

RELATIONS AMONG SYMPTOM SEVERITY, COPING, AND PARENTING IN
DEPRESSED AND NON-DEPRESSED PARENTS

By

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CHAPTER I

INTRODUCTION

In adults, the population incidence of depressive disorders in a given year is 9.5% (Kessler, Chiu, Demler, Merikangas, & Walters, 2005); lifetime prevalence rates are about 18% (Kessler, Berglund, et al., 2005), with the highest rates in women during the years they are bearing and raising children (Heneghan, Silver, Bauman, Westbrook, & Stein, 1998; Kessler, 2003). These high rates are especially concerning because offspring of depressed parents are at greater risk of developing depression and other psychiatric disorders, cognitive and medical difficulties, and impaired academic and social functioning compared to offspring of nondepressed parents (Beardslee, Versage, & Gladstone, 1998; Goodman & Gotlib, 1999; Kramer et al., 1998; Lieb, Isensee, Hofler, Pfister, & Wittchen, 2002).

One mechanism hypothesized to underlie the transmission of depression from parents to children is impaired parenting (Goodman, 2007; Goodman & Gotlib, 1999). Depressed parents are generally less warm, accepting, and aware of their child's activities and tend to be more irritable, hostile, psychologically controlling, neglectful, and disengaged (Cummings, Keller, & Davies, 2005; Gelfand & Teti, 1990; Herr, Hammen, & Brennan, 2007; Lovejoy, Graczyk, O'Hare, & Neuman, 2000). Lower parenting quality has been shown to partially mediate the relation between parental depression and negative child outcomes (Hilsman, 2001; Kam, 2001; McCarty & McMahon, 2003; Snyder, 1991). Thus, parenting is an important target for interventions that aim to prevent negative outcomes in offspring of depressed parents (Compas et al., 2010; Garber, 2006).

Despite the clear link between depression and parenting difficulties, little is known about the mechanisms that underlie this relation (Dix & Meunier, 2009). In the general population, quality of parenting has been associated with parents' characteristics (e.g. personality, well-being), characteristics of the child (e.g., temperament), contextual sources of stress and support (Belsky, 1984), activation, engagement, and regulation of affective processes (Dix, 1991), optimism (Brody et al., 1994), perceived control (Bugental, Blue, & Cruzcosa, 1989), and the strategies parents use to cope with stress (Bynum & Brody, 2005; Levy-Shiff, Dimitrovsky, Shulman, & Har-Even, 1998; Meichenbaum & Fitzpatrick, 1993; Mondell & Tyler, 1981; Seng & Prinz, 2008; Tein, Sandler, & Zautra, 2000). The extent to which these correlates of parenting quality are affected by parental depression, and thus, might mediate the relation between depression and impaired parenting needs to further study.

Depressed individuals show clear deficits in adaptive coping (see Christensen & Kessing, 2005 for a review). Coping strategies are potentially modifiable, however, and therefore may be a particularly good target of interventions aimed at changing parents' behaviors (Compas et al., 2010; Gillham et al., 2006). One purpose of the present study was to explore whether parents' coping partially mediated the link between their depression and lower quality parenting behavior.

Coping

Coping has been defined as “conscious volitional efforts to regulate emotion, cognition, behavior, physiology, and the environment in response to stressful events or circumstances” (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001). Connor-Smith, Compas, Wadsworth, Thomsen, and Saltzman (2000) proposed a model of responses to stress that includes both voluntary and involuntary actions. Although coping responses have some

continuity and stability over time, in part due to individual characteristics such as temperament and personality (Compas, Connor-Smith, & Jaser, 2004), coping generally is regarded as a process, rather than a trait, and can be influenced by the context in which the stressors occur (Lazarus & Folkman, 1984; Wadsworth & Berger, 2006).

Voluntary coping responses can be further categorized as either engagement with or disengagement from a stressful life event and one's emotional reactions to that event (Compas et al., 2001; Connor-Smith et al., 2000). Confirmatory factor analyses have revealed a model of coping that includes three distinct responses to stress. Primary control engagement coping involves attempts to directly change the situation or one's emotional reactions to it (e.g., problem solving, emotional expression); secondary control engagement coping is comprised of attempts to adapt to the situation by regulating attention and cognitions (e.g., acceptance, cognitive restructuring, positive thinking, distraction); and disengagement coping involves withdrawing from the source of stress and one's emotions (e.g., avoidance, denial, wishful thinking). Coping strategies that involve engagement with the stressor or one's emotional reaction to the stressor (primary and secondary control coping, respectively) are associated with better outcomes, whereas strategies that involve disengagement from the stressor are associated with more symptoms and lower competence (Compas et al., 2001). Using this framework, the present study investigated the relation of primary control, secondary control, and disengagement coping to parenting quality among depressed and nondepressed parents.

Coping and parenting. Coping has been linked to various aspects of parenting behaviors in parents of infants (Levy-Shiff et al., 1998), children (Tein et al., 2000), and adolescents (Bynum & Brody, 2005). In a review, Seng and Prinz (2008) concluded that, "when parents do not have the...coping skills to deal with ongoing or fluctuating daily stress, they are less able to

deal with the additional stress of child rearing” (p. 171). Use of more adaptive coping strategies, such as active and activity-focused coping, is associated with greater parental warmth (Tein et al., 2000), more positive feelings toward their child, treating the child as more capable and resourceful, being more helpful to the child (Mondell & Tyler, 1981), more positive parent-child relationship quality, more consistent discipline (Bynum & Brody, 2005), an authoritative parenting style (Meichenbaum & Fitzpatrick, 1993), and higher observer ratings of parental efficacy (Levy-Shiff et al., 1998). In contrast, greater use of avoidant and emotion-focused coping strategies by parents is associated with less affiliative and caretaking behaviors with infants and less consistent discipline with children and adolescents (Levy-Shiff et al., 1998; Tein et al., 2000). The present study examined the link between coping behaviors and parenting in depressed and nondepressed parents.

Coping and depression. Higher levels of depressive symptoms in adults are associated with more emotion-focused coping (Billings & Moos, 1984; Endler & Parker, 1990; Ravindran, Matheson, Griffiths, Merali, & Anisman, 2002), ineffective escapism (Rohde, Lewinsohn, Tilson, & Seeley, 1990), avoidance (Dekker & Ormel, 1999), catastrophizing, rumination, and self-blame, and less positive reappraisal (Garnefski, Legerstee, Kraaij, Van Den Kommer, & Teerds, 2002). In a sample of low-income parents, Wadsworth, Raviv, Compas, and Connor-Smith (2005) found that higher levels of depression were connected with less primary and secondary control coping and more disengagement coping in response to economic strain. A central aim of the present study was to examine depressed parents’ reported responses to stress, and whether their responses were related to their parenting behavior and the quality of their relationship with their children.

Remission of Depressive Symptoms

Fortunately, depression in adults is treatable (Dimidjian et al., 2006; Hollon, Thase, & Markowitz, 2002; Weissman, Markowitz, & Klerman, 2000). In general, about 60% to 70% of depressed patients show a reduction in symptoms and impairment with treatment (Hollon et al., 2002). Thus, although parental depression is associated with a range of problems in themselves and their children, depression can be reduced successfully. A second aim of the current study was to explore what happens to parenting and coping when depressed parents remit from a depressive episode.

Changes in parenting. Results of studies examining whether improvement in parental depression is associated with increased parenting quality have been mixed. Some studies have found that when depressed parents' symptoms remit, they show significant improvements in infant-directed speech (Kaplan, Bachorowski, Smoski, & Zinser, 2001), are significantly more positive and competent at feeding their infant (Campbell, Cohn, & Meyers, 1995), and make significantly more noninstrumental approaches toward their infant (Fleming, Klein, & Corter, 1992). Other studies, however, have found that even after their symptoms improve, mothers who have been depressed continue to have less positive interactions with their infants (Weinberg & Tronick, 1998), exhibit poorer behavior management skills (Murray, Cooper, Wilson, & Romaniuk, 2003), and their infants continue to show lower attachment security compared to controls (Forman et al., 2007).

Many studies of remission of maternal depression have been cross-sectional and have focused on post-partum depression. However, a longitudinal study of 114 mother-child dyads found that improvements in maternal depression over a 3-month period were accompanied by increases in children's report of mothers' warmth/acceptance (Foster et al., 2008). No relation,

however, was found between mothers' remission and changes in children's reports of their mothers' use of psychological control. Thus, although some aspects of parenting improve with remission of depression, others do not; additional intervention(s) might be needed to achieve parenting behavior comparable to that of never-depressed parents.

Changes in coping. Coping likely has both trait- and state-dependent features (Christensen & Kessing, 2005; Wadsworth & Berger, 2006). Therefore, some aspects of coping might be expected to improve as depression remits, whereas others might be more stable. Only a few studies have directly assessed coping changes in relation to remission of depression in adults.

In a sample of 352 inpatients and outpatients with unipolar depression, Swindle, Cronkite, and Moos (1989) found that one year after their treatment intake (median duration of treatment was 6 weeks for inpatients and 4 weeks for outpatients), patients showed significant improvement in their affect regulation, information-seeking, and emotional discharge, but no change in their problem-solving coping. In contrast, in a sample of 49 patients with major depression or anxiety disorders, Uehara, Sakado, Sato, and Takizawa (2002) showed that task-oriented coping (akin to Swindle et al.'s "problem solving") improved as symptoms remitted in response to treatment, but emotion- and avoidance-oriented coping did not. Finally, in a sample of 35 patients with major depressive or dysthymic disorder, Ravindran, Griffiths, Waddell, and Anisman (1995) reported that after eight weeks of treatment with a selective serotonin reuptake inhibitor (SSRI), patients exhibited reductions in their use of blame, emotional expression, emotional containment, avoidance/denial, and passivity, as well an increase in problem solving. Given these few studies of changes in coping in patients treated for depression, the lack of consistency in coping terminology used from study to study, variation in definitions of

“remission,” and differences in the depression treatments administered, it is not possible to draw firm conclusions about the effect of remission of depressive symptoms on coping in adults.

