TESTING SPECIFICITY IN THE RELATIONSHIP BETWEEN PARENTING AND CHILD PSYCHOPATHOLOGY IN CHILDREN OF DEPRESSED PARENTS

By

Meredith A. Gruhn

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Professor Bruce E. Compas

Professor JoAnne Bachorowski

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CHAPTER I

BACKGROUND

Major Depressive Disorder (MDD) is a prevalent and debilitating mental health problem that affects more than 20 million adults in the United States annually, approximately 7.5 million of whom are parents of children and adolescents. Depression is associated with multiple indicators of poor adjustment for offspring of depressed parents, including social and academic impairment, internalizing and externalizing problems, and increased risk for the development of psychopathology including higher rates of mood disorders (Beardslee, Versage, & Gladstone, 1998; Downey & Coyne, 1990; England & Sim, 2009; Gunlicks & Weissman, 2008; Klein, Lewinsohn, Rohde, Seeley, & Olino, 2005; Lieb, Isensee, Hofler, Pfister, & Wittchen, 2002; Weissman et al., 2006).

The present study will focus on mechanisms of risk for the transmission of psychopathology from depressed parents to their children. Specifically, I will examine the association between parenting and children's internalizing and externalizing problems in a sample of parents with a history of depression and their children. It should be noted that, although past findings have indicated associations between child maladjustment and parenting impairments of depressed fathers (e.g., Wilson & Durbin, 2010), the majority of previous research has focused exclusively on depressed mothers. In this paper, the term "mothers" will be used in reference to studies that only included mothers in the sample, and the term "parents" will refer to studies that incorporated both mothers and fathers in the sample.

It is also important to note that parental depression most likely influences child

development through several pathways. Offspring of depressed parents may have genetic vulnerabilities, neurobiological abnormalities (e.g., dysregulated stress response systems), and unique social learning experiences that contribute to the development of psychosocial problems (Goodman et al., 2011). Additionally, negative parenting patterns may not be a direct product of parents' depressive symptoms. Rather, environmental and interpersonal factors, such as individual characteristics of children (e.g., temperament), may contribute to poor parenting behaviors exhibited by depressed individuals. Finally, Rutter (1990) noted that there are a number of associated features of depression aside from parenting that may account for the relationship between maternal depression and childhood difficulties, including substance abuse, personality disorders, and marital discord.

Despite the importance of acknowledging multiple sources of risk, extensive empirical evidence leaves little doubt that parenting is highly influential in children's social, emotional, and behavioral development in the general population. Aspects of parental control, including discipline, monitoring, and autonomy granting, as well as affective components of parenting behaviors, including warmth, acceptance, and responsiveness, consistently emerge as correlates and predictors of children's adjustment (for reviews, see Frick, 1994; Loeber & Stouthamer-Loeber, 1986; Maccoby, 2000; McLeod, Weisz, & Wood, 2007). For example, adolescents who perceive their parents to be authoritative (i.e., high in warmth and structure) are consistently found to have better relations with peers and engage in less delinquent activities than adolescents with authoritarian (i.e., low in warmth and high in structure), permissive, or neglecting parents (Steinberg, Lamborn, Dornbusch, & Darling, 1992). On the other hand, adolescents who

experience harsh, disruptive and inconsistent discipline practices may be more likely to develop conduct disorder, and adolescents who experience negative, affectionless over-control from parents may be more prone to developing anxiety or depression (Berg-Nielson, Vikan, & Dahl, 2002).

Children of depressed parents are less likely than children of parents without a history of depression to experience optimal, authoritative parenting. As depressive symptoms increase, mothers tend to become less positive and responsive to children, more negative and disengaged, and more hostile, manipulative, and inconsistent during discipline (Dix & Meunier, 2009). Although research consistently implicates parenting as a major correlate of child psychopathology and psychosocial impairments in children of depressed parents (for reviews, see Dix & Meunier, 2009; Goodman et al., 2011; Lovejoy, Graczyk, O'Hare, & Neuman, 2000; Wilson & Durbin, 2010), studies tend to examine parenting of depressed parents within the broad domains of "positive" or "negative" behaviors. This approach may lead researchers to underestimate the strength of and sources of variability in the association between parenting and child adjustment for this population.

Research on parenting in general (i.e., not focused specifically on depressed parents) has shown that levels of parental warmth, hostility, and disciplinary skills predict children's and adolescents' internalizing and externalizing problems (e.g., Ge, Best, Conger, & Simons, 1996). However, there is evidence that child adjustment problems may not be a product of these three parenting dimensions combined, but rather are individually related to specific aspects of parenting. That is, sub-types of negative parenting behaviors have been differentially linked to child adjustment. Harsh parenting

practices, for example, have been consistently associated with externalizing, disruptive behaviors (e.g., Patterson, DeBaryshe, & Ramsey, 1989; Thompson, Hollis, & Richards, 2003), whereas withdrawn parenting practices have been consistently linked to internalizing problems, such as depression and anxiety (e.g., Brenning, Soenens, Braet, & Bal, 2012; Lumley, Dozois, & Hennig, 2012).

Drawing on the broader literature on parenting and children's emotional and behavioral problems, the purpose of the present study is to examine the relationship between sub-types of negative parenting behaviors associated with parental depression and child adjustment in children of depressed parents. Past findings on parenting and child adjustment as well as parenting deficits associated with depression will be reviewed to inform (a) rationale for the aspects of child adjustment and parenting behaviors examined in the present study and (b) hypotheses of how dimensions of parenting and child adjustment are related for families with depressed parents.

Parenting and Child Adjustment

It is well established that internalizing and externalizing symptoms are elevated in children of depressed parents (see Goodman et al., 2011, for review). Reports by teachers, parents, and self-reports confirm that school-aged children of depressed parents generally show higher levels of both externalizing and internalizing symptoms than children of non-depressed parents (e.g., Billings & Moos, 1983; Breslau, Davis, & Prabucki, 1988; Hirsch, Moos, & Reischl, 1985; Lee & Gotlib, 1989; Richters & Pelligrini, 1989). Among the various behavioral and emotional problems for which

children of depressed parents are at-risk, the present study will focus specifically on internalizing and externalizing problems for several reasons.

Evidence suggests that internalizing and externalizing problems in children of depressed parents may be best predicted by environmental influences including parenting, whereas other areas of maladjustment show stronger evidence of genetic transmission (e.g., increased rates of major depressive disorder; neuroticism) (Goodman et al., 2011). Further support for this notion comes from a study on parental schizophrenia—a disorder associated with child behavior problems similar to problems related to depression—in which Downey and Walker (1992) demonstrated that children of parents with schizophrenia showed very low levels of internalizing and externalizing problems when they had not been exposed to dysfunctional parenting in contrast to those who were.

Evidence from the more general literature on parenting and children's development also suggests that internalizing and externalizing problems in children are not a product of "incompetent parenting" as a whole, but rather are uniquely related to different subtypes of negative parenting behaviors. Parental negative, affectionless control and withdrawn parenting have been related more strongly to depression and anxiety in children, whereas inconsistent, harsh, and disruptive parenting practices have been shown to be characteristic of parents with conduct-disordered children (Berg-Nielsen et al., 2002). Therefore, the present study will focus on child adjustment specifically in terms of internalizing and externalizing problems in order to most effectively examine the relations of specific negative parenting patterns with child adjustment for children of depressed parents.

Externalizing disorders. The construct of "externalizing disorders" refers to behavioral problems that place children in conflict with their environment (Phelps, Brown, & Power, 2002). Based on the diagnoses in the Diagnostic and Statistical Manual of Mental Disorder-Fourth Edition, disorders with an externalizing component include disruptive, hyperactive, and aggressive behaviors as reflected in Conduct Disorder, Oppositional Defiant Disorder, and Attention Deficit-Hyperactivity Disorder (American Psychiatric Association [APA], 2000) and are generally reflected in items on rating-scales of rule-breaking and aggressive behaviors (Achenbach & Rescorla, 2001).

Empirical evidence has established the importance of several correlates to adolescent conduct problems, including early adverse social context, early harsh and inconsistent parenting, lack of social-cognitive and cognitive readiness to begin school, early behavior problems, early school social and academic failure, lack of parental supervision and monitoring in adolescence, and adolescent deviant peer associations (e.g., Conduct Problems Prevention Research [CPPRG], 1992; Dodge, Coie, & Lynam, 2006; Stouthamer-Loeber, Loeber, Wei, Farrington, & Wikström, 2002). Of these predictors, parenting style consistently emerges as central to developmental theories of children's externalizing behavior problems.

A dominant perspective on how disruptive behaviors are developed is captured by the cascade model (Dodge, Greenberg, & Malone, 2009), which focuses heavily on parenting. In this model, parents engage in a coercive process with the child, which the child then mirrors and manifests in interactions with teachers and peers (Granic & Patterson, 2006). Coercive parenting refers to discipline or attempted influence of the child by means of contingent complaints, guilt-inducing tactics, or manipulation through

taking advantage of the child's wish for love and approval from his or her parents. Coercion could take the form of guilting, shaming, withdrawing love, condescending remarks, discounting the child's feelings or ideas, physical punishment (e.g., spanking), yelling, or threatening behaviors directed at the child (Strassberg & Treboux, 2001). By maintaining and modeling coercive parenting practices throughout adolescence, parents in this model exacerbate and maintain their child's disruptive behaviors. More specific externalizing problems, such as violence toward peers, have been linked to harsh discipline in the first several years of life (Lansford et al., 2002), especially when discipline is inconsistently applied (Patterson et al., 1992).

Parenting behaviors aside from harsh discipline and coercion have also been found to influence externalizing problems. In a study of monozygotic twins, Caspi et al. (2004) found that negative expressed emotion about a child predicted children's antisocial behavior, suggesting that negativity alone (rather than harsh physical or verbal discipline practices) may be enough to promote externalizing problems. Parental disengagement from the child has also been found to predict increased associations with deviant peers and delinquent outcomes for youth (Dishion, Nelson, & Bullock, 2004). Patterson and colleagues (1992) argue that a lack of adequate monitoring by parents in early adolescence precipitates a child to drift into a deviant peer group, wherein a wide array of antisocial and delinquent behavior, including alcohol and drug use, may be reinforced. However, some research suggests that the effects of parental withdrawal may be more specific than those of harsh parenting, proving most important in the development of externalizing problems for youth who reside in a social context of danger and risk (e.g., Pettit, Bates, Dodge, & Meese, 1999).

In sum, the relationship between parenting and externalizing behaviors is not clear-cut; multiple pathways may exist in the development of externalizing problems in children. However, parental inconsistency and over-reactivity in the form of harsh, controlling, and negative discipline has been found to be a consistent predictor of externalizing problems in children and adolescents.

Internalizing disorders. While externalizing problems in youth involve outward behavior toward the environment, internalizing disorders reflect inner emotions and generally appear in the form of anxiety, depression, withdrawal, and somatic problems (Achenbach & Rescorla, 2001). Family environments of negativity, rejection, and diminished warmth manifesting in a permissive and withdrawn parenting style consistently predict internalizing problems (e.g., Akhter, Hanif, Tariq, & Atta, 2011; Burge, & Hammen, 1991; Herman & McHale 1993; McLeod et al. 2007; Mezulis Shibley Hyde, Abramson, 2006; Muris et al. 2001; Siqueland, Kendall, & Steinberg, 1996). More specifically, low parental responsiveness has been linked to children's higher avoidance, higher anxious and avoidant attachment, poorer emotion regulation, increased negative schema structure, and difficulty trusting others (e.g., Brenning et al., 2012; Lumley et al., 2012).

Although withdrawn parenting consistently emerges as a risk factor for child internalizing symptoms, studies have also suggested a relationship between excessive parental control and internalizing disorders (e.g., Siqueland et al., 1996). A literature review by Wood and colleagues (2003) demonstrated that greater parental control during parent–child interactions is linked with more child shyness and a higher risk for meeting criteria for an anxiety disorder in children and adolescents. However, it remains unclear

whether over-controlling parenting patterns are a cause of child's internalizing behaviors, a response by parents to the child's internalizing behaviors, or a manifestation of the parents' own anxiety (e.g., Fox, Henderson, Marshall, Nichols, & Ghera, 2005; Rapee, 2001;Wood et al., 2003). Additionally, aspects of control may contribute to withdrawn parenting. For example, parents may intentionally attempt to control their child's behavior through love withdrawal—a parenting tactic that has been found to relate more strongly to internalizing than to externalizing problems (e.g., Barber, Olsen, & Shagle, 1994; Kincaid, Jones, Cuellar, & Gonzalez, 2011; Pettit, Laird, Dodge, Bates, & Criss, 2001).

Depression and Parenting

It is well established that depressive symptoms significantly interfere with parenting competence. Although this relationship is not fully understood, research is generally guided by the assumption that parenting problems reflect the affective, cognitive, and physical symptoms that characterize depression (i.e., sad mood, loss of interest, fatigue, low energy, poor concentration, feelings of self-reproach, irritability, changes in appetite, motor activity, or sleep patterns, and suicidal thoughts; National Institute of Mental Health [NIMH], 2011). For example, mothers experiencing sad mood and fatigue may be less motivated to be responsive and attentive to children's needs, while mothers who are irritable may express more negative affect and harsh discipline toward their children as a result of decreased tolerance for normative child behavior (Lovejoy et al., 2000). Additionally, early studies on this topic demonstrated that depressed mothers perceived more difficulty in the parenting role than nondepressed

mothers, and consequently reported less emotional involvement, communication, and affection, and increased hostility and resentment toward children (Weissman & Paykel, 1974, 1972).

Findings from eight comprehensive reviews of parenting deficits as related to depression or child adjustment are presented in Table 1. The purpose of the table is to draw attention to the variability in parenting categorizations and definitions of parenting behaviors that has been typical of research on this topic. Three criteria were used to select studies for inclusion in the table: a) publication in a peer-reviewed journal, b) methodology was a meta-analysis or literature review, c) identifiers were "depression" and "parenting." Eight of the search results were included, depending on whether they reviewed articles relevant to impairments in parenting associated with depression or child adjustment, and provided salient and prototypical examples of how parenting is categorized in the literature. Additionally, these reviews confirm that depressive symptoms are consistently associated with maternal withdrawal, intrusiveness, flat and negative emotional expression to children, and ineffective, harsh, inconsistent, manipulative, and indulgent discipline.

Categories of negative parenting in depressed parents. Kiff, Lengua, and Zalewski (2011) made a noteworthy comment on parenting classifications that is evident in the research that is summarized in Table 1: "there is little consistency across studies in the labeling and operationalization of many parenting behaviors" (p. 253). As discussed above, the broader literature on parenting demonstrates a specificity of children's internalizing and externalizing behaviors according to the different types of negative parenting behaviors. However, risk-transmission models involving parental depression

typically have not examined parenting at a more specific level than ”positive” or “negative” parenting patterns.

Furthermore, research has lacked consistency regarding how parenting behaviors are assessed, even among studies measuring the same constructs (e.g., the association between child adjustment and parental depression). For example, while Dix and Meunier’s (2009) review examines behaviors that are intrusive, ineffective, and possess flat and negative emotional expression to children (classified in their review as “low parenting competence”), the review by Goodman et al. (2011) examines parental inconsistency, aversiveness, and low warmth and responsiveness toward children (classified in their review as “inadequate parenting”). Similarly, while some studies of parenting measure dimensions of control and warmth (e.g., Prinzie et al., 2009), other studies measure control and responsiveness (e.g., Kiff, 2011) or control and rejection (e.g., McLeod et al., 2007). Still further, studies often combine these elements of warmth, control, and responsiveness into a single measure. For example, Baumrind’s (1971) parenting classifications combine elements of control and responsiveness to measure authoritative, authoritarian, and permissive parenting, and measures of parental control and warmth are often combined to assess over-protective parenting (Rubin, Cheah, & Fox, 2001).

Despite the consistent evidence that certain parenting deficits are predicted by depressive symptoms (e.g., withdrawn, harsh, inconsistent, and manipulative parenting; Dix & Meunier, 2009), studies continue to examine a wide array of parenting styles and group these behaviors inconsistently. In the current study, parenting impairments associated with depressive symptoms will be divided into two salient categories:

withdrawn and harsh. These categories were chosen for three reasons. First, these categories are consistent with the literature reviews on parenting with depression. At a practical level, they encompass most behaviors that have been included in measures of negative parenting in previous research on depression and parenting. Second, these categories compliment findings that withdrawn and harsh parenting differentially relate to internalizing and externalizing problems in children in the general literature on parenting and children's adjustment. Third, these categories reflect aspects of the nurturance dimension of parenting style that has been repeatedly identified in parenting research, in that they contain some elements of a lack of parental validation and increased parental rejection (Lovejoy et al., 2000; Maccoby & Martin, 1983). A further description of each parenting category is provided in the sections below.

Withdrawn parenting. Baumrind (1991) defines responsiveness as parenting that is attuned, supportive, and acquiescent to children's needs and demands. When a parent is withdrawn or unresponsive to their child, it means that they are either not attuned to these needs and demands, or they are aware of children's needs but choose to ignore them. There is evidence to suggest that withdrawn parenting patterns found in individuals with depression are attributable to a lack of awareness of the child's needs due to increased self-focused attention. Self-focused attention, defined as the process of directing attention to internal stimuli during a social interaction (Gaydukevych & Kocovski, 2012), is a hallmark of depression (e.g., Ingram & Smith, 1984; Smith, Ingram, & Roth, 1985). Specifically, parents' depressive symptoms may reduce attention to child-relevant input while increasing attention to self-relevant input (Dix & Meneuir, 2009; Ingram, 1990; Larsen & Cowan, 1988; Smith & Greenberg, 1981). As a consequence, self-focused

attention may disrupt parents' ability to encode cues related to children's needs, interests, and abilities and promote parenting that is less sensitive and contingently responsive. Mothers experiencing depression have been found to have less motivation for social interaction, demonstrate more self-focus, and be less socially involved than mothers who are not experiencing symptoms of depression (Hammen, 1997).

Research has also proposed that depressive symptoms motivate individuals to minimize exertion by selecting activities and responses that require low effort (e.g., Cummings & Davies, 1994; Downey & Coyne, 1990), thus promoting avoidance of difficult child behaviors (Kochanska, Kuczynski, Radke-Yarrow, & Welsh, 1987). Avoidance of difficult child behaviors could also be a result of low parenting competence, self-perceptions of one's own ineptitude as a parent (e.g., Alloy, 1988), or a direct product of anhedonia.

Parenting deficits of depressed individuals that fall under the category of withdrawn parenting include low responsiveness and high disengagement, low ongoing involvement (i.e., lack of involvement between parent and child; lack of interest in the activities of the child; lack of emotional support or reciprocity), low positive expression and more flat and negative emotional expression to children.

Harsh parenting. Harsh parenting refers to coercive acts and negative emotional expressions that parents direct toward children, including verbal aggression (e.g., yelling or name calling) and physical aggression (e.g., spanking or hitting) (Chang, Schwartz, Dodge, & McBride-Chang, 2003). Harsh parenting is among the most reliable correlates of child aggressive and disruptive behavior (Gershoff, 2002), and mechanisms of transmission have been specified and supported empirically (Patterson, 2002). In the

current study I will categorize hostility, intrusiveness, and inconsistent, manipulative, and indulgent discipline as harsh parenting practices of depressed individuals, as these behaviors consistently emerged in the selected literature reviews.

One explanation for the prevalence of harsh parenting practices in depressed individuals comes from the idea that depressive symptoms create negative biases in parents' appraisals of their children. While effective parents tend to attribute difficult child behavior to immaturity, transient moods, or other uncontrollable circumstances, depressed mothers may be more likely to attribute problem behaviors to stable, negative intentions of the child (Dix & Meunier, 2009). Mothers who believe that their children have motives or dispositions that undermine those of the mother are more likely to react with anger, harsh discipline, and negative affect (e.g., Brody & Forehand, 1988; Bugental & Happaney, 2004; Dix, Ruble, & Zambarano, 1989; Larrance & Twentyman, 1983). Along the same vein, models of reciprocity suggest that children's demands and difficult behaviors may increasingly arouse distress in the parent and lead them to react abrasively or forcefully to reduce aversive behaviors, especially as depressive symptoms increase (Forehand, McCombs, & Brody, 1987).

Depressed parents also often tend to possess skewed perceptions of their own competency as parents, believing themselves to be incapable of parenting effectively (Dix & Meunier, 2009). These appraisals may activate negative emotionality in the depressed parent and disrupt appropriate contingent responses to child behaviors. Mothers who believe that they lack adequate parenting skills have been found to react to challenging child behaviors with anger, anxiety, and harsh control (Bugental, 1992; Coleman & Karraker, 1997; Teti & Gelfand, 1991).

Current Study

The present study is intended to close the considerable distance between research on depression and parenting impairments, and parenting as related to child adjustment. More specifically, it will serve to answer a call from Goodman and colleagues (2011), who stated that next steps needed are for research to "examine mechanisms and developmental pathways whereby depression may be similarly or differently related to the emergence of internalizing relative to externalizing problems or to their co-occurrence in children and adolescents" (p. 14). This proposition for future research was based on the authors' meta-analytic review of 193 studies, which found that both withdrawn and harsh, inconsistent parenting have been found to be associated with maternal depression (Lovejoy et al. 2000), but harsh, inconsistent parenting in particular has been associated with children's externalizing problems (Patterson et al. 1992). These findings suggest specificity of outcomes in the children that may vary with the depressed mother's particular predominant parenting style.

This study is unique in several respects. First, as evident in Table 1, past research with depressed parents has grouped negative parenting patterns associated with depression together into broad categories, such a "low parenting competence" or divided parenting into positive versus negative behaviors. By parsing out the specific negative parenting patterns that comprise measures of low parenting competence, aspects of parenting that differentially correlate to internalizing and externalizing problems in offspring should become more salient. Second, the majority of previous studies on this topic have largely relied on parent or child reports to assess parenting patterns. The

present study will use direct observations of parenting behaviors and a global coding system (Iowa Family Interaction Rating Scales [IFIRS]; Melby et al., 1998) to gather objective measures of observed parenting and child behaviors.

Because rates of depression are higher for women with young children (Dix & Meunier, 2009), understanding how parenting deficits due to depressive symptoms relate to child adjustment is a crucial topic that could potentially inform future intervention research with this population.

Hypotheses.

Past findings, as reviewed above, inform several hypotheses of the association between parenting and child internalizing and externalizing problems in families dealing with depression.

1. Observed withdrawn and harsh parenting behaviors and child internalizing and externalizing symptoms will be significantly positively related to parents' depressive status, as measured by self-reported symptoms and a diagnostic interview.
2. Harsh parenting will be uniquely associated with externalizing symptoms in children.
3. Harsh parenting will be associated with externalizing symptoms in children after accounting for withdrawn parenting and parents' depression status.
4. Withdrawn parenting will be uniquely associated with internalizing symptoms in children.
5. Withdrawn parenting will be associated with internalizing symptoms in children

after accounting for harsh parenting and parents' depression status.

CHAPTER II

METHOD

Participants

The original sample included 180 families with 242 children (121 girls, 121 boys) between the ages of 9 and 15 years (M = 11.53, SD = 2.02) and the target parents (160 mothers, 20 fathers) ages 24 to 69 years (M = 41.96, SD = 7.53). All parents met criteria for at least one episode of Major Depressive Disorder during the lifetime of their children (Mdn = 4.0). A number of families had more than one child participating in the study. In consideration of the possible violation of independence of children within the same family, one child per family was randomly selected from each family for all analyses.

The final sample used in the present analyses included 89 girls and 91 boys between the ages of 9 and 15 (M = 11.46, SD = 2.00) and their parents (160 mothers, 20 fathers) who met criteria for at least one episode of Major Depressive Disorder during their child's lifetime. The sample of children were 74.4% Euro-American, 12.8% African-American, 3.3% Asian, 1.7% Latino or Hispanic, and 7.8% other or mixed ethnicity. Eighty-two percent of the parents were Euro-American, 11.7% African-American, 1.1% Asian, 2.2% Latino or Hispanic, and 2.8% other or mixed ethnicity. Parents ranged from 24 to 69 years of age (M = 41.96, SD = 7.53). Parents' level of education included 5.6% of parents with less than high school, 8.9% completed high school, 30.6% had some college or technical school, 31.7% had a college degree, and 23.3% had a graduate education. The marital statuses of the parents were 61.7% married

or co-habitating, 21.7% divorced, 11.9% never married, 4.0% separated, and 1.0% widowed. Annual household income ranged from less than $5,000 to more than $180,000, with a median household income of $40,000.

Measures

Parental depression diagnoses. Parents' current and past history of major depressive disorder (MDD) was assessed and other Axis I disorders were screened with the Structured Clinical Interview for DSM (SCID; First, Spitzer, Gibbon, & Williams, 2001), a semi-structured diagnostic interview that was administered to the target parent by a well-trained research assistant or graduate student. The SCID is a frequently used measure that has been shown to yield reliable diagnoses of past and current Major Depressive Disorder as well as other psychopathology in adults (First, Spitzer, Gibbon, & Williams, 2001). Inter-rater reliability was calculated on a set of randomly selