feeling **worried**.

1.	My child can keep him/herself from losing control of his/her worried feelings.	Hardly Ever 1	Sometimes 2	Often 3
2.	My child shows his/her worried feelings.	Hardly Ever 1	Sometimes 2	Often 3
3.	My child holds his/her worried feelings in.	Hardly Ever 1	Sometimes 2	Often 3
4.	My child talks to someone until he/she feels better when he/she is worried	Hardly Ever 1	Sometimes 2	Often 3
5.	My child does things like cry and carry on when he/she is worried.	Hardly Ever 1	Sometimes 2	Often 3
6.	My child hides his/her worried feelings.	Hardly Ever 1	Sometimes 2	Often 3
7.	My child keeps whining about how worried he/she is.	Hardly Ever 1	Sometimes 2	Often 3
8.	My child gets worried inside but doesn't show it.	Hardly Ever 1	Sometimes 2	Often 3
9.	My child can't stop him/herself from acting really worried	Hardly Ever 1	Sometimes 2	Often 3
10.	My child tries to calmly settle the problem when he/she feels worried.	Hardly Ever 1	Sometimes 2	Often 3

End of Program Questionnaire, Child Report

We would like to get some of your opinions about the treatment you received in the Emotion Detectives Project. Please take a few minutes to answer each of the following questions as honestly as possible. Circle the number which best reflects your feelings. Circle the term "Not Applicable" if the question does not apply to you. Remember, there are no right or wrong answers. We appreciate your input!

1. How much did this program make sense to you as a way of helping you deal with tough emotions (e.g. fear, sadness, anger, etc.)?

0	1	2	3	4	5	6	7	8	N/A
Not at all				Somewhat				Very Much	

2. How much do you think the program helped you deal with fear?

0	1	2	3	4	5	6	7	8	N/A
Not at all				Somewhat				Very Much	

3. How much do you think the program helped you deal with sadness?

0	1	2	3	4	5	6	7	8	N/A
Not at all				Somewhat				Very Much	

4. How much would you recommend this program to a friend who was having a tough time dealing with their emotions (e.g. fear, sadness, anger, etc.)?

0	1	2	3	4	5	6	7	8	N/A
Not at all				Somewhat				Very Much	

5. How much do you think the program helped you deal with anger?

0	1	2	3	4	5	6	7	8	N/A
Not at all				Somewhat				Very Much	

6. How important do you think it is that we offer this program to other children dealing with strong emotions (e.g. fear, sadness, anger, etc.)?

0	1	2	3	4	5	6	7	8	N/A
Not at all				Somewhat				Very Much	

End of Program Questionnaire – Parent

We would like to get some of your opinions about the treatment your child received in the Emotion Detectives Project. Please take a few minutes to answer each of the following questions as honestly as possible. Circle the number which best reflects your feelings. Circle the term “Not Applicable” if the question does not apply to your child. Remember, there are no right or wrong answers. We appreciate your input!

1. How much did this program make sense to your child as a way of helping your child deal with tough emotions (e.g. fear, sadness, anger, etc.)?

0	1	2	3	4	5	6	7	8	Not Applicable
Not at all			Somewhat			Very Much			

2. How much do you think the program helped your child deal with fear?

0	1	2	3	4	5	6	7	8	Not Applicable
Not at all			Somewhat			Very Much			

3. How much do you think the program helped your child deal with sadness?

0	1	2	3	4	5	6	7	8	Not Applicable
Not at all			Somewhat			Very Much			

4. How much would your child recommend this program to a friend who was having a tough time dealing with their emotions (e.g. fear, sadness, anger, etc.)?

0	1	2	3	4	5	6	7	8	Not Applicable
Not at all			Somewhat			Very Much			

5. How much do you think the program helped your child deal with anger?

0	1	2	3	4	5	6	7	8	Not Applicable
Not at all			Somewhat			Very Much			

6. How important do you think it is that we offer this program to other children dealing with strong emotions (e.g. fear, sadness, anger, etc.)?

