**SELF-DISCLOSURE AS A PREDICTOR OF OUTCOMES IN
COGNITIVE-BEHAVIORAL THERAPY FOR ANXIOUS YOUTH**

A Dissertation
Submitted
to the Temple University Graduate Board

In Partial Fulfillment
of the Requirements for the Degree of
Doctor of Philosophy

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August, 2008

ABSTRACT

Title: Self-Disclosure as a Predictor of Outcomes in
Cognitive-Behavioral Therapy for Anxious Youth
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Degree: Doctor of Philosophy
Temple University, August 2008
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Cognitive-Behavioral Therapy (CBT) is an empirically supported treatment for anxious youth; however, approximately 30% of youths continue to meet diagnostic criteria for their primary anxiety disorder at posttreatment. Efforts to identify predictors and moderators of outcome in CBT are encouraged in order to enhance treatment efficacy. One potential predictor is youth pretreatment self-disclosure (e.g. Panichelli-Mindel, Flannery-Schroeder, Kendall, & Angelosante, 2005). Using a sample of 101 Anxiety Disordered (AD) youths meeting criteria for a primary diagnosis of Generalized Anxiety Disorder (GAD), Separation Anxiety Disorder (SAD), or Social Phobia (SOP) who were treated with 16-weeks of CBT (individual or family), this study examined (a) youth self-disclosure as a predictor of CBT outcomes, (b) pre- to post-treatment change in disclosure and distress during disclosure task, for responders relative to nonresponders, (c) disclosure and distress while disclosing in anxious youth relative to community volunteers (N=74); and (d) disclosure and distress while disclosing in treatment responders and nonresponders (posttreatment), and community volunteers. Videotaped recordings of a four-minute Youth Speech Sample (YSS) in which the youth was instructed to talk about him/herself were coded by reliable coders who were blind to diagnostic status, using the Youth Self-Disclosure Rating Scale (YSDRS) for each of the

variables of interest (Feared Situations, Personal Content, Global Rating of Disclosure, and Distress while Disclosing). Text analysis software was used to measure Disclosure Language. Treatment outcome was measured using posttreatment diagnostic status and severity, youth self-report, and mother- and father-reports. Findings of the present study indicate that pretreatment disclosure does not predict CBT outcomes for anxious youth. Additionally, there were no differences in the pre- to post-treatment change in disclosure and distress for responders and nonresponders; however, a main effect of treatment on disclosure of personal content was observed, such that youths disclosed more at posttreatment relative to pretreatment. Anxious youths appear more distressed in the disclosure task relative to community volunteers, but groups do not differ in their level of disclosure. Similarly, treatment responders and nonresponder at posttreatment were rated as more distressed while disclosing relative to community volunteers, but do not differ in their level of disclosure. Clinical implications and future directions are discussed.

ACKNOWLEDGMENTS

I would like to thank Dr. Philip Kendall, my advisor, for his guidance, support, and mentorship throughout my graduate school career. In addition, I thank Drs. Lauren Alloy, Robert Fauber, Deborah Drabick, Tania Giovannetti, and Robert Weisberg who generously donated their time and expertise to serve on my dissertation committee. I am very grateful for the time and energy that each of you devoted to this dissertation. I would like to specially thank you to Dr. Robert Fauber for his time, patience, thoughtfulness, and mentorship throughout my graduate career. I also wish to thank my research team, Chris, Gabrielle, and Jen for volunteering their time on this project. It would not have been possible without each of their contributions.

I would also like to thank my friends and family for their love and support while writing this dissertation and completing my graduate school requirements.

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CHAPTER 1
INTRODUCTION

Predictors of CBT Outcomes for Anxious Youth

Anxiety disorders in children and adolescents[1] affect as much as 10% of the population (e.g., Pine, 1994; Costello, Mustillo, Erkanli, & Keeler, 2003) and lead to impairments at home, in school, and with peers. If left untreated, anxiety-disordered (AD) youth are at a greater risk for anxiety disorders in adulthood (e.g. Pine, Cohen, Gurley, Brook, & Ma, 1998; Beidel, Fink, & Turner, 1996), future depression (e.g. Biederman, Faraone, Mick, & Lelon, 1995), and potential substance abuse (e.g. Compton, Burns, Egger, & Robertson, 2002; Kendall, Safford, Flannery-Schroeder, & Webb, 2004; Kessler, 2004). The potentially chronic and debilitating course of untreated anxiety highlights the importance of early intervention and intervention evaluation. Evaluations using randomized clinical trials (RCTs) are optimal to assess the efficacy of treatments and to test for predictors and moderators of the treatment outcomes.

Within the last two decades there has been notable progress in the treatment of anxiety in youth. To date, there have been approximately 20 RCTs conducted by various researchers across the globe, using similar cognitive-behavioral interventions (Barrett, Dadds, & Rapee, 1996; Barrett, 1998; Beidel, Turner & Morris, 2000; Cobham, Dadds, & Spence, 1998; Flannery-Schroeder & Kendall, 2000; Ginsburg & Drake, 2002 ; Hayward et al., 1999; Kendall, 1994; Kendall et al., 1997; Kendall, Hudson, Gosch, & Flanery-Schroeder, & Suveg, 2008; Last, Hansen & Franco, 1997; Manassis et al., 2002; Mendlowitz et al., 1999; Nauta, Scholing, Emmelkamp, & Minderaa, 2003; Shortt, Barrett, & Fox, 2001; Silverman et al., 1999b; Spence, Donovan, & Brechman-Toussaint, 2000; Wood, Piacentini, Southam-Gerow, Chu, & Sigman, 2006). Reviews of the outcomes of these treatments have been favorable, and CBT has been

recognized as a "probably efficacious" treatment for anxious youth (American Psychological

Association Task Force on Promotion and Dissemination of Psychological Procedures, 1995;

Chambless & Hollon, 1998; Kazdin & Weisz, 1998; Ollendick & King, 1998; Ollendick, King,

& Chorpita, 2006). The efficacy of CBT for AD youth has been demonstrated when presented in

a group format (e.g. Flannery-Schroeder & Kendall, 2000) and when parents are more actively

involved (e.g., see Barmish & Kendall, 2005 for review), and the maintenance of gains has been

documented (Barrett, Duffy, Dadds, & Rapee, 2001; Kendall & Southam-Gerow, 1996; Kendall

et al., 2004).

Although CBT can be said to be efficacious for anxious youth in general, approximately

one third of those treated with CBT still meet criteria for an anxiety disorder following treatment.

The variability in success rates reported across studies suggests the need to consider predictors of

differential outcomes and potential moderators that may influence treatment outcome. Predictors

and moderators are variables present at baseline that are systematically associated with treatment

response; whereas predictors do so regardless of treatment condition, moderators differentially

predict outcome across treatment groups, or across treatment and control groups (Kraemer,

Wilson, Fairburn, & Agras, 2002). Identifying and targeting these factors could increase the

number of treatment responders and enhance the overall efficacy of CBT (Kazdin & Kendall,

1998). Such information would also allow for tailoring the treatment to the individual youth in

order to improve outcome (March & Curry, 1998) and would assist clinicians in planning and

delivering efficient treatment services (Durlak, Fuhrman, & Lampan, 1991).

RCTs are considered by the field to be the gold standard for evaluating treatment efficacy

and are particularly valuable in informing moderators and mediators (i.e. the potential

mechanism of therapeutic change) of treatment outcome (Kraemer et al., 2002), yet tests of

moderation are rare in the youth-treatment-outcome literature (Durlak, Wells, Cotton, & Johnson, 1995; Weisz, Doss, & Hawley, 2005; Weisz & Hawley, 1998). In fact, to encourage such analyses, the journal *Clinical Psychology: Science and Practice* (CPSP) recently requested submissions of mediator and moderator analyses of already published RCTs in an effort to help tell the "whole story," because meaningful content may be reduced by reviewers, restricted by journal word/page limits, or (unfortunately) divided up due to pressure to publish multiple papers (Kendall, 2006). Additionally, Kendall pointed out that the media's affinity for simple, understandable "headlines" may inadvertently overlook the intricacies of the findings from an RCT. This is a noted need for more emphasis on access to the complete and accurate set of findings and their interpretations by encouraging analyses of mediators and moderators.

The majority of RCTs with anxious youth have found that age, gender, and ethnicity do not predict or moderate CBT outcome, suggesting the generalizability of CBT for anxiety across girls and boys of different ages and ethnicities. Several exceptions have been noted, however. For example, Barrett et al. (1996) found that younger children responded more favorably than older youth in CBT in which parents were involved (Barrett et al., 1996). Age was also identified as a significant predictor of attendance among a sample of school-refusing anxious youth, such that younger children were more likely than older youth to achieve 95% attendance by posttreatment (Last et al., 1998). With respect to youth gender, Barrett et al. (1996) identified a significant interaction between gender and treatment condition, which indicated the superiority of the CBT + plus active parent involvement relative to individual CBT at posttreatment and 12-month follow-up for girls, and no differences between the treatment conditions for boys. Although several exceptions are noted to the otherwise comparable treatment response across age, gender, and ethnicity, it is premature to draw firm conclusions related to youth demographic

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variables as predictors and moderators of treatment outcome--the moderator effects should be interpreted cautiously until replicated.

Comorbidity, defined by the presence of two or more clinical diagnoses at one time, is an important variable to consider when examining the differential outcomes for anxious youth. Three of the published RCTs assessing CBT in anxious youth examined whether comorbidity moderated treatment outcome, finding equally robust treatment gains for comorbid and noncomorbid youths at posttreatment using various measures of outcome (Shortt et al., 2001; Silverman et al., 1999). Kendall et al. (1997) reported no differential outcome between youths comorbid only with another anxiety disorder (68% of sample) and youths comorbid with any nonanxiety disorder (26% of sample), on dependent variables assessing internalizing symptomatology and distress. Similarly, Shortt et al. found that treatment effects of their group CBT program were not influenced by rates of youth comorbidity. In their sample, 72% of youths had a comorbid anxiety disorder and 4% had comorbid depression or dysthymia. Silverman et al. (1999b) reported that comorbidity did not influence treatment outcome; however, they did not report details related to the comorbidity in their sample.

Several subsequent studies have focused specifically on examining the role of comorbidity as a predictor and/or moderator of treatment outcome for anxious youth (Flannery-Schroeder, Suveg, Safford, Kendall, & Webb, 2004; Kendall, Brady, & Verduin, 2001; Rapee, 2003). For example, Kendall et al. grouped 173 youth between the ages of 8 and 13 who met primary DSM-III-R/DSM-IV (American Psychiatric Association 1980; 1987;1994) criteria for diagnoses of separation anxiety disorder (SAD), overanxious disorder (OAD)/generalized anxiety disorder (GAD), or avoidant disorder(AD)/social phobia (SOP), based on whether they had a principal anxiety diagnosis with (a) no comorbid disorder, (b) a co-occurring anxiety

disorder, or (c) a comorbid externalizing disorder. Results indicated that all groups responded comparably to CBT measured at posttreatment and one year follow-up, suggesting that CBT was similarly effective in youth with a primary anxiety disorder with and without comorbid diagnoses. Similarly, Rapee (2003) grouped 165 youths aged 7-16 meeting criteria for a DSM-IV anxiety disorder into one of three groups, depending on whether they had (a) no comorbid disorder, (b) comorbid anxiety disorder, or (c) comorbid non-anxiety disorder (i.e. mood or externalizing disorder), and found no differences in treatment response between comorbid and noncomorbid groups at posttreatment based on youth and parent reports. These findings should be interpreted cautiously, however, because they are confounded by the fact that youth with externalizing disorder and mood disorder comorbidities were in one group, making it impossible to ascertain the differential impact that comorbid internalizing versus externalizing disorders may have on outcome. At twelve month follow-up, there were indications based on parents' report via the Child Behavior Checklist (CBCL; Achenbach, 1991) that the non-comorbid group continued to demonstrate further gains, whereas the comorbid groups got worse; however, given that these results were not consistent on all measures, findings should be interpreted carefully. Furthermore, Flannery-Schroeder et al. (2004) found comparable rates of AD youth with comorbid externalizing disorders versus youth with no comorbidity free of their principal anxiety disorder at 7.4 year follow-up on all dependent measures, suggesting that pretreatment comorbidity did not impact the maintenance of gains.

One of the challenges in identifying predictors and moderators of treatment outcome relates to sample size. Many of the RCTs use samples that are small and thus potentially underpowered to detect differential outcomes. To address this issue, several studies have pooled samples employing the same interventions or collected additional data, adding them to already

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published RCTs to increase the power in order to examine predictors and moderators of treatment outcome for anxious youth (e.g. Berman, Weems, Silverman, & Kurtines, 2000; Crawford & Manassis, 2001; Southam-Gerow, Kendall, Weersing, 2001). These studies are also of merit because they go beyond youth demographics and diagnostics and examine theoretically-driven variables such as parent psychopathology and family functioning (e.g. Crawford & Manassis, 2001), and youth self-disclosure (Panichelli-Mindel, Flannery-Schroeder, Kendall, & Angelosante, 2005).

Berman et al. (2000) published an examination of pretreatment variables as they related to treatment outcome for AD youth including youth sociodemographics (age, gender, ethnicity, socioeconomic status), diagnostic characteristics (primary diagnosis, number of diagnoses, comorbidity), treatment format (group, individual), youth symptoms (youth and parent report), parent psychopathology, and marital adjustment. The sample consisted of 106 youth who met criteria for a principal diagnosis of a phobic or anxiety disorder and who participated in one of two RCTs (Silverman et al., 1999a; Silverman et al., 1999b) comparing exposure-based treatments that involved either cognitive procedures (i.e. self-control) or behavioral procedures (contingency management) in either an individual or group format. At posttreatment, youth were classified in either a treatment success group or a treatment failure group, determined on the basis of whether or not they continued to meet DSM diagnostic criteria for their primary diagnosis or showed a reduction in severity of 4 points or more (i.e. reductions of 4 points or more indicate treatment success). Similar to previous results found by RCTs, there were no significant differences between treatment success and treatment failure groups in terms of youth sociodemographics, diagnostic characteristics, and treatment format, suggesting the generalizability of CBT treatment for anxious youth. The strongest predictors of poor treatment

response in youth were a comorbid diagnosis of depression (d= .61), higher youth self-ratings of depression (d=.55), trait anxiety (d= .58), and parent psychopathology symptoms (e.g. depression, hostility) (d=.50-.86 for various symptoms). According to Cohen's (1977) definition of small (d=.2), medium (d=.5), and large (d=.8) effect sizes, these effects can be considered medium to large. These findings underscore the importance of considering youth diagnostic variables and parent psychopathology in addition to youth demographic variables when seeking to explain the variability in treatment response of AD youth.

Using 61 youths (ages 8 to 12 years) diagnosed with DSM-IV GAD, SAD, SOP, specific phobia, panic disorder, and other anxiety-based disorders (e.g., selective mutism), Crawford and Manassis (2001) investigated family variables as predictors of treatment outcome following a 12-week CBT program. Specifically, parents and youths completed pretreatment measures of family functioning, parenting stress, parental frustration, and parental psychopathology. Unlike Berman et al.'s (2000) definition of treatment response based on clinician-rated diagnostic status, Crawford and Manassis measured outcome using clinician-rated functioning (Child's Global Assessment Scale) and self-and parent-rated anxiety (Revised Children's Manifest Anxiety Scale). Youth-reported family dysfunction and parental frustration at pretreatment were significant predictors of clinician-rated youth functioning, such that youth who perceive more problems in their families were less likely to improve with treatment (f^2 =.32 and f^2 = .17, respectively). Likewise, mother and father reports of family dysfunction (f^2 =.11 and f^2 =.18, respectively) and mother-rated parental stress (f^2 =.15) were predictive of less youth improvement rated by the mother. Lastly, father-rated somatization (f^2 =.16) and youth reports of family dysfunction (f^2 =.11) and maternal-frustration (f^2 =.12) predicted poorer treatment

response based on youth self-report. These findings suggest that family dysfunction at pretreatment appears to be related to less favorable treatment outcome in AD youth.

Southam-Gerow and colleagues (2001) examined outcome variability (i.e. correlates of treatment response) using a sample of 135 youths ages 7 to15 who met criteria for a primary DSM-III or DSM-IV anxiety disorder (i.e. OAD/GAD, SAD, or SOP/AD) who participated in a 12-week CBT program. At posttreatment, youths were classified in one of two groups, poor treatment response and good treatment response—using parent diagnostic reports. Consistent with Berman et al.'s (2000) findings on comorbid depression, Southam-Gerow et al. found that higher ratings of mother-and teacher-reported youth internalizing psychopathology at pretreatment was significantly predictive of poor treatment response (d ranging from .35-.55). Similarly, higher ratings of maternal self-reported depressive symptoms were related to less favorable outcomes (d=.37). Contrary to the majority of findings, Southam-Gerow et al. also found that youth age was a significant predictor of treatment outcome, such that that age was negatively associated with treatment response. However, other demographic and diagnostic variables (i.e. youth gender, ethnicity, family income, marital status, and youth reported symptomatology) were unrelated to outcome.

In summary, although there was variability in the methods, measures, and definitions of treatment outcome across the handful of published studies that systematically investigated predictors of outcome in CBT for anxious youth, there are several relatively consistent findings. For one, youth demographic variables seem not to be systematically related to treatment response, suggesting that CBT for anxious youth is equally efficacious for boys and girls of various ages, races, and ethnicities (One exception, Southam-Gerow et al., 2001 found poorer response for older youth). Second, pretreatment diagnostic information related to anxiety

diagnoses does not predict outcome (i.e. primary diagnosis, number of diagnoses and severity). However, comorbid depression (but not comorbid anxiety or externalizing disorders) may be predictive of poorer treatment response. Last, higher rates of parent psychopathology and family dysfunction tend to be related to less favorable outcome. Although it is premature to draw firm conclusions based on the pattern of findings, these findings regarding family factors and parent psychopathology highlight the merits and importance of assessing variables other than youth demographics and constructs in addition to youth anxiety.

<div align="center">Youth Self-Disclosure</div>

A theoretical construct which may inform the literature on predictors of outcome in AD youth is self-disclosure. Self-disclosure can be defined as the sharing of personal thoughts, feelings, attitudes, and beliefs (Jourard, 1971). With respect to disclosure in the pretreatment assessment process, one can speculate that being a disclosing self-reporter of personal distress is quite different from a highly self-focused youth who denies the presence of anxiety (Kendall & Flannery-Schroeder, 1998). A youth's willingness to express distress may be particularly important in relation to treatment outcome, when one considers that CBT for anxiety disorders is a focused, action-oriented treatment that requires the youth's disclosure of feared situations in order to establish therapy goals (e.g. planning exposure tasks). Youth may more readily engage in treatment and accept therapist suggestions if the therapist addresses self-identified challenges. Furthermore, given that youth are typically not self-referred to therapy and may be relatively unaware of why they are brought to therapy, a pretreatment measure of youth self-disclosure may provide useful information about their readiness for treatment and may ultimately be related to variation in treatment response.

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Relative to the adult literature, little is known about disclosure processes in youth, particularly as they relate to treatment outcome. The majority of research on disclosure in youth has focused on personal disclosure in intimate relationships, such as with peers (e.g. Buhrmester & Furman, 1987; Berndt & Hanna, 1995) and parents (e.g. Fagot, Luks, & Poe, 1995). Furthermore this work has been overly reliant on self-report questionnaire measures of disclosure; the findings are therefore limited to youth perceptions of self-disclosure. The potential value of extending these literatures and examining youth self-disclosure as a predictor of treatment outcome is suggested based on theoretical discussions of youth self-disclosure in the treatment process and as an intervention itself.

