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Cognitive style as a mediator of the relation between depression and parenting.

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University of Massachusetts Amherst

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COGNITIVE STYLE AS A MEDIATOR OF THE RELATION
BETWEEN DEPRESSION AND PARENTING

A Thesis Presented

by

BRIAN J. STOESSEL

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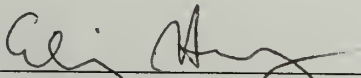
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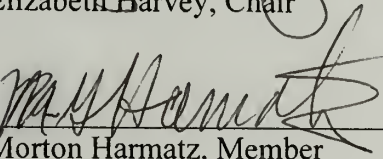
by

BRIAN J. STOESSEL


Approved as to style and content by:



Elizabeth Harvey, Chair



Morton Harmatz, Member



Robert Feldman, Member



Melinda Novak, Department Head
Department of Psychology

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CHAPTER 1

INTRODUCTION

The broad category of childhood problems referred to as acting out, aggression, oppositional defiant disorder, and conduct disorder constitutes a major mental health problem, affecting approximately 10% of elementary school students (Kazdin, 1987). These problems have been found to be associated with later drug and alcohol abuse, family violence, crime, and psychiatric disturbance; thus, prevention and early intervention have become critical issues, with child rearing practices receiving considerable attention (Arnold et al., 1993). Although many aspects of parenting contribute to the socialization of children, certain parental discipline strategies are especially implicated in the development and maintenance of children's behavior and adjustment problems. Based on her observational studies of parenting and child behavior problems, Baumrind (1978) identified three types of parental discipline used by parents to control their children. *Authoritarian* discipline refers to child rearing strategies that are excessively harsh or overreactive; *permissive* discipline refers to parental behavior that is too lax; *authoritative* discipline, in contrast, refers to a style of parenting characterized by a balance of firm control and warm regard. A large body of research now exists linking both authoritarian (harsh, overreactive) discipline and permissive (lax) discipline to child behavior problems (see Kendziora & O'Leary, 1993 for a review).

Determinants of Parenting

Since the emergence of this theoretical framework for understanding parental discipline, research has investigated the determinants and correlates of parenting

practices, and the respective consequences for children. Parental behavior has been conceptualized as being determined by three primary forces: contextual sources of stress and support, characteristics of the parent, and the characteristics of the child, (Belsky, 1984).

Social-contextual factors that have been found to contribute to parenting difficulties are parents' dissatisfaction with their social networks (Meyers, 1999; Sterling, 1999; Woodworth, Belsky, & Crnic, 1996), mothers' time at work (Scher & Mayseless, 2000), socioeconomic status (SES; Bluestone & Tamis-LeMonda, 1999), marital quality, (Kendler, Sham, & MacLean, 1997; Meyers, 1999), and father absence (Kelley, Power, & Wimbush, 1992).

Belsky (1984) argues that characteristics of parents including personality traits, demographic variables (e.g., age, sex), and their psychological well-being are the most influential determinants of parenting. He claims that parent characteristics are particularly influential determinants of parenting behavior because of their role in bolstering contextual support, such as quality of family relationships, in addition to their direct effect on parental functioning (Belsky, 1984). Specific characteristics of parents found to be associated with parenting behavior are depression, personality traits, maternal education, age, separation anxiety, parenting stress and childrearing history (Bluestone & Tamis-LeMonda, 1999; Carpenter, 1999; Frias-Armenta & McCloskey, 1998; Kelley, Power, & Wimbush, 1992; Kendler, Sham, & MacLean, 1997; Reis, 1989; Scher & Mayseless, 2000; Woodworth, Belsky, & Crnic, 1996).

Child temperament, especially the “difficult temperament” profile, has also been found to influence parenting behavior (Kendler et al., 1997; Meyers, 1999). Theory and research on parenting children with behavior problems suggests a bi-directional relationship with child behavior influencing parenting behavior, which then perpetuates and exacerbates child behavior problems (Danforth, Barkley & Stokes, 1991). Of particular interest, therefore, are studies that examine parenting behavior in samples of parents with children with behavior difficulties.

Depression and Parenting

Much of the research done on the personality and psychological well being of parents has focused on parental functioning of psychologically troubled adults, particularly those who are depressed. Numerous studies done in the past 30 years have shown that depression in parents, particularly mothers, is associated with difficulty in the parenting role (for a review, see Lovejoy, Graczyk, O’Hare & Neuman, 2000). Early studies on the parenting of depressed mothers, which relied on mothers’ self-report, found that depressed mothers reported, “diminished emotional involvement, impaired communication, disaffection, [and] increased hostility and resentment” (Weissman, Paykel & Klerman, 1972, p. 98). Depressed mothers perceive the parenting role less positively than do non-depressed mothers, and frequently experience feelings of inadequacy as parents, as well as feelings of rejection and hostility toward their children (see Downey & Coyne, 1990, for a review).

Observational studies of depressed mothers and their children have corroborated these earlier findings, demonstrating that mothers who are depressed tend to be more

hostile and negative, and less positive, with their children than control mothers (e.g., Cohn, Campbell, Matias & Hopkins, 1990; Goodman & Brumley, 1990; Gordon et al., 1989; Lovejoy, 1991). In a review of 46 published articles on maternal depression and parenting behavior, Lovejoy et al. (2000) found that the association between depression and parenting was strongest for negative maternal behavior such as hostility and irritability toward the child and was present to a lesser degree in disengagement from the child; the association between depression and positive maternal behavior was weak, but significant. In addition, an experimental study by Jouriles, Murphy & O'Leary (1989), found evidence that negative mood can reduce the number of positive interactions mothers have with their children. These studies support the notion that depression in parents may increase parents' levels of child-directed hostility and negativity, and may also have a dampening effect, reducing the effort that parents put into interacting with their children.

A variety of variables have been found to moderate the relationship between parental depression and parenting difficulty. Depressed mothers have been found to experience the most difficulty in the parenting role with infants and very young children (Lovejoy et al., 2000), and with boys more than with girls (Cohn et al., 1990). Depression and parenting difficulties are also more strongly associated when parents are economically disadvantaged (Lovejoy et al., 2000), when the mother is not working (Cohn et al., 1990), and when the depression is longer in duration (Campbell, Cohn, & Meyers, 1995).

Despite strong evidence that depression and parenting are associated, there is uncertainty among clinical researchers regarding whether depression itself causes parenting problems. Lovejoy et al. (2000) suggest that the parenting difficulties observed in depressed individuals “may not be specific to depression and may reflect general psychological distress rather than depression *per se*” (p. 563). Studies showing considerable overlap in the parenting difficulties of clinically depressed mothers and schizophrenic mothers, mothers with mild depressive symptomatology, and mothers experiencing several different stressors highlight the uncertainty of a specific causal relationship between clinical depression and parenting difficulties (Downey & Coyne, 1990). These authors suggest that parenting difficulties of depressed parents may be better conceptualized as correlates of disturbances in negative and positive affect. Another alternative explanation of the association between depression and parenting difficulties is that parenting difficulties seen in depressed mothers are caused by any of a number of possible sources of stress on mothers, including clinical depression, and others such as marital problems, chronic stress, personality dysfunction and poverty (Downey & Coyne, 1990). The authors suggest the possibility that these sources of stress, which in some cases are correlates of depression, may account better for parenting difficulties of depressed mothers than clinical depression itself. It is also possible that in many cases child behavior causes or contributes to both depression and parenting difficulties.