Present Study

Several empirical findings serve as the basis of the current investigation. First, depressed parents tend to exhibit impaired parenting, although the specific mechanisms that are responsible for this link are not well understood (Dix & Meunier, 2009). Second, depressed adults use less adaptive coping than their non-depressed counterparts (Christensen & Kessing, 2005). Third, studies of nonclinical samples have shown a significant relation between parents’ coping profiles and their manner of interacting with their children (Bynum & Brody, 2005; Levy-Shiff et al., 1998; Meichenbaum & Fitzpatrick, 1993; Mondell & Tyler, 1981; Tein et al., 2000). Therefore, we hypothesized that currently depressed parents would show deficits in coping compared to nondepressed parents, and such maladaptive coping would be associated with lower quality parenting.

The present study examined cross-sectional associations between (1) severity of depressive symptoms and coping, and (2) coping and the quality of parenting and the parent-child relationship in a sample of depressed and nondepressed parents. In addition to attempting to replicate previous findings of an association between depression severity and coping, we extended past work on the link between parenting and coping by using the model of coping proposed by Connor-Smith et al. (2000). Moreover, this study was the first to explore the relation between coping and parenting in a sample of currently depressed and nondepressed parents.

The second aim of this study was to examine whether coping and parenting improved as parents’ depression remitted. Prior longitudinal studies of whether parenting and coping improve

with remission of parents' depression have yielded mixed results (Fleming et al., 1992; Forman et al., 2007; Swindle et al., 1989; Uehara et al., 2002). The present study builds on this past work by using a larger sample of depressed parents, including both mothers and fathers, and measuring multiple aspects of parenting behavior and dimensions of parent-child relationship quality (i.e., conflict and attachment) as reported by the children.

Specific hypotheses were as follows: (a) The severity of parents' depressive symptoms would be negatively associated with primary and secondary control coping and positively associated with disengagement coping at baseline. (b) Primary and secondary control coping would be positively associated with children's reports of positive parenting behaviors (greater warmth/acceptance, less psychological control, greater monitoring) and parent-child relationship quality (less conflict, greater attachment). (c) Disengagement coping would be negatively associated with children's reports of positive parenting behavior and parent-child relationship quality. Finally, we explored whether remission of parents' depression was associated with changes in parents' coping and parenting/parent-child relationship quality.

CHAPTER II

METHOD

Participants

Participants were 226 dyads of one parent and one child per family. The depressed group consisted of 129 families in which a parent was receiving treatment for a current Major Depressive Disorder (MDD) as defined in the Diagnostic and Statistical Manual of Mental Disorders–Fourth Edition (DSM-IV; American Psychiatric Association, 1994), and scored 14 or greater on the Hamilton Rating Scale for Depression (HRSD; Hamilton, 1967). Complete data for the current analyses were available for 116 of the 129 depressed parents. There were no differences on demographic variables (parent’s age, sex, race, education, marital status, or the child’s age or sex) between the 13 parents that were not included in the present analyses and the 116 that were included. Exclusion criteria for parents were a lifetime diagnosis of any psychotic or paranoid disorder, organic brain syndrome, intellectual disability, or bipolar I or II, or a current or primary diagnosis of substance abuse or dependence, obsessive-compulsive disorder, eating disorder, certain personality disorders (antisocial, borderline, schizotypal), or unwillingness to participate in treatment for depression.

The comparison group (“nondepressed”) included 98 families with parents who were lifetime-free of mood disorders, psychotic disorders, organic brain syndromes, or personality disorders, and during the child’s life were free of adjustment disorders, anxiety disorders, substance abuse/dependence, psychotherapy longer than eight sessions, and psychotropic medication use.

Child participants were between 7 and 17 years old ($M = 12.52$, $SD = 2.32$). Only one child per family was included. In families with multiple children, the child closest to age 12 participated. Exclusion criteria for children were a developmental disability or a chronic medical condition. Children lived with the target parent at least half the time. For nondepressed families, the enrolled child was selected to be similar in age, sex, and race to a high-risk child.

Depressed and nondepressed groups did not differ significantly in parents' age, sex, race, or children's age or sex (see Table 1); parent education differed significantly between the groups and was controlled in all analyses.

Procedure

Depressed parents were recruited from clinics when they first presented for treatment. These parents received standard, evidence-based treatments including medication and/or cognitive behavioral therapy (CBT) from experienced psychiatrists, psychologists, social workers, or psychiatric nurses. Recruitment of comparison families involved advertisements, coordination with local schools, health maintenance organizations, and community agencies. These parents were initially screened over the phone and, if eligible, then were scheduled for an evaluation to further assess eligibility criteria.

Assessments of children of depressed parents were conducted by different evaluators than those treating and assessing the parent. Parent and child evaluations occurred at the beginning of the parents' treatment (T1) and 4 months later at parents' post-treatment (T2). Children of nondepressed parents were assessed within 2 weeks after the initial parent evaluation (T1) and then the parent and child were assessed again 4 months later (T2).

Measures

Parents' psychopathology. The Structured Clinical Interview for DSM–IV Axis I Disorders (SCID-I; First, Spitzer, Gibbon, & Williams, 1996) was used to evaluate psychopathology in parents. A randomly selected subset of taped interviews was used to assess inter-rater reliability, yielding kappa coefficients $\geq .80$.

Parents' depressive symptoms. Hamilton Rating Scale for Depression (HRSD; Hamilton, 1967) is an interview-based measure of the severity of depression. The 17-item version used here yields scores ranging from 0 to 52; higher scores indicate greater severity. The HRSD has high interrater reliability (i.e., $\geq .84$). Intraclass correlation in this study was .96. Coefficient alpha in this sample was $\geq .89$ at the two time points.

Beck Depression Inventory, Second Edition (BDI-II; Beck, Steer, Ball, & Ranieri, 1996) is a 21-item self-report measure rated on a scale ranging from 0 (absence of symptoms) to 3 (most severe level of the symptom). Scores can range from 0 to 63, with higher scores indicating more depression. Coefficient alpha in this sample was $\geq .96$ at both time points.

Depression symptom composite scores were created by standardizing HRSD and BDI-II scores and averaging each parent's scores at each of the two time points. These pre-treatment (baseline; T1) and post-treatment (4-month; T2) composite scores were used as the index of parental depression in all analyses. Coefficient alpha for the depression composite scores in this sample was $\geq .95$ at both time points.

Remission Status. Parents with a diagnosis of depression at baseline were classified as either “remitted” or “nonremitted” based on whether their depressive symptoms at T2 had decreased to a level below predetermined cutoffs: a HRSD score of less than 13 and a BDI-II score of less than 14. Parents who scored greater than or equal to 13 on the HRSD or greater than

or equal to 14 on the BDI-II at T2 were considered nonremitted.

Parents' coping. The COPE Inventory (Carver, Scheier, & Weintraub, 1989) is a multidimensional coping inventory. Respondents rate each of 60 coping strategies using a four-point Likert scale (1: *Usually do not do this at all*; 4: *Usually do this a lot*). Internal consistency, test-retest reliability, and convergent and discriminant validity have been well documented for the COPE (Carver et al., 1989). The 60 items of the COPE can be divided into 15 subscales measuring conceptually and empirically distinct aspects of coping. Connor-Smith et al. (2000) created coping composites from the COPE subscales to represent a three-factor model comprised of primary, secondary, and disengagement coping. The COPE subscales included in the *primary control coping* composite are Planning, Seeking Social Support for Instrumental Reasons, Active Coping, and Seeking Social Support for Emotional Reasons. The *secondary control coping* composite includes Acceptance, Positive Reinterpretation, and Growth subscales; the *disengagement* composite is comprised of Behavioral Disengagement, Denial, and Mental Disengagement subscales. As recommended by Connor-Smith and colleagues, we computed factor scores for coping as proportions of the total score for all responses (i.e., sum of scores on primary control items/sum of all items) to control for overall responding bias. In the current sample, internal consistency for both time points were: primary control coping: $\alpha \geq .91$; secondary control coping: $\alpha \geq .77$; disengagement coping: $\alpha \geq .80$.

Children's report of parenting and parent-child relationship quality. Parenting behavior was measured with the Children's Report of Parent Behavior Inventory (CRPBI; Schaefer, 1965), which contains 24 items yielding three factors: *acceptance, psychological control/autonomy granting, and monitoring/knowledge*. For each item, children rated the similarity between the item and the parent's behavior using a 3-point scale (0 = like, 1 =

somewhat like, 2 = not like). Higher scores indicated more of the parenting behaviors. In the current sample, internal consistency across the two time points was $\alpha \geq .88$ for acceptance, $\alpha \geq .75$ for psychological control, $\alpha \geq .80$ for monitoring/knowledge.

Children's perception of conflict in their relationship with the target parent was assessed with the 20-item version of the Conflict Behavior Questionnaire (CBQ; Robin & Foster, 1989). The true-false items describe the parent's behaviors and the parent-child interactions, with a focus on conflict. Total scores are calculated by counting the number of items endorsed in the negative direction (i.e. higher scores indicate more conflict). The CBQ has well-established reliability and validity (Prinz, Foster, Kent, & O'Leary, 1979; Robin & Foster, 1989). Coefficient alpha in this sample was $\geq .87$ at both time points.

The Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987) was completed by children to measure their perception of parent-child attachment. Twenty-five items are rated on a 5-point Likert scale (1=*Almost never or never true*; 5=*Almost always or always true*); higher scores indicated better attachment. The IPPA has good reliability and validity (Armsden & Greenberg, 1987). Coefficient alpha in this sample was $\geq .94$ at both time points.