Process variables in CBT have only more recently been investigated in the youth literature (see Karver, Handelsman, Fields, & Bickman, 2006; Shirk & Karver, 2003 for review). It seems reasonable to assume that a certain level of self-disclosure would be necessary from the outset of treatment to form a collaborative therapeutic relationship, particularly in the case of youth with internalizing disorders where the distress is internal and may be less evident. Chu and Kendall (2004) investigated the role of positive youth involvement in CBT for anxiety, with self-disclosure being one aspect of positive involvement, and found that youth involvement at mid-treatment and shifts in involvement each predicted positive treatment response. The specific contribution of disclosure during therapy to the variance of treatment outcome was not measured. Anecdotal reports from advanced therapists who work at the Child and Adolescent Anxiety Disorders Clinic (CAADC) suggest that youth who are more forthcoming about their anxiety and distress, as well as their willingness to share personal information from the outset of therapy, tend to be considered "good candidates" for treatment. Although this is an observation that

warrants empirical examination, it highlights the potential value in measuring disclosure prior to treatment.

There are data to suggest that instructing people to disclose their emotions, usually related to a trauma or stress, yields health and psychological benefits. The clearest evidence for disclosure as an intervention comes from Pennebaker's written disclosure paradigm. Pennebaker and his colleagues posit that the inhibition of negative emotions strains the body and suppresses immune function, with negative effects on health, and that written or verbal disclosure about these upsetting experiences can serve to obviate these unwanted effects (Pennebaker, 1997a, 1997b). The written disclosure intervention typically asks individuals to write about emotional, stressful and/or traumatic experiences for 15-20 minutes on three consecutive days. Individuals in the disclosure condition are specifically asked to explore and express their private thoughts and feelings in writing, and these texts are compared to individuals who are asked to write about neutral or superficial topics during the same time span. Pre- and post-writing outcome measures are gathered on a host of health (e.g. immune function, doctor visits) and psychological measures. To date, there have been many published trials investigating the benefits of writing about one's distress (emotional disclosure) with various populations (see Pennebaker, 1997; Sloane & Marx, 2004; Smyth, 1998 for reviews). Although the majority have been with adults, there have been two published studies assessing the written disclosure paradigm with school-aged youth (Reynolds, Brewin, & Saxton 2000; Soliday, Garofalo, & Rogers, 2004). These studies reveal the benefit that arises from the disclosure process and provide empirical support for the intuitively pleasing assumption that disclosure about "difficult" topics is valuable. Pennebaker and others' work on the written-disclosure intervention not only demonstrates the

benefit of self-disclosure on health and psychological factors, but also provides a valid way of measuring disclosure through language.

In all of the written (and verbal) disclosure-intervention studies, texts are analyzed using Linguistic Inquiry Word Count (LIWC) software (Pennebaker, Francis, & Booth, 2001), a programmed dictionary of over 2300 words and word stems that have previously been categorized and validated by independent judges. LIWC is composed of 70 linguistic dimensions including standard language categories (e.g. articles, prepositions, pronouns, first person singular, first person plural, etc…), psychological processes (e.g. positive and negative emotion categories, cognitive processes such as use of causation words, self-discrepancies), relativity-related words (e.g. time, verb tense, motion, space), and traditional content dimensions (e.g. sex, death, home, occupation). LIWC text analysis has been used as a manipulation check to ensure that the disclosure group is in fact writing about more emotional and personal content than the neutral writing group; it has also been employed to successfully differentiate individuals instructed to disclose personal content from those instructed to write about neutral content. In particular, variables such as higher use of emotion words, first person pronouns, and greater shift over time of insight and causation words are characteristic of disclosers (Pennebaker, Mehl, & Niederhoffer, 2003). For example, using a sample of school children aged 8-13, Reynolds and colleagues randomly assigned children to one of three conditions: writing about negative events, writing about non-emotional events, and a non-writing control group (Reynolds, Brewin, & Saxton, 2000). Although the primary focus of this study was to examine the relative benefits of emotional disclosure on health and school performance, examination of the written samples enabled the assessment of language use and content in groups instructed to write about emotional events versus neutral events. Of particular relevance, using the LIWC software, highly

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significant differences were found between the emotional and nonemotional writing groups in emotional expression (e.g. anger, anxiety, negative emotionality, and positive feelings), cognitive strategies (e.g. insight, causation, cognitive mechanisms), and content domains (e.g. death), such that the frequency of these categories was much higher in the emotional than in the nonemotional writing group.

Indeed, the way in which people use words to share information about themselves and their feelings can be used to classify their disclosure status and can convey information about their intentions and personality. Symbolizing feelings through verbal expression (i.e. disclosure of emotion) characterizes and generates feelings, so that people come to understand their feelings in ways that is not possible before they are articulated (Kennedy-Moore & Watson, 2001). Observational studies of emotion/disclosure language in children with a history of maltreatment, neglect, or abuse show that these children use fewer internal state words (McFadyen & Kitson, 1996) and have difficulty labeling negative emotional experiences (Rogosch, Cichett, & Aber, 1995) compared to non-maltreated youth. Youth with externalizing problems have been found to use fewer words and verbal expressions for emotions (e.g. Muchmore, 1998), display a less semantically-specific emotional lexicon (Casey, 1996), and use a paucity of words that focus on cognitive states (Muchmore, 1998). To date, fewer studies have been conducted with internalizing youth; those that exist have not found deficits in their ability to represent emotions in language (e.g. Casey, 1996). However, it is premature to draw firm conclusions about the absence of such differences.

Emotional expression in the family and with peers provides the basis for youths' linguistic representation of their own and others' emotions. Although there are many ways in which parents socialize their children's emotions, research has found that discussing emotional

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experiences and family emotional expressiveness are integral components of emotional socialization (see Eisenberg, Cumberland, & Spinrad, 1998, for a review). For example, a child who learns that emotional expression is acceptable and beneficial may be more likely to openly express his or her emotions verbally, relative to a child who is discouraged from emotional expression.

To this end, there has been a more recent interest in examining how emotions are socialized in families of youth with psychopathology. In one study, AD youth and non-disordered youth and their mothers were given a discussion task in which they talked about a time when the child felt worried, angry, and sad (Suveg, Zeman, Flannery-Schroeder, & Cassano, 2005) and completed the Family Environment Scale, which measured the degree of emotional expressiveness in the family. The discussion task was coded for the total words spoken by each member of the dyad, use of emotion words, presence of explanatory discussion of emotion, and facilitation of emotion discussion. With respect to child variables, AD youth and non-disordered youth did not differ in their use of emotion words; however, mothers of AD youth used significantly fewer positive-emotion related words and demonstrated significantly more discouragement of emotion discussion than did mothers of non-disordered children. In addition, AD youth and their mothers reported significantly less expressiveness of emotion in their families as compared to non-disordered children and their mothers.

The association between the quantity and quality of emotional expression is related to social and emotional competencies, and points to the important role for emotion language in the development and maintenance of problems in emotional regulation characteristic of psychological disorders (O'Kearney & Dadds, 2005).

In summary, there is substantial variability in the language youths use to discuss emotions; however, little is known about how variability in the verbal disclosure of emotional and personal information about oneself may be related to treatment outcome in disordered populations.

To date, only one study attempted to evaluate the construct of self-disclosure as a predictor of treatment outcome in anxious youth (i.e., Panichelli-Mindel et al., 2005). Using a sample of 171 youth between the ages of 8 and 14 meeting criteria for a primary diagnosis of GAD, SAD or SOP, Panichelli-Mindel et al. investigated AD youths' disclosure of internal distress at pretreatment as a predictor of outcome following 16-weeks of CBT. During a pretreatment assessment, youths and their parents were interviewed separately using the Anxiety Disorders Interview Schedule (ADIS; Silverman & Albano, 1996) to determine the youth's diagnosis. Youths were classified as either disclosers of high or low distress, determined by the parents' endorsement of an anxiety disorder and the youth's endorsement or lack of endorsement of an anxiety disorder, respectively. Additional youth, parent, and teacher reports of the youths' symptomatology were obtained (e.g. Revised Children's Manifest Anxiety Scale, RCMAS; CBCL, Teacher Report Form, TRF). There were no observed differences between the high distress and low distress disclosing youth on the following variables: age, race, family income, number of siblings, and number of diagnoses, severity, and comorbidity. Gender differences were found such that a significantly larger number of girls were in the high disclosure group relative to the low disclosure group, and therefore, gender was controlled in subsequent analyses. Although disclosers of high versus low distress did not differ in the presence/absence of their primary diagnosis at posttreatment (i.e. when outcome was measured as a dichotomous variable), the severity of the primary disorder for high distress disclosers decreased significantly, whereas

the severity of low distress disclosers did not. Similar patterns of change from pre-to post-treatment were observed on youth-report measures of anxiety and depression and on several parent and teacher measures of anxiety and internalizing symptoms, such that disclosers of high distress showed greater treatment effects compared to disclosers of low distress. These differences suggest that distress disclosure may be a meaningful moderating variable and underscores the potentially important role of a youth's willingness to talk openly about their emotions and distress prior to treatment.

Panichelli-Mindel et al. (2005) made a reasonable argument for the importance of self-disclosure as a predictor of treatment outcome; however, there are several methodological and conceptual limitations in that work that require further research. First, embedded in their operational definition of disclosure is the parent report of their youth's distress (i.e. use of parent-report on the ADIS as the gold standard). This definition is problematic given the extant literature on parent-youth agreement, which suggests that, more often than not, youth and parent reports of psychopathology are discrepant (e.g. Choudhury, Pimentel, & Kendall, 2003; Grills & Ollendick, 2003). Second, the ADIS is a semi-structured interview aimed at producing specific yes/no responses and severity ratings. This approach may be fairly susceptible to demand characteristics, and anxious youth may show concerns with self-presentation, thereby over-reporting or under-reporting their distress (DiBartolo, Albano, Barlow, & Heimberg, 1998; Kendall & Chansky, 1991). Related to this, Panichelli-Mindel et al.'s definition of disclosure was limited to a specific set of questions that asks for a particular type of information related strictly to symptomatology and related distress. A more open-ended disclosure task would allow for the measurement of the youths' quantity and quality of disclosure, allowing for the disclosure of emotional and personal content both related to and separate from distress.

Although the topic of self-disclosure is not pervasive in the youth treatment outcome literature, Panichelli-Mindel et al.'s (2005) study on the disclosure of distress highlights the importance of future research on its role as a potential predictor of CBT treatment outcome. Furthermore, data on the benefits of disclosure as an intervention with adults (and somewhat with youths), as well as the value of emotional expression in the understanding of emotions, suggests the need to investigate whether youth disclosure at pretreatment (a) can predict treatment response and (b) change as a result of beneficial treatment.

Overview of the Current Study

This study extends the literature on the predictors of outcomes in the treatment of anxious youth by assessing the role of a relatively uninvestigated construct: pretreatment youth self-disclosure as a predictor of outcome. This study evaluates (a) the extent to which pretreatment youth self-disclosure is associated with treatment outcome in youth anxiety disorders and (b) the degree to which there is change in youth self-disclosure from pre-to post-treatment for treatment responders relative to treatment nonresponders. This study also explores (c) differential disclosure in AD youth relative to community volunteers, and between treatment responders, nonresponders, and community volunteers. Videotaped recordings of a four-minute Youth Speech Sample (YSS) in which youth are instructed to talk about themselves, were coded for each of the variables of interest (see Youth Disclosure Rating Sheet; YSDRS for codes and selected LIWC variables).

This study addresses several of the limitations noted in the Panichelli-Mindel et al. (2005) study by using (a) a broader definition of disclosure, which includes verbal disclosure of anxiety/distress as well as verbal disclosure of other personal content; and (b) an unstructured four-minute speech sample coded by independent coders for different facets of disclosure, as

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well as LIWC software, to analyze the intricacies of language-use as a proxy for disclosure and emotional expression. The use of the speech sample is less susceptible to demand characteristics (since youth are able to choose what to speak about) and does not rely on parent report as a gold standard (i.e. independent observers are used); and it also allows for non-verbal observational data to capture distress during disclosure. This study conceptualizes self-disclosure as a youth characteristic, and examines its relationship with treatment outcome in an effort to enhance theory development and better understand predictors of therapeutic change (Kazdin, 1999).

Primary Hypotheses

Disclosure as a Predictor of CBT Outcomes

It was predicted that the degree of pretreatment youth self-disclosure would be significantly related to treatment outcome. Specifically, it was hypothesized that higher levels of pretreatment youth disclosure coded in a four-minute YSS would predict better treatment outcomes. Significant main effects were predicted for the following disclosure variables (described in detail in the Methods sections and Appendix A): Feared Situations (FS), Personal Content (PC), Global Rating of Disclosure (GRD), and Disclosure Language (DL), such that higher ratings on (1) FS, and (2) PC, and (3) GRD on the YSDRS, and greater usage of (4) DL at pretreatment, would predict better treatment response, defined as positive responder status and higher change scores on child and parent reports of anxiety, as well as on diagnostician-rated severity scores. It was also hypothesized that ratings of youth distress while disclosing (DD) would moderate the relationship between disclosure and treatment outcome, such that youth who are rated higher on disclosure and observed to be more highly distressed during the YSS task would be more likely to respond to treatment. This hypothesis is based on the findings that engagement in exposure tasks in CBT is a key component to treatment of anxiety disorders.

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Secondary Hypotheses

Part 1: Pre- to Post-Treatment Change in Disclosure and DD for Responders versus Non-

Responders

It was predicted that the degree of youth self-disclosure would change from pre- to post-treatment for treatment responders, but would remain relatively unchanged for nonresponders. More specifically, it was hypothesized that FS, PC, GRD, and DL would significantly increase from pretreatment to posttreatment for treatment responders and that there would be no significant pre-to post-treatment change in disclosure for treatment nonresponders. It was predicted that the magnitude of change for FS would be the largest, given that youth will have completed CBT treatment focused on their anxiety. It was also hypothesized that DD would significantly decrease from pre- to post-treatment for responders and remain unchanged for nonresponders.

Given that responders are hypothesized to be rated higher in disclosure than nonresponders at pretreatment, and expected to have a larger magnitude of pre- to post-treatment change in disclosure, the possibility that a ceiling effect might limit the ability to confirm the secondary hypothesis (part 1) was considered. However, it is believed that the range of the YSDRS items is large enough for both the primary hypothesis and the secondary hypothesis part 1 to be true.

Part 2: Disclosure and DD in AD Youth (Pretreatment) versus Community Volunteers

Next, AD youth and community volunteers were compared on self-disclosure variables to assess for differences in disclosure patterns. Given the data that suggest that disclosure is related to psychological health, it was hypothesized that community volunteers would be rated as higher

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in all facets of disclosure, except for distress (DD), where AD youth were expected to be rated higher.

Part 3: Disclosure and DD in Responders and Nonresponders at Posttreatment versus Community Volunteers

Treatment responders and nonresponders were compared to community volunteers at posttreatment. It was hypothesized that treatment responders and community volunteers would be rated as higher in disclosure (FS, PC, GRD, and DL) and lower in DD, relative to treatment nonresponders.

<center>*Exploratory Hypotheses*</center>

If the primary hypotheses were confirmed and disclosure predicted treatment outcomes, a mediational analysis was planned to assess if in-session therapist ratings of child involvement from the Session Summary Sheet (Kendall, 1997) mediates the relationship between pretreatment disclosure and treatment outcomes. If disclosure did not significantly predict outcomes (i.e. primary hypotheses are nonsignificant), meditational analyses would not be conducted.

CHAPTER 2
METHOD

Power Analysis

To determine the sample size needed to test the primary hypotheses, a power analysis

was conducted with power set at .80 and alpha set at .05. Effect sizes (ES) could not be estimated

from previous research because the Panichelli-Mindel et al. (2005) report is the only one to

consider pretreatment disclosure, and their definition of disclosure status was a dichotomous

grouping variable (disclosers of high and low distress) and different from the definition of

disclosure in this report. Power analyses were conducted using ES estimates from other studies

that assessed predictors of outcome in the treatment of anxiety disorders (e.g. Crawford &

Mannassis, 2001; Berman et al., 2001, Southam-Gerow et al, 2001).

Crawford and Manassis (2001) reported regression coefficients (R^2) ranging between .18

and .28 (mean= .23) and partial regression coefficients (pr_i^2) ranging between .08 and .23

(mean= 0.13) for psychosocial predictors (e.g. family functioning, parenting stress, parental

frustration, and parental psychopathology) of treatment outcome measured by clinician, parent,

and youth reports. Cohen's (1988) formulae were used to convert the regression and partial

regression coefficients to effect sizes yielding, $f^2 = .17$ for the model and $f^2 = .32$ for partial

regression coefficient. According to Cohen's (1988) definition of small ($f^2 = .02$), medium ($f^2 =$

.15), and large ES ($f^2 = .35$), these effects can be considered medium. Other studies evaluating

predictors of outcome in AD youth indicate medium to large ES's (e.g., Berman et al., 2000;

Southam-Gerow et al., 2001). If this study yields similar effects (i.e. medium effects) to those

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found in previous research examining predictors of outcome in anxious youth, the current study, using four predictor variables, will require a minimum of 82 participants to achieve a power of .80 to detect an overall significant contribution of disclosure (Cohen, 1977; Erdfelder, Franz, & Axel, 1996), and a sample size of 46 participants to detect significant partial contributions of each disclosure variable: Frightening Situations (FS), Personal Content (PC), Disclosure Language (DL), and Global Rating of Disclosure (GRD).

Participants

Participants were 101 AD youth, 59 males (58 %) and 42 females (42%) ranging in age from 7 to 14 years (M=10.45, SD=1.79), and their parents (96 mothers and 78 fathers). The 101 youth came from a total of 111 potential youth (3 participants were randomized, but never received CBT; 7 participants were excluded due to missing videotapes necessary for coding) who participated in a larger treatment study evaluating the efficacy of a 16-session individual cognitive-behavioral therapy (ICBT) versus a 16-session cognitive behavior therapy involving the family (FCBT) for the treatment of youth anxiety. Youth were referred for treatment from multiple community resources (e.g., school counselors, family physicians, mental health facilities) and were treated with ICBT (n=48) or FCBT (n=53) at the CAADC at Temple University. Of the 101 treated children, 82% were Caucasian, 13% were African-American, 1% were Hispanic, and 4% identified themselves as "other" or mixed race. Data with regard to annual family income were available for 94 of the 101 families and showed that 3% of the sample earned less than $30,000; 27% earned between $30,000 and 59,999; 30% earned between $60,000 and $79,999; and 34% earned $80,000 or more annually.