Parental Beliefs

Emerging more recently in the literature are studies on the beliefs and attitudes that parents hold, and how those beliefs and attitudes are thought to influence parenting

behavior. Abidin (1992) argues that an “unfortunate mistake” was made in the past 25 years when parenting researchers, “rushing to embrace behavioral methodologies, devalued, gave up on, or ignored self-report and personality measures designed to assess parental belief systems” (Abidin, 1992, p. 411). Although some investigators have found that the relationship between parent beliefs, behaviors, and child outcomes is tenuous (e.g., Miller, 1988), several recent articles have substantiated looking at parental belief systems as correlates, if not causal agents, of parenting behavior. Iverson and Segal (1993) found that parents who valued process goals in interaction with their children such as imagination and creativity spent a greater amount of time interacting with their children than parents who valued child obedience. Smith and O’Leary (1995) found that mothers’ child-centered attributions regarding an observed videotape of a mother-child interaction in which the child displayed negative affect were significantly correlated with mothers’ reports of harsh parenting. In a study of harsh parenting among Mexican mothers, Frias-Armenta and McCloskey (1998), found that mothers’ use of physical punishment was best accounted for by mothers’ authoritarian parenting style (i.e., their beliefs concerning the effective use of physical punishment and mothers’ lack of disciplinary skills). Holloway and Machida (1993) found that women who felt more in control of their children’s behavior had a higher baseline of varied coping strategies and used the strategies of problem solving and positive appraisal more often.

Cognitive Style as a Determinant of Parenting

Although researchers have begun to look at parental belief systems as determinants of parenting behavior, all of the articles published to date on this topic have

examined values, attitudes and attributions specifically regarding parenting. That is, studies have assessed constructs such as parents' "belief in spanking" or "belief in teaching" as determinants of parenting behavior, but parental cognitive styles in general, and their relation to parenting behavior, have not yet been well studied. This is surprising considering the fact that depression has been identified as a powerful contributor to dysfunctional parenting, and that negative cognitive styles are strongly associated with episodes of depression. Below is a review of the current theoretical understanding and empirical findings concerning the association between depression and cognitive style.

Depression and Cognitive Style

Two of the major cognitive theories of depression, the theory of Beck (1967, 1987) and Beck, Rush, Shaw, & Emery (1979), and the hopelessness theory of depression (Abramson, Metalsky, & Alloy, 1989) hypothesize that particular negative cognitive styles (also referred to as dysfunctional attitudes and irrational beliefs) increase individuals' likelihood of becoming depressed when they encounter negative life events. According to these theories, individuals possessing such cognitive styles are vulnerable to depression because they tend to interpret their experiences in ways that have negative consequences for themselves and their futures (Alloy et al., 1999a).

In the theory of Beck (1967, 1987) and Beck, Rush, Shaw, & Emery (1979), individuals possessing dysfunctional attitudes such as "If I fail partly, it is as bad as being a complete failure" or "I am nothing if a person I love doesn't love me" are hypothesized to develop negative beliefs about themselves, the world and their futures, and in turn, develop depressive symptoms. According to the hopelessness theory (Abramson et al.,

1989), people who tend to attribute negative life events to stable (likely to persist over time) and global (likely to affect many areas of life) causes are more likely to believe that they themselves are fundamentally flawed or worthless, which leads them to feel hopeless and eventually depressed. Thus, though they differ in their specifics, both of these theories postulate that a cognitive vulnerability increases risk for depression by affecting how individuals process and appraise personally relevant life experiences (Alloy et al., 1999a).

Reviews of the empirical evidence for the cognitive vulnerability hypotheses of depression have generally not found strong support for a causal relationship between cognitive vulnerability and depression (e.g., Barnett & Gotlib, 1988). Findings that dysfunctional attitudes and attributions disappear when depressive symptoms remit appear to refute the claim that dysfunctional attitudes are stable traits (Persons & Miranda, 1992). Other criticisms of the cognitive vulnerability hypotheses stem from findings that groups of normal and recovered depressive individuals do not differ in dysfunctional attitudes or attributions (see Persons & Miranda, 1992 for a list of studies). As a result, many investigators have concluded that dysfunctional attitudes are not vulnerability factors, but rather are consequences or correlates of depression (e.g., Barnett & Gotlib, 1988). However, in an alternative interpretation of such evidence, Persons and Miranda (1992) proposed a mood-state hypothesis, which is consistent with cognitive theories of depression. According to this hypothesis, dysfunctional attitudes and attributions are indeed stable personality traits, but an individual's ability to report them depends on their current mood state.

In support of the cognitive vulnerability hypotheses, a recent prospective study by the Temple-Wisconsin Cognitive Vulnerability to Depression (CVD) Project provides evidence that negative thinking patterns confer vulnerability not only to depressive symptomatology, but also to full-blown, clinically significant depressive episodes (Alloy, et al., 1999a). In this study, non-depressed college freshman identified as cognitively high-risk (HR) or low-risk (LR) for depression were followed periodically for 5 years. Findings indicate that the HR group showed double the rate of lifetime clinical depression than the LR group. In addition, these HR-LR differences were specific to depressive disorders (Alloy et al., 1999a). HR individuals also showed “greater endorsement, faster processing, and better recall of negative depression-related adjectives involving themes of incompetence, worthlessness, and low motivation” than did LR individuals (Alloy, Abramson, & Francis, 1999, p. 129). HR participants showed less endorsement, slower processing, and worse recall of positive depression-relevant adjectives (e.g., “successful,” “lovable”) than LR participants.

Research has also begun to identify moderator variables that may influence whether individuals with cognitive vulnerability to depression will actually develop depressive symptoms. For example, Barnett and Gotlib (1990) found that dysfunctional attitudes interacted with social support in predicting the severity of dysphoric symptoms in women. In addition, Temple-Wisconsin researchers found, using CVD project data, that individuals’ tendencies to ruminate in response to life stressors interacted significantly with cognitive risk to predict both lifetime history and prospective onsets of major depressive episodes (Alloy et al., 1999a).

Much of the research on the origins of negative cognitive styles is based on Beck's (1967) theory of depression. This theory suggests a three-stage causal model in which dysfunctional parenting gives rise to dysfunctional attitudes in the offspring, which in turn, give rise to depression-proneness in the offspring. One study that supports this theory found that dysfunctional parenting, particularly perfectionistic and critical parenting, predicted dysfunctional attitudes and depression tendencies in children (Randolph & Dykman, 1998). In further developing Beck's theory, researchers have speculated that parents may engender negative cognitive styles in their children by (a) genetically transmitting negative cognitive styles, (b) modeling such styles in interactions with their children, (c) providing negative feedback to their children which results in the children adopting negative cognitive styles, or (d) maltreating their children (Alloy et al., 1999a).

Depression and Parenting in Ethnic Minority Populations

Early studies on the parenting practices of ethnic minority families, particularly African-American families, characterized their disciplinary practices as "harsh, rigid, and strict" (see Kelley, Power, & Wimbush, 1992). However, Kelley et al. (1992) argued that using models of child rearing developed on majorities to evaluate minority parenting practices is inappropriate, and can result in differences being interpreted as deficits. Recent research has found wide variability in the parenting practices of minority families, and has begun to identify additional factors such as cultural and religious beliefs and child safety as determinants of parenting in these populations (Bluestone & Tamis-LeMonda, 1999; Carpenter, 1999; Frias-Armenta & McCloskey, 1998). However, much

of the research on determinants of parenting has been conducted with predominantly European-American parents and little is known about the determinants of parenting in other racial/ethnic groups.