CHAPTER III

RESULTS

Data Analysis Plan

We calculated descriptive statistics (means and standard deviations [*SDs*]) for all study variables at T1 (i.e., pre-treatment, baseline) and T2 (i.e., post-treatment, 4 months), and correlations among demographics, parents' depressive symptoms, primary control coping, secondary control coping, disengagement coping, parenting behaviors (i.e., acceptance, psychological control, monitoring), and parent-child relationship quality (i.e., conflict; attachment). Differences between depressed and nondepressed parents on each of these variables also were calculated.

A series of linear regression analyses, controlling for child age and sex, and parent education was conducted to evaluate associations between parents' depressive symptoms and coping and parenting variables at T1. Next, a series of stepwise linear regression analyses was conducted to determine whether the coping variables were associated with parenting quality at T1. Child age and sex, parent education, and parents' T1 depression scores were entered in the first step and the coping variable of interest was entered in the second step.

Changes in parental depression over the 4-months were evaluated with a 2 (time: T1, T2) x 2 (group: depressed, nondepressed) ANCOVA, with child age and sex, and parent education as covariates. Finally, to investigate the relation of remission to each of the coping and parenting variables, we conducted 2 (Time: T1, T2) x 3 (Group: nondepressed, remitted, nonremitted) repeated measures analysis of covariance's (ANCOVAs) controlling for child age and sex,

parent education, and T1 parent depression scores on the coping (i.e., primary control, secondary control, and disengagement) and parenting (i.e., acceptance, psychological control, monitoring, parent-child conflict, attachment) variables. All pairwise comparisons were conducted with Fisher's Least Significant Difference (LSD) procedure.

Descriptive Statistics and Correlations

Table 2 presents the T1 and T2 means and *SDs* on all study measures for the depressed and nondepressed parents. At T1, depressed parents reported significantly lower levels of both primary and secondary control coping, and higher levels of disengagement coping, compared to nondepressed parents. The same overall pattern of differences between depressed and nondepressed parents remained for all variables at T2.

Regarding parenting, at T1 children of depressed parents reported that their parents were significantly less accepting, more psychologically controlling, and engaged in less monitoring; they also were less attached to their depressed parent as compared to children of nondepressed parents (see Table 2). The same pattern of differences in parenting between depressed and nondepressed parents remained for all variables at T2, with the nonsignificant trend-level elevation in the depressed group's parent-child conflict at T1 reaching significance at T2. Table 3 presents the correlations among demographic variables, parents' depressive symptoms at T1 and T2, and parents' coping and child-reported parenting variables at T1.

Associations among Depressive Symptoms, Parenting Variables, and Parental Coping

A series of linear regression analyses, controlling for child age and sex, and parent education showed that higher levels of parents' depressive symptoms were associated with

higher levels of psychological control ($b=.17, p=.016$) and lower levels of monitoring ($b=-.19, p=.006$). Severity of parents' depressive symptoms was not associated with parental acceptance, degree of parent-child conflict, or level of child-reported attachment to parents. Linear regression analyses, controlling for child age and sex and parent education revealed that higher levels of parental depressive symptoms also were significantly associated with less primary control coping ($b=-.49, p<.001$), less secondary control coping ($b=-.22, p=.003$), and more disengagement coping ($b=.52, p<.001$).

Associations between Parents' Coping and Parenting

We conducted a series of stepwise linear regression analyses to determine whether the coping variables were associated with parenting quality assessed at T1. Child age and sex, parent education, and parents' T1 depression scores were entered in the first step and the coping variable of interest was entered in the second step. Table 4 presents the results of these analyses.

Parents' primary control coping was significantly associated with children's report of attachment to the depressed parent, and there was a nonsignificant marginal relation between primary control coping and parental acceptance (CRPBI) and parent-child conflict (CBQ). Parents' secondary control coping showed a similar, but even stronger relation to children's report of parenting, such that secondary control coping was associated with higher levels of parental acceptance and attachment, and lower levels of parent-child conflict at T1. Finally, disengagement coping was not significantly associated with any of the parenting variables.

We also conducted these same stepwise linear regression analyses within the depressed and nondepressed parent groups separately. Again, child age and sex, parent education, and parents' T1 depression scores were entered in the first step and the coping variable of interest

was entered in the second step. Within the depressed group, results were similar to those found in the analyses of the whole sample. Parents' secondary control coping was significantly associated with higher levels of parental acceptance and attachment and lower levels of parent-child conflict. Primary control coping and disengagement coping were not significantly associated with the parenting variables. Within the nondepressed group, none of the parents' coping variables were significantly associated with children's report of parenting.

Changes in Parents' Depression from T1 to T2

To examine whether parents' depression changed from T1 to T2, we conducted a 2 (Time point: T1, T2) \times 2 (Group: depressed, nondepressed) repeated measures ANCOVA with depression symptom composite scores, controlling for child age and sex, and parent education (see Figure 1). Results revealed a significant main effect of group [$F(1,195) = 525.14, p < .001$] and a significant Group by Time interaction [$F(1,195) = 27.80, p < .001$] indicating that depressed parents' symptoms significantly decreased from T1 to T2 [$F(1,195) = 13.90, p < .001$], whereas nondepressed parents' depressive symptoms significantly increased [$F(1,195) = 14.37, p < .001$]. Overall, however, depressed parents had significantly higher levels of depressive symptoms as compared to nondepressed parents even after four months of treatment [$F(1, 195) = 146.93, p < .001$].

Remission Status

Parents in treatment for depression were classified as either "remitted" or "nonremitted" based on their level of depressive symptoms at the post-treatment (T2) evaluation. To be considered remitted (Rem), a parent must have had a HRSD score of less than 13 *and* a BDI

score of less than 14. Parents who scored ≥ 13 on the HRSD *or* ≥ 14 on the BDI-II at T2 were considered nonremitted (NonRem). According to these criteria, 50 parents (45.5%) were remitted (i.e., were depressed at baseline and not depressed at 4 months) and 60 (54.5%) were nonremitted.

A series of t-tests revealed that at T1, parents who remitted by the post-treatment assessment did not differ from those who did not remit with regard to their age or sex, their child's age or sex, or in their baseline levels of depressive symptoms, coping, or any of the child-reported parenting variables. Remitted and nonremitted depressed parents did differ significantly with regard to education [$t(102)=2.28, p=.025$] and race [$X^2(1)=10.23, p=.001$]. Remitted parents had a higher level of education. African American, depressed parents were significantly less likely to remit than non-African American, depressed parents.

Changes from T1 to T2

All subsequent analyses that examined change over time in parents' self-reported coping and child-reported parenting quality compared the nondepressed control (ND) parents to the remitted and nonremitted depressed parents. We conducted a 2 (Time: T1, T2) x 3 (Group: ND, Rem, NonRem) repeated measures analysis of covariance (ANCOVA) controlling for child age and sex, parent education, and baseline parent depression scores on the each of the coping and parenting variables. All pairwise comparisons were conducted with Fisher's Least Significant Difference (LSD) procedure. Results of these analyses are presented in Table 5.

Parents' coping

Primary control coping. For primary control coping, the Time X Group interaction was significant (see Figure 2). Pairwise comparisons revealed that from T1 to T2, the ND group

exhibited a significant increase in primary coping ($p < .001$), the NonRem group had a significant decrease in primary coping ($p = .012$), and the Rem group did not change significantly. At baseline, the groups were not significantly different on primary coping; at T2 the ND group reported using primary control coping significantly more than both the Rem ($p=.015$) and NonRem ($p<.001$) groups, and the Rem group used primary coping significantly more than the NonRem group ($p=.012$).

Secondary control coping. The main effect of Group was significant, but the Time X Group interaction was not significant. Pairwise comparisons revealed that at T1, the Rem group reported significantly greater use of secondary control coping than the NonRem group ($p=.049$); the ND group did not differ significantly from either the Rem or NonRem groups. At T2, both the ND ($p=.001$) and Rem ($p=.013$) groups reported using secondary control coping significantly more than the NonRem group, and were not significantly different from each other. None of the groups showed significant changes from T1 to T2.

Disengagement coping. For disengagement coping, the main effect for Group was significant and the Time X Group interaction indicated a nonsignificant trend (see Figure 3). Pairwise comparisons revealed that at T1, the ND group reported using disengagement coping significantly less than the NonRem group ($p = .026$); the Rem group did not differ significantly from either group. At T2, the ND and Rem groups were not significantly different from each other, and both reported using disengagement coping significantly less than the NonRem group ($p = .01, p < .001$, respectively). From T1 to T2, the Rem group showed a significant reduction in disengagement coping ($p < .001$); the other two groups did not change significantly over time.

Child-reported parenting behavior and parent-child relationship quality

We conducted 2 (Time: T1, T2) x 3 (Group: ND, Rem, NonRem) repeated measures

analysis of covariance (ANCOVA) controlling for child age and sex, parent education, and baseline parent depression scores on the following dependent variables: Children's Report of Parent Behavior Inventory (CRPBI) subscales: parental acceptance, psychological control, and monitoring, parent-child conflict, and level of attachment to the parent. All pairwise comparisons were conducted with Fisher's Least Significant Difference procedure. Results of these analyses are presented in Table 5.

Acceptance. The main effect of Group was significant for the CRPBI parental acceptance subscale. Pairwise comparisons revealed that at both T1 and T2, children of ND parents rated them to be significantly more accepting as compared to children of the Rem and NonRem groups (T1: $p = .01, p = .02$; T2: $p = .003, p = .002$); these groups did not differ significantly from each other. Acceptance scores did not change significantly from T1 to T2 for any of the groups.

Psychological Control. The main effect for Group was significant for the CRPBI psychological control subscale. At T1, the three groups were not significantly different from each other. At T2, both the ND and Rem groups were significantly less psychologically controlling than the NonRem group ($p = .008, p = .009$, respectively) and were not different from each other. The ND group showed a significant decrease in psychological control from T1 to T2 ($p=.016$); Rem and NonRem did not change significantly from T1 to T2.