All children met *DSM-IV* diagnostic criteria for a principal diagnosis of GAD (59%), SP (38%), and/or SAD (29%)[2] based on structured diagnostic interviews. Composite diagnoses were

computed using the "or" rule: the diagnosis was assigned if the child or parent reported the diagnosis and the clinician subsequently assigned a clinician severity rating (CSR) of 4 or greater. Of the 101 children, 26% met *DSM-IV* diagnostic criteria for at least one co-principal anxiety diagnosis. In addition to principal anxiety diagnosis, 71% of children met diagnostic criteria for at least one other anxiety disorder (i.e., GAD, SP, or SAD), 5% of children met diagnostic criteria for major depressive disorder, 24% of children met criteria for attention deficit hyperactivity disorder, 12% met criteria for oppositional defiant disorder, 4% met criteria for obsessive-compulsive disorder, 6% met criteria for panic disorder, 3% met criteria for post-traumatic stress disorder, 50% met criteria for at least one specific phobia, and 4% of children met criteria for "other" psychiatric disorders (e.g., enuresis, selective mutism). Children were excluded if they had a Full Scale IQ below 80 (i.e., potentially may not be able to fully comprehend cognitive components of treatment), demonstrated psychotic symptoms, were taking antianxiety or antidepressant medications, or were non English-speaking/writing. Of the 101 AD youth, 90 completed treatment and 11 discontinued CBT. All analyses use the intent to treat sample[3].

Community volunteers were 74 children, 35 males (47%) and 39 females (53%) ranging in age from 7 to 14 (*M*= 10.10, *SD*= 1.60) who were recruited from the same general region as AD youth referred for treatment to the CAADC, and their parents (68 mothers and 55 fathers). Of the 74 community volunteers, 84% were Caucasian, 11% were African-American, 1% were Hispanic, and 4% identified themselves as "other" or mixed race. Data with regard to annual family income were available for 70 of the 74 families and showed that 7% of the sample earned less than $30,000; 18% earned between $30,000 and 59,999; 44% earned between $60,000 and $79,999; and 27% earned $80,000 or more annually.

The community sample provides a metric against which to compare disclosure in AD youth. To prevent creating a "super" normal group, youth with DSM-IV diagnoses (including anxiety problems) were not eliminated from the community sample. All community volunteers were administered the same structured diagnostic interview as the AD treatment-seeking group; 71% of community volunteers did not meet criteria for any DSM-IV diagnosis; 5% met criteria for GAD, 7% met criteria for SP, 5% met criteria for SAD, 5% met criteria for a specific phobia, 7% met criteria for attention deficit hyperactivity disorder, 4% met criteria for oppositional defiant disorder, 1% met criteria for obsessive-compulsive disorder, 4% met criteria for "other" psychiatric disorders (e.g., enuresis, selective mutism). None of the community volunteers met criteria for major depressive disorder, post-traumatic stress disorder, or panic disorder.

Measures

Primary Dependent Measure

Anxiety Disorders Interview Schedule for Children-Child and Parent Versions (ADIS- C/P; Silverman & Albano, 1996)

The *ADIS-IV-C/P* is a semistructured interview designed specifically for the diagnosis of DSM-IV anxiety disorders in youth ages 6 to 18. The ADIS also assesses mood and externalizing disorders (e.g., Major Depressive Disorder, Attention-Deficit/Hyperactivity Disorder) allowing for sensitivity to comorbidity. Youth and their parents were interviewed separately using the ADIS, yielding two diagnostic profiles, which were integrated into a composite diagnostic profile generated by applying an algorithm to the diagnostic profiles (see Silverman & Albano, 1996). Impairment ratings were made by the youth and parents using a 9-point scale (i.e., 0-8), with a "0" signifying no impairment to an "8" signifying severe impairment causing interference with the youth's life in several areas including school, family life, social functioning, and/or

causing significant internal distress. Based on the parent and youth interview, independent evaluators assigned diagnoses as well as ratings of severity for each diagnosis known as clinician severity ratings (CSRs). CSRs also range from 0 to 8, with 0 being "not at all" severe or interfering in the youth's life to 8 being "very much" so. A CSR of 4 or greater indicates a clinical severity, warranting a diagnosis and the diagnosis with the highest composite CSR is considered the youth's principal diagnosis.

The ADIS-C/P has solid psychometric properties for the diagnostic assessment of anxiety disorders in youth (Silverman & Nelles, 1988; Silverman & Eisen, 1992). It demonstrates high reliability for deriving DSM diagnoses with either parent or child information with kappa coefficients for GAD, SP, and SAD that are all in the excellent range (.80 - .92; Silverman, Saavedra, & Pina, 2001). The ADIS has also demonstrated strong concurrent validity (Wood, Piacentini, Bergman, McCracken, & Barrios, 2002) and is sensitive to treatment effects with AD youth (e.g., Kendall et al., 1997; Silverman et al., 1999). The ADIS-C/P is most commonly used in treatment research with anxious youth and has also been used as the gold standard of diagnostics by which self-reports are compared and evaluated (Silverman & Ollendick, 2005).

In the current study, composite ADIS-C/P CSR scores at posttreatment were used to classify youth as treatment responders or treatment nonresponders. Consistent with previous research (e.g., Berman et al., 2000), youth who no longer met *DSM-IV* criteria for their principal pretreatment diagnosis (i.e., ADIS-C/P composite CSR < 4) at posttreatment or who showed a CSR reduction of 3 or more points for their principal pretreatment diagnosis were considered treatment responders. In the case of co-principal diagnoses at pretreatment, if the youth did not meet *DSM* criteria for at least one of the disorders or showed a CSR reduction of 3 or more points for at least one of the disorders, the youth was considered a treatment responder. All other

youth were considered treatment nonresponders. Composite ADIS-C/P CSR change scores from pre- to post-treatment for the youth's principal diagnosis was also a measure of treatment outcome when testing the primary, secondary and exploratory hypotheses. In the case of co-principal diagnoses at pretreatment, an average change score was used as the treatment outcome measure.

Multidimensional Anxiety Scale for Children (MASC; March, Parker, Sullivan, Stallings, & Conners, 1997; March, 1998)

The MASC is a 39-item self-report rating scale designed to address anxious symptomatology in youth ages 8-16. Items are rated on a 4-point Likert-type scale (0 = "Never true about me", 3 = "Often true about me") and provide a Total score, as well as four empirically derived factors: Physical Symptoms (tense/restless and somatic/autonomic), Social Anxiety (humiliation/rejection and public performance), Harm Avoidance (anxious coping and perfectionism) and Separation/Panic Anxiety (Baldwin & Dadds, 2007). The MASC has demonstrated high internal consistency (e.g. r=.90 for Total score and r =.74-.85 for subscales; March et al., 1997; March, Sullivan, & Parker, 1999). The MASC has also demonstrated three-week test-retest reliability in a clinical sample (r=.79; March et al., 1997) and school-based samples (r=.88; March et al., 1999). Evidence of acceptable convergent, concurrent, and discriminant validity has also been demonstrated (see March et al., 1997; March & Albano, 1998; Wood et al., 2002). Furthermore, the MASC can discriminate between anxiety-disordered and non-anxiety-disordered adolescents (Dierker et al., 2001) and may be considered the most efficient self-report scale to use in screening for a principal anxiety diagnosis and for the specific

anxiety disorders (Khanna, Hedtke, Barmish, & Kendall, 2006). The present study used changes in Total MASC score from pre- to post- treatment as a measure of youth self-reported anxiety.

Child Behavior Checklist (*CBCL; Achenbach & Rescorla, 2001)*

The 118-item CBCL is a parent report of their youth's behavioral problems and social competencies. The CBCL is scored 0 to 2 depending on the extent to which a particular statement describes their youth (i.e., 0 = *not true*, 1 = *somewhat or sometimes true,* and 2 = *very true or often true*). The CBCL has been standardized to obtain normative scores (see Achenbach & Edelbrock, 1983, 1986; Edelbrock & Achenbach, 1984, as such, standard t scores represent a youth's standing in relation to other youth and determine whether elevated scores on a particular scale falls in a clinical range. The CBCL yields a Total Problems score along with two broadband subscales (i.e. Internalizing, Externalizing) and narrowband subscales (Withdrawn, Somatic Complaints, Anxious/Depressed, Social Problems, Thought Problems, Attention Problems, Delinquent Behavior, and Aggressive Behavior). The CBCL is one of the most extensively tested rating scales available and possesses excellent psychometrics. Internal consistency on the subscales range from .54-.96. Test-retest reliability on the subscales range from .86-.89 (cf Silverman & Ollendick, 2005). The CBCL-Internalizing scale (CBCL-Int) can discriminate between youth with and without an anxiety disorder, as well as between youth with anxiety disorders and youth with externalizing disorders (Seligman, Ollendick, Langley, & Baldacci, 2004) and is sensitive to treatment for anxious youth (e.g. Kendall 1994, Kendall et al. 1997).

The CBCL also includes items that can form a separate anxiety score (CBCL-Anxiety Scale; CBCL-A; Kendall et al., 2007) using 19 CBCL items. The CBCL-A can discriminate AD youth from nonanxiety disordered youth, demonstrates sensitivity to treatment changes, and

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relative to the CBCL Anxious/Depressed syndromes and Internalizing dimensions, the CBCL-A improved prediction of anxiety status (Kendall et al., 2007). Mother- and father-reported change scores on the Internalizing scale and the Anxiety scale from pre- to post-treatment will be used as a measure of parent-report of youth anxiety.

<p align="center">*Independent Variables: Measures of Disclosure*</p>

Linguistic Inquiry and Word Count (LIWC) (Pennebaker et al., 2001)

The LIWC program is a comprehensive computerized text analysis program that was originally developed in the context of Pennebaker's work on emotional writing and was designed to discover which features of writing about emotional life experiences (usually negative ones) predict subsequent health improvements (Pennebaker & Francis, 1996). The LIWC has subsequently been used to analyze classic literature, press conferences, and transcripts of conversations and speeches (Pennebaker & Graybeal, 2001). The LIWC counts words in multiple word categories. LIWC analyzes texts and transcriptions against a programmed dictionary of over 2300 words and word stems that have previously been categorized and validated by independent judges. LIWC is composed of 70 linguistic dimensions including standard language categories (e.g. articles, prepositions, pronouns, first person singular, first person plural, etc .), psychological processes (e.g. positive and negative emotion categories, use of causation words, self-discrepancies), relativity-related words (e.g. time, verb tense, motion, space), and traditional content dimensions (e.g. sex, death, home, occupation) (Pennebaker et al., 2003; 2001). The LIWC dimensions are organized hierarchically and allow for words to fall in multiple categories. The LIWC software outputs percentages of total words that belong to each word category. For example, if the LIWC data indicate a value of "3" for "affective processes"

(i.e. positive and negative emotion words), this means that 3% of the total words in that particular text were emotion words.

The first step to establish the psychometric properties of LIWC entailed establishing the psychometrics of word use itself (i.e. that people's word usage patterns demonstrate stability and consistency across time). Several studies have established the reliability of word use and demonstrated high internal consistency in short-term word choice (e.g. r=.51; Gleser, Gottschalk, & Watkins 1959); in language use across time (days-years), topic, and text source (Pennebaker & King, 1999). High internal consistency has also been found for spontaneous word use in everyday conversations (average test-retest correlation for standard linguistic variables: r=.41) and has been found to be consistent across social context (e.g. home, public place, work) (reported in Pennebaker et al., 2003). LIWC has also demonstrated adequate external validity with Pearson correlations ranging from .27-.78 (mean= .59) between software output categories and judges' ratings of content categories (Pennebaker & Francis, 1996).

This study used the LIWC output to create a Disclosure Language (DL) variable to test the primary and secondary hypotheses. In particular, DL was the combined percentage of words indicating affective processes (positive and negative emotion words), cognitive processes (causation and insight words), and first person pronouns. These LIWC variables were chosen to form the DL variable because higher use of words in these categories reliably differentiate individuals instructed to disclose information about an emotional event compared to a neutral one (e.g. Pennebaker, Mehl, & Niederhoffer, 2003; Reynolds, Brewin, & Saxton, 2000)

Youth Self-Disclosure Rating Scale (YSDRS)

The YSDRS was developed for the present study and is comprised of 4 codes measuring youth self-disclosure during a four minute Youth Speech Sample (YSS) in which youth are

instructed to talk about themselves in front of a video camera (See Appendix A for YSS

Instructions). The YSDRS has three codes assessing the quality of disclosure defined by the

number of instances in which a youth reveals and elaborates on Frightening Situations (FS) and

Personal Content (PC), as well as an overall Global Rating of Disclosure (GRD) (i.e. observer

impression of how well he/she got to know the youth after the YSS). Additionally, raters

appraised the youth's Distress while Disclosing (DD) (i.e. observed distress during disclosure

task). Each YSDRS code is operationally defined using a 6-point Likert-type scale ranging from

0 ("Not at all") to 5 ("A great deal"). Anchors for each of these ratings are described in the

Coding Manual (Appendix B) in detail using examples. Coders recorded all of their responses on

the Coding Sheet (Appendix C).

The YSDRS codes were created for use with the disclosure data derived from the LIWC

software. In particular, LIWC output is a statistical word analysis approach unable to account for

context, sarcasm, irony, depth of emotion, and non-verbal aspects accompanying disclosure

(Pennebaker, et al., 2003). The YSDRS will compliment LIWC by training coders to rate self-

disclosure while considering context, meaning, gist, and content. The YSDRS and Coding

Manual were submitted for review by two Ph.D.-level therapists who have extensive experience

in the assessment and treatment of AD youth and they provided opinions on item definitions and

rating anchors.

Items on the YSDRS were *not* totaled (i.e., no total disclosure score), because each code

is believed to be a conceptually different dimension of the disclosure construct and is believed to

have unique contribution to the prediction of treatment outcomes. The GRD (i.e. "How well do

you feel you got to know the youth after watching the four-minute YSS?") is included to capture

those aspects of disclosure that are more difficult to operationalize (i.e. observer *impression*).

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This code was included because previous studies coding videotaped samples of anxious youth yielded as good reliability on global scales (e.g. global rating of anxiety), which were unaffected by low frequency occurrences that affect specific codes (Kendall, 1994; Kendall et al., 1977).

Independent coders (n=3) were trained on each code (see Procedures section) and an intraclass correlation coefficient (ICC) was used to measure agreement with the investigator (i.e., ICC $\geq$ .80).

<div align="center">Other Measures</div>

Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1979, 1985)

The RCMAS was designed as a measure of the youth's chronic, or trait anxiety. The RCMAS contains 28 anxiety items, and 9 Lie scale items, for a total of 37 dichotomous (yes/no) items (e.g., "I often worry about something bad happening to me"). Three anxiety factors have been derived: Physiological, Worry and Oversensitivity, and Concentration (Reynolds & Richmond, 1979). Validity has been demonstrated for the RCMAS, and national reliability and normative data are available (Reynolds, 1982; Reynolds & Paget, 1983).

The RCMAS has demonstrated high internal consistency (within α = .8 range; Witt, Heffer, & Pfeiffer, 1990) and moderate to high test-retest reliability (ranges from r = .68-.90; Reynolds, 1982; Reynolds & Paget, 1983). The RCMAS Total Anxiety score has been shown to correlate highly with other self-report measures of anxiety (e.g. with the STAI-C; Muris, Merckelbach, Ollendick, King, & Bogie, 2002), thereby lending support to the concurrent validity of the measure. The RCMAS has also demonstrated sensitivity to treatment effects (e.g. Barrett, et al., 1996; Kendall et al., 1997; Seligman et al., 2004) and has demonstrated accuracy in correctly identifying anxious youth (e.g. Stark, Kaslow, & Laurent, 1993; Mattison, Bagnato, & Brubaker, 1988), with an average reported effect size of 1.30.

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The RCMAS offers an advantage relative to other self-report measures in that it not only contains a Total Anxiety scale, but it has a Lie Scale containing items like "I never get angry" or "I am always kind." The Lie Scale has been used as an indicator of social desirability (Dadds, Perin, & Yule, 1998) or defensiveness (Joiner, 1996) reflecting a tendency to deny flaws and present in a generally positive manner. Research on the RCAMS Lie Scale has found demographic trends related to self-concealment, such that younger youth score significantly higher on the Lie Scale than older youth (Dadds et al., 1998, Pina, Silverman, Saavedra, & Weems, 2001); African American youths score significantly higher than European American youth (Dadds et al., 1998), and Hispanic youths score higher than European American youths (Pina et al., 2001). No gender differences on the RCMAS Lie scale have been observed (Pina et al., 2001; Reynolds & Richmond, 1985). The current study will use the RCMAS Lie scale to establish the convergent validity of the measures of disclosure.

Session Summary Sheet (SSS; Kendall, 1997)

The SSS is a rating form completed by the therapist immediately after each treatment session. The therapist uses the SSS to rate the child's level of involvement in session, mastery of skill, therapeutic relationship, and attendance. The SSS consists of 10 items with various response options including yes or no answers as well as ratings on a Likert type scale from 1 to 7, with 1 representing very poor and 7 representing very good. Of particular interest in the present study is therapist rating of child involvement in session (question 8). Involvement scores will be averaged across Session 8, 10, and 11 (preparation and beginning of exposure phase of treatment), given that child input/disclosure is required for the collaborative planning of appropriate exposure tasks. Mean involvement on the SSS were planned to be examined as a mediator variable as part of the exploratory analyses, if primary hypotheses were supported.

Interventions

Individual Cognitive Behavioral Therapy (ICBT)

Participants in ICBT received 16, 60-minute sessions over a 16-week period (on average one session per week). The first half of treatment focused on teaching new skills to the youth, whereas the second half of treatment provided the youth with an opportunity to practice newly acquired skills through exposure. Two sessions, one during the first half of treatment and one during the second half of treatment, were designated for meetings between the therapist and parents. The main principles of ICBT were: (a) recognizing anxious feelings and somatic reactions to anxiety, (b) identifying cognition in anxiety-provoking situations (i.e. unrealistic or negative expectations), (c) developing a plan to cope with the situation (e.g., by modifying anxious self-talk into coping self-talk, through relaxation, or through problem-solving techniques), (d) behavioral exposure, and (e) evaluating performance and self-reward. These principles were presented to the youth during treatment as part of the FEAR plan, where FEAR is an acronym which can be used by the youth to remember skills learned. To help reinforce and generalize the skills, specific homework tasks were assigned.

Family Cognitive Behavioral Therapy (FCBT)

Similar to ICBT, participants in FCBT received 16 60-minute sessions over a 16-week period (one session per week). The first half of treatment focused on teaching new skills to the youth as well as the parents whereas the second half of treatment provided the youth the opportunity to practice these skills through exposures. Two sessions, one during the first half of treatment and one during the second half of treatment were designated for meetings between the therapist and parents.

FCBT covers all of the principles of ICBT but also involved parents by including them in the therapy sessions. Although the treatment remained youth-focused, the educational portion of treatment in FCBT also aimed to modify parental beliefs and expectations, to teach parents more constructive responses to their youth's distress, to encourage the parents to support the youth's mastery experiences, and to teach effective communication skills. The structure of the second half of treatment (exposure sessions) was similar to ICBT, where parents may or may not have been involved in exposure tasks (depending on the nature and goal of the task).

Procedure

Informed assent and consent for treatment and videotaping was obtained from participating youth and their parents, respectively. As part of the intake assessment, all youth and their parents were interviewed separately by trained, reliable diagnosticians using the ADIS-C/P. Diagnosticians were clinical psychology doctoral students specializing in the study of youth anxiety. Separate diagnosticians conducted the parent and the youth interviews to ensure that information obtained by one reporter did not bias the administration of the other interview of the diagnoses assigned.

Following the diagnostic interview, youth and their parents completed rating scales (e.g. MASC and CBCL). Youth meeting entry criteria are asked to return for a second assessment in which their parents participated in a diagnostic interview assessing their own psychopathology and youth and their parents participated in observation tasks. A four-minute youth speech sample (YSS) task was used for this study.

The experimenter read the following standardized instructions to the youth:

"Even though we ask a lot of questions, there are important things about you that we may not ask about. So we have the people who come here talk about themselves in front of a video camera for four minutes on their own.