Epidemiological research is contradictory in reporting rates of depression in African-Americans, European-Americans and Hispanics. Some studies show that Hispanics experience higher rates of depression (Kemp, Krause, & Adkins, 1999; Munet-Vilaro, Rolkman, & Gregorich, 1999; Siegel et al., 1998), whereas others show no differences (e.g., Alvidrez, 1998), or that the differences disappear when SES is controlled (Jackson-Triche et al., 2000). The experience and symptomatology of major depression has been found to vary among different cultural groups (American Psychiatric Association, 2000). Some studies indicate that Hispanics experience more somatic symptoms than the majority culture (e.g., Roberts, 1992), whereas other studies refute these findings (e.g., Fandino De Cirilli, 1999). Comparisons in the levels of depression between African-Americans and European-Americans have also generally found no differences when SES has been controlled (e.g., Biafora, 1995).

With respect to the experience of cognitive distortions, there are surprisingly few studies documenting either similarities or differences across different racial/ethnic groups. One study by Robin and DiGiuseppe (1995) reported differences between racial/ethnic groups on scores on the Attitudes and Belief Scale II, a measure of irrational beliefs believed to underlie depression. Based on information collected from 1,220 undergraduate students from three different colleges, the investigators found that on average, African-American participants scored higher than European-Americans overall;

more specifically, African-Americans scored higher than European-Americans on items constructed to measure beliefs about comfort and achievement (i.e., “catastrophizing” beliefs regarding physical and emotional comfort, and the need to succeed or perform well, respectively). The investigators note that one encouraging outcome of the study is that during debriefing, participants from all ethnic groups expressed that the items seemed appropriate and applicable to their own situations. Nevertheless, the results of this study must be interpreted with caution because they have not yet been replicated with other irrational beliefs scales or with other populations.

The Present Study

The present study investigated the relations among three variables: parental depression, parental cognitive styles, and parental behavior. As described above, two of these three relationships have been studied extensively in recent years. Depressive symptomatology is known to be associated with both parenting difficulties and with negative cognitive styles. This study will examine whether dysfunctionality of cognitive style in parents is related to their parenting practices, and whether cognitive style mediates the relation between depression and parenting.

Hypotheses

The study sought to evaluate a number of hypotheses.

1. Parents scoring high on a measure of dysfunctional attitudes were expected to score high on a measure of self-reported maladaptive discipline strategies, where high scores indicate higher than average levels of laxness, overreactivity, or both.

2. Types of dysfunctional attitudes were expected to be associated with types of reported discipline, with the following specific relations being the most likely: parents high on Need for Approval were expected to report more lax discipline, and parents high on Performance Consciousness were expected to report more harsh discipline.

3. In accordance with the literature, participants scoring high on the depression scale were expected to score high on the scale of dysfunctional attitudes.

4. Participants scoring high on the depression scale were expected to report higher use of lax and harsh discipline.

5. It was also expected that the association between depression and parenting behaviors would be mediated by dysfunctional attitudes.

This study also sought to explore whether these relations were moderated by ethnicity, socioeconomic status, and parent gender.

CHAPTER 2

METHOD

Participants

Participants were 142 mothers and 109 fathers of 144 children aged 38 to 49 months. Of the 142 mothers, 116 identified themselves as European-American (non-Hispanic), 14 as Hispanic, 8 as African American, 1 as Korean, and 3 as multiracial (i.e., identified with two or more races/ethnicities). Of the 109 fathers, 90 identified as European-American (non-Hispanic), 10 as Hispanic, 5 as African American, 1 as Chinese, and 3 as multiracial. Median household income¹ for children was \$63,000. Mothers' average education level was 14.3 years (where 12 years indicates completion of high school) and fathers' mean was 14.0 years.

In order to participate, parents had to have a child meeting the criteria for either the behavior problems group or the control group. Children from both groups met the following criteria: a) normal cognitive development as measured by the McCarthy Scales of Children's Ability (standard score of 70 or higher); b) no evidence of deafness, blindness, language delay, cerebral palsy, epilepsy, autism, or psychosis, based on a medical history, parental interview, and child observations. The 124 children in the behavior problems group also met two additional criteria: c) a response of "yes" or "possibly" from the parent completing the recruitment questionnaire to the question, "Are you concerned about any of the following behaviors in your 3-year-old child: high activity level, defiance (refusing to obey adults), aggression or impulsive behavior (acting without thinking)"; and d) Behavioral Assessment System for Children (BASC)

¹ Household income was calculated separately for mothers and fathers. If parents lived together, the sum of their incomes was used for both parents. The medians of these samples were both \$63,000.

Hyperactivity or Aggression T-score at or above 65 (about 92nd percentile) based on the report of the parent who completed a screening questionnaire. The 20 control group children's parents responded "no" to the recruitment questionnaire item ("c" above) and had T-scores below 60 on all the BASC clinical scales (including hyperactivity, aggression, anxiety, depression, somatization, withdrawal, inattention, and atypicality).²

Effort was made to recruit both parents whenever possible, even when the parents were not currently living together. Parents who spent time with the child on a regular basis (at least once per month), were invited to participate.

Procedure

Participants were recruited from pediatrician's offices in the Springfield-Northampton-Greenfield, Massachusetts area, and also from state birth records. Letters describing the study and questionnaires were distributed to parents of 3-year-old children during visits to their pediatricians' offices, and mailed to parents of 3-year-old children using information from state birth records. The questionnaire packet contained an informed consent form, a Behavioral Assessment System for Children (BASC), and a questionnaire asking parents whether their children evidenced deafness, blindness, language delay, cerebral palsy, epilepsy, autism, or psychosis, and whether they were concerned about the child's activity level, defiance, aggression or impulse control. Parents were also asked to provide their names and telephone numbers. Parents who met the criteria listed above for either the behavior problems group or the control group³ were contacted by phone, provided a brief description of the study, and invited to participate.

² Parents who answered "possibly" regarding their concern about no more than one of the behaviors – high activity, defiance, aggression, or impulsivity – were also permitted in the control group provided that their BASC T-scores were all below 60.

³ Note: these two groups pertain to the larger study, and were not differentiated in the present analyses.

Parents who expressed an interest in participating were scheduled for two three-hour home visits scheduled one week apart. Each parent who participated was paid \$200.

During home visits, doctoral students in clinical psychology and undergraduate research assistants collected data from the families through parent interviews, questionnaires, child cognitive testing, and observation of parent-child interaction. Data for this particular study was obtained using three questionnaires completed separately by each parent, and through two phone interviews completed by each parent.

Measures

Dysfunctional Attitude Scale – Form A (DAS-A, Weissman, 1979). The DAS-A is a 40-item questionnaire in which participants indicate the extent of their agreement to statements designed to measure “depressogenic schemas.” Based on Beck’s (1967) cognitive theory of depression, items on the DAS-A were derived from an original pool of 100 items which were constructed so as to represent seven major value systems: approval, love, achievement, perfectionism, entitlement, omnipotence, and autonomy. The DAS-A (hereafter referred to simply as the DAS) has established stability (test-retest correlations over an eight-week period of .80 to .84, Weissman & Beck, 1978) and excellent concurrent validity (Weissman, 1980).

Preliminary principal-components factor analyses with Varimax rotation were conducted separately for mothers and fathers and yielded similar two-factor solutions. Therefore, in order to have a larger sample size and thus a more stable solution, mothers and fathers were combined into one sample for the factor analysis of the DAS. A principal-components factor analysis with Varimax rotation on the combined sample

yielded two factors accounting for 30.6% of the variance: Performance Consciousness and Need for Approval. Items were discarded if their factor loadings were below .35 (5, 6, 12, 17, 18, 24, 25, 35), if their contents were theoretically dissimilar to the factors on which they loaded (7, 13, 16, 23, 29, 31, 32, 36, 37), or if the item loaded on both factors (19, 34).