Monitoring. The main effect of Group was significant for the CRPBI parental monitoring subscale. Pairwise comparisons revealed that at both T1 and T2, the ND group had significantly higher monitoring scores than both the Rem and NonRem groups (T1: $p = .04, p = .04$; T2: $p = .01, p = .02$), which did not differ significantly from each other. None of the groups' monitoring scores changed significantly from T1 to T2.

Parent-Child Conflict. The main effect of Group was significant for conflict scores on

the CBQ. Pairwise comparisons revealed that at both T1 and T2, the ND group had significantly lower conflict scores than the Rem and NonRem groups (T1: $p = .048$, $p = .007$; T2: $p = .001$, $p < .001$), which did not differ from each other. The ND group exhibited a significant decrease in conflict over the four months ($p = .015$), whereas the other groups did not change significantly.

Attachment. There was a significant main effect of Group for attachment scores on the IPPA; the Time X Group interaction showed a nonsignificant trend (see Figure 4). Pairwise comparisons revealed that at both T1 and T2, children of ND parents reported significantly higher attachment scores than did children of the Rem and NonRem parents (T1: p 's = .04; T2: p 's < .001), which did not differ significantly from each other. The ND group exhibited a significant increase in attachment over the four-months ($p = .001$), whereas the other groups did not change significantly.

CHAPTER IV

DISCUSSION

The current study examined the relations among parental depression, parents' coping, and parenting behavior. Consistent with past research (e.g., Cummings et al., 2005; Gelfand & Teti, 1990; Herr et al., 2007; Lovejoy et al., 2000), depressed parents were less warm/accepting, more psychologically controlling, and less aware of their child's activities than nondepressed parents. In addition, children of depressed parents indicated that their relationship with their parent was characterized by greater conflict and less attachment as compared to children of nondepressed parents.

Coping and Depression

In accordance with our first hypothesis, the present study found that more severe depression was significantly associated with less adaptive coping. In particular, parents with higher levels of depressive symptoms reported using less primary and secondary control coping and more disengagement coping. These results are consistent with prior studies that have shown that in adults, more severe depression is accompanied by the use of maladaptive coping strategies such as avoidance, rumination, and emotion-focused coping (e.g., Billings & Moos, 1984; Dekker & Ormel, 1999; Wadsworth et al., 2005).

Coping and Parenting

Evidence for the second and third hypotheses regarding the relation between coping and parenting was mixed. Parents' primary and secondary control coping were related to several parenting variables. Specifically, greater secondary control coping was positively associated with warmth/acceptance and attachment and negatively associated with conflict. Primary control was similarly positively associated with attachment, and showed nonsignificant trends toward an association with higher parental acceptance and greater conflict. Thus, the general direction of the relations between parents' coping and parenting were similar for primary and secondary control coping, although the strength of these associations was somewhat greater for secondary coping. Disengagement coping was not related to parenting behavior or parent-child relationship quality.

Although several past studies have found a link between parents' coping and their parenting behavior, the present study is the first to examine the specific coping constructs of primary control, secondary control, and disengagement coping in relation to parenting. Previous studies have categorized coping as "active" or "avoidant" (Bynum & Brody, 2005; Levy-Shiff et al., 1998; Meichenbaum & Fitzpatrick, 1993; Mondell & Tyler, 1981; Tein et al., 2000). Active coping is similar to "primary control" and avoidant coping is similar to "disengagement." Secondary control coping, however, which involves attempts to adapt to the situation by regulating attention and cognition, has not been studied in relation to parenting. Moreover, the current study is the first to examine these coping subtypes and parenting in depressed parents.

Based on prior findings that active coping and avoidant coping are, respectively, positively and negatively associated with parenting quality (Bynum & Brody, 2005; Levy-Shiff et al., 1998; Meichenbaum & Fitzpatrick, 1993; Mondell & Tyler, 1981; Tein et al., 2000), we expected that greater use of primary control coping and less use of disengagement coping would

be positively related to parenting quality. The associations between disengagement coping and child-reported parenting or parent-child relationship quality, however, were not significant. In contrast, secondary control coping, and to a somewhat lesser extent primary control coping, significantly contributed to the variance in children's reports of parenting and the quality of their relationships with these parents.

Secondary control coping may be especially important for high quality parenting, particularly when depressed. Secondary control coping includes strategies such as acceptance and positive reinterpretation and was represented in the coping measure used in the present study by items such as "I accept that this has happened and cannot be changed," "I try to see it in a different light to make it seem more positive," and "I learn something from the experience" (see Appendix for a complete list of the COPE items). More frequent use of these types of strategies may be a reflection of a more generally positive outlook that results in being bothered less easily, jumping to fewer conclusions, and being more forgiving of others' wrongdoing. Such characteristics in parents would likely engender more positive relationships with their children and lead the children to view their parents in a more positive light.

The present study found that parents' coping (i.e., secondary control coping, and to a lesser extent primary control coping) was associated with parenting behaviors and parent-child relationship quality. We do not know, however, if such coping in parents plays a role in the link between depression and parenting. Future longitudinal, multi-wave research is needed to determine whether a mediational relation exists (Cole & Maxwell, 2003) such that changes in parents' secondary or primary control coping predict changes in parenting. If evidence of mediation is found, then improving depressed parents' secondary and primary control coping may be viable targets for interventions aimed at improving parenting.

Remission of Parents' Depression

The final aim of the present study was to explore changes in depressed parents' coping, parenting behavior, and parent-child relationship quality in relation to their remission status at the post-treatment evaluation. With regard to parenting, offspring of neither the remitted nor nonremitted depressed parents reported significant change in any of the measures of parenting or parent-child relationship quality, whereas children of the never-depressed parents (i.e., controls) reported improvements in parents' psychological control, conflict, and attachment over the four-month study period. These findings are consistent with other studies that have shown that deficits in parenting remain even after parents' depressive symptoms improve (Forman et al., 2007; Murray et al., 2003; Weinberg & Tronick, 1998), and suggest that parenting skills training, in addition to standard treatment for depression, may be warranted in order to prevent negative outcomes in offspring of depressed parents. Preventive interventions that target parenting have been found to both improve parenting and reduce emotional and behavioral problems in their children (Compas et al., 2010).

Regarding coping, depressed parents who remitted showed reductions in disengagement coping, but no change in primary or secondary control coping. Parents who did not remit decreased in their primary control coping, and did not change in their secondary control or disengagement coping. Never-depressed parents increased in primary control coping over the four months, but did not change in secondary control or disengagement coping. Thus, some aspects of coping changed as depressive symptoms remitted and others did not, which is consistent with the view that some types of coping may be more mood- or state-dependent than others (Christensen & Kessing, 2005; Wadsworth & Berger, 2006).

One implication of the finding that primary and secondary control coping did not

improve as parents' depression remitted is that therapies for treating depression may need to include additional components that explicitly train coping skills. Improving primary and secondary control coping might have a beneficial effect on the parenting behavior of depressed parents, and thereby result in better outcomes in their children.

Strengthening parents' coping skills also could contribute to the prevention of depression in their children in several additional ways. For example, teaching depressed parents coping skills may allow them to model more adaptive responses to stress (Gillham et al., 2006). Greater use of secondary control coping has been shown to predict fewer internalizing and externalizing symptoms in offspring of depressed parents (Compas et al., 2010). Furthermore, stronger coping skills in depressed adults predict an increased likelihood of remission and a decreased risk of relapse in adults (Christensen & Kessing, 2005). Reducing the frequency and/or severity of depressed parents' future episodes could have a positive effect on children's well-being (Garber, Ciesla, McCauley, Diamond, & Schloedt, 2011; Kouros & Garber, 2010).

Limitations and Future Directions

Limitations of this study should be noted as they provide directions for future research. First, information about parents' coping and children's ratings of parenting were based on questionnaires, which could be affected by response sets, rater bias, or social desirability. Independent observations of behavior may provide a more objective assessment of both parents' coping strategies and their parenting behaviors. A strength of the current study, however, was its use of different informants; that is, parents reported about their coping, whereas children reported about their parents' behaviors, conflict, and attachment to them. Moreover, the measure of depressive symptoms combined parents' self-report with clinicians' ratings. Future studies not

only should include multiple informants, but also should use multiple methods in addition to self-report, such as observations of behaviors in naturalistic contexts.

Second, the present study examined concurrent associations between coping and parenting. To determine whether coping mediates the link between depression and parenting, data will need to be collected across multiple time points so that mediation analyses can be conducted according to the guidelines outlined by Cole and Maxwell (2003). Nevertheless, establishing that there is a cross-sectional association between parents' coping and several aspects of parenting is an important first step in demonstrating that a relation exists that needs to be explained.

Third, the present study did not examine the specific type of treatment that depressed parents received in relation to change in parenting and coping. It is possible that interventions such as cognitive behavioral therapy that focus on developing skills to monitor and regulate one's thoughts, feelings, and behaviors as a means of reducing depressive symptoms may produce more change in parenting and/or coping than medication that works at a more biological level. Future research on changes in parenting and/or coping in parents whose symptoms remit should compare those receiving psychotherapy versus medication.

Fourth, the dispositional measure of coping used here, the COPE (Carver et al., 1989), has both advantages and disadvantages. On the one hand, asking parents how they cope in general allowed for an examination of coping strategies in response to both controllable and uncontrollable stressors. On the other hand, the COPE requires respondents to recall and report how they coped across a variety of situations. The validity of some coping responses may be context-specific, however (Jaser et al., 2007). Therefore, asking parents how they cope in general

may not adequately capture the specific interplay among coping strategies, parenting, and depressive symptoms.

Moreover, the COPE was not designed to assess primary control, secondary control, and disengagement coping. Rather, in the present study, subscales from the original COPE were combined according to information provided by Connor-Smith et al. (2000). Future research should use a measure of coping that assesses how a parent responds to multiple specific stressors, particularly those related to their role as a parent, and that is designed specifically for assessing primary control, secondary control, and disengagement coping. The Responses to Stress Questionnaire is one such measure (Connor-Smith et al., 2000).