You're the _____ (subject number) *person to do this.*

This paper lists some things you can talk about (hand copy of suggested topics to child)

First you will say your name, age, grade, and school. Then you can talk about any of the topics listed:

- *Things you like most, for example, seasons of the year, sports, TV shows*

- *Tell us things you dislike most*

- *Describe what you like about your best friends*

- *What things or situations you find frightening*

- *Tell us something that is important about you that you think we should know*

I'll leave the sheet for you to look at- if you want to- while you are talking in front of the video camera. You should stand up in this area here and look at the camera during your talk. I'll leave and you can start soon as the door closes. You'll talk about yourself while I am gone. When four minutes are up, I'll come back in and that's how you'll know it is time to stop.

Do you understand the instructions?

Remember you can start as soon as I close the door."

If the youth did not speak or stopped speaking before the four minutes were complete, the experimenter did not enter the room to prompt the youth, because this variability may provide meaningful information. At the end of the four minutes, the experimenter knocked on the door to tell the youth that the task was complete. All YSSs were copied from VHS to DVD to ease transcription and coding. All YSSs were transcribed verbatim, and subsequently reformatted to be compatible for text analysis using LIWC (e.g. correcting for misspellings, ensuring that abbreviations are alphabetic letters separated from one another by periods without spaces).

After the assessment process was complete, youth were randomly assigned to treatment. Following treatment, youth and their parents completed an assessment that followed the same pretreatment procedures and measures, conducted by diagnosticians who were blind to treatment condition and therapist.

Diagnostic Reliability

Diagnosticians were required to complete didactic training in youth diagnostics, view live ADIS-C/P administrations by reliable senior interviewers, and administer the ADIS-C/P interviews in the presence of a senior interviewer. During the observation and administration phases, diagnostic profiles of the training diagnostician had to match those of the senior interviewer on at least three out of four interviews. The training diagnosticians were required to pass the observation stage (i.e. "match") before entering the administration stage. In addition, diagnosticians presented diagnostic assessments conducted within the past week at the weekly staff meeting. If there was diagnostic disagreement among the staff, the sources of these differences were discussed and a consensus diagnosis was reached. Finally, 30% of diagnostic assessments were randomly selected for review by a trained rater to ensure the ongoing reliability among diagnosticians (i.e., kappa criterion of $\geq$ .80). If a diagnostician fell below the

.80 criterion, the diagnostician was retrained until reaching criterion and previous diagnostic assessments were reevaluated.

Treatment Integrity

All treatment sessions in each therapy condition were video or audio taped. Treatment integrity was assessed by randomly selecting 30% of cases in each treatment condition to be rated. For selected cases, fifteen minute segments from each session were rated by comparing therapist adherence against a checklist of session content. Therapists were unaware of which sessions were selected for integrity checks. Treatment integrity raters were trained by listening to 8 tapes with the principal investigator and discussing the ratings. Next, the PI and raters rated new tapes and reached a criterion of at least .85 (Cohen's Kappa). Four unannounced reliability checks were made throughout the study. If the rater fell below the .85 criterion, the rater was retrained until criterion was reached again. If treatment integrity was not maintained, those cases were not included in the study.

Independent Rater Reliability

Coders were three undergraduate psychology majors trained through reading materials, instructive presentations, and supervised practice. Training began with a review of the Coding Manual. The investigator explained each code in detail to the raters and provided examples of the various ratings using illustrations from YSS transcriptions and videos. Following the initial training and introduction to the procedures, the investigator watched 3 training YSS with the coders to familiarize them with the YSDRS codes. All training YSSs came from cases that did not receive treatment evaluated in the present study. The investigator and coders coded 5 additional training tapes independently. All codes were rated on a Likert-type scale (i.e.

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continuous); therefore, an intraclass correlation coefficient (ICC) was used to assess the degree to which the coders reached agreement with the investigator (i.e., ICC $\geq$ .80). Coders coded 5 training tapes at a time until agreement with the investigator was reached on all items.

Discrepancy among ratings was discussed throughout the training process and the investigator made written notes of these issues and how they were resolved, so that other coders could refer to them. Once coders reached the set criterion on each code, they were able to code the YSS from the current sample. The coders were blind to the youth's diagnostic status (i.e. AD or community volunteers) and to the youth's outcome status. Unannounced reliability checks were made on two occasions during the study, covering 30% of the total YSSs. If a coder fell below the .80 criterion, he/she was retrained to criterion and previous ratings were reevaluated and recoded (if necessary) by the investigator.

Validity

Convergent validity was assessed by correlating FS, PC, GRD, and DD with the Lie Scale of the RCMAS, a measure of social desirability or defensiveness. A significant negative correlation was expected (i.e. those with higher ratings on the RCMAS Lie Scale were expected to be rated lower on disclosure variables). Divergent validity was assessed by correlating FS, PC, GRD, and DD with severity and primary diagnosis. A nonsignificant correlation was expected, such that disclosure variables and comfort while disclosing (i.e., DD) were hypothesized to be unrelated to youth's primary disorder and severity of primary disorder.

Data Analysis

Preliminary Analyses

Before testing specific hypotheses, preliminary analyses were conducted. Chi-Square and *t*-tests were conducted to assess for group equivalence (responders versus nonresponders) on

demographic variables such as age, gender, race, and annual household income, on pretreatment principal diagnosis, pretreatment severity, and number of pretreatment diagnoses, and total Word Count (WC) during the pretreatment YSS. If a significant group difference was found, that variable was controlled in all those analyses that include group comparisons (i.e. entered as a covariate).

Descriptive analyses of pretreatment disclosure variables for AD youth (i.e. mean, standard deviation) as well as statistical tests of assumptions of normality and homogeneity of variances were run prior to testing the primary and secondary hypotheses. To assess the assumption of normality, skewness, kurtosis, the Shapiro-Wilks statistic, and outliers were examined. Skewness and kurtosis values were converted to z scores $z_x = S-0/SE_x$ (where X equaled skewness and kurtosis respectively and SE is the associated standard error). Absolute values greater than 1.96 were significant at the .05 level and indicated pile-up or flatness/pointiness of the distribution respectively (Field, 2005, p.72). Given that the Shapiro-Wilks statistic is overly sensitive to slight departures from normality, the test statistic (correlation value between the raw data from the current distribution and the expected data based on the normal curve), but not the p value was used to assess normality. Shapiro-Wilks correlations that were less than .85 were used as an indicator of non-normality (Karpinski, 2002). Lastly, boxplots and histograms were examined to further assess for normality and outliers. Levene's test was used to assess for the homogeneity of variances (in analyses that include group comparisons). In cases where assumptions were violated, data were transformed.

MANOVAs were conducted to examine if mean disclosure ratings (FS, PC, GRD, and DL) varied by demographic variables (gender, age, race, and average annual household income).

If significant differences were found, that demographic variable was controlled in subsequent analyses.

Multicollinearity among independent variables (IVs) was assessed prior to each regression analysis using collinearity diagnostics such as Tolerance and VIF, as well as Pearson's correlation. If there was a large correlation (i.e., $r \geq .90$; Tabachnick & Fidell, 1996) between IVs, one of the highly correlated IVs was omitted from the regression equation based on theoretical grounds and reliability of the code to avoid redundancy of variables.

Primary Hypotheses: Disclosure as a Predictor of CBT Outcomes

It was hypothesized that higher levels of pretreatment youth disclosure coded in a four-minute YSS would predict better treatment outcome. Significant main effects were predicted for the following disclosure variables: FS, PC, GRD, and DL. In particular, it was hypothesized that a higher rating on the disclosure of (1) FS, and (2) PC, and (3) GRD, and higher usage of (4) DL at pretreatment would predict better treatment response. Treatment response was defined in four ways:

1. Responders or nonresponders: Youth who no longer met *DSM-IV* criteria for their principal pretreatment diagnosis (i.e., ADIS-C/P composite CSR < 4) at posttreatment or who showed a CSR reduction of 3 or more points for their principal pretreatment diagnosis were considered treatment responders. In the case of co-principal diagnoses at pretreatment, if the youth did not meet *DSM-IV* criteria for at least one of the disorders or showed a CSR reduction of 3 or more points for at least one of the disorders, the youth was considered a treatment responder.

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2. Change scores on clinical severity ratings from pre-to post-treatment (greater reduction in severity indicated better treatment response).

3. Change score on self-reported anxiety using the MASC

4. Change scores on mother and father reported internalizing and anxious symptoms using the CBCL-Int. and CBCL-A respectively.

The decision to use change scores as the dependent variables (DVs), as opposed to posttreatment scores, was made to account for pretreatment scores, which likely contributed to posttreatment anxiety scores.

Given the lack of consensus about how to reconcile differences across measures and reporters in the assessment of anxiety in youth (De Los Reyes & Kazdin, 2005), separate regression analyses were run for each outcome variable. Using the disclosure variable (FS, PC, GRD, and DL), logistic regression was used to predict responder status. Multiple regression analyses were conducted to estimate the relative unique contribution of FS, PC, GRD, and DL to the variance in youth treatment outcome (R^2) for continuous measures of outcome (severity, youth-report, and mother and father-report). This method allowed for an estimate of the relative contribution of each disclosure variable to the variance in youth treatment outcomes. To isolate the unique contribution of each variable, the partial correlation coefficient (pr^2) was reported. The pr^2 expresses the unique contribution of the predictor to the total variance by taking out the contribution of the other predictors. That is, pr^2 is the proportion of the variance that is accounted for uniquely by the predictor (FS, PC, GRD, DL), relative to the other predictor variables in the model (Cohen 1977; 1988). A Bonferroni correction with an adjusted alpha of $p=.008$ was used for the multiple regression analyses in order to account for the fact that multiple related tests were conducted.

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Next, logistic regression analyses were conducted using the strongest disclosure predictor (determined on the basis of the beta weights from the first set of analyses) to assess if youths' level of pretreatment distress during the disclosure task (DD)[4] moderated treatment outcomes. In other words, these analyses were conducted to assess for a significant interaction between DD and disclosure in the prediction of treatment response. A significant interaction was expected, such that youths rated high in disclosure and high in distress would respond better to treatment than those rated high in disclosure and low in distress.

Secondary Hypotheses

Part 1: Pre- to Post-Treatment Change in Disclosure and DD for Responders versus Non-Responders

The secondary hypotheses were assessed by first categorizing youth based on response status. As mentioned previously, youth who no longer met *DSM-IV* criteria for their principal pretreatment diagnosis (i.e., ADIS-C/P composite CSR < 4) at posttreatment or who showed a CSR reduction of 3 or more points for their principal pretreatment diagnosis were considered treatment responders. In the case of co-principal diagnoses at pretreatment, if the youth did not meet *DSM-IV* criteria for at least one of the disorders or showed a CSR reduction of 3 or more points for at least one of the co-principal disorders, the youth was considered a treatment responder. A 2 (Assessment Point: Pre, Post) X 2 (Treatment Responder Status: Responder, Nonresponder) mixed-design ANOVA was run to compare responders and nonresponders on the pre- to post-change in total WC during the YSS. Assessment point was entered as the within subject factor (i.e., Pre WC, Post WC) and responder status (i.e., Responder, Nonresponder) was entered as the between subject factor. If the interaction effect was significant, indicating that

responders and nonresponders differed in the pre- to post-change in WC, then WC was controlled for in subsequent analyses.

A 2 (Assessment Point: Pre, Post) X 2 (Treatment Responder Status: Responder, Nonresponder) mixed-design MANOVA was carried out to compare pre- to post-changes in disclosure variables (i.e. FS, PC, GRD, DL)) for responders relative to nonresponders. Assessment point (i.e., Pretreatment Disclosure, Posttreatment Disclosure) was entered as the within-subject factor and responder status was entered as the between-subject factor. Significant effects were followed-up with univariate ANOVAs using a Bonferroni correction.

A mixed-design ANOVA was conducted to measure the differential pre- to post-treatment change in DD for responders relative to nonresponders. Treatment responder status (i.e., Responder, Nonresponder) was entered as the between subject factor and assessment point was entered as the within subject factor (Pretreatment, Posttreatment).

Part 2: Disclosure and DD in AD Youth (Pretreatment) versus Community Volunteers

Chi-Square and *t*-tests were conducted to compare AD youth and community volunteers on demographic variables and on total WC. Variables that were significantly different across groups were controlled in subsequent analyses. MANOVA was used to compare AD youth and community volunteers on the linear combination of disclosure variables.. Group was entered as the fixed factor and pretreatment disclosure variables (i.e., FS, PC, GRD, & DL) were entered as the dependent variables. Significant tests were followed with univariate ANOVA analyses using a Bonferroni correction and with a discriminant function analysis. ANOVA was conducted to compare AD youth and community volunteers on their observed distress during the disclosure task (i.e. DD).

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Part 3: Disclosure and DD in Responders and Nonresponders at Posttreatment versus
Community Volunteers

A MANOVA was conducted to examine the hypothesis that treatment responders, and community volunteers, would be rated as higher in disclosure (FS, PC, GRD, & DL) relative to treatment nonresponders. A one-way independent ANOVA was used compare treatment responders, nonresponders, and community volunteers on DD at posttreatment. Significant MANOVAs were followed up with univariate ANOVAs using a Bonferroni correction and with a discriminant function analysis. Significant ANOVA was followed-up with post-hoc pairwise comparison using a Bonferroni correction.

The decision to use MANOVAs in all of the secondary analyses, rather than conducting multiple ANOVAs was twofold. First, of interest in the present study were the group differences in the linear combination of disclosure variables (FS, PC, GRD, & DL). MANOVAs create a new dependent variable that linearly combines the individual dependent variables (i.e., FS, PC, GRD, and DL) in a way that maximizes the difference between groups (i.e. MANOVA has the power to detect whether groups differ along a combination of disclosure dimensions). In so doing, MANOVAs account for the intercorrelations among dependent variables, whereas multiple ANOVAs do not. Second, MANOVAs decrease the risk of making a Type I error by controlling the family-wise error rate.

Dependent variables entered into a MANOVA should be chosen for conceptual or empirical reasons and works acceptably when variables have moderate correlations (Field, 2005, pp. 572). For the present study, FS, PC, GRD, and DL are theorized to represent conceptually different facets of the same disclosure construct and therefore, were included in the MANOVA.

DD was not included in the MANOVA because it is conceptualized as functionally distinct from the disclosure variables. Said differently, the amount that one discloses is seen as different from how distressed one is doing so. For this reason, separate ANOVAs were run to compare groups on distress ratings during the disclosure task.

Exploratory Analyses

When any of the primary analyses were significant (i.e. the disclosure model significantly predicted outcomes), mediational analyses were conducted to assess whether in-session therapist ratings of child involvement on the Session Summary Sheet mediated the relationship between pretreatment disclosure and treatment outcomes. If the disclosure model did not significantly predict outcomes (i.e. primary hypotheses were nonsignificant), mediational analyses were not conducted.

CHAPTER 3
RESULTS

Reliability

Diagnostic Reliability

Diagnosticians were trained to administer the ADIS-IV C/P in accordance with the procedures previously described. Three unannounced reliability checks were conducted by trained raters throughout the study, covering 30% of pre- and posttreatment diagnostic assessments. Interrater reliability for principal diagnosis (i.e., presence = "yes" or "no") and CSR (i.e., agreement within 1 CSR point = "yes" or "no"), were kappa = .97 and kappa = .81, respectively.

Analyses of Treatment Integrity

Throughout the study, four unannounced random reliability checks were conducted to assess treatment integrity by comparing actual session content to proposed session activities and goals specific to the administered treatment session. Results showed that for ICBT and FCBT respectively, actual session content matched proposed session content 91% and 92% of the time (average across four reliability checks). No significant pattern emerged regarding the absence of specific manual content.

YSDRS Independent Rater Reliability

Interrater reliability for disclosure ratings was established between the investigator of this study and the three independent observers prior to initiating the coding of session tapes from the current sample. All independent observers met an ICC criterion for continuous variables of $\geq .80$ at the outset of the study. Two unannounced reliability checks were conducted during the study

(one in the middle and one at the end), covering 30% of the 101 cases. Table 1 shows observer reliability scores for the YSDRS for the two reliability checks.

Table 1. Observer Reliability Scores for Disclosure Ratings

	Intra-Class Correlations(ICC)	
YSDRS Items	Time 1 (n=15)	Time 2 (n=15)
Feared Situations(FS)	.93	.96
Personal Content (PC)	.86	.89
Global Rating of Disclosure (GRD)	.94	.87
Distress while Disclosing (DD)	.91	.90

Note. YSDRS= Youth Self-Disclosure Rating Scale.

All reliability ratings for disclosure measures were equal to or above the .80 criterion, so all variables were retained for future data analyses.

YSDRS Validity

Convergent Validity

To assess convergent validity, disclosure variables were correlated with the RCMAS Lie scale, a measure of self-concealment. Findings yielded small nonsignificant correlations ($r < .10$) between each disclosure variable (FS, PC, GRD) and DD, and the RCMAS Lie Scale. This finding does not establish the YSDRS's convergent validity.

Divergent Validity

To establish the divergent validity of the YSDRS, disclosure items were correlated with pretreatment severity of principal diagnosis. Pearson correlation values (*r)* ranged from 0.04-0.44, which suggested that each disclosure variable was non-redundant with diagnostic severity.

In order to examine whether type of pretreatment principal diagnosis (GAD, SAD, SP) was significantly related to disclosure variables, three separate between group MANOVAs were conducted. Presence/absence of GAD, SAD, and SP as pretreatment principal diagnosis respectively was entered as the fixed factor[5] and FS, PC, GRD, and DD were entered as the dependent variables. Youths with and without a principal diagnosis of GAD, SAD, and SP respectively did not differ in their mean disclosure at pretreatment $F(1, 99) = 1.66$, $p=.17$, $F(1, 99) = 0.64$, $p=.64$; $F(1, 99) = 1.94$, $p=.10$.

Table 2. Convergent and Divergent Validity of the YSDRS

	RCMAS Lie Scale	Severity
FS	-.09	.04
PC	.08	-.05
GRD	.06	-.04
DD	.09	.13

Note. Values represent Pearson's correlation *r*. YSDRS= Youth Self-Disclosure Rating Scale; RCMAS= Revised Children's Manifest Anxiety Scale; FS= Feared Situations; PC= Personal Content; GRD=Global Rating of Distress; DD= Distress while Disclosing. Severity= pretreatment clinical severity rating (CSR) for youth's primary pretreatment diagnosis.

Descriptive Analyses: Disclosure and Distress

Descriptive data for the average level of pretreatment youth self-disclosure (i.e. FS, PC, GRD, and DL) and the observed distress while disclosing (DD) are presented in Table 3. Disclosure ratings at pretreatment for AD youth on average were rated as "a little bit" for disclosure of FS (*M*=1.4, *SD*=1.6), "somewhat" for PC (*M*=1.8, *SD*=1.4), and "somewhat" for GRD (*M*=2.2, *SD*=1.3). Mean disclosure language (DL) was 24.6% of total words spoken. The

average rating of observed distress (DD) at pretreatment was "somewhat" (*M*=2.3; *SD*=1.4).

Average number of words spoken (i.e. Word Count; WC) during the four minute speech sample

at pretreatment was 237.