Items on the DAS and their factor loadings are shown in Table 1. The Performance Consciousness factor consists of 13 items that describe excessive concerns about performance, failure and weakness. The Need for Approval factor consists of eight items that indicate high need for approval from others. These items describe beliefs indicating that approval and acceptance from others is extremely important. A similar 2-factor structure was found by Cane et al.(1986), and similar factors, labeled need for approval and perfectionism, were found by Oliver and Baumgart (1985) as the first two factors in a four-factor solution.

Participants' scores were calculated by reverse-scoring items 2, 30 and 40, and then taking the average of all items on each factor. Scores range from 1.0 to 7.0 with low scores indicating higher dysfunctionality of cognitive style.

Parenting Scale (PS; Arnold et al., 1993). The PS is a 30-item self-report scale of parental discipline. It has demonstrated good reliability and validity both in a preschool sample (Arnold et al., 1993) and an elementary school sample including children with ADHD (Harvey, Danforth, Ulaszek, & Eberhardt, 2001). Factor analyses from these two studies reveal both Overreactivity and Laxness factors for parents of both younger and older, clinical and non-clinical samples. Both of these studies found that overreactivity

and laxness scores were associated with child behavior and demonstrated good internal consistency (all alphas > .80). In addition, Arnold et al. (1993) found that both Overreactivity and Laxness factors correlated significantly⁴ with observations of parents' behavior. Participants' scores on Overreactivity and Laxness were computed using the factor structure cited in Arnold et al. (1993), and full scale scores, entitled Total Effectiveness, were computed by adding all responses (and reverse-scoring appropriate items). On all three of these sub-scales, higher scores indicate greater difficulty in the parenting role.

Structured Daily Discipline Interview (SDDI). The SDDI is a phone interview conducted twice with each parent (within one week following each home visit) in which they were asked whether they used various discipline strategies with their child in the previous 24 hours. This interview is a modification of the Daily Discipline Interview (Webster-Stratton & Spitzer, 1991), which uses open-ended rather than closed-ended questions. Items for the SDDI were generated by creating several parental discipline strategies for each of the Categories of Parental Discipline Techniques outlined in Webster-Stratton et al. (1996), which include Physical Force, Critical Non-Physical Force, Non-Critical Verbal Force, Limit Setting, Teaching, Positive Verbal Response, Positive Nonverbal Response, Lack of Response/No Follow-Through, and Parent's State of Mind. For example, one of the SDDI items created for the Physical Force category is "Did you physically restrain your child to prevent him/her from doing something?" Undergraduate research assistants were trained to conduct these interviews, documenting how frequently parents used each of 31 discipline strategies in the previous 24 hours.

⁴ Spearman Rank-Order Correlations of .65 ($p < .01$) for Overreactivity and .61 ($p < .05$) for Laxness.

A principal-components factor analysis with Varimax rotation was conducted on the entire sample of mothers and yielded two factors that accounted for 39.8% of the variance: Warm/Firm Parenting and Overreactive Parenting. A similar analysis on the entire sample of fathers also yielded two factors accounting for 36.6% of the variance. Since the factor structures were very similar for mothers and fathers, and to facilitate comparisons between mothers and fathers, items were chosen only if they loaded similarly for both mothers and fathers.⁵

In general, items were assigned to one of the two factors using the criterion that the factor loading for that item should be .35 or higher. One item (17) that had no factor loadings above .35 was discarded. Other items were discarded because they loaded differently for mothers and fathers (2, 6, 10, 19) or because they were theoretically dissimilar to other items on the factor on which they loaded (21, 22, 30, 31).

The items on both factors and their factor loadings are shown in Table 2. The Warm/Firm factor consists of 15 items that describe parent-child interactions characterized by firm limits and emotional warmth and are consistent with Baumrind's conceptualization of authoritative parenting. The Overreactive Parenting factor consists of seven items that indicate parental behavior that is harsh or overreactive. These items describe parenting strategies that are overly critical, coercive, or punitive.

For each item, the two frequencies reported by parents (one frequency from each administration of the SDDI) were averaged to create aggregate scores. If only one SDDI was completed, the frequencies given during that administration were used in place of the aggregate scores. Z-scores were calculated for the aggregate scores for each item

⁵ We did not combine mothers and fathers into one sample for the factor analysis of the SDDI because these factor analyses were performed on Z-scores, which were calculated separately for the samples of mothers and fathers.

separately for mothers and fathers. Since there was no upper limit placed on the frequencies reported by parents, there were several outliers in the resulting data set. These outliers were eliminated according to the technique suggested by Tabachnick (1996). For each item on the scale (separately for mothers and fathers), z-scores at or above 3.29 were identified and reduced to the z-score on that item that was nearest to, but not higher than, 3.29. Participants' scores on each factor were then calculated by finding the mean of the z-scores corresponding to the items on that factor. High scores on the Warm/Firm factor of the SDDI indicate parenting characterized by high levels of emotional warmth and firm limits, whereas low scores on this factor indicate low levels. High scores on the Overreactive Parenting factor indicate parenting characterized by high levels of overreactivity, whereas low scores on this factor indicate low levels.

Center for Epidemiologic Studies – Depressed Mood Scale (CES-D; Radloff, 1977). The CES-D is a 20-item questionnaire designed to measure depressive symptomatology in the general population, with emphasis on the affective component – depressed mood. Participants are asked to indicate how often (1 = *rarely or none of the time*, 4 = *most or all of the time*) they felt or behaved in certain ways during the previous week (e.g., *I talked less than usual*). An overall score is calculated by taking the average of all of the frequency ratings, and reverse scoring items 4, 8, 12, and 16. Scores range from 1 to 4 with higher scores indicating greater depression. The CES-D has established reliability and validity in both general and clinical populations and for various subgroups: African Americans and European-Americans, males and females, and three levels of education (Radloff, 1977).

Behavior Assessment Schedule for Children (BASC; Reynolds & Kamphaus, 1992). The BASC is a behavior rating scale that assesses a broad range of psychopathology in children aged 30 months and older. It yields both hyperactivity and aggression subscales for children age three and older. Research indicates that reliability of the BASC for 2 and 3-year-olds is good, and validity for children four and older is excellent (Reynolds & Kamphaus, 1992).

The McCarthy Scale of Children's Abilities (McCarthy, 1972) measures cognitive ability in children age 2 and up. It yields scores on each of the following scales: Verbal Scale, Perceptual-Performance Scale, Quantitative Scale, Memory Scale, Motor Scale, and General Cognitive Scale. It has adequate reliability (split-half reliabilities for the six scales range from .79 to .88) and correlates well with other cognitive measures (McCarthy, 1972).

CHAPTER 3

RESULTS

Descriptive Statistics

Mothers' and fathers' mean scores on measures of depression, parenting styles and cognitive styles are reported in Table 3. These scores were calculated separately for European-American and ethnic minority parents because several studies have found differences in discipline and depression between these groups (e.g., Kelley et al., 1992; Kemp et al., 1999). A more ideal analysis would have looked for mean differences among each of the specific populations sampled (African-American, Hispanic and European-American); however, the small numbers of participants from minority populations in the present study prevented us from doing so. We therefore chose to combine the minority populations into a single group, acknowledging (a) the possibility that the heterogeneity of this group may mask within-group differences, and (b) the difficulty in interpreting findings from such a group.

Minority mothers and fathers reported more depression than European-American mothers and fathers, respectively. European-American mothers indicated higher need for approval than European-American fathers. Minority mothers and European-American fathers both indicated more ineffective parenting than did European-American mothers. Minority mothers also showed more lax parenting than did European-American mothers. It is unclear whether the differences found between European-American and minority parents reflect actual differences or whether these differences are due a problem in

measurement: since these measures were developed using European-American parents, they may not accurately assess the parenting of ethnic minorities.

Intercorrelations

Visual inspection of a scatterplot of the relation between depression and parenting revealed that two mothers were bivariate outliers. Both participants reported using the most effective parenting strategies in the sample, as well as having the highest levels of depression. Since this pattern of responses was unexpected based on past research (Lovejoy, Graczyk, O'Hare & Neuman, 2000), and was unusual in this sample, it is likely that data from those two participants was either not valid or highly atypical. Furthermore these two parents' data would have had a disproportionately strong effect on analyses if they had been included. Qualitative observations made by graduate research assistants during data collection indicated that these two parents may have been motivated to report unrealistically positive parenting behavior due to their personal circumstances. Therefore, these two participants were excluded from all data analyses.

Table 4 presents intercorrelations among the CES-D, DAS, PS, and SDDI for mothers and fathers separately. Higher levels of depression were significantly associated with more negative parenting based on all four parenting measures for both mothers and fathers. In general, more depressed parents had more dysfunctional cognitive styles. The correlations between depression and cognitive style (overall cognitive dysfunctionality and performance consciousness) were significantly higher for fathers than for mothers ($p < .05$ for both). The correlation between overall cognitive dysfunctionality and overall parenting difficulty was also higher for fathers than for mothers ($p < .05$). Mothers who

reported higher levels of depression also reported more dysfunctional attitudes overall, and higher performance consciousness, but not more need for approval. Fathers who reported higher levels of depression reported more dysfunctional attitudes overall, as well as higher performance consciousness and more need for approval.

Mothers who reported high levels of performance consciousness rated themselves as significantly more overreactive, but not more lax. Mothers reporting a high need for approval did not rate themselves as more overreactive or more lax. Fathers who reported higher performance consciousness reported both more overreactivity and more laxness. Fathers who reported more need for approval rated themselves as more overreactive, but not more lax.

Analytic Strategy for Testing the Mediation Model

Baron & Kelly (1986) describe the conditions under which a mediation model is supported. A variable, M , partially mediates the relation between an independent variable, X , and a dependent variable, Y , when the following conditions are met: (1) the correlation between X and Y is significant; (2) the correlation between X and M is significant; (3) the coefficient of M is significant when Y is regressed on X and M . For *complete* (or *full*) mediation, the following condition must also apply: (4) the coefficient of X is no longer significant when Y is regressed on X and M . According to MacKinnon & Dwyer (1993), the significance of mediated effects can be tested as follows: The size of the mediated effect is first calculated by multiplying the correlation between X and M by the regression coefficient of M when Y is regressed on X and M . This mediated effect is then divided by its standard error, yielding a z-score and associated p-value.

For the present study, several mediation models were tested because multiple measures of parenting style and cognitive style were used. First, as required in steps 1 and 2 above, parenting style and cognitive style variables were identified that were significantly correlated with depression, based on the correlations found in Table 4. For fathers, CES-D was significantly correlated with 3 cognitive style measures and 4 parenting style measures, yielding 12 testable mediation models (see Table 5). For mothers, the CES-D was significantly correlated with 2 cognitive style measures and 4 parenting style measures, yielding 8 testable mediation models.

Then, steps 3 and 4 were conducted for each mediation model: multiple regression equations were computed (for mothers and fathers separately) in which parenting style (PS-Total, PS-Overreactivity, PS-Lax, or SDDI-Harsh) was regressed on depression (CES-D) and cognitive style (DAS-Total, DAS-Performance, or DAS-Approval). Additional significance tests (MacKinnon & Dwyer, 1993) were then calculated (hereafter referred to as tests of the mediated effect) for each mediation model that was found to be significant using steps 1-3 (regardless of whether step 4 was significant). Results are presented according to the parenting style measure that was used in each group of mediation models tested. Figure 1 illustrates each mediation model that was found to be significant.

Tests of the Mediation Models

Parenting Style Measure: PS-Total

When PS-Total was regressed on CES-D and DAS-Total, the coefficient of DAS-Total was significant for fathers ($\beta = -0.31$, $p < .01$) and the relation between CES-D and

PS-Total decreased but remained significant ($\beta=.29$, $p<.01$) for fathers. This mediated effect was significant ($z=2.57$, $p<.01$).

When PS-Total was regressed on CES-D and DAS-Performance, the coefficient of DAS-Performance was also significant for fathers ($\beta=-0.26$, $p<.05$) and the relation between CES-D and PS-Total decreased but remained significant ($\beta=.31$, $p<.01$) for fathers. The mediated effect was significant ($z=2.26$, $p<.05$). None of the mediation models using PS-Total as the parenting style measure were significant for mothers.

Parenting Style Measure: PS-Overreactivity

When PS-Overreactivity was regressed on CES-D and DAS-Total, the coefficient of DAS-Total was significant for both mothers ($\beta=-0.29$, $p<.01$) and fathers ($\beta=-0.38$, $p<.001$); the relations between CES-D and PS-Overreactivity decreased to non-significant levels for both mothers ($\beta=.04$, $p=.66$) and fathers ($\beta=.16$, $p=.14$). This mediated effect was significant for both mothers ($z=1.78$, $p<.05$) and fathers ($z=2.94$, $p<.01$).

When PS-Overreactivity was regressed on CES-D and DAS-Performance, the coefficient of DAS-Performance was significant for both mothers ($\beta=-0.29$, $p<.01$) and fathers ($\beta=-0.24$, $p<.05$); the relation between CES-D and PS-Overreactivity decreased to a non-significant level for mothers ($\beta=.04$, $p=.67$) and remained significant for fathers ($\beta=.22$, $p<.05$). This mediated effect was significant for both mothers ($z=1.78$, $p<.05$) and fathers ($z=2.02$, $p<.05$).

When PS-Overreactivity was regressed on CES-D and DAS-Approval, the coefficient of DAS-Approval was significant for fathers ($\beta=-0.31$, $p<.01$) and the relation

between CES-D and PS-Overreactivity remained significant ($\beta=.24$, $p<.05$) for fathers. The mediated effect was also significant ($z=2.03$, $p<.05$). The coefficient of DAS-Approval was not significant for mothers.

Parenting Style Measure: PS-Lax and SDDI-Harsh

None of the models using PS-Lax or SDDI-Harsh as measures of parenting style were significant for either mothers or fathers.

Tests of Moderated Effects

Calculation of Interaction Terms

In order to determine whether participants' ethnic minority status or socioeconomic status (SES) affected whether or not cognitive style mediated the relation between depression and parenting style, variables were created to denote minority status and SES. Participants who identified themselves as having any non-European-American heritage were placed in the minority group, and those who identified themselves as having only European-American heritage were placed in the European-American group. Each participant's SES was calculated by combining their reported annual income and their education level. Self-report of annual family income was based on all income, including AFDC and child-support payments received. Scores were transformed by square-root to correct for skewness of the income distribution. Education level was computed by calculating the number of years participants had been in school. Participants reported the highest level of education they had completed, and this level was converted into years (e.g., 12th grade = 12 years, Master's Degree = 18 years).

Finally, both income and education variables were converted to Z-scores and averaged to create a single SES variable.

Interaction terms were calculated by centering CES-D and DAS variables (to reduce the potential problem of multicollinearity; Jaccard, Turrisi, & Wan, 1990), and then multiplying them by either minority status or SES variables. Multiple regression equations with interaction terms were computed in which parenting style (PS-Total, PS-Overreactivity, or PS-Lax⁶) was regressed on either depression or cognitive style, the minority or SES variable, and the interaction term.