Finally, another strength of the current study was the inclusion of fathers, who generally have been underrepresented in this literature. A limitation of the current study, however, was that the number of fathers in the sample was small, so it was not possible to test for sex differences in the levels or relations among the study variables.

In summary, the results of this study are congruent with the perspective that some forms of coping in parents are linked with both depression and impaired parenting. We showed that (1) increased severity of depressive symptoms was related to less adaptive coping, and (2) decreased use of certain coping strategies (i.e., secondary control coping) was associated with less positive parenting/parent-child relationship quality. We extended past work on coping and parenting by examining three coping dimensions of primary control, secondary control, and disengagement coping (Connor-Smith et al., 2000). In addition, remission of depressive symptoms was accompanied by improvements in disengagement coping but not primary or secondary control coping or parenting. Therefore, additional interventions that focus more directly on coping and parenting may be warranted in order to prevent negative outcomes in at-risk children.

REFERENCES

- Armsden, G. C., & Greenberg, M. T. (1987). The inventory of parent and peer attachment: individual differences and their relationship to psychological well-being in adolescence. *Journal of Youth and Adolescence, 16*, 427-54.
- Association, A. P. (1994). *Diagnostic and statistical manual of mental disorders (4th ed.)*. Washington, D.C. : Author.
- Beardslee, W. R., Gladstone, T. R. & O'Connor, E.E. (2011). The prevention of adolescent depression. *Psychiatric Clinics of North America, 34*, 35-52.
- Beck, A. T., Steer, R. A., Ball, R., & Ranieri, W. (1996). Comparison of Beck Depression Inventories -IA and -II in psychiatric outpatients. *Journal of Personality Assessment, 67*, 588-97.
- Belsky, J. (1984). The determinants of parenting: a process model. *Child Development, 55*, 83-96.
- Billings, A. G., & Moos, R. H. (1984). Coping, stress, and social resources among adults with unipolar depression. *Journal of Personality and Social Psychology, 46*, 877-91.
- Brody, G. H., Stoneman, Z., Flor, D., McCrary, C., Hastings, L., & Conyers, O. (1994). Financial resources, parent psychological functioning, parent co-caregiving, and early adolescent competence in rural two-parent African-American families. *Child Development, 65*, 590-605.
- Bugental, D., Blue, J., & Cruzcosa, M. (1989). Perceived control over caregiving outcomes: Implications for child abuse. *Developmental Psychology, 25*, 532-39.
- Bynum, M. S., & Brody, G. H. (2005). Coping behaviors, parenting, and perceptions of children's internalizing and externalizing problems in rural African American mothers. *Family Relations: Interdisciplinary Journal of Applied Family Studies, 54*, 58-71.
- Campbell, S. B., Cohn, J. F., & Meyers, T. (1995). Depression in first-time mothers: Mother-infant interaction and depression chronicity. *Developmental Psychology, 31*, 349-57.
- Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: a theoretically based approach. *Journal of Personality and Social Psychology, 56*, 267-83.

- Christensen, M. V., & Kessing, L. V. (2005). Clinical use of coping in affective disorder, a critical review of the literature. *Clinical Practice and Epidemiology in Mental Health, 1*, 20.
- Cole, D. A., & Maxwell, S. E. (2003). Testing mediational models with longitudinal data: questions and tips in the use of structural equation modeling. *Journal of Abnormal Psychology, 112*, 558-77.
- Compas, B. E., Champion, J. E., Forehand, R., Cole, D. A., Reeslund, K. L., Fear, J., Hardcastle, E. J., Keller, G., Rakow, A., Garai, E., Merchant, M. J., & Roberts, L. (2010). Coping and parenting: Mediators of 12-month outcomes of a family group cognitive-behavioral preventive intervention with families of depressed parents. *Journal of Consulting and Clinical Psychology, 78*, 623-34.
- Compas, B. E., Connor-Smith, J., & Jaser, S. S. (2004). Temperament, stress reactivity, and coping: implications for depression in childhood and adolescence. *Journal of Clinical Child and Adolescent Psychology, 33*, 21-31.
- Compas, B. E., Connor-Smith, J. K., Saltzman, H., Thomsen, A. H., & Wadsworth, M. E. (2001). Coping with stress during childhood and adolescence: problems, progress, and potential in theory and research. *Psychological Bulletin, 127*, 87-127.
- Connor-Smith, J. K., Compas, B. E., Wadsworth, M. E., Thomsen, A. H., & Saltzman, H. (2000). Responses to stress in adolescence: measurement of coping and involuntary stress responses. *Journal of Consulting and Clinical Psychology, 68*, 976-92.
- Cummings, E. M., Keller, P. S., & Davies, P. T. (2005). Towards a family process model of maternal and paternal depressive symptoms: exploring multiple relations with child and family functioning. *Journal of Child Psychology and Psychiatry, 46*, 479-89.
- Dekker, J., & Ormel, J. (1999). Depression and coping. *European Journal of Psychiatry, 13*, 183-89.
- Dimidjian, S., Hollon, S. D., Dobson, K. S., Schmalzing, K. B., Kohlenberg, R. J., Addis, M. E., Gallop, R., McGlinchey, J. B., Markley, D. K., Gollan, J. K., Atkins, D. C., Dunner, D. L., & Jacobson, N. S. (2006). Randomized trial of behavioral activation, cognitive therapy, and antidepressant medication in the acute treatment of adults with major depression. *Journal of Consulting and Clinical Psychology, 74*, 658-70.
- Dix, T. (1991). The affective organization of parenting: adaptive and maladaptive processes. *Psychol Bull, 110*, 3-25.
- Dix, T., & Meunier, L. N. (2009). Depressive symptoms and parenting competence: An analysis of 13 regulatory processes. *Developmental Review, 29*, 45-68.

- Endler, N. S., & Parker, J. D. (1990). Multidimensional assessment of coping: a critical evaluation. *Journal of Personality and Social Psychology*, *58*, 844-54.
- First, M. B., Spitzer, R. L., Gibbon, M., & Williams, J. B. W. (1996). *User's Guide for the Structured Clinical Interview for DSM-IV Personality Disorders (SCID-II)*. Washington D.C. : American Psychiatric Press Inc.
- Fleming, A. S., Klein, E., & Corter, C. (1992). The effects of a social support group on depression, maternal attitudes and behavior in new mothers. *Journal of Child Psychology and Psychiatry*, *33*, 685-98.
- Forman, D. R., O'Hara, M. W., Stuart, S., Gorman, L. L., Larsen, K. E., & Coy, K. C. (2007). Effective treatment for postpartum depression is not sufficient to improve the developing mother-child relationship. *Developmental Psychopathology*, *19*, 585-602.
- Foster, C. E., Webster, M. C., Weissman, M. M., Pilowsky, D. J., Wickramaratne, P. J., Talati, A., Rush, A. J., Hughes, C. W., Garber, J., Malloy, E., Cerda, G., Kornstein, S. G., Alpert, J. E., Wisniewski, S. R., Trivedi, M. H., Fava, M., & King, C. A. (2008). Remission of maternal depression: relations to family functioning and youth internalizing and externalizing symptoms. *Journal of Clinical Child and Adolescent Psychology*, *37*, 714-24.
- Foster, C.E., Garber, J., Durlak, J.A. (2008). Current and past maternal depression, maternal interaction behaviors, and children's internalizing and externalizing symptoms. *Journal of Abnormal Child Psychology*, *36*, 527-537.
- Garber, J. (2006). Depression in children and adolescents: linking risk research and prevention. *American Journal of Preventive Medicine*, *31*, S104-25.
- Garber, J., Ciesla, J. A., McCauley, E., Diamond, G., & Schloedt, K. A. (2011). Remission of depression in parents: links to healthy functioning in their children. *Child Development*, *82*, 226-43.
- Garnefski, N., Legerstee, J., Kraaij, V. V., Van Den Kommer, T., & Teerds, J. (2002). Cognitive coping strategies and symptoms of depression and anxiety: a comparison between adolescents and adults. *Journal of Adolescence*, *25*, 603-11.
- Gelfand, D. M., & Teti, D. M. (1990). The effects of maternal depression on children. *Clinical Psychology Review*, *10*, 329-53.
- Gillham, J. E., Reivich, K. J., Freres, D. R., Lascher, M., Litzinger, S., Shatte, A., & Seligman, M. E. (2006). School-based prevention of depression and anxiety symptoms in early adolescence: A pilot of a parent intervention component. *School Psychology Quarterly*, *21*, 323-48.
- Goodman, S. H. (2007). Depression in mothers. *Annual Review of Clinical Psychology*, *3*, 107-35.

- Goodman, S. H., & Gotlib, I. H. (1999). Risk for psychopathology in the children of depressed mothers: a developmental model for understanding mechanisms of transmission. *Psychological Review*, *106*, 458-90.
- Hamilton, M. A. (1967). Development of a rating scale for primary depressive illness. *British Journal of Social & Clinical Psychology*, *6*, 278-96.
- Heneghan, A. M., Silver, E. J., Bauman, L. J., Westbrook, L. E., & Stein, R. E. (1998). Depressive symptoms in inner-city mothers of young children: who is at risk? *Pediatrics*, *102*, 1394-400.
- Herr, N. R., Hammen, C., & Brennan, P. A. (2007). Current and past depression as predictors of family functioning: a comparison of men and women in a community sample. *Journal of Family Psychology*, *21*, 694-702.
- Hollon, S. D., Thase, M. E., & Markowitz, J. C. (2002). Treatment and prevention of depression. *Psychological Science in the Public Interest*, *3*, 39-77.
- Jaser, S. S., Champion, J. E., Reeslund, K. L., Keller, G., Merchant, M. J., Benson, M., & Compas, B. E. (2007). Cross-situational coping with peer and family stressors in adolescent offspring of depressed parents. *Journal of Adolescence*, *30*, 917-32.
- Kam, C. M. (2001). . Effects of maternal depression on children's social and emotional functioning during early school year. *Dissertation Abstracts International*, *62*.
- Kaplan, P. S., Bachorowski, J., Smoski, M., & Zinser, M. (2001). Role of clinical diagnosis and medication use in effects of maternal depression on infant-directed speech. *Infancy*, *2*, 537-48.
- Kessler, R. C. (2003). Epidemiology of women and depression. *Journal of Affective Disorders*, *74*, 5-13.
- Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, *62*, 593-602.
- Kessler, R. C., Chiu, W. T., Demler, O., Merikangas, K. R., & Walters, E. E. (2005). Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, *62*, 617-27.
- Kouros, C. D., & Garber, J. (2010). Dynamic associations between maternal depressive symptoms and adolescents' depressive and externalizing symptoms. *Journal of Abnormal Child Psychology*, *38*, 1069-81.