Table 3. Descriptive Analyses: Means and Standard Deviations for Pretreatment Disclosure

Disclosure Variable (N=101)	*M*	*SD*
FS	1.4	1.6
PC	1.8	1.4
GRD	2.2	1.3
DD	2.3	1.4
DL	24.6	7.4

Note. FS= Feared Situations; PC= Personal Content; GRD=Global Rating of Distress; DD= Distress while Disclosing; DL=Disclosure Language. Scores for FS, PC, GRD, and DD ranged from 0 (not at all) to 5 (very much). Scores of DL ranged from 0 to 44% of total words spoken.

Disclosure variables as measured by PC and GRD, as well as DD, were normally

distributed with Shapiro-Wilks correlation >.90. Disclosure of FS was positively skewed such

that 43% of anxious youth did not disclose any information about their fears and anxiety (i.e.

43% rated as "0" on FS measure of disclosure). Given the highly positive skewness of the FS

distribution, data were transformed using the Log transformation, and following this

transformation, the assumption of normality was met. The distribution of DL scores also

violated the normality assumption, such that pretreatment DL scores were negatively skewed and

had a significantly positive kurtosis value indicating a pointy distribution. Following a

transformation, the normality assumption continued to be violated. As a result, standardized

residuals were calculated for the DL data and four outliers that fell beyond 3.29 SD were

identified from the mean. These outliers were replaced with values 2.5 SD from the mean (Field, 2005), which improved the skewness and kurtosis.

MANOVA analyses revealed that disclosure did not vary by sex $F (1, 99)= 0.24, p=.91$; age[6] $F (1,99)= 1.86, p=.12$; race $F (3, 97)= 1.10, p=.36$; or estimated total household income $F(8, 92)=0.68, p=.91$.

<center>Analyses of Primary Hypotheses</center>

<center>*Group Equivalence*</center>

Preliminary analyses involved group comparisons to determine equivalence across the two conditions, treatment responders ($n=65$) and treatment nonresponders ($n=36$), on demographic and pretreatment diagnostic variables. Treatment responders and nonresponders did not significantly differ with regard to the pretreatment demographic variables of sex, $\chi^2 (1, N=101) = 1.57, p=.21$; age, $t (99) = -0.11, p=.91$; race, $\chi^2 (3, N=101) = 4.67, p=.20$; or estimated annual total household income, $\chi^2 (8, N=101) = 13.06, p=.11$. Considering diagnostic severity and status, treatment responders and nonresponders did not differ in the severity of pretreatment principal diagnosis, $t (99) = -1.98, p=.06$; however, responders and nonresponders did differ significantly with regard to type of pretreatment principal diagnosis, such that significantly more treatment responders relative to nonresponders had a principal pretreatment diagnosis of GAD, $\chi^2 (1, N=101) = 5.19, p<.05$ and significantly fewer responders had a pretreatment diagnosis of SP, $\chi^2 (1, N=101) = 5.47, p<.05$. Given this difference, type of pretreatment diagnosis was controlled for in the analyses of the primary hypotheses comparing treatment responders and nonresponders. Finally, treatment responders and nonresponders did not differ in the mean

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number of words spoken during the pretreatment YSS (M=257, SD=152; M=199; SD=145), t(99) = 1.86, p= .07.

<div align="center">*Preliminary Analyses*</div>

Before interpreting each regression analysis, multicollinearity was assessed by looking at the Variance Inflation Factor (VIF), Tolerance, and Pearson correlation matrix, to avoid the redundancy of predictor variables. The Tolerance value for each predictor (FS, PC, GRD, DL,) was greater than 0.1 and the VIF was below the recommended threshold of 10 (Myers, 1990), which suggested that there was no multicollinearity among predictor variables. Table 4 displays the correlation matrix between predictor variables. All correlations fell below the threshold for multicollinearity as proposed by Tabachnick and Fidell (1996; $r \geq .90$); therefore, all IVs remained in the regression equation.

Table 4. Correlation Matrix of Disclosure Predictor Variables

	FS	PC	GRD	DL	DD
FS	1	.14	.36	.08	-.16
PC		1	.69	.25	-.37
GRD			1	.14	-.37
DL				1	-.13
DD					1

Note. FS=Feared Situations; PC=Personal Content; GRD= Global Rating of Disclosure; DL= Disclosure Language; DD= Distress while Disclosing.

<div align="center">*Disclosure as a Predictor of Treatment Response Status: Logistic Regression*</div>

Table 5 presents the results of the logistic regression analysis assessing the contribution of FS, PC, GRD, and DL to responder status (i.e. responder versus nonresponder), while controlling for type of pretreatment principal diagnosis. Overall, the initial model using only the constant correctly classified 64% of children (b_0= .59). Next, presence/absence of GAD and SP

as pretreatment principal diagnosis was entered into Block 1 as a categorical covariate and the model improved significantly χ^2 (2) = 7.40, $p<.05$, correctly classifying 68% of youth into treatment response group. Finally, the four disclosure variables (FS, PC, GRD, and DL) were entered into the equation in Block 2. The addition of disclosure predictors did not significantly improve the predictive ability of the model χ^2 (6) = 11.03, $p=.09$ and correctly classified an additional 4% of youth (i.e. total 72%).   The coefficients for the disclosure variables were not significantly different from zero, suggesting that none of the disclosure predictors made a significant contribution to the predictive power of the model.

Table 5. Disclosure (FS, PC, GRD, DL) as a Predictor of Treatment Response Status: Logistic Regression

	B (SE)	95% Confidence Interval for Exp *B*		
		Lower	Exp *B*	Upper
Block 1[a]				
Constant	.46 (0.46)		1.58	
PrincGAD	-.67(0.47)	0.20	0.51	1.30
PrincSP	.71(0.48)	0.80	2.04	5.18
Block 2[b]				
Constant	1.38(.96)		3.98	
PrincGAD	-.74(0.49)	0.18	0.48	1.25
PrincSP	.71(0.49)	0.77	2.03	5.35
FS	.02(0.16)	0.75	1.02	1.39
PC	.02(0.23)	0.65	1.02	1.60
GRD	.16(0.25)	0.72	1.17	1.92
DL	-.05(.03)	0.89	0.95	1.01

Note. PrincGAD= Principal diagnosis of Generalized Anxiety Disorder; PrincSP= Principal diagnosis of Social Phobia; FS= Feared Situations; PC= Personal Content; GRD= Global Rating of Disclosure; DL= Disclosure Language.
[a]R^2 = .07 (Cox & Snell), .10 (Nagelkerke). Model χ^2 (2) = 7.4, $p<.05$. [b]R^2 = .10 (Cox & Snell), .14 (Nagelkerke). Model χ^2 (6) = 11.03, $p=.09$.
*$p <.05$

Disclosure as a Predictor of Anxiety Severity and Self- and Parent-Reported Anxiety:
Multiple Regression Analyses

Table 6 presents the results of the multiple linear regression analyses assessing the

contribution of FS, PC, GRD, and DL to treatment outcome as measured by pre- to posttreatment

change scores on clinician-rated measures (i.e., ADIS C/P CSR for pretreatment principal

diagnosis), a measure of child self-report (MASC total score), and a measure of parent report of

child (CBCL Internalizing and Anxiety *T*-mother report and CBCL Internalizing and Anxiety *T*-

father report). Table 7 shows the overall contribution of each model to the variance accounted for

in treatment outcome (R^2), the individual contributions of FS, PC, GRD, and DL to treatment

outcome when the contribution of the other IVs is taken out of both the IV and DV (partial R^2, or

pr^2), and the effect size estimates for R^2 and pr^2 (i.e., f^2). No significant differences were found

when conducting analyses using the untransformed and transformed FS data and DL including

outliers or with outliers replaced. Therefore, for ease of interpretation, results using the

untransformed data are reported[7].

Clinician-Rated Anxiety Severity

For clinician-rated outcome measures, the predictor variables (i.e., FS, PC, GRD, DL)

were not found to account for a significant portion of the variance in treatment outcome.

Specifically, disclosure measured by ratings of FS, PC, GRD, and DL together accounted for

only 3% of the total variance in ADIS C/P CSR change scores, indicating a small effect size of

the model on clinician-reported treatment outcome. When considered individually, FS, PC,

GRD, and DL did not significantly predict clinician-rated treatment outcome; however, a

medium effect was observed for GRD to the contribution of ADIS C/P change scores and a small

effect was observed for FS and PC. Virtually no effect was observed for the contribution of DL to ADIS C/P CSR change scores.

Child Self-Report

Considering child self-report, the predictor variables were not found to account for a significant portion of the variance in treatment outcome. Specifically, ratings of disclosure based on FS, PC, GRD, and DL accounted for 7% of the total variance in total MASC change scores, which corresponds to a small effect size. When considered individually, GRD was found to contribute significantly to pre- to posttreatment change scores on the MASC, corresponding to a medium effect. FS, PC, and DL did not significantly contribute to the model, corresponding to a small effect size.

Parent Report

Similarly, the predictor variables were not found to account for a significant portion of the variance in treatment outcome as assessed by parent-report of child. Specifically, FS, PC, GRD, and DL together accounted for 6% of the total variance in CBCL-I change scores as reported by the child's mother and 1% as reported by the child's father. The findings for both models correspond to small effect size estimates. When considered individually, none of the disclosure variables were found to contribute significantly to higher change scores in Mother and Father reported internalizing symptoms corresponding to small effect sizes for individual predictor variables, with the exception of GRD and DL, which corresponded to medium effect sizes in the contribution of Mother-reported CBCL-I change scores.

For parent report of anxiety, FS, PC, GRD, and DL together accounted for 6% of the total variance in CBCL-A change scores as reported by the child's mother and 9% of the total

Table 6. Contribution of Disclosure Variables to Treatment Outcomes

Outcome Measure	FS		PC		GRD		DL	
	B (SE B)	*B*	*B* (SE B)	*B*	*B* (SE B)	*B*	*B* (SE B)	*B*
Clinician Rated								
ADIS CSR[a]	-0.01 (0.17)	-.01	-0.14 (0.26)	-.08	0.38 (0.28)	.21	-0.001 (0.04)	.00
Child Self-Report								
MASC[b]	0.09 (1.40)	.07	-2.25 (2.03)	-.16	4.78 (2.22)	.33*	0.17 (0.29)	.06
Parent Report								
CBCL-I, mother[c]	0.28 (0.69)	.05	-1.01 (1.06)	-.14	1.67 (1.18)	.23	0.18 (0.14)	.14
CBCL-I, father[d]	-0.06 (0.95)	-.01	-0.47 (1.31)	-.07	0.56 (1.65)	.08	-0.80 (.20)	-.06
CBCL-A, mother[c]	0.41 (0.37)	.13	0.27 (0.57)	.07	0.39 (0.63)	.10	0.00 (.08)	.00
CBCL-A, father[d]	0.26 (0.44)	.10	0.79 (0.60)	.25	0.13 (0.76)	.04	-0.19 (0.10)	-.25

Note. ADIS CSR=Anxiety Disorders Interview Schedule for Children Clinician Severity Rating; MASC=Multidimensional Anxiety Scale for Children; CBCL=Child Behavior Checklist; FS= Feared Situations; PC= Personal Content; GRD= Global Rating of Disclosure; DL= Disclosure Language.
[a]$n=101$; [b]$n=93$; [c]$n=86$; [d]$n=62$
 *$p<.05$

Table 7. Overall Contribution of Models and Individual Contribution of Disclosure Variables to Treatment Outcome

Outcome Measure	R^2	pr^2	f^2
ADIS CSR[a]	.03		.03
FS		-.01	.01
PC		-.08	.08
GRD		.20	.21
DL		.00	.00
MASC[b]	.07		.08
FS		.01	.01
PC		-.12	.13
GRD		.22*	.24
DL		.06	.06
CBCL-I, Mother[c]	.06		.06
FS		.05	.05
PC		-.11	.12
GRD		.16	.17
DL		.14	.15
CBCL-I, Father[d]	.01		.01
FS		-.01	.01
PC		-.05	.05
GRD		.05	.05
DL		-.05	.05
CBCL-A, Mother[c]	.06		.06
FS		.12	.13
PC		.05	.05
GRD		.07	.08
DL		-.01	.01
CBCL-A, Father[d]	.09		.10
FS		.08	.09
PC		.18	.20
GRD		.02	.02
DL		-.24	.26

Note. ADIS CSR=Anxiety Disorders Interview Schedule for Children Clinician Severity Rating; MASC=Multidimensional Anxiety Scale for Children; CBCL=Child Behavior Checklist; FS= Feared Situations; PC= Personal Content; GRD= Global Rating of Disclosure; DL= Disclosure Language.
[a]$n=101$; [b]$n=91$; [c]$n=86$; [d]$n=62$.
$f^2=.01$, .15, and .35 for small, medium, and large effects

variance in CBCL-A change scores as reported by the child's father. The findings for both

models correspond to small effect size estimates. When considered individually, each predictor

had a small effect on Mother reported CBCL-A change scores. FS and GRD had a small effect

on Father reported CBCL-A change scores, whereas PC and DL produced a medium effect size

for Father-reported CBCL-A change scores.

Results from the logistic and multiple regressions did not support the primary

hypotheses that higher pretreatment self-disclosure would predict better treatment response on

the basis of treatment response status, greater change scores in self-reported anxiety, parent-

reported anxiety, and clinician-rated diagnostic severity. That said, among the disclosure

predictors, the results revealed a pattern in which GRD was most frequently the strongest

disclosure predictor in the disclosure model. In fact, among all regression analyses with various

measures of treatment outcome, GRD was the only disclosure predictor that significantly

contributed to the model. This occurred in only one instance when predicting outcomes in child

self-reported anxiety symptom reduction (MASC). Given this pattern of findings, GRD was used

along with DD in the following analysis.

Disclosure X Distress as a Predictor of Treatment Response Status: Logistic Regression

Table 8 presents the results of the logistic regression analysis assessing the contribution

of GRD, DD, and the GRD X DD interaction effect to responder status (i.e. responder versus

nonresponder), while controlling for pretreatment diagnosis. Responder status was defined in the

same way as in the previous analyses. Overall, the initial model using only the constant correctly

classified 64% of children (b_0= .59). Next, the presence/absence of GAD and SP as the youth's

pretreatment principal diagnosis was entered into Block 1 as a categorical covariate and the

model improved significantly χ^2 (2) = 7.40, $p<.05$ and correctly classified 68% of youth into

treatment response group. Finally, GRD, DD, and the GRD X DD interaction were entered into

the equation in Block 2. The addition of disclosure predictors did not significantly improve the

predictive ability of the model χ^2 (5) = 8.63, p=.13. In fact, the addition of the disclosure

variables had virtually no impact at all on the model, with only one more youth being correctly

classified into treatment response group (i.e. 69%). The coefficients for the disclosure variables

were not significantly different from zero, suggesting that none of the disclosure predictors made

a significant contribution to the predictive power of the model. Furthermore, contrary to the

initial hypothesis, not only was the GRD X DD term nonsignificant, it was the weakest among

the predictors in this model of treatment response.

Table 8. Logistic Regression: GRD, DD, GRD X DD as Predictor of Treatment Response

	B (SE)	95% Confidence Interval for Exp *B*		
		Lower	Exp *B*	Upper
Block 1[a]				
Constant	.50 (0.44)		1.66	
PrincGAD	.67 (0.47)	0.77	0.49	4.92
PrincSP	-.71 (0.48)	0.19	1.95	1.25
Block 2[b]				
Constant	-.34 (0.96)		0.71	
PrincGAD	.65 (0.48)	0.75	0.54	4.88
PrincSP	-.62 (0.49)	0.21	1.91	1.39
GRD	.28 (0.32)	0.71	1.32	2.45
DD	.18 (0.28)	0.70	1.20	2.06
GRD X DD	-.04 (0.12)	0.76	0.96	1.21

Note. PrincGAD= Principal diagnosis of Generalized Anxiety Disorder; PrincSP= Principal
diagnosis of Social Phobia; GRD= Global Rating of Disclosure; DD= Distress while Disclosing;
GRD X DD= Interaction effect between Global Rating of Disclosure and Distress while
Disclosing.
[a]R^2 = .08 (Cox & Snell), .10 (Nagelkerke). Model χ^2 (2) = 7.4, p<.05; [b]R^2 = .08 (Cox & Snell),
.11 (Nagelkerke). Model χ^2 (5) = 8.60, p=.13
*p <.05

Part 1: Pre- to Post-Treatment Change in Disclosure and DD for Responders versus Non-

Responders

Preliminary Analyses

Prior to running the secondary analyses, a 2 (assessment point: pretreatment, posttreatment) X 2 (treatment responder status: responder, nonresponder) mixed- design ANOVA was run to compare pre- to post-treatment changes in total number of words spoken (i.e. WC) for responders relative to nonresponders. Assessment point (i.e., Pretreatment, Posttreatment) was entered as the within-subject factor and responder status (i.e., Responder, Nonresponder) was entered as the between subject factor. This analysis was conducted to determine if WC needed to be entered into subsequent analyses as a covariate. Group means were imputed for missing WC scores ($n= 15$).[8] Results from the mixed-design ANOVA indicated a significant main effect for assessment point $F (1, 99) = 4.60$, $p<.05$ such that anxious youth used significantly more words during the YSS at posttreatment relative to pretreatment (See Table 9 for means). A significant main effect was also found for response status, such that on average, responders used significantly more words than nonresponders during the YSS $F (1, 99)= 4.11$, $p< .05$. The interaction between assessment point and responder status was nonsignificant, $F (1, 99) = .004$, $p=.94$; there was no difference between responders and nonresponders in the pre- to post-treatment change in total words spoken in the YSS self-disclosure task. Given that the interaction was not significant, WC was not entered as a covariate in subsequent analyses.[9]

Table 9. Total Number of Words Spoken During YSS for Responders and Nonresponders at Pre
and Post Treatment

Response Status	Pre-Treatment		Post-Treatment		Total	
	M	*SE*	*M*	*SE*	*M*	*SE*
	Word Count (WC)					
Treatment Responder[a]	257.09	18.57	282.98	18.60	270.04$_a$	17.23
Treatment Nonresponder [b]	199.36	24.96	223.68	24.99	211.52$_b$	23.14
Total[c]	228.23$_a$	15.55	253.33$_b$	15.58	240.78	14.42

Note. *M*= Mean number of words spoken during youth speech sample; *SE*= Standard Error of total words spoken.
[a]*n*=65; [b]*n*=37, [c]*N*=101.
Means with different subscripts in the same horizontal and vertical row differ significantly at the *p*<.05 level.

Disclosure (FS, PC, GRD, DL)

A 2 (Assessment Point: Pre, Post) X 2 (Treatment Responder Status: Responder,

Nonresponder) Mixed Design MANOVA was run to compare pre to post changes in disclosure

(i.e. FS, PC, GRD, DL) for Responders relative to Nonresponders. The within-subject factor was

Assessment Point (i.e. Pretreatment, Posttreatment) and the between-subject factor was

Responder Status (i.e. Responder, Nonresponder). MANOVA was used rather than conducting

multiple mixed design ANOVAs in order to account for the inter-correlations among dependent

variables. The mixed-design MANOVA indicated a significant main effect for assessment point

F (1, 99) = 2.42, *p*<.05, such that youth self-disclosure increased significantly from pre- to post-

treatment. Follow-up univariate ANOVAs using a Bonferroni correction resulting in an adjusted

alpha rate of *p*=.01, revealed a significant effect of treatment on PC and GRD, such that all

anxious youth (averaged across responder status) were rated higher on disclosure of PC and

GRD at posttreatment relative to pretreatmnent, F (1, 99) = 7.40, *p*<.01; F (1, 99) = 6.38, *p*<.01.

However, when the change in pre- to post-treatment word count was controlled for, the treatment effect for PC F (1, 99) = 4.90, p=.03 and the treatment effect of GRD were no longer significant F (1, 99) = 3.56, p=.06 using the Bonferroni corrected alpha of .01.

The main effect for responder status was nonsignificant, F (1, 99) =1.69, p=.16, suggesting that when averaged across assessment points responders and nonresponders did not differ in mean disclosure. Finally, the responder status by assessment point interaction effect was nonsignificant, F (1, 99) = 0.27, p=.90 and therefore, the secondary hypotheses were not confirmed.

Distress while Disclosing (DD)

A mixed design ANOVA with assessment point was entered as the within-subject factor (Pretreatment; Posttreatment) and responder status as the between-subject factor (Responder; Nonresponder) was conducted to assess the pre- to post-treatment change in DD for responders relative to nonresponders. The main effect of assessment point was nonsignificant F (1, 99) = .09, p=.77, suggesting that there was no difference in the mean rating of DD at pretreatment versus posttreatment when averaged across responder status. Similarly, the main effect for responder status was nonsignificant, F (1, 99) = 1.19, p=.28, suggesting that when averaged across assessment points responders and nonresponders did not differ in their mean level of distress. Finally, the responder status by assessment point interaction effect was nonsignificant, F (1, 99) = 1.98, p= .16, suggesting that there was no differential change in DD from pre- to post-treatment for responders relative to nonresponders.

In summary, MANOVAs and ANOVAs did not find differential change in disclosure and observed distress respectively, for treatment responders and treatment nonresponders from pre-

to post-treatment and therefore the secondary hypothesis (Part 1) was not confirmed[10] (See Table

10 for means).

   Part 2: Disclosure and DD in AD Youth (Pretreatment) versus Community Volunteers

Preliminary Analyses

   Prior to comparing AD youth ($n=101$) and community volunteers ($n=74$) on disclosure

variables, demographic comparisons were conducted. With regard to demographic variables, AD

youth and community volunteers did not significantly differ with regard to sex, $\chi^2 (1, N= 175) =$

2.12, $p=.15$; age, $t (173) = 1.31$, $p=.19$; race, $\chi^2 (3, N=175) = 0.21$, $p=.98$; or estimated total

household income, $\chi^2 (8, N=175) = 14.12$, $p=.10$. Therefore, there was no need to control for

demographic variables in subsequent analyses. Next, using an independent samples t-test, AD

youth and community volunteers were compared on the total number of words spoken (WC)

(See Table 11); a significant difference was found such that AD youth used significantly fewer

words in the four-minute YSS relative to community volunteers, $t (173) = -2.36$, $p < .05$. Given

this significant finding, WC was entered as a covariate in subsequent analyses in order to control

for its when comparing AD youth and community volunteers.

Disclosure (FS, PC, GRD, DL)

   A between subjects MANCOVA comparing AD youth at pretreatment and community

volunteers was conducted to compare groups on disclosure variables. Group (AD; Community

Volunteer) was entered as the fixed factor, WC was entered as the covariate, and FS, PC, GRD,

and DL were entered as the dependent variables. After controlling for the effect of total WC,

there was no group effect on level of disclosure, $F (1, 172) = 0.48$, $p= .75$. Although community

volunteers spoke more than AD youth, no significant differences in disclosure as measured by

the linear combination of FS, PC, GRD, and DL was observed between groups.

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Table 10. Means and Standard Errors for FS, PC, GRD, DL, and DD by Treatment Response
Status and Assessment Point

Response Status	Pre-Treatment		Post-Treatment		Total	
	M	*SE*	*M*	*SE*	*M*	*SE*
Feared Situations (FS)						
Treatment Responder[a]	1.47	0.20	1.40	0.18	1.44	0.16
Treatment Nonresponder [b]	1.25	0.27	1.32	0.24	1.29	0.22
Total[c]	1.36	0.17	1.36	0.15		
Personal Content (PC)						
Treatment Responder[a]	1.94	0.17	2.50	0.18	2.30	0.16
Treatment Nonresponder [b]	1.64	0.23	1.97	0.25	1.81	0.17
Total[c]	1.79_a	0.15	2.24_b	0.13		
Global Rating of Disclosure (GRD)						
Treatment Responder[a]	2.32	0.17	2.77	0.15	2.55	0.13
Treatment Nonresponder[b]	1.92	0.22	2.21	0.21	2.07	0.18
Total[c]	2.12_a	0.14	2.49_b	0.13		
Disclosure Language (DL)						
Treatment Responder[a]	24.08	0.91	23.98	0.81	24.03	0.78
Treatment Nonresponder [b]	25.60	1.23	24.75	1.09	25.17	1.05
Total[c]	24.84	0.77	24.36	0.68		
Distress While Disclosing (DD)						
Treatment Responder[a]	2.31	0.17	2.04	0.13	2.18	.0.18
Treatment Nonresponder [b]	2.31	0.23	2.48	0.17	2.39	0.16
Total[c]	2.31	0.14	2.26	0.11		

Note. Means in the same row or column for each variable with different subscripts differ
significantly at the *p*<.03 level
[a]*n*=65; [b]*n*=36, [c]*N*=101

Table 11. Mean Number of Words Spoken in AD Youth versus Community Volunteers

	AD[a]		Community Volunteers[b]	
	M	SD	M	SD
WC	236.50$_a$	151.55	292.15$_b$	157.43

Note. AD= Anxiety Disordered; WC= Word Count; M= Mean number of words spoken during youth speech sample; SD= Standard Deviation.
[a]n= 101, [b]n=74
Means with different subscripts are significantly different at the *p<.05* level.

Distress while Disclosing (DD)

An independent ANOVA was conducted to compare AD youth at pretreatment and community volunteers in their level of distress while participating in the YSS task (i.e., DD). A significant difference in DD was observed, $F(1, 172)$= 13.42, *p<.05*, suggesting that AD youth were rated as significantly more distressed during the disclosure task relative to community volunteers.

MANCOVA results did not lend support to the hypothesis that community volunteers would be rated as higher in disclosure than AD youth; however, ANOVA results confirm the hypothesis that AD youth were in fact more distressed during the YSS disclosure task (see Table 12 for means and standard deviations).

Table 12. Mean Disclosure for AD Youth versus Community Volunteers

	AD		Community Volunteers	
	M	SD	M	SD
FS	1.40 a	1.59	1.23 a	1.44
PC	1.83 a	1.40	2.23 a	1.59
GRD	2.18 a	1.34	2.54 a	1.42
DL	24.62 a	7.36	24.76 a	5.74
DD	2.31 a	1.38	1.59 b	1.11

Note. AD=Anxiety Disordered; FS=Feared Situations; PC=Personal Content; GRD= Global Rating of Disclosure; DD= Distress while Disclosing; DL= Disclosure Language. Disclosure ratings for FS, PC, GRD, and DD range from 0 (not at all anxious) to 5 (extremely anxious). DL ranges from 0-44% of total words spoken.
Means with different subscripts are significantly different at the *p<.05* level.

Part 3: Disclosure and DD in Responders and Nonresponders at Posttreatment versus

Community Volunteers

Preliminary Analyses

A one-way analysis of variance (ANOVA) was conducted to compare treatment responders and treatment nonresponders at posttreatment to community volunteers' total posttreatment WC (See Table 13 for means and SDs). Results from the omnibus test were nonsignificant, suggesting that no group differences existed in the total WC, F (2,172) = 2.57, *p=.08.*[11]

Table 13. Mean Number of Words Spoken at Posttreatment: Responders versus Nonresponders versus Community Volunteers

	Treatment Responders		Treatment Nonresponders		Community Volunteers	
	M	SD	M	SD	M	SD
WC[a]	282.98_a	150.93	223.68_a	148.16	292.15_a	157.43

Note. WC= word count (i.e. total number of words spoken during the youth speech sample)
[a] posttreatment data for responders and nonresponders are presented.
Means with same subscripts do not differ. Means with different subscripts are significantly different at the *p*<.05 level

Disclosure (FS, PC, GRD, DL)

A between subjects MANOVA comparing treatment responders, treatment nonresponders, and community volunteers was conducted to compare groups on disclosure variables (See Table 14 for means). Group (Responder; Nonresponder; Community Volunteer) was entered as the fixed factor, and FS, PC, GRD, and DL were entered as the dependent variables. The group effect on level of disclosure was nonsignificant, $F(2, 172) = 0.75$, *p*=.65, suggesting that there was no difference in disclosure between responders and nonresponders at posttreatment, and community volunteers.

Distress while Disclosing (DD)

ANOVA was run to compare treatment responders, treatment nonresponders, and community volunteers in DD at posttreatment. A significant group difference in mean DD was found, $F(2, 172)= 8.94$, *p*< .05. Follow-up pairwise comparisons using a Bonferroni correction with an adjusted alpha of *p*=.02 indicated that both responders and nonresponders were rated as higher on DD at posttreatment relative to community volunteers (mean difference= -0.45, p<.02 and -.88, p<.02 respectively). Responders and nonresponders did not differ in DD at posttreatment (mean difference= -.43, *p*=.15). See Table 14 for means and standard deviations.

Table 14. Means and SD of Disclosure Variables for Responders, Nonresponders at
          Posttreatment, and Community Volunteers

	Treatment Responder		Treatment Nonresponder		Community Volunteer	
	M	SD	M	SD	M	SD
FS	1.40 $_a$	1.40	1.32 $_a$	1.43	1.22 $_a$	1.45
PC	2.50 $_a$	1.49	1.97 $_a$	1.46	2.23 $_a$	1.59
GRD	2.77 $_a$	1.17	2.21 $_a$	1.32	2.53 $_a$	1.42
DL	23.97 $_a$	6.49	24.75 $_a$	6.61	24.76 $_a$	5.74
DD	2.04$_a$	0.96	2.48$_a$	1.09	1.59$_b$	1.10

Note. FS=Feared Situations; PC=Personal Content; GRD= Global Rating of Disclosure; DD= Distress while Disclosing; DL= Disclosure Language; Disclosure ratings range from 0 (not at all anxious) to 5 (extremely anxious). Disclosure Language ranges from 0-44%.
Means with same subscripts in horizontal rows do not differ. Means with different subscripts are significantly different at the $p<.05$ level

<p style="text-align:center">Analyses of Exploratory Hypotheses</p>

<p style="text-align:center">In-Session Involvement as a Mediator</p>

Given the nonsignificant findings of the primary hypotheses, the exploratory mediational

model could not be examined. Specifically, the disclosure model did not significantly predict

treatment outcomes as measured by diagnostic status, changes in clinician-rated severity, self-

reported anxiety, and parent-rated anxiety. Given these findings, it would be impossible for

therapist ratings of in-session child involvement to mediate the relationship between

pretreatment disclosure and treatment outcomes.

CHAPTER 4

DISCUSSION

The primary goal of this study was to examine a conceptually compelling construct, youth self-disclosure, and operationalize it to assess whether pretreatment disclosure would predict CBT outcomes in anxious youth. Secondary hypotheses examined the differential change in pre- to post-treatment disclosure and distress while disclosing for responders and nonresponders. This study also investigated the differences in disclosure and observed distress while disclosing for AD youth (pretreatment) relative to community volunteers, and disclosure in treatment responders and nonresponders (posttreatment) relative to community volunteers.

Disclosure as a Predictor

Examining variables that may moderate or predict CBT outcome for anxious youth is of undeniable importance in our effort to understand and enhance treatment outcome. Identification of these variables helps explain variations in response to CBT and will likely improve treatment efficacy, leading to more efficient treatment planning and more tailored interventions. Specifically, identifying predictors and moderators of CBT outcome for anxious youth helps unveil particular subgroups for whom CBT is likely to be beneficial as well as those for whom an alternate approach may be preferable. Although predictor and moderator variables are more complex to test than are main effects of treatment, they are crucial for understanding the "whole story" (Kendall, 2006). Self-disclosure is of particular interest given that CBT for anxiety is a short-term focused treatment that requires youths' participation and verbal disclosure in order to appropriately target youth anxiety.

To date, only one other study has examined self-disclosure as a pretreatment predictor variable; Panichelli-Mindel et al. (2005) found that, indeed, more disclosure of distress at

pretreatment predicted better CBT outcomes in youths with anxiety disorders. Findings from the present study do not lend support to the primary hypothesis that higher pretreatment self-disclosure (measured along several dimensions) predicts favorable treatment outcomes. That is, youths' pretreatment disclosure (i.e. FS, PC, GRD, and DL) using a four-minute speech sample did not predict CBT treatment outcomes based on responder status, clinician severity ratings, or parent and child reports of anxiety. Additionally, the global disclosure rating and observed distress while disclosing interaction did not predict treatment outcomes.

The finding that the disclosure model (FS, PC, GRD, and DL) did not predict treatment outcomes for anxious youth suggests that CBT is equally as efficacious for youths across the spectrum of pretreatment disclosure. That is, pretreatment disclosure measured by FS, PC, and GRD on the YSDRS and DL, did not contribute to a better understanding of who did or did not respond to CBT for youth anxiety in this study. Other studies that have examined pretreatment predictors and moderators of CBT outcomes have also been unable to explain the variation in treatment response with demographic variables such as age (e.g. Berman et al., 2000), gender and race/ethnicity (e.g. Berman et al., 2000; Southam-Gerow et al., 2000; and Treadwell et al., 1995), and for diagnostic variables such as pretreatment principal diagnosis (e.g. Berman et al., 2000; Southam-Gerow et al., 2001). Findings from the present study are encouraging for parents of youth who report concern that their child may be resistant to share personal information during the pretreatment assessment and how this may impact treatment. Failure to find empirical support for a significant predictive relationship between pretreatment disclosure and CBT outcomes is inconsistent with the earlier-stated clinician bias that youths who disclose more at pretreatment are better "therapy candidates," and suggests the need for caution when making this intuitively-pleasing assumption. Based on the present findings, the observed variability in

disclosure of FS, PC, GRD, and DL at pretreatment does not meaningfully relate to CBT outcomes.

Another possible explanation for the nonsignificant contribution of the disclosure model to treatment outcomes may, in part, be related to the way in which disclosure was operationalized in the present study. The strengths of the YSDRS in combination with the LIWC data are briefly discussed followed by alternate methodological and measurement approaches that were considered: (1) Panichelli-Mindel et al.'s (2005) definition, (2) total YSDRS score, (3) task instructions, and (4) disclosure in a dyadic paradigm.

The YSDRS has several strengths: two operationally defined codes that capture the richness and subtleties of the open-ended speech sample, including an appreciation for the choice of the topics discussed, the extent to which they are discussed, as well as the depth in which they are discussed (i.e. FS, PC); a global rating of disclosure that captures the impressionistic aspects of disclosure from the perspective of the rater (i.e. GRD); and a separate behavioral counterpart to the disclosure task that measures observed distress while disclosing (i.e. DD). Operational definitions of codes were informed by previous studies utilizing the experimental disclosure manipulation with children (e.g. Reynolds, Brewin, & Saxton 2000; Soliday, Garofalo, & Rogers, 2004); these studies identify personal/emotional topics most frequently discussed in their disclosure condition among youths of similar developmental stage. These codes were employed after rigorous reliability training and have strong inter-rater reliability. The codes were used in combination with a disclosure language variable created from text analyses from the LIWC software, which has greater validity. Nevertheless, other approaches to measuring disclosure as a predictor of outcomes were considered.

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Panichelli-Mindel et al. (2005) Definition

In the one study to date that measured disclosure as a pretreatment predictor of CBT outcomes, disclosure was operationalized by the extent to which the youths' disclosure of symptoms and distress during the ADIS matched the parent ADIS. Such a definition is limited by the use of parent report as the gold-standard in the context of a literature which suggests that parent-child disagreement about symptoms is more the norm than the exception (e.g. Choudhury, Pimentel, & Kendall, 2003; Grills & Ollendick, 2003). Panichelli-Mindel et al.'s definition was not used in the present study because such an approach would have been confined to disclosure of distress related to symptoms and unable to assess the relative contributions of disclosure of FS and PC, which are central to this study. Indeed, there is growing support for the therapeutic benefit of disclosure of positive emotion and experiences in disclosure intervention studies (e.g. Burton & King, 2004), suggesting the importance of measuring both positively and negatively valenced disclosures. In addition, this study captured the multiple facets of the disclosure construct by not only including disclosure of anxiety and personal information, but also a global impressionistic component, a disclosure language component, and a separate behavior observational component, which could not be obtained in Panichelli-Mindel et al.'s definition. Indeed, Panichelli-Mindel et al. called for the need for more studies to assess the quality of youth self-disclosure in order to address the limitations of the definition utilized in their study.

Total YSDRS Score

The YSDRS employs single item codes as predictors. Summing the ratings of each code to create a total score was considered. Summing the scores is premised on the idea that each variable contains some "true" value of the variable in question, as well as some random

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measurement error, and therefore by summing the variables, the measurement error would sum to zero across measurements, thereby improving the reliability of the code and increasing its sensitivity and power. This rationale however, was not applicable to the present study, since each code on the YSDRS is believed to represent a conceptually different dimension of the disclosure construct. Totaling the score would compromise the uniqueness of each indicator and its potential contribution to the model. Therefore, data were treated as separate indicators of disclosure, and entered as single-item predictors in the regression analyses and as multivariate indicators of disclosure in a MANOVA. Indeed, given the conceptual distinction among variables, summing up the scores would not be a reliable indicator of a single underlying dimension (Hill & Lewicki, 2006).

Disclosure Task Instructions

One point that merits further discussion relates to the instructions for the disclosure task. In the present study, task instructions were designed to elicit self-disclosure and provide suggested discussion points for both personal content and feared situations, in addition to more superficial information; this partly left the choice of what to talk about during the YSS to the youth. The decision to use relatively vague instructions was made in order to detect the natural variability in youth self-disclosure. It is possible, however, that the absence of a specific and strong pull for personal information failed to capture a youth's true willingness to self-disclose at pretreatment. Although experimental disclosure paradigms (i.e. disclosure as an intervention) are not the aim of the present study, they provide useful methodological information regarding how best to manipulate/elicit disclosure. A recent meta-analysis including one hundred and forty six randomized controlled trials of experimental disclosure with college-aged-subjects and adults, assessed moderators of outcome (Frattaroli, 2006). They found that, indeed, disclosure

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instructions significantly moderated the psychological benefits of disclosure, such that the presence of directed questions and specific examples, along with instructions regarding topic switching, had overall larger psychological health benefits. It is unclear if youths would show a similar pattern; however, failure to provide youths with specific expectations of the disclosure task (i.e. should youths focus on one topic? Should they switch topics?) might have prevented youths from fully engaging in the YSS task, instead worrying about "not doing it right." This may be particularly true for the disclosure of feared situations (FS), given that 43% of anxious youths did not disclose any anxieties or fears (i.e. 43% of youth rated as "0" on FS) at pretreatment.

Future studies might benefit from a stronger and a more focused disclosure manipulation. One way to do this would be to create two separate disclosure tasks, each with a focused set of instructions and task expectations: one measuring disclosure of distress and anxiety and the other disclosure of personal/emotional information (both positive and negative). Altering the disclosure instructions may disentangle the various facets of disclosure and assess the patterns of differential disclosure as they relate to treatment outcomes.

Disclosure in a Dyadic Paradigm

The present study conceptualizes self-disclosure as an individual-child characteristic and measures it in the relative absence of an interpersonal context (i.e. talking to a video camera). This approach allows for a standardized set of the disclosure task conditions and minimizes the impact of potentially confounding interpersonal factors that may influence disclosure (e.g., females disclose more to females than to males; Buhrmester & Prager, 1995). Indeed, talking to a video camera rather than to another person controls for verbal and nonverbal responses that may encourage or discourage further self-disclosure. This approach also minimizes potential

instrumental functions in a dyadic or group disclosure paradigm, such as youths who may avoid disclosing inadequacies and vulnerabilities, or who may avoid disclosing information for fear of burdening or boring others. The disclosure paradigm in the present study (versus talking to another individual) also minimizes the impact that social desirability and demand characteristics may have on self-disclosure.

Although disclosing to a video camera likely minimizes the interpersonal context in which disclosure occurs, it is important to be mindful that the interpersonal aspect cannot be eliminated. Indeed it is possible that youths are imagining that they are talking to someone. It is also possible that youths' level of disclosure and comfort disclosing may have been affected by their expectation about whether or not someone would watch/listen to their speech sample. The current study did not manipulate whether the youth was told that their YSS would or would not be watched, nor was their expectation of this assessed. In many of the experimental disclosure studies reviewed by Frattaroli (2006), participants turn in their written essays (or tape recorded oral disclosures) to the experimenter at the conclusion of the study. It is unclear whether or not experimenters explain to the participants that that their disclosures will be read/listened to, however it is relatively safe to assume that they do. In fact, in one written disclosure study with adults (Levey-Thors, 2000) participants are given the choice to turn in their writing samples, and 90% handed them in, suggesting an interpersonal drive to written disclosure task, even though it does not occur in the context of a dyadic or group paradigm.

Future studies should instruct youths on whether the YSSs will be watched and ask youths if they *imagined* they were talking to someone, in order to better understand how interpersonal subtleties may or may not impact pretreatment self-disclosure. Finally, it is important to be mindful of the questionable ecological validity of the current paradigm outside of

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the laboratory setting. This is of particular note given that CBT treatment occurs in the context of a therapeutic relationship, and therefore, future research would also benefit from a pretreatment disclosure paradigm that occurs in the context of a dyad.

<p style="text-align:center">Pre- to Post-Treatment Changes in Disclosure and Distress</p>

The results of the secondary analyses did not confirm the hypothesis that disclosure would increase from pre- to post-treatment for responders and remain unchanged for nonresponders. Indeed, there were no differences between responders and nonresponders in pre- to post-treatment changes on all disclosure measures. However, a significant main effect revealed that regardless of treatment response, youths disclosed more personal information at posttreatment relative to pretreatment (i.e. treatment effect on PC)[12]. One possible explanation for this is a practice effect. Youths completing the YSS at posttreatment were doing so for the second time, and therefore, were more familiar with the task expectations. It is possible that youths planned ahead about what they would share, and thus, were more readily able to disclose personal and emotional information during the four-minutes. In addition to a possible practice effect, youths may have felt more compelled to engage in the disclosure task at posttreatment (i.e., greater demand characteristic) relative to pretreatment, given that they recently completed sixteen weeks of CBT in the same clinic. Furthermore, they may also have disclosed more because they had just spent sixteen weeks disclosing personal information to a therapist.

No main effect of time was observed for the other disclosure variables (i.e., FS, GRD, & DL). Of particular interest is the absence of pre-to post-treatment changes in FS, even after completing a CBT program targeting anxiety. This finding is somewhat surprising, given that ,throughout the course of treatment, youths are consistently engaged in a dialogue about the somatic, cognitive, and behavioral components of anxiety, along with completing exposure tasks

targeting their anxieties. Of note is that a disclosure indicating that he/she was fearful of something in the past, but is no longer fearful (e.g. "I used to be scared to sleep alone, but I am not scared anymore") was counted as a FS disclosure; however, the instructions did not explicitly prime for tackled fears and so it is possible that this may, in part, explain the nonsignificant change in disclosure of FS from pre- to post-treatment, particularly for responders. In addition, this finding cannot be explained by a ceiling effect, because at pretreatment, 43% of youths did not disclose any feared situations. There were no differences in the pre- to post-treatment change in distress during the disclosure task for responders relative to non-responders, nor was there a main effect for time or group. This highlights that DD is, in fact, independent of anxiety disorder status.

Although the primary focus of this study was an examination of disclosure quality, significant group differences and time effects for *how much* a youth spoke may be worthy of further investigation. In particular, responders used significantly more words in the YSS than nonresponders (averaged across time points) and youths spoke more at posttreatment than at pretreatment (averaged across responder status). Practice effects may explain the significant increase in words spoken at posstreatment; however, the main effect for responders requires a different explanation. It is possible that youths who speak more in the four minute speech sample, regardless of what they are saying, respond better to treatment. Perhaps these youths are easier to engage and more likely to be involved in treatment, or perhaps they can more easily be redirected to topics in therapy. It is also possible that their chattiness facilitates better therapeutic alliance, which in turn improves outcomes. Further empirical examination of these relationships is necessary before making interpretations.

Disclosure and DD in Community Volunteers versus AD Youth, Responders and Nonresponders

AD youth used significantly fewer words in the four-minute YSS than did community volunteers; however there were no significant differences in the level of disclosure between the two groups as measured by the combination of FS, PC, GRD, or DL. This highlights the distinction between the quality (i.e., ratings of disclosure) and quantity (i.e., total word count) of what youths shared in the four minute speech sample. It is possible that the amount that youths speak may be a more meaningful differential than what they disclose; however, this warrants further investigation before firm conclusions can be drawn. Given this interpretation, alongside the earlier finding regarding responders speaking more during the YSS than nonresponders (averaged across both time points), we might expect that word count (but not YSDRS variables or DL) may be a proxy for anxiety disordered versus community volunteer status. However, this interpretation does not hold when comparing treatment responders, nonresponders, and community volunteers in total word count at posttreattment: there were no significant differences across the three groups in total words spoken.

AD youth were found to be more distressed during the YSS task than community volunteers. This finding is not entirely surprising; however, when considering that DD was independent of type of principal anxiety disorder and severity of anxiety disorder, it suggests that the YSS disclosure task may be differentially anxiety-provoking for anxious youth relative to community volunteers. Furthermore, responders and nonresponders were rated as higher on DD at posttreatment relative to community volunteers, but did not differ from each other. This finding was unexpected for a number of reasons. First, given that both the responders and nonresponders were completing the YSS task for a second time and it was therefore less novel, one would have thought that there would be less distress associated with the task. Second, this

difference in observed distress at posttreatment transcends anxiety disorder status. That is, even treatment responders who no longer met criteria for their principal diagnosis were rated by blind observers as more distressed than community volunteers. Said differently, youth with a present or past anxiety disorder were rated as more distressed at posttreatment relative to community volunteers. One possible explanation for this finding is the fact that community volunteers came to the clinic one time, and therefore did not know clinic personnel and would likely not see staff members again in the future. This may have made them feel more comfortable during the disclosure task relative to responders and nonresponders. Both treatment responders and nonresponders may be more invested creating a positive impression among clinic staff, thereby feeling more distressed during the disclosure task, regardless of their treatment response.

Limitations and Future Directions

Potential limitations merit consideration. First, the present study was a snapshot of youths self-disclosure, which may or may not be a reliable indicator of youth disclosure more generally. Future studies may benefit from also utilizing self-, parent-, and teacher-report questionnaires about the youths' disclosure tendencies outside of the experimental/clinic setting. Second, as discussed earlier, findings are limited by the current operationalization of disclosure, and other methodological approaches merit further consideration. Third, the YSDRS has strong reliability; however, it would benefit from further examination of its validity relative to other disclosure measures. The present study was unable to demonstrate YSDRS's convergent validity with the RCMAS Lie Scale (i.e., correlations were low). It should be noted that this finding could not be explained by a restricted range. However, these low correlations may have been, in part, confounded by the fact that the RCMAS is a child self-report measure, and it is unclear if scores from the RCMAS Lie scale are generalizable beyond the self-report measure itself.

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Correlations between the YSDRS and pretreatment severity were consistent with what was expected (i.e. low correlations). Future studies would benefit from validating the YSDRS using other questionnaire measures designed specifically to measure disclosure. Fourth, although the sample size was relatively large, there was insufficient power to test all possible interactions within the disclosure model and to measure disclosure alongside other potential predictors and moderators (e.g. age/developmental level; gender) Although the present study did not find any age or gender differences in disclosure ratings, the study was underpowered to assess for interactions between these variables, as they relate to outcomes.

Future studies would also benefit from further investigating potential "third variables" (e.g., compliance, personality factors) that disclosure may be related to and/or a larger individual difference variable (or set of variables) that disclosure may be a proxy for. For example, Panichelli-Mindel et al.'s finding that disclosure of distress predicted treatment responses, may have been reflective of a the fact that these youth are more compliant and motivated to please, and therefore more sensitive to the demand characteristics at pretreatment, which was to disclose distress during the ADIS. This may be one way to reconcile the nonsignifcant findings in present study with those of Panichelli-Mindel, given that the YSS task expectations were more open-ended leaving the youth with a less clear sense of how best to satisfy the demand characteristic (i.e. even if the youth was motivated to comply and "do a good job," it may have been less clear what to do). Future studies would benefit from investigating other possibly related individual difference variables such as openness and extroversion as they relate to talkativeness (i.e., total word count), disclosure, and CBT outcomes.

Although the findings of the present study did not confirm the primary hypotheses that the disclosure model would predict treatment CBT outcomes for anxious youth, the conceptual

merit of the disclosure construct, along with other empirical data supporting the value of this construct, suggest the need for additional research before abandoning self-disclosure as a potential predictor. Indeed, had disclosure been identified as a meaningful predictor of outcomes, there would have been value in further examining whether a pretreatment module targeted at fostering disclosure and emotional expression could (a) increase pretreatment self-disclosure and (b) improve overall outcomes. Future studies would also benefit from examining the role of self-disclosure as an in-session process variable. It is possible that disclosure may be more meaningfully related to outcomes, when assessed in the context of a therapeutic relationship.

[1] Hereafter referred to as youth

[2] Note that percentages do not equal 100% because 26 of the 101 AD youth had more than one principal diagnosis at pretreatment (i.e. some diagnoses had equal CSR ratings and thus were considered "co-principal").

[3] Treatment completers and noncompleters did not differ significantly on demographic variables including gender, age, race, and average annual income. Treatment completers and non completers did not differ in type of pretreatment principal diagnosis and severity of pretreatment diagnosis. The only significant difference between these groups was number of diagnoses; an independent sample t-test indicated that noncompleting children had more diagnoses at pretreatment ($M= 4.83$, $SD= 2.04$) than did completers ($M= 3.64$, $SD= 1.74$) $t(99)=2.21$, $p<.05$. Analyses of primary and secondary hypotheses were also conducted for those cases that completed treatment and comparable results were consistently found, therefore intent-to-treat analyses are reported hereafter.

[4] Note that DD was not entered into the initial regression analyses because the effect of interest is the interaction term and there was insufficient power to measure interaction terms for each disclosure variable with DD.

[5] Note that separate MANOVAs were run for the presence/absence of each anxiety disorder in order to account for those youths that had a co-principal diagnosis.

[6] Age was divided into two groups younger (7-10) and older (11-14).

[7] Note that regression analyses were also conducted controlling for total word count (i.e. entering WC as a covariate) and this did not change the pattern of findings.

[8] Note that a mixed design ANOVA analysis was also run deleting missing cases pair-wise and the interaction effect between assessment point and responder status continued to be nonsignificant, $F(1, 84)= 2.4$, $p=.12$. Of note, however, is that the main effect for time and the main effect for responder status was no longer significant $F(1, 84)= 3.40$, $p=.07$; $F(1, 12)=2.4$, $p=.12$

[9] Note that although responders and nonresponders differed in type of pretreatment principal diagnosis, it is not entered as a covariate in the MANOVA analysis given that mean disclosure did not differ across youths with a principal diagnosis of GAD, SAD, and SP $F (1, 99)=0.72$, $p=.73$

[10] No significant differences were found when conducting analyses using the untransformed and transformed FS data. Therefore, for ease of interpretation results using the untransformed data are reported. Mixed-design MANOVA and ANOVAs were also run deleting missing cases pair-wise and the same pattern of results was observed.

[11] Note that the same analysis was conducted deleting pairwise those cases in which WC post data were missing and there were no differences in the findings.

[12] Note that the main effect of treatment on PC just missed significance when compared to the Bonferroni adjusted alpha, so findings should be interpreted somewhat cautiously.

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APPENDIX A

YOUTH SPEECH SAMPLE INSTRUCTIONS

[If POST or FOLLOW-UP add this part: *I know you've done this before, but it's part of my job so bear with me. I have to read these instructions to everybody every time they do this.]*

The experimenter read the following instructions to each youth:

"*Even though we ask a lot of questions, there are important things about you that we may not ask about. So we have the people who come here talk about themselves in front of a video camera for four minutes on their own.*

*You're the _____ (*subject number*) person to do this.*

This paper lists some things you can talk about (hand copy of suggested topics to child)

First you will say your name, age, grade, and school. Then you can talk about any of the topics listed:
- *Things you like most, for example, seasons of the year, sports, TV shows*
- *Tell us things you dislike most*
- *Describe what you like about your best friends*
- *What things or situations you find frightening*
- *Tell us something that is important about you that you think we should know*

I'll leave the sheet for you to look at- if you want to- while you are talking in front of the video camera. You should stand up in this area here and look at the camera during your talk. I'll leave and you can start soon as the door closes. You'll talk about yourself while I am gone. When four minutes are up. I'll come back in and that's how you'll know it is time to stop.

Do you understand the instructions?
Remember you can start as soon as I close the door."

Experimenter 2 starts the video-recorder as soon as the experimenter leaves the room. (If the child stops speaking or sits down, do <u>not</u> provide prompts to continue.

APPENDIX B

YOUTH SELF-DISCLOSURE RATING SCALE (YSDRS)

CODING MANUAL

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This manual provides coders with a guide for coding the four-minute Youth Speech Sample (YSS). The YSS is a task in which an experimenter reads a standardized script (See Appendix A) to each youth, which asks them to talk about themselves in front of a camera. It should be noted that this task is not intended to be an emotional induction and does not specifically instruct youth to disclose emotionally provocative information. The YSS is open-ended and primes youth for a combination of factual and personal information about themselves. The unstructured nature of the task provides youth with the choice about what information about themselves they would like to share. The Youth Self-Disclosure Rating Scale (YSDRS) was designed to capture the variability in content (i.e. does the youth self-disclose intimate and emotional information?) and observed affect while self-disclosing.

The YSDRS is comprised of 4 codes measuring youth self-disclosure. Three of these codes assess the quality of disclosure defined by the number of instances in which a youth reveals and elaborates on Personal Content (PC) and Frightening Situations (FS), as well as an overall Global Rating of Disclosure (GRD) (i.e. observer impression of how well he/she got to know the youth after the YSS). Additionally, raters appraise the youth's Distress while Disclosing (DD) (i.e. observed distress during disclosure task). The measurement of disclosure may be useful in a clinical setting to gauge a youth's willingness and comfort with sharing personal information and may also serve as a predictor of treatment outcome.

General Scoring Instructions for Coders

1. As you read the transcript, underline topic areas classified as "Frightening" and "Personal" disclosures using a separate color to differentiate them. Marking the transcript will help count the occurrences of each type of disclosure, achieve reliability and help resolve discrepant ratings.

2. Become familiar with the scale and anchors for each code, but *always* have the coding manual with code definitions in front of you as you code.

3. Avoid "halo effects." A halo effect refers to a situation in which a rater provides a rating that is biased by a "global impression." For example, if a youth is extremely talkative or likeable, this does not necessarily mean that that they deserve a high rating on Personal Content (i.e. youth could be talking about a professional sports team the entire time!) Similarly, a youth who displays high levels of discomfort with the self-disclosure task may still disclose high levels of Personal Content.

4. Ratings should remain independent of verbal sophistication (i.e. ratings of Personal Content and Frightening Situations should not be biased by youth verbal level). For

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example, a youth who states that he is "scared" of dogs versus "scared" of unleashed canines would not be scored differentially based on their language choice.

5. Record final ratings on the YSDRS Scoring sheet, by clearly circling the appropriate score.

(1) Does the youth share and elaborate on situations that are frightening to him/her?
Key Words: *Frightening Situations (FS)*

The youth reveals and expands on information related to situations that make him/her anxious, nervous, scared, fearful and/or worried. To avoid making assumptions or relying on impressions, only code those instances in which the youth states that a situation is frightening. For example, if a youth says "*I don't like when I have to take a spelling test and I am not prepared*" or "*I don't like being alone in the dark at night,*" these should *not* be coded as disclosures of FS, since the youth does not explicitly state he/she finds these situations frightening. If a youth states "*I get worried when I have to take a spelling test and I am not prepared*" or "*I don't like being alone in the dark at night, cause it makes me scared*" – these variations would be considered instances of self-disclosures of FS, because there is no leap of faith on the part of the coder.

Ratings require the consideration of **how many** fears (i.e. anxieties, worries etc …) the youth discloses and **what he/she says about the fear (i.e. instances of elaboration)**. Youth who disclose many feared situations or elaborate a lot on one or more situations would get the highest rating. An instance of elaboration is marked by the presence of the following:

1. Youth adds **detail** or a more in depth description of the fear (e.g. *I am scared of going to the basement <u>because it's really dark. We only have one small light down there</u>*")

2. Youth qualifies fear by articulating **feared consequence** (e.g. "*I am scared about being alone in my room at night, <u>cause someone might take me</u>*")

3. Youth describes his/her **response or reaction** to feared situation (e.g. "*When I get scared at night, <u>I run to my parents room</u> …*")

4. Youth provides a specific **example** or anecdote to explain feared situation (e.g. *"I'm scared of going downstairs to the basement … <u>one time, I went down and I heard a scary noise and got totally freaked out!</u>"*)

A given statement can only be counted as one instance of elaboration. If a youth provides two different types of elaborations in separate statements (e.g. detail and feared consequence) for the same situation this would be counted as two instances. If the youth provides one elaboration on various frightening situations, each instance of elaboration should be counted. A youth

should be given the highest rating he/she earns, whether it is based on # of frightening situations mentioned or # of instances of elaboration (see anchors).

Very much (5):	Five or more frightening situations **OR** four or more instances of elaboration.
A lot (4):	Four frightening situations **OR** three instances of elaboration
Moderately (3):	Three frightening situations **OR** two instances of elaboration
Somewhat (2):	Two frightening situations **OR** one instance of elaboration
A Little (1):	One frightening situation, but has no instances of elaboration (e.g. *"I am scared of the dark"*)
Not at all (0):	Zero frightening situations and no instances of elaboration

Examples of YSS with FS ratings are provided in the next several pages.
- Light grey highlight indicates frightening situation
- Dark grey highlight indicates each instance of an elaboration

Example 1:
Hi. I'm Maura, and I'm ten years old. I'm in fourth grade, and I go to Highland Elementary School. I like to play basketball, baseball a little bit, and I like to do gymnastics a lot. I'm well, I, what do I want to say? I'm on a gymnastics team, and I'm not on a basketball team yet, but I'm going to be. My best friend's name is Claire. And I also have really good friends: Jacqueline H, Jenna M, and my sister I like. She's fun. My favorite TV show is probably Sister, Sister. On channel 98, Disney channel. I, I like, well in music I like Avril Lavigne. My favorite song is skater boy. I, let's see.., oh … my favorite food, oh gosh! My favorite food is spaghetti and meatballs. I eat it so much. I'm like at the stores, I'm like, "Give me spaghetti!" But I don't like string beans and not that kind of stuff, like healthy stuff, but I eat it. My favorite season is probably summer, because I like to swim in the ocean and it's hot. And I'd rather be hot than cold and stuff. I also like Fall because, well I like Fall because it's nice out and I like to see the leaves fall and change different colors. My favorite color is blue. And, let's see. . . I like, let's see. Oh, I like to go to the mall a lot. I like to pick out new clothes and earrings, and stuff like that. I get, I get like, let's see. Actually, one thing that I really don't like is to clean up. I hate cleaning up my room because my room is always a mess. It's like walk in and be like, Oh my God, like how do I start. I also like to skate and ride my bike with my friend, and my sister. I taught my sister two days ago how to skate, that's pretty cool. And I also like to ice skate. Ice skating is one of my hobbies actually. So, well, let's see. Actually another good show I like on TV is Sponge Bob, I love Sponge bob. Well, actually, one of my favorite foods is spaghetti, but I also like, I also like Chinese food a lot.

# of Fears: 0
Elaborations: 0
Not at all (0): Zero frightening situations and no instances of elaboration

Example 2:
My name is Sean. I am ten years old. I'm in, I'm in grade four, and I go to Prospect Parks School. I go to Prospect Parks School. Prospect Parks School. like to play video games. I really like the one company that makes video games that's called Namco. That's cool. I got this one video game called Sword Caliber 2-- I like that game a lot. Sports, I really like bowling, it's on of my favorites. Shows, sometimes I don't watch all kinds of shows. I'll watch some cartoons, not all the time but I'll watch cartoons mostly a lot of times, but not a lot. I do watch things that are appropriate like. I like movies. Movies are cool, and good movies. . . I, I do not like certain kinds of stuff, like people who pick on me, or people who are mean, or destructive. I like, I like to be alone a lot. I can tell you that much. I like to do a lot of stuff alone. I play action figures that I like a lot alone. I do play video games. Like I said earlier, I play my game boy a lot. I've been doing that lately for some reason. Well I have a couple friends, not a lot of friends, mostly. His name is, well, I don't really want to say, but he's a good guy, and we have fun. It's cool. Everything's fine. This are, ==things that I find frightening: I don't like to be left alone for a long time==. I'm never, I'm just quiet. I'm very good, and I don't lie that much. Sometimes, but not a lot. My dad doesn't think I lie. He says one thing about this boy is that I don't lie that much. And I don't, some quiet, very. I like to do things. I feel like I'm weird. I don't feel right. I just think all this is kind of silly. I want this gone. I really feel like. I like to play board games and stuff, and other things. Find me, find a, I think that are amusing. I like to be creative. I like, I want to be, like a film maker. And do a lot of fun things. I think I like to draw, and make my own comic. And write a book. And do a talk show with, on the radio. Like I was thinking of that. I've very creative with like stuff I can build with. And I've always liked that stuff for some reason. And I'm really
good with my head. I mean I can think really well. I'm very good with that, yeah. I think.

> # of Fears: 1
> # Elaborations: 0
> **A Little (1):** One frightening situation, but has no instances of elaboration

Example 3:
Alright. Well. The things that I like for example are are say I like the year January because it's my birthdays and it's the beginning of the year. And my favorite sport is basketball cause you really, like, you can get to use your arms and your legs a lot. My favorite TV show is … Even Steven which is on Disney channel and and that's it. And for second thing the things that I don't like I don't like… what do I don't like. Alright I don't like uh I I don't like… alright sorry I don't know but this is really hard the things I don't like… Well for one thing I don't like seeing kids being put down, I don't like scary movies I don't like bad things and that's it. A thing that I like about my friends, are that they stick up for me they don't say bad things about me. They're really nice, they make up good jokes. We play at recess together. Sometimes they do say things that kinda make me upset, but I know they're joking plus they say they're joking and other than that we're we're best friends. The thing about the thing about me that is important is that I care about myself, like I protect myself I I like who I am I like being Tommy H and that's it….Oh I'm sorry I forgot to tell you what things that I think are frightening well like I mentioned earlier is that the ==things that I find frightening are scary movies.. seeing bad things happen to grown ups other kids== and that's it . Sorry about messing that up…

> # of Fears: 2
> # Elaborations: 0
> **Somewhat (2):** Two frightening situations **OR** one instance of elaboration

Example 4

My name is Alexis. My age is eight. My, I go to Bingham School and I am in second grade
… My favorite TV show is Rocket Power. I don't like to be mean to other children. My best friend is Abigail and she would never she would never not be my friend anymore. And, Um, frightening, I'm scared um that robbers might break into my house. Um, I like to, I like to play school and house. Um, my favorite sport is cheerleading. Um, I'm scared that someone might break into my house at night and I'll get stolen. My favorite season is summer. I like to go to the park and I like to go the park and I like to ride bikes. Um, my best friend Abigail she would never walk away from me and she will always be my best friend. Um, usually I don't like my mom and dad to shut their door at night cause sometimes I get scared that they wont hear me if a robber is coming in. I don't like to eat rice. I'm allergic to peanut butter.

> # of Fears: 1
> # Elaborations: 2
> Based on # of fears rating would be (1) or (2), based on # of elaborations rating would be (3)→ 3>2
> **Moderately (3):**   Three frightening situations **OR** two instances of elaboration

Example 5

I'm at Sugertal Elementary School. My favorite sport is gymnastics and my favorite tv show is…Seinfeld and the Simpson's and Supermarket Sweep. Things I dislike are having to clean up the kitchen, eating Brussels sprouts and feeding my dog. I like best about my best friends is that I can go places with them and go to their birthday parties. I find staying in my room with the light off frightening and when I get really really high on something I find it very frightening. I think you should know that I don't really know but I don't know…oh and I also like…just being friends with my best friends and I like eating over at their house and a lot of things. Oh and also dislike having to clean up the dog poop even though that's a little funny. And my, my two favorite seasons are summer and winter. Oh and another situations that is frightening to me is when I hear the-the smoke detector go off, and when I walk into a room and I'm in- the room all by myself…and its frightening hear very spooky sounds when Im in the room alone that I don't know what it is and another one of my favorite sports in baseball, football, soccer…

> # of Fears: 4
> # Elaborations: 1
> Based on # of fears rating would be (4), based on # of elaborations rating would be (2)→ 4>2
> **A lot (4):** Four frightening situations **OR** three instances of elaboration

Example 6

My name is John, I'm in 6th grade. I go to St. Paul's School. I'm 12 years old, and the things I like most are all the seasons of the year. My favorite is summer I guess because I guess I'm away from school. The sports I like best are baseball and Ti Kwan Do and things I dislike the most are.. I'm really not sure. What I like about my best friends, I guess, is that they are funny and we do stuff together. Some things or situations that I find frightening are I guess is one is being alone when the power is out in the dark or something. Something else I find frightening is being in the woods alone or being lost or something or... Another situation I find frightening is being on a scary ride I guess in an amusement park or something or almost drowning in a pool or a lake or a stream or something. Back to the dark, it gets even scarier when I hear noises in the dark, that sorta frightens me. I dislike my neighborhood because all the other kids around there are pretty mean and they…I like to watch wrestling on, well WWF wrestling..

> # of Fears: 5
> # Elaborations: 1
> Based on # of fears rating would be (5), based on # of elaborations rating would be (2)→ 5>2
> **Very much (5):**   Five or more frightening situations **OR** four or more instances of elaboration.

(2) Does the youth reveal or elaborate on personal content?
Key Words: *Personal Content (PC)*

   Youth shares personal thoughts, feelings, attitudes, impressions about him/herself rather than listing superficial facts. Examples of personal topics (i.e. Personal Content) are provided below and are those topics discussed by youth ages 8-13 who were instructed to self-disclose about meaningful and emotional topics in a written-disclosure intervention, relative to the neutral condition (Reynolds, Brewin, & Saxton, 2000). These topics have been adapted for to current study include positively valenced content areas.

Personal Content includes, but is not restricted to:

- Friendships (falling outs with friends, quality of friendships, descriptions of best friends)
- Family (relationship with mother, father, siblings, divorce, arguments)
- Unfair situations/ Bullying/Teasing
- Illness
- School/Tests/Exams
- Loyalty (and uncertainties about loyalty)
- Self-esteem/ self-statements (e.g. "I'm nice" or "I like who I am!")

Personal Content DOES NOT include:

- **Disclosures related to anxiety provoking situations**. Although this may be an intimate disclosure, this will be captured in Code #1 (FS). The purpose of keeping these content areas separate is to ensure independence of codes, allowing for the analysis of the unique contribution of the elaboration on anxiety-provoking information and other intimate content to the variance in treatment outcome.
- **Favorite (or least favorite**) seasons, hobbies, foods, or TV shows.
- **Informational facts** like the names (e.g. school, best friend, cousin, pet) or birthday.
- **Activities** (i.e. sports or extra-curricular, or shared activities with friends)

  Note, however, that the context must be considered, because subtle differences can determine whether something should be coded as an instance of personal content. For example if a youth says *"I hate broccoli"* or *"I don't like spinach,"* these are not coded as personal. But, if a youth says *"I don't like when my mom makes me eat fish and vegetables*," this is an instance of personal content, since it has to do with the youth's relationship with his mother and/or an unfair situations. If a youth says "*My best friend is Samantha*" this is not coded as a personal content,

but if a child says *"I like my best friend because she is so nice to me,"* it is, because it speaks to the quality of the friendship. While some topics may be judged as inherently personal (e.g. death, divorce), a youth can add meaning to any topic making it a disclosure of personal content.

Personal Content **statements** and/or **elaborations** are counted <u>**each time**</u> any one of the following is mentioned **AS IT PERTAINS to** an aforementioned **PERSONAL CONTENT DOMAIN**:

1. Youth adds **detail** or a more in-depth **description** of PC (e.g. *"I like my best friend because she sticks up for me.")*

2. Youth describes his/her **response or reaction (action or feeling)** related PC (e.g. *"My brother makes me want to scream sometimes"* OR *"I get really sad when the kids walk away from me"* OR *"I love my family")*

3. Youth provides a specific **example** or **anecdote** to describe PC (e.g. *Sometimes at recess, when the kids walk away from me, I get really upset!)*

4. Youth provides **inner thoughts** about self or other (e.g. *"I don't like when the kids are mean"* OR *"I wish he was nicer to me!"*)

Ratings capture the extent to which the youth reveals and/or expands on PC, by counting each PC statement. For example *"I like my best friends because they are nice to me they're always there to talk to me, and we can talk about anything!"* would count as 3 statements that contain PC. Statements can pertain to various personal content domains or be elaborations on one content domain. If the youth makes two statements that are the same (i.e. repeats the same statement or makes two statements with the same gist) they should be counted as two statements.

Very much (5):	Seven or more statements containing personal content
A lot (4):	Six statements that containing personal content
Moderately (3):	Four or Five statements containing personal content
Somewhat (2):	Two or Three statements containing personal content
A Little (1):	One statement containing personal content
Not at all (0):	Zero statements containing personal content (no personal content)

Examples of YSS with PC ratings are provided in the next several pages.
- Light grey highlight indicate *statements* of PC

Example 1:
I'm at Sugertal Elementary School. My favorite sport is gymnastics and my favorite tv show is…Seinfeld and the Simpson's and Supermarket Sweep. Things I dislike are having to clean up the kitchen, eating Brussels sprouts and feeding my dog. I like best about my best friends is that I can go places with them and go to their birthday parties. I find staying in my room with the light off frightening and when I get really really high on something I find it very frightening. I think you should know that I don't really know but I don't know…oh and I also like…just being friends with my best friends and I like eating over at their house and a lot of things. Oh and also dislike having to clean up the dog poop even though that's a little funny. And my, my two favorite seasons are summer and winter. Oh and another situations that is frightening to me is when I hear the-the smoke detector go off, and when I walked into a roo-and I'm in- when I'm in a room all by myself…and its frightening to me when I hear very spooky sounds that I don't know what it is and another one of my favorite sports in baseball, football,

> # of PC statements: 0
>
> **Not at all (0):** Zero statements containing personal content (no personal content)

Example 2
My name is John, I'm in 6th grade. I go to St. Paul's School. I'm 12 years old, and the things I like most are all the seasons of the year. My favorite is summer I guess because I guess I'm away from school. The sports I like best are baseball and Ti Kwan Do and things I dislike the most are.. I'm really not sure. What I like about my best friends, I guess, is that they are funny and we do stuff together. Some things or situations that I find frightening are I guess is one is being alone when the power is out in the dark or something. Something else I find frightening is being in the woods alone or being lost or something or... Another situation I find frightening is being on a scary ride I guess in an amusement park or something or almost drowning in a pool or a lake or a stream or something. Back to the dark, it gets even scarier when I hear noises in the dark, that sorta frightens me. I dislike my neighborhood because all the other kids around there are pretty mean and they…I like to watch wrestling on, well WWF wrestling..

> # of PC statements: 2
>
> **Somewhat (2):** Two or Three statements containing personal content

Example 3

My name is Alexis. My age is eight. My, I go to Bingham School and I am in second grade … My favorite TV show is Rocket Power. I don't like to be mean to other children. My best friend is Abigail and she would never she would never not be my friend anymore. And, Um, frightening, I'm scared um that robbers might break into my house. Um, I like to, I like to play school and house. Um, my favorite sport is cheerleading. Um, I'm scared that someone might break into my house at night and I'll get stolen. My favorite season is summer. I like to go to the park and I like to go the park and I like to ride bikes. Um, my best friend Abigail she would never walk away from me and she will always be my best friend. Um, usually I don't like my mom and dad to shut their door at night cause

sometimes I get scared that they wont hear me if a robber is coming in. I don't like to eat rice. I'm allergic to peanut butter.

# of PC statements: 4

Moderately (3):   Four or Five statements containing personal content

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Example 4
My name is Molly I am thirteen, I'm in seventh I just finished seventh grade and I go to St. Dennims. like to play the piano. I like dancing. I like to watch TV. I like going on computers, talking with friends, hanging out with my friends, and going to school. Things I don't like, like, is going on big rides or roller-coasters, big shots, being near dogs especially big ones, doing homework, being hot in hot weather. What I like most about my ==friends is they're they're really nice and funny.== I have some of them that are ==really good at making me feel better when I'm angry or sad, they accept me.== Not too much else I like that's really important …Key situation, what situations are frightening to me are being in the dark alone at night with the thunderstorm, having to talk in front of the class, big tests, going on I mean going on rollercoaster's or big rides at amusement parks. Something important about me would be that ==I am shy but very responsible. I get sad cause I lost my dad about eleven years ago== and ==it's really hard because everybody else because everybody else has a dad and I don't.== That's pretty much it, What I really don't like is getting my ID picture taken ==I do not like that because I don't like the way I look==

# of PC statements: 7

Very much (5): Child makes **seven or more statements** that contain **personal content**

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(3) How well do you feel got to know the youth after watching the four-minute YSS

Key Words: *Global Rating of Disclosure (GRD)*

This rating is a global rating of disclosure in which the rater gives his/her impression of how well he "got to know" the youth, based on the information he/she shared. "Getting to know" the youth will depend on how much information the youth revealed in the four minutes, the nature of the information shared (i.e. superficial facts vs. personal information), and how it was conveyed. Unlike the PC and FS, this code is not a frequency count, but rather a rating based the rater's overall impression of the youth. For this reason, the anchors are purposefully left vaguer.

Very much (5):	Got to know the youth very much (youth shared a lot of information about him/herself making you feel like you got know him/her very well)
A lot (4):	Got to know the youth a lot
Moderately (3):	Got to know the youth a moderate amount
Somewhat (2):	Sort-of got to know the youth (youth revealed some personal information)
A Little (1):	Got to know the youth a little bit
Not at all (0):	Did not get to know this youth at all (youth barely spoke or spoke about superficial facts)

(4) Does the youth appear distressed during the disclosure task?

Key Words: *Distress Disclosing (DD)*

This code is based on behavior observations of youth during the self-disclosure task. Youth's body language and tone of voice suggests that he/she is uneasy and anxious with the self-disclosure task. This code has been adapted from the Global Rating of Overall Anxiety used in Kendall (1994). Raters should score this code independently from the content of the transcript. Raters should look at the youth's movement, sweating, screaming, crying, shaking, and quiet or trembling voice as indicators of distress. Rater should remember that task avoidance *may* be a sign of anxiety and distress (i.e. youth does not talk).

Very much (5):	Youth appears very distressed displaying high levels of stereotypic motor responses, sweating, screaming, crying, rigidity, or task avoidance (i.e. stop talking)
A great deal (4):	Youth appears to be a great deal distressed
Moderately (3):	Youth appears to be moderately distressed, but still in control of his/her behavior.
Somewhat (2):	Youth appears somewhat/slightly distressed
A Little (1):	Youth appears a little distressed
Not at all (0):	Youth does not appear distressed at all. No muscle tension, no stereotypic motor movement, no screaming, no crying, no trembling, no sweating, no voice tremble, and appears relaxed

YOUTH SELF-DISCLOSURE RATING SCALE (YSDRS)
CODING SHEET

Subject #:   _____

DVD #/Part#:   _____

Rater Initials: _____

Date Rated: _____

Please clearly indicate your rating by circling one number for each scale.

1) Does the youth share and elaborate on situations that are frightening to him/her?

Very much (5):	Five or more frightening situations **OR** four or more instances of elaboration.
A lot (4):	Four frightening situations **OR** three instances of elaboration
Moderately (3):	Three frightening situations **OR** two instances of elaboration
Somewhat (2):	Two frightening situations **OR** one instance of elaboration
A Little (1):	One frightening situation, but has no instances of elaboration (e.g. *"I am scared of the dark"*)
Not at all (0):	Zero frightening situations and no instances of elaboration

2) Does the youth reveal or elaborate on personal content?

Very much (5):	Seven or more statements containing personal content
A lot (4):	Six statements that containing personal content
Moderately (3):	Four or Five statements containing personal content
Somewhat (2):	Two or Three statements containing personal content
A Little (1):	One statement containing personal content
Not at all (0):	Zero statements containing personal content (no personal content)

3) How well do you feel got to know the youth after watching the four-minute YSS?

Very much (5):	Got to know the youth very much (youth shared a lot of information about him/herself making you feel like you got know him/her very well)
A lot (4):	Got to know the youth a lot
Moderately (3):	Got to know the youth a moderate amount
Somewhat (2):	Sort-of got to know the youth (youth revealed some personal information)
A Little (1):	Got to know the youth a little bit
Not at all (0):	Did not get to know this youth at all (youth barely spoke or spoke about superficial facts)

4) Does the youth appear distressed during the disclosure task?

Very much (5):	Youth appears very distressed displaying high levels of stereotypic motor responses, sweating, screaming, crying, rigidity, or task avoidance (i.e. stop talking)
A great deal (4):	Youth appears to be a great deal distressed
Moderately (3):	Youth appears to be moderately distressed, but still in control of his/her behavior.
Somewhat (2):	Youth appears somewhat/slightly distressed
A Little (1):	Youth appears a little distressed
Not at all (0):	Youth does not appear distressed at all. No muscle tension, no stereotypic motor movement, no screaming, no crying, no trembling, no sweating, no voice tremble, and appears relaxed