Minority Status Interactions

For fathers, need for approval interacted with minority status in predicting (overall) ineffective parenting ($\beta=.30, p<.05$) such that need for approval was negatively correlated with ineffective parenting for European-American fathers ($r=-.30, p<.01$)⁷ and was positively (but not-significantly) correlated with ineffective parenting for minority fathers ($r=.23, p=.39$). Thus, although need for approval was not associated with ineffective parenting when the entire sample of fathers was included, the correlation was significant when only European-American fathers were included. Tests of the mediation model when only European-American fathers were included in the analyses were not significant.

For mothers, a trend emerged for the interaction of overall cognitive dysfunctionality (DAS-Total) and minority status in predicting laxness ($\beta=.18, p<.10$) such that DAS-Total and laxness were not significantly correlated for minority mothers

⁶ The SDDI was not used as a dependent variable in these analyses.

⁷ European-American fathers with more need for approval reported more ineffective parenting.

($r=.06$), but were negatively correlated for European-American mothers ($r=-.289$, $p<.01$).⁸ Again, although the relation between DAS-Total and laxness was not significant when the entire sample of mothers was included, this relation was significant when only European-American mothers were included. Through further testing, DAS-Total was found to mediate the relation between depression and laxness for European-American mothers ($z=1.80$, $p<.05$).

A trend also emerged for the interaction of mothers' performance consciousness with minority status in predicting laxness ($\beta=.16$, $p<.10$) such that high performance consciousness and laxness were not significantly correlated for minority mothers, but were negatively correlated when only European-American mothers were included in the analyses ($r=-.28$, $p<.01$)⁹. Further testing indicated that for European-American mothers, but not for minority mothers, high performance consciousness mediated the relationship between depression and laxness ($z=1.71$, $p<.05$).

SES Interactions

For fathers, there was a significant interaction between depression and SES in predicting overreactive parenting ($\beta=.26$, $p<.05$). To interpret this interaction, participants were split into high and low SES groups (Z-scores above zero and below zero, respectively). For high SES participants, depression was positively correlated with overreactivity ($r=.38$, $p<.01$) and for low SES participants, depression was not significantly correlated with overreactivity ($r=.13$). Mediation tests revealed that when

⁸ European-American mothers with more dysfunctional attitudes were more lax.

⁹ European-American mothers with high performance consciousness were more lax.

only high SES fathers were included, none of the cognitive style variables mediated the relation between depression and overreactivity. There were no significant SES interactions for mothers.

CHAPTER 4

DISCUSSION

The present study examined the relation between parental depression, cognitive style, and parenting of 3-4 year old children. As expected, depressed parents reported more dysfunctional attitudes and more difficulty in the parenting role. Depression was more strongly associated with performance consciousness than with high need for approval, and these associations tended to be higher for fathers than for mothers. Also as predicted, performance-conscious mothers and fathers both rated themselves as high in overreactive parenting; performance-conscious fathers but not mothers rated themselves as higher in laxness. Neither mothers nor fathers who had a high need for approval rated themselves as more lax; however, fathers who had a high need for approval rated themselves as significantly more overreactive.

This study found support for the hypothesis that cognitive style mediates the relation between depression and parenting effectiveness. In particular, performance-consciousness mediated the relation between depression and overreactivity for mothers and performance-consciousness together with need for approval mediated the relation between depression and overreactivity for fathers. Furthermore, performance-consciousness mediated the relation between depression and laxness for European-American mothers but not for ethnic-minority mothers. The study found no evidence that socioeconomic status affects whether or not cognitive style mediates the relation between depression and parenting.

The present findings are generally consistent with the existing literature on parenting and depression. The findings that more depressed parents have more difficulty in the parenting role, and that depression is associated with negative cognitive styles, echo well-documented findings from several decades of research (e.g., Lovejoy et al., 2000; Alloy et al., 1999a). The finding that cognitive style was related (directly or indirectly) to parental behavior is consistent with Belsky's (1984) contention that parent characteristics are perhaps the most influential factors affecting their parenting. The present study is the first to empirically document a link between cognitive style and parenting. The finding that cognitive styles may account for some of the relation between depression and parenting is a step beyond what has been previously documented or studied.

These findings suggest a new perspective on the relation between depression and parenting difficulties. They highlight the importance of examining parents' belief systems, not only as they pertain to parenting, but also as a "cognitive orientation" that may affect the decisions parents make, their perceptions of themselves, their children and their environment, and the way they behave and manage their children's behavior. The finding that parents who are especially performance-conscious tend to be more overreactive suggests that particular cognitive styles may predispose parents to particular parenting difficulties. If that is the case, there is a need to further identify particular cognitive styles that are associated with particular parenting practices. In addition, the present study suggests that for mothers, certain cognitive styles and not others play a role in the relation between depression and parenting. Future studies using alternative

measures of cognitive style and parenting could help to clarify the specificity of these relationships.

One interesting result in this study is that the strength of the associations between cognitive style and both depression and parenting style, as well as the significance of the mediation models, was consistently higher for fathers than for mothers. One explanation for this pattern is that dysfunctional attitudes may be a more common manifestation of depression in men than in women. Although fathers did not report more dysfunctional attitudes than mothers (in fact, the only significant difference found was that mothers reported more need for approval than fathers), dysfunctional attitudes were more strongly related to depression among fathers than among mothers. Thus, perhaps these findings are especially applicable to understanding how fathers experience depression, and how depression may influence their parenting practices. Only one research article was found that examined gender differences in associations between depression and cognitive style, and those authors (Oliver & Baumgart, 1985) reported no differences.

These findings may also have implications for understanding the process by which depression and cognitive styles are transmitted from parents to children. Randolph and Dykman (1998) found support for a causal path leading from dysfunctional parenting to the formation of dysfunctional child attitudes, which, in turn, predisposed children to a later development of depression. They also found that parenting that was perfectionistic and critical in nature was the most strongly predictive of dysfunctional attitudes in children. Other theorists (see Blatt, 1995) have discussed the role that perfectionistic parents – parents who belittle their children's accomplishments, and find it difficult to

praise the efforts of their children – may play in contributing to their children’s own perfectionism and depression. It is important to note that the DAS factor “performance-consciousness” used in the present study closely resembles the “perfectionism” factor found by other researchers using the same scale (Oliver and Baumgart, 1985). Thus, if cognitive styles characterized by performance-consciousness or “perfectionism” mediate the relation between depression and parenting, and parenting affects children’s functioning (see Kendziora & O’Leary, 1993), then future research should further examine the role that parenting plays in the transmission of cognitive styles and depression from parents to children.

Another set of questions that follows from these findings is whether the presence or absence of negative cognitive style may determine *whether* depression and parenting are related. Since depression and cognitive style are only moderately correlated, there is a substantial percentage of depressed individuals who do not have negative cognitive styles. Perhaps individuals who are depressed but do not have dysfunctional attitudes differ in their parenting from those who are depressed and do have dysfunctional attitudes. A related question is whether especially healthy parental cognitive styles act as a protective factor, making parents, and perhaps also their children, more resilient to stress. No studies have examined these questions.

The present model postulates that negative cognitive styles resulting from depression explain why depressed parents are more overreactive with their children. However, negative cognitive styles may predispose individuals to depression, which then leads to parenting difficulties. It is also unclear whether parents who are depressed

parent differently when they are not depressed. Longitudinal studies (and within-subjects designs) looking at patterns of depression and parenting over time will be useful in furthering our understanding of causal processes.

These findings should be interpreted in the context of the limitations of this study. First, this study relied on self-report measures. The Parenting Scale has been shown to be correlated with observational measures of overreactive and lax parental discipline; however, since none of the data collected for this particular study involved observation of parenting behavior, parents' patterns of responses on the questionnaires may be responsible for some of the significant findings. This study was also limited by its cross-sectional design. Longitudinal studies are needed to tease apart the direction of causality among these variables. Another limitation is the breadth and depth of this study's assessment of these issues in ethnic minority populations. This study included some ethnic minority families and found evidence that these processes may work differently among different populations. However, more research is needed to explore how these processes vary between and within different racial/ethnic groups.

This study is the first to identify an association between cognitive style and parenting, and to document that cognitive style may be a pathway through which depression influences parents' interactions with their children. These findings highlight the importance of seeking to understand not only parents' thoughts and opinions about what they do as parents, but also their underlying attitudes and core beliefs as factors that may contribute to their parenting.

Table 1

DAS Items That Load Greater Than .35 on Each Factor and Their Factor Loadings

Factor Loadings	Items
Performance Evaluation	
.79	If I fail at my work, then I am a failure as a person.
.78	If I do not do as well as other people, it means I am a weak person.
.71	If a person asks for help, it is a sign of weakness.
.71	If I ask a question, it makes me look stupid.
.68	If I fail partly, it is as bad as being a complete failure.
.61	If I don't set the highest standards for myself, I am likely to end up a second-rate person.
.60	If I cannot do something well, there is little point in doing it at all.
.60	If I do not do well all the time, people will not respect me.
.55	If I am to be a worthwhile person, I must be the best in at least one way.
.54	It is difficult to be happy unless one is good looking, intelligent, rich and creative.
.54	People will probably think less of me if I make a mistake.
.54	If other people know what I am really like, they will think less of me.
.52	People who have good ideas are better than those who do not.

Need for Approval

.60	What other people think about me is very important.
.58	If I don't have other people to lean on, I am going to be sad.
-.56	I can find happiness without being loved by another person.
.55	Being alone leads to unhappiness.
.49	It is awful to be put down by people important to you.
.42	It is best to give up my own interests in order to please other people.
-.37	Happiness is more a matter of my attitude towards myself than the way other people feel about me.
-.36	It is possible for me to be scolded and not get upset.

Items not on a specific factor

- Taking even a small risk is foolish because the loss is likely to be a disaster.
- It is possible to gain another person's respect without being especially talented at anything.
- I cannot be happy unless most people I know admire me.

(table continues)

Items

- Making mistakes is fine because I can learn from them.
- If someone disagrees with me, it probably indicates he does not like me.
- I am nothing if a person I love doesn't love me.
- One can get pleasure from an activity regardless of the end result.
- People should have a chance to succeed before doing anything.
- My value as a person depends greatly on what others think of me.
- I should be upset if I make a mistake.
- My own opinions of myself are more important than others' opinions of me.
- To be a good, moral, worthwhile person I must help everyone who needs it.
- I can reach important goals without pushing myself.
- I cannot trust other people because they might be cruel to me.
- If others dislike me, I cannot be happy.
- My happiness depends more on other people than it does on me.
- I do not need the approval of other people in order to be happy.
- If a person avoids problems, the problems tend to go away.
- I can be happy even if I miss out on many of the good things in life.

Table 2

SDDI Items That Load Greater Than .35 on Each Factor and Their Factor Loadings

Factor Loadings		Parenting Strategy
Mothers	Fathers	
Warm/Firm Parenting		
.82	.80	Praise your child? (e.g., saying "What a great drawing you made!", or "Thank you!")
.77	.58	Distract or redirect your child to a different activity when s/he was misbehaving? (e.g., saying, "Let's go over to the swings now.")
.72	.45	Identify your child's feeling? (e.g., saying "It sounds like you're very angry.")
.70	.67	Discuss or explain a behavior or situation? (e.g., saying, "We don't hit because it hurts.")
.66	.63	Reassure your child, or show understanding? (e.g., a child is frightened and the parent lets him/her know s/he is safe.)
.64	.70	Say things like "No", "Stop", or tell your child that a certain behavior is not allowed?
.59	.53	Ask nicely for your child to do something? (e.g., saying "could you please be quiet while I'm on the phone?")
.58	.47	Remind your child what s/he is supposed to do? (e.g., before or during a grocery store trip, saying to your child, "remember to stay with me while we are in the store, OK?")
.58	.42	Stick to your ground? Were you firm with your child?
.57	.74	Play with your child?
.54	.74	Give your child physical affection?
.53	.56	Reward or give positive reinforcement? (e.g., saying "If you get ready for bed now, I'll read you a story.")
.52	.41	Alter a situation your child was in to stop or prevent a misbehavior? (e.g., a child is bothering a cat so the parent takes the cat away)
.52	.57	Help your child solve a problem or do a task such as helping him/her pick up toys or brush his/her teeth?
.49	.47	Try to find out from your child the possible reasons for his/her misbehavior? (e.g., saying "Tell me what's going on, tell me what you want.")

(table continues)

Factor Loadings		Parenting Strategy
Mothers	Fathers	

Overreactive Parenting

.65	.39	Withdraw privileges or toys as a consequence for your child's misbehavior?
.56	.77	Raise your voice, yell, or scold your child?
.55	.63	Ignore or attempt to ignore your child's misbehavior? (e.g., turning away or looking elsewhere to get your child to stop doing something for attention.)
.53	.51	Use physical force to make your child do something; (e.g., taking the child's hand and leading child inside when s/he won't come in on his/her own)
.53	.46	Threaten child w/o telling him/her what the consequences will be? (e.g., saying "you pick that up, or else!")
.49	.41	Actually give your child a Time Out (or try to give a Time Out)?
.46	.70	Physically restrain your child to prevent him/her from doing something? (e.g., restraining a child who is hyper, or pulling child away when fighting with another child)

Items not on a specific factor

--	--	Repeat yourself over and over when trying to get your child to do something or to stop doing something? (Note: how many different situations?)
--	--	Express disapproval or dissatisfaction with your child? (e.g., "Bad boy," or "Don't be a brat!")
--	--	Warn your child that he/she was going to get a Time Out or lose a privilege if he/she didn't behave?
--	--	Punish your child by spanking, hitting, shaking or using other physical contact?
--	--	Do a task for your child that you had asked him/her to do? (e.g., you asked your child to pick up his/her toys and s/he didn't pick them up, so you picked them up yourself.)
--	--	Allow the child to misbehave because you didn't want to deal with it?
--	--	Give in to your child's misbehavior? (e.g., your child pesters you for a treat so long that you just give it to him/her)
--	--	Feel like you lost control over a situation?
--	--	Get angry or feel overwhelmed with your child?

Table 3

Descriptive Statistics

Variable	White Mothers	Minority Mothers	White Fathers	Minority Fathers	W. Mothers vs. W. Fathers	M. Mothers vs. M. Fathers	W. Mothers vs. M. Mothers	W. Fathers vs. M. Fathers
	M (SD)	M (SD)	M (SD)	M (SD)	t (85)	t (10)	t (141)	t (106)
CES-D	1.39 (.31)	1.66 (.40)	1.34 (.34)	1.56 (.43)	.163	-.608	-3.750 ^{***}	-2.075 [*]
DAS-TOT	5.26 (.61)	5.23 (.84)	5.33 (.63)	5.07 (.73)	-.741	.388	.178	1.529
DAS-PER	5.75 (.84)	5.73 (1.13)	5.72 (.84)	5.40 (1.18)	.134	.766	.074	1.072
DAS-APP	4.29 (.78)	4.41 (1.05)	4.53 (.75)	4.06 (1.16)	-2.217 [*]	-.882	-.562	1.613
PS-TOT	2.75 (.53)	3.12 (.76)	2.90 (.52)	3.03 (.49)	-2.201 [*]	.038	-2.355 [*]	-1.035
PS-OVER	2.75 (.73)	2.76 (.98)	2.65 (.77)	2.84 (1.08)	.055	-.328	-.055	-.749
PS-LAX	2.65 (.75)	3.35 (1.19)	2.77 (.69)	2.90 (.96)	-1.171	.807	-2.957 ^{**}	-.692
SDDI-WARM	-.02 (.50)	-.18 (.34)	-.03 (.49)	-.11 (.47)	-.087	1.477	1.419	.624
SDDI-HARSH	-.08 (.45)	.14 (.54)	-.02 (.46)	-.17 (.32)	-1.253	3.802 ^{**}	-2.036 [*]	1.302
N	116	26	90	19				

* p < .05

** p < .01

*** p < .001

Table 4

Intercorrelations Among Predictor, Mediator, and Outcome Variables for Mothers and Fathers

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. CES-D		-.45***	-.43***	-.27**	.40***	.24*	.32**	.09	.33**
2. DAS-TOT	-.18*		.90***	.59***	-.43***	-.45***	-.25*	.04	-.12
3. DAS-PER	-.18*	.91***		.28**	-.39***	-.34**	-.24*	.01	-.08
4. DAS-APP	-.08	.73***	.48***		-.18	-.37***	-.09	.05	-.14
5. PS-TOTAL	.31***	-.18*	-.16	-.09		.62***	.69***	.01	.20*
6. PS-OVER	.18*	-.30**	-.30**	-.16	.55***		.21*	-.10	.16
7. PS-LAX	.36***	-.16	-.16	-.05	.60***	.10		.02	.19
8. SDDI-WARM	.09	-.02	-.03	-.10	.02	.04	.01		.41***
9. SDDI-HARSH	.30***	.00	.02	.00	.19*	.30**	.16	.57***	

Correlations for mothers are below the diagonal and for fathers are above the diagonal.

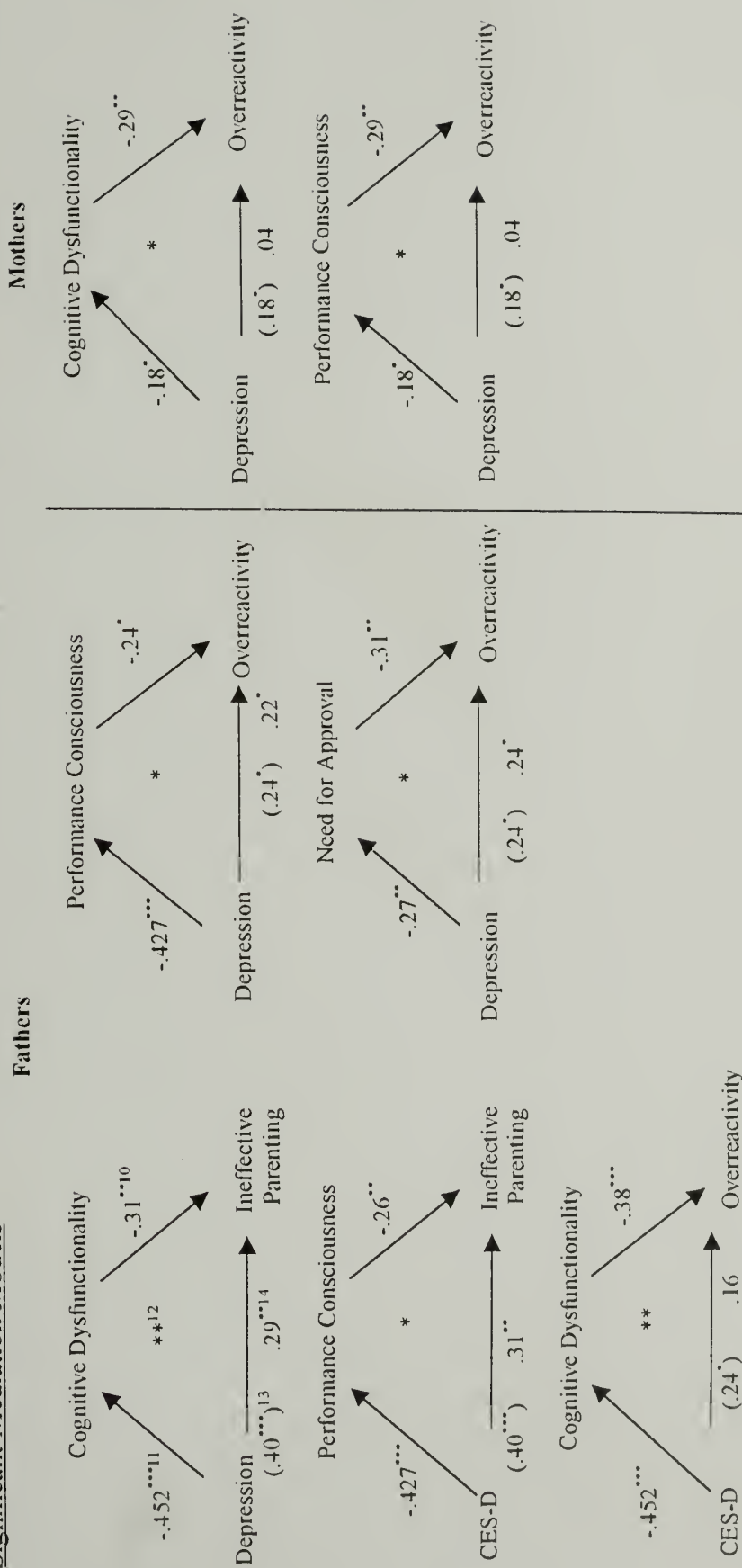
* $p < .05$ ** $p < .01$ *** $p < .001$

Table 5

Mediation Models Resulting From Significant Correlations Between the Depression Variable and the Two Other Types of Variables

Mediation Models	Depression Variable	Cognitive Style Variable	Parenting Style Variable
Fathers			
1	Depression	Overall Dysfunction	Overall Ineffectiveness
2	Depression	Overall Dysfunction	Overreactivity
3	Depression	Overall Dysfunction	Laxness
4	Depression	Overall Dysfunction	Harshness (SDDI)
5	Depression	Performance Conscious.	Overall Ineffectiveness
6	Depression	Performance Conscious.	Overreactivity
7	Depression	Performance Conscious.	Laxness
8	Depression	Performance Conscious.	Harshness (SDDI)
9	Depression	Need for Approval	Overall Ineffectiveness
10	Depression	Need for Approval	Overreactivity
11	Depression	Need for Approval	Laxness
12	Depression	Need for Approval	Harshness (SDDI)
Mothers			
1	Depression	Overall Dysfunction	Overall Ineffectiveness
2	Depression	Overall Dysfunction	Overreactivity
3	Depression	Overall Dysfunction	Laxness
4	Depression	Overall Dysfunction	Harshness (SDDI)
5	Depression	Performance Conscious.	Overall Ineffectiveness
6	Depression	Performance Conscious.	Overreactivity
7	Depression	Performance Conscious.	Laxness
8	Depression	Performance Conscious.	Harshness (SDDI)

Figure 1
Significant Mediation Models



¹⁰ Coefficient of DAS-Total when PS-Total was regressed on DAS-Total and CES-D.

¹¹ DAS-Total regressed on CES-D.

¹² Indicates significance level of the mediated effect (* p<.05; ** p<.01; *** p<.001).

¹³ PS-Total regressed on CES-D.

¹⁴ Coefficient of CES-D when PS-Total was regressed on DAS-Total and CES-D.

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