- Kramer, R. A., Warner, V., Olfson, M., Ebanks, C. M., Chaput, F., & Weissman, M. M. (1998). General medical problems among the offspring of depressed parents: a 10-year follow-up. *Journal of the American Academy of Child and Adolescent Psychiatry, 37*, 602-11.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.
- Levy-Shiff, R., Dimitrovsky, L., Shulman, S., & Har-Even, D. (1998). Cognitive appraisals, coping strategies, and support resources as correlates of parenting and infant development. *Developmental Psychology, 34*, 1417-27.
- Lieb, R., Isensee, B., Hofler, M., Pfister, H., & Wittchen, H. U. (2002). Parental major depression and the risk of depression and other mental disorders in offspring: a prospective-longitudinal community study. *Archives of General Psychiatry, 59*, 365-74.
- Lovejoy, M. C., Graczyk, P. A., O'Hare, E., & Neuman, G. (2000). Maternal depression and parenting behavior: a meta-analytic review. *Clinical Psychology Review, 20*, 561-92.
- McCarty, C. A., & McMahon, R. J. (2003). Mediators of the relation between maternal depressive symptoms and child internalizing and disruptive behavior disorders. *Journal of Family Psychology, 17*, 545-56.
- Meichenbaum, D., & Fitzpatrick, D. (1993). A constructivist narrative perspective on stress and coping: Stress inoculation applications. In L. Goldberger & S. Breznitz (Eds.), *Handbook of stress: Theoretical and clinical aspects* (Vol. 2nd Ed., pp. 706-23). New York: Free Press.
- Mondell, S., & Tyler, F. (1981). Parental Competence and Styles of Problem Solving/Play Behavior with Children. *Developmental Psychology, 17*, 73-78.
- Murray, L., Cooper, P. J., Wilson, A., & Romaniuk, H. (2003). Controlled trial of the short- and long-term effect of psychological treatment of post-partum depression: 2. Impact on the mother-child relationship and child outcome. *British Journal of Psychiatry, 182*, 420-7.
- Prinz, R. J., Foster, S., Kent, R. N., & O'Leary, K. D. (1979). Multivariate assessment of conflict in distressed and nondistressed mother-adolescent dyads. *Journal of Applied Behavior Analysis, 12*, 691-700.
- Ravindran, A. V., Griffiths, J., Waddell, C., & Anisman, H. (1995). Stressful life events and coping styles in relation to dysthymia and major depressive disorder: variations associated with alleviation of symptoms following pharmacotherapy. *Progress in Neuropsychopharmacology and Biological Psychiatry, 19*, 637-53.

- Ravindran, A. V., Matheson, K., Griffiths, J., Merali, Z., & Anisman, H. (2002). Stress, coping, uplifts, and quality of life in subtypes of depression: a conceptual frame and emerging data. *Journal of Affective Disorders, 71*, 121-30.
- Robin, A., & Foster, S. (1989). *Negotiating parent-adolescent conflict*. New York: Guilford.
- Rohde, P., Lewinsohn, P. M., Tilson, M., & Seeley, J. R. (1990). Dimensionality of coping and its relation to depression. *Journal of Personality and Social Psychology, 58*, 499-511.
- Schaefer, E. S. (1965). Children's reports of parental behavior: An inventory. *Child Development, 36*, 413-24.
- Seng, A. C., & Prinz, R. J. (2008). Parents who abuse: what are they thinking? *Clinical Child and Family Psychology Review, 11*, 163-75.
- Snyder, J. (1991). Discipline as a mediator of the impact of maternal stress and mood on child conduct problems. *Development and Psychopathology, 3*, 263-76.
- Swindle, R. W., Jr., Cronkite, R. C., & Moos, R. H. (1989). Life stressors, social resources, coping, and the 4-year course of unipolar depression. *Journal of Abnormal Psychology, 98*, 468-77.
- Tein, J. Y., Sandler, I. N., & Zautra, A. J. (2000). Stressful life events, psychological distress, coping, and parenting of divorced mothers: a longitudinal study. *Journal of Family Psychology, 14*, 27-41.
- Uehara, T., Sakado, K., Sato, T., & Takizawa, R. (2002). Coping measurement and the state effect of depression and anxiety in psychiatric outpatients. *Psychopathology, 35*, 48-51.
- Wadsworth, M. E., & Berger, L. E. (2006). Adolescents coping with poverty-related family stress: Prospective predictors of coping and psychological symptoms. *Journal of Youth and Adolescence, 35*, 57-70.
- Wadsworth, M. E., Raviv, T., Compas, B. E., & Connor-Smith, J. (2005). Parent and adolescent responses to poverty-related stress: Tests of Mediated and Moderated Coping Models. *Journal of Child and Family Studies, 14*, 283-98.
- Weinberg, M. K., & Tronick, E. Z. (1998). The impact of maternal psychiatric illness on infant development. *Journal of Clinical Psychiatry, 59 Suppl 2*, 53-61.
- Weissman, M. M., Markowitz, J. C., & Klerman, G. L. (2000). *Comprehensive Guide to Interpersonal Psychotherapy*. New York: Basic Books.

Table 1. Parent and Child Demographic Characteristics

	Depressed	Nondepressed	Whole Sample
Parents	(N=116)	(N=98)	(N=214)
Female (N [%])	85 (73.3%)	78 (79.6%)	163 (76.2%)
Age (M [SD])	41.65 (7.27)	43.12 (6.22)	42.35 (6.81)
Parent education (M [SD])*	14.72 (2.60)	15.43 (2.61)	15.05 (2.62)
Marital Status (N [%])*			
Married	58 (50.0%)	76 (77.6%)	134 (62.6%)
Single	18 (15.5%)	14 (14.3%)	32 (15.0%)
Divorced	28 (24.1%)	5 (5.1%)	33 (15.4%)
Separated	3 (2.6%)	1 (1.0%)	4 (1.9%)
Widowed	9 (7.8%)	2 (2.0%)	11 (5.1%)
Race (N[%])			
White	83 (70.3%)	73 (74.5%)	156 (72.9%)
African American	24 (20.3%)	23 (23.5%)	45 (21.0%)
Multiracial	4 (3.4%)	0 (0.0%)	4 (1.9%)
Asian	2 (1.7%)	1 (1.0%)	3 (1.4%)
Hispanic	0 (0%)	0 (0%)	0 (0%)
Not reported	5 (4.2%)	1 (1.0%)	6 (2.8%)
Children	(N=116)	(N=98)	(N=214)
Female (N [%])	62 (53.4%)	53 (54.1%)	115 (53.7%)
Age (M [SD])	12.35 (2.41)	12.73 (2.22)	12.52 (2.32)
Race (N [%])			
White	83 (71.6%)	70 (71.4%)	153 (71.5%)
African American	22 (19.0%)	22 (22.4%)	44 (20.6%)
Multiracial	9 (7.8%)	6 (6.1%)	15 (7.0%)
Asian	1 (.9%)	0 (0.0%)	1 (.5%)
Not reported	1 (.9%)	0 (0.0%)	1 (.5%)
Ethnicity (N [%])			
Non-hispanic	112 (96.6%)	4 (95.9%)	206 (96.3)
Hispanic	3 (2.6%)	4 (4.1%)	7 (3.3%)
Not reported	1 (.9%)	0 (0%)	1 (.5%)

* $p < .05$ between depressed and nondepressed groups

Table 2. Means and Standard Deviations (SDs) at Pre-Treatment and Post-Treatment on Parents' Depressive Symptoms and Coping, and Children's Report of Parenting and Relationship Quality for Depressed and Nondepressed Groups

	T1: Pre-treatment			T2: Post-treatment		
	Depressed n=116	Nondep n=98	<i>t</i> (<i>df</i>)	Depressed n=110	Nondep n=97	<i>t</i> (<i>df</i>)
PARENT-REPORT [M (SD)]						
Depression Symptom Composite (Ham-D & BDI)	.82 (.56)	-.96 (.14)	-30.45** (212)	.57 (.97)	-.70 (.24)	-12.58** (205)
Coping (COPE)						
Primary Control	39.28 (10.01)	48.69 (7.54)	7.32** (190)	41.99 (9.02)	49.65 (7.40)	6.31** (183)
Secondary Control	21.12 (4.99)	23.35 (3.46)	3.58** (190)	21.31 (4.66)	23.13 (3.44)	3.02** (183)
Disengagement	21.73 (5.10)	15.87 (3.75)	-9.02** (190)	19.11 (4.97)	15.05 (3.03)	-6.52** (184)
CHILD-REPORT [M (SD)]						
Parent Behavior (CRPBI)						
Acceptance	24.88 (4.72)	26.28 (3.95)	2.31* (207)	25.55 (5.02)	26.77 (3.67)	2.00* (202)
Psychological Control	13.08 (3.30)	11.70 (2.89)	-3.19** (207)	12.38 (3.81)	11.09 (2.69)	-2.75** (202)
Monitoring	12.64 (2.45)	13.70 (1.90)	3.44** (207)	12.43 (2.79)	13.75 (1.94)	3.88** (203)
Conflict (CBQ)	3.87 (4.38)	2.86 (3.56)	-1.80+ (206)	3.48 (4.97)	2.23 (3.40)	-2.08* (203)
Attachment (IPPA)	99.29 (18.98)	105.46 (15.97)	2.49* (201)	100.83 (21.21)	108.56 (15.53)	2.90** (196)

+*p* < .10; **p* < .05; ** *p* < .01; *df* = degrees of freedom; *M* = mean; *SD* = standard deviation

Ham-D = Hamilton Depression Rating Scale; BDI = Beck Depression Inventory; CRPBI = Child Report of Parent Behavior Inventory; CBQ = Conflict Behavior Questionnaire; IPPA = Inventory of Parent and Peer Attachment

Table 3. Correlations among Demographic Variables, Parents' Depressive Symptoms at T1 and T2, Parents' Coping, and Children's Report of Parenting Behaviors and Relationship Quality Assessed at T1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Child Sex ^a	--															
2. Child Age	.02	--														
3. Parent Dep Status ^b	.01	-.08	--													
4. Parent Sex ^a	.10	.19**	.07	--												
5. Parent Age	.13	.41**	-.11	.23**	--											
6. Parent Education	.20**	.06	-.14*	.20**	.35**	--										
7. T1 Parent Depression	.05	-.02	.90**	.07	-.09	-.15*	--									
8. T2 Parent Depression	.01	-.09	.66**	.05	-.11	-.20**	.68**	--								
9. Primary Coping	.00	.04	-.47**	-.09	.09	.06	-.49**	-.35**	--							
10. Secondary Coping	-.01	.05	-.25**	-.03	.04	-.03	-.23**	-.20**	.60**	--						
11. Disengagement Coping	.08	-.11	.55**	-.03	-.06	-.08	.54**	.41**	-.32**	-.08	--					
12. Acceptance	-.04	-.33**	-.16*	-.16*	-.11	.07	-.12	-.11	.12	.18*	-.04	--				
13. Psychological Control	-.03	.09	.22**	.05	-.05	-.15*	.22**	.22**	-.13	-.11	.16*	-.47**	--			
14. Monitoring	.05	-.26**	-.23**	-.25*	-.03	.06	-.22**	-.14	.08	.06	-.11	.47**	-.34**	--		
15. Conflict	-.10	.19**	.12	.02	-.06	-.16*	.08	.11	-.12	-.16*	.10	-.61**	.71**	-.37**	--	
16. Attachment	.05	-.36**	-.17*	-.17*	-.07	.09	-.13	-.10	.16*	.15*	-.06	.82**	-.61	.55**	-.74**	--

* $p < .05$, ** $p < .01$; ^aSex: 0=female, 1=male; ^bParent Depression Status: 0=Control, 1=Depressed; T1 = Time 1 (pre-treatment); T2 = Time 2 (post-treatment)

Table 4. Separate Regression Analyses for Primary and Secondary Control Coping, Controlling for Child Age and Sex, Parent Education, and Parent Depression, Predicting each Parenting Variable at T1

		Primary Control Coping					Secondary Control Coping				
Dependent Variables		<i>B</i>	<i>SE B</i>	β	Total R^2	R^2 Change	<i>B</i>	<i>SE B</i>	β	Total R^2	R^2 Change
Step	Parental Acceptance (CRPBI)										
1					.136**					.136**	
	Child Sex	-.69	.62	-.08			-.69	.62	-.08		
	Child Age	-.68	.13	-.36**			-.68	.13	-.36**		
	Parent education	.12	.12	.07			.123	.12	.07		
	T1 Parent Depression	-.06	.31	-.01			-.06	.31	-.01		
2	Parent Coping	.07	.04	.16+	.155**	.018+	.19	.07	.19**	.171**	.035**
	Psychological Control (CRPBI)										
1					.039					.039	
	Child Sex	.07	.47	.01			.07	.47	.01		
	Child Age	.09	.10	.07			.09	.10	.07		
	Parent education	-.12	.09	-.10			-.12	.09	-.10		
	T1 Parent Depression	.48	.24	.15*			.48	.24	.15*		
2	Parent Coping	-.03	.03	-.08	.044	.005	-.05	.05	-.07	.044	.005
	Monitoring (CRPBI)										
1					.084**					.084	
	Child Sex	-.06	.33	-.01			-.06	.33	-.01		
	Child Age	-.24	.07	-.25**			-.24	.07	-.25**		
	Parent education	.02	.06	.02			.02	.06	.02		
	T1 Parent Depression	-.35	.17	-.15*			-.35	.17	-.15*		
2	Parent Coping	-.00	.02	-.01	.084**	.000	.01	.04	.01	.084	.000
	Conflict (CBQ)										
1					.051+					.051+	
	Child Sex	-.32	.60	-.04			-.32	.60	-.04		
	Child Age	.32	.13	.19*			.32	.13	.19*		
	Parent education	-.22	.12	-.15+			-.22	.12	-.15+		

	T1 Parent Depression	-.01	.30	-.00			-.01	.30	-.00		
2	Parent Coping	-.06	.03	-.16	.070*	.018+	-.15	.07	-.17	.078*	.026*
	Attachment (IPPA)										
1					.160**					.160	
	Child Sex	1.00	2.51	.03			.99	2.53	.03		
	Child Age	-	.54	-.40**			-3.11	.54	-.14**		
	Parent education	.48	.49	.07			.48	.49	.08		
	T1 Parent Depression	-.94	1.25	-.05			-.94	1.25	-.102		
2	Parent Coping	.29	.14	.16*	.180**	.020*	.61	.28	.15*	.182	.022*

+ $p < .05$; * $p < .05$; ** $p < .01$; T1 = Time 1 (Pre-treatment); CRPBI = Child Report of Parent Behavior Inventory; CBQ = Conflict Behavior Questionnaire; IPPA = Inventory of Parent and Peer Attachment

Table 5. Results of 2(Time: T1, T2) x 3(Group) ANCOVAs for Parents' Coping and Parenting Variables, and the Pairwise Comparisons of Estimated Marginal Means (EMM)

	T1: Baseline EMM (SE)			T2: 4 month EMM (SE)			Time (2) X Group (3) ANCOVA [#]		
	NonDep	Remitted	NonRem	NonDep	Remitted	NonRem	F Time	F Group	F Time X Group
PARENT-REPORT									
Coping (COPE)									
Primary Control	45.70 ^{a,1} (1.68)	43.87 ^{a,1} (1.98)	42.60 ^{a,1} (1.99)	50.77 ^{a,2} (1.59)	43.14 ^{b,1} (1.87)	38.51 ^{c,2} (1.88)	.002	3.90*	6.48**
Secondary Control	23.31 ^{ab,1} (.83)	22.52 ^{a,1} (.97)	20.65 ^{b,1} (.98)	24.06 ^{a,1} (.77)	21.32 ^{a,1} (.90)	19.12 ^{b,1} (.91)	2.47	5.01**	1.48
Disengagement	17.28 ^{a,1} (.86)	19.72 ^{ab,1} (1.00)	21.08 ^{b,1} (1.01)	15.85 ^{a,1} (.79)	16.54 ^{a,2} (.92)	19.84 ^{b,1} (.92)	1.41	5.85**	2.67+
CHILD-REPORT									
Parenting Behavior									
Acceptance	27.56 ^{a,1} (.79)	23.74 ^{b,1} (.86)	24.15 ^{b,1} (.85)	28.67 ^{a,1} (.83)	24.11 ^{b,1} (.90)	23.68 ^{b,1} (.89)	1.94	5.04**	1.14
Psychological Control	11.81 ^{a,1} (.58)	12.21 ^{a,1} (.63)	13.40 ^{a,1} (.62)	10.54 ^{a,2} (.60)	11.87 ^{a,1} (.65)	13.55 ^{b,1} (.65)	1.98	4.60*	1.13
Monitoring	14.03 ^{a,1} (.41)	12.44 ^{b,1} (.45)	12.44 ^{b,1} (.45)	14.19 ^{a,1} (.45)	12.04 ^{b,1} (.49)	12.16 ^{b,1} (.48)	1.61	3.56*	.307
Conflict (CBQ)	1.55 ^{a,1} (.75)	4.32 ^{b,1} (.82)	5.40 ^{b,1} (.80)	.04 ^{a,2} (.77)	4.84 ^{b,1} (.84)	5.72 ^{b,1} (.82)	.122	6.71**	1.56
Attachment (IPPA)	108.98 ^{a,1} (3.18)	96.59 ^{b,1} (3.53)	96.81 ^{b,1} (3.39)	117.28 ^{a,2} (3.25)	94.88 ^{b,1} (3.61)	93.30 ^{b,1} (3.47)	.731	5.65**	3.02+

+p<.1, *p<.05, ** p<.01, ***p<.001

CRPBI = Child Report of Parent Behavior Inventory; CBQ = Conflict Behavior Questionnaire; IPPA = Inventory of Parent and Peer Attachment

[#]All ANCOVAs included child age and sex, parent education, and parents' T1 depression as covariates

Superscript letters (^{a,b,c}) show significant (p<.05) between-group differences within each time point

Superscript numbers (^{1,2}) show significant (p<.05) within-group differences between time point

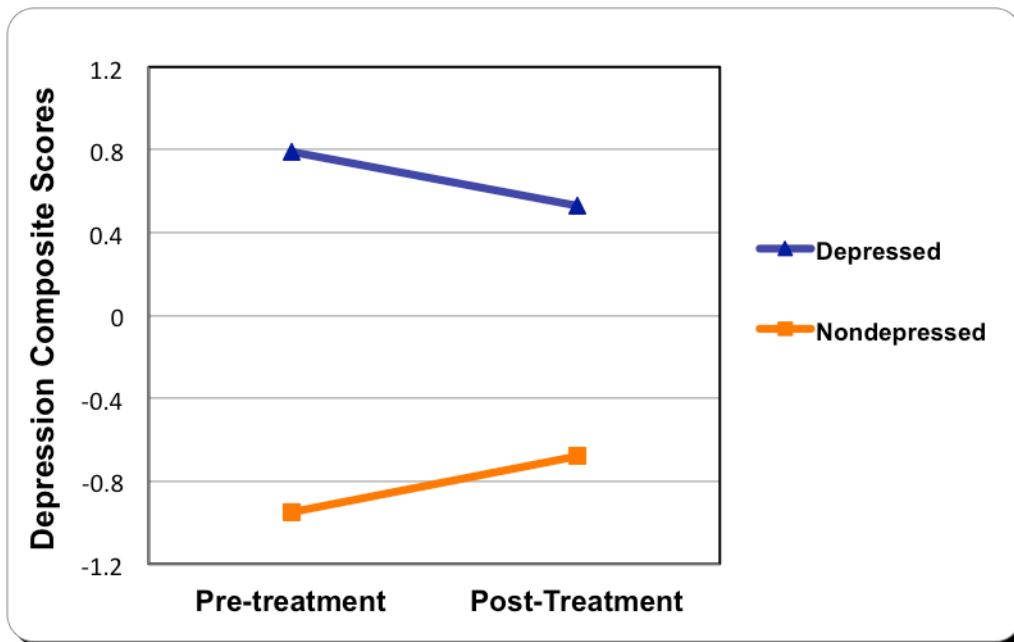


Figure 1. Nondepressed and Depressed Parents' Changes in Composite Depression Scores from Pre-treatment (T1) to Post-treatment (T2)

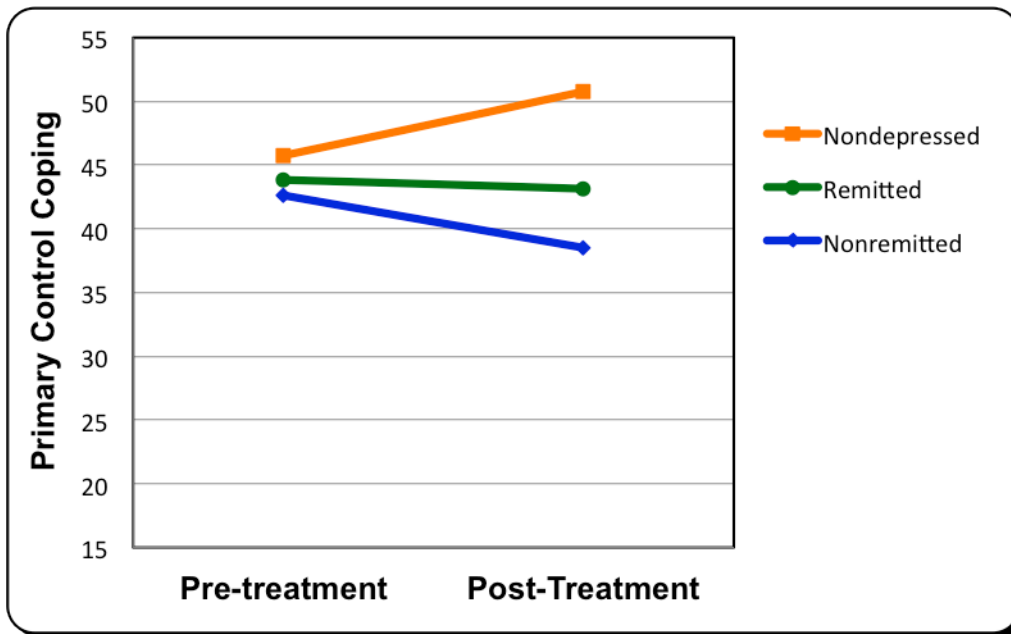


Figure 2. Nondepressed, Remitted, and Nonremitted Parents' Change in Primary Control Coping Scores from Pre-treatment (T1) to Post-treatment (T2)

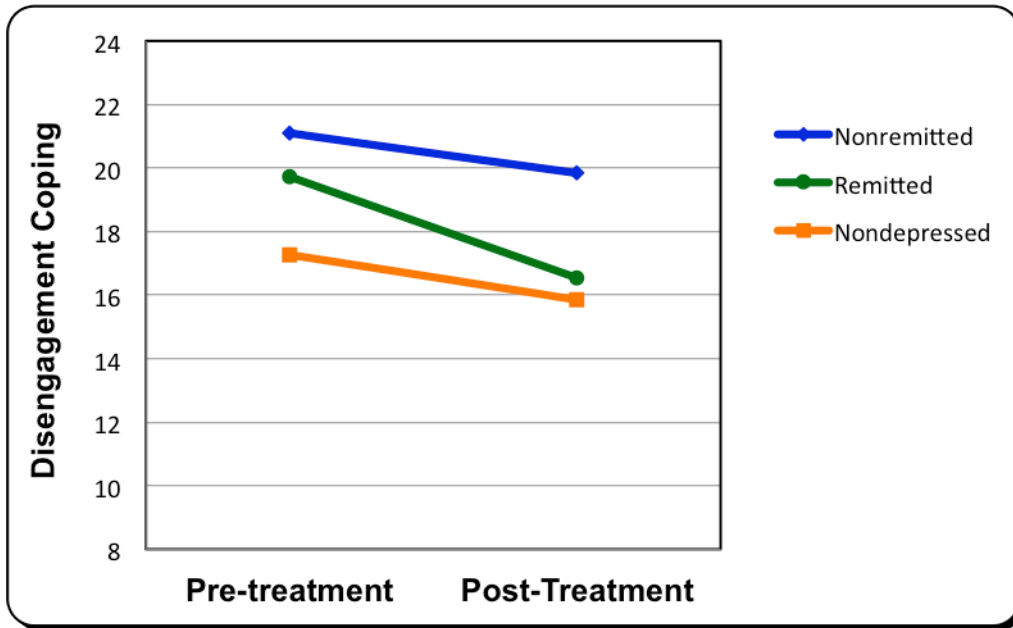


Figure 3. Nondepressed, Remitted, and Nonremitted Parents' Change in Disengagement Coping Scores from Pre-treatment (T1) to Post-treatment (T2)

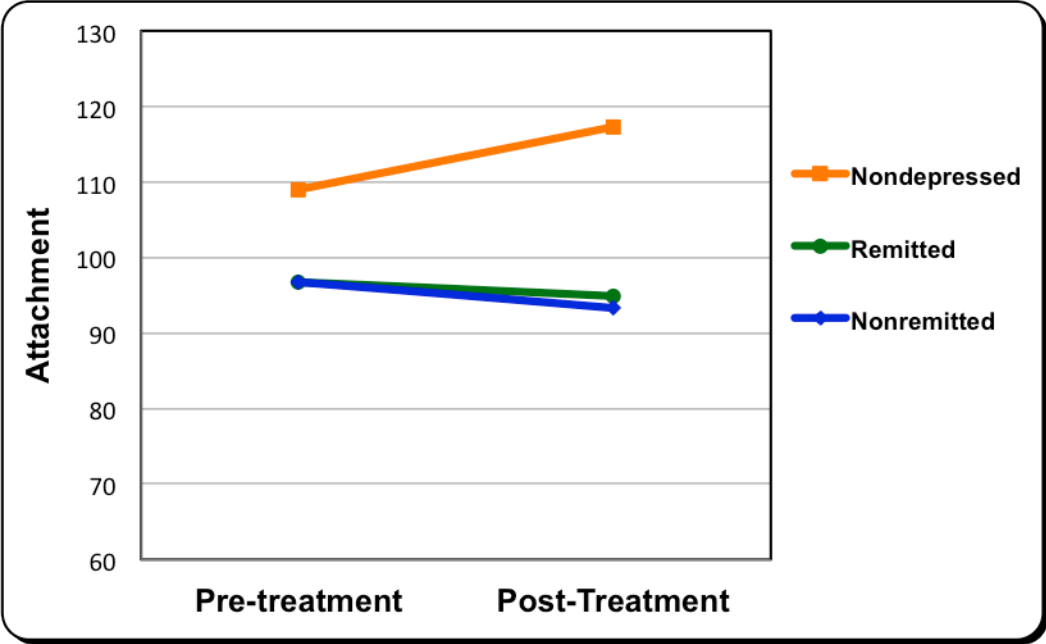


Figure 4. Nondepressed, Remitted, and Nonremitted Parents' Change in Child-Reported Attachment Scores from Pre-treatment (T1) to Post-treatment (T2)

APPENDIX

Items from COPE Inventory Included in Primary, Control, Secondary Control, and Disengagement Coping Scales

Primary Control

I make a plan of action.
I try to come up with a strategy about what to do.
I think about how I might best handle the problem.
I think hard about what steps to take.
I try to get advice from someone about what to do.
I talk to someone to find out more about the situation.
I talk to someone who could do something concrete about the problem.
I ask people who have had similar experiences what they did.
I concentrate my efforts on doing something about it.
I take additional action to try to get rid of the problem.
I take direct action to get around the problem.
I do what has to be done, one step at a time.
I discuss my feelings with someone.
I try to get emotional support from friends or relatives.
I get sympathy and understanding from someone.
I talk to someone about how I feel.

Secondary Control

I try to grow as a person as a result of the experience.
I try to see it in a different light, to make it seem more positive.
I look for something good in what is happening.
I learn something from the experience.
I get used to the idea that it happened.
I accept that this has happened and that it can't be changed.
I accept the reality of the fact that it happened.
I learn to live with it.

Disengagement

I admit to myself that I can't deal with it, and quit trying.
I just give up trying to reach my goal.
I give up the attempt to get what I want.
I reduce the amount of effort I'm putting into solving the problem.
I say to myself "this isn't real."
I refuse to believe that it has happened.
I pretend that it hasn't really happened.
I act as though it hasn't even happened.
I turn to work or other substitute activities to take my mind off things.
I daydream about things other than this.
I sleep more than usual.
I go to movies or watch TV, to think about it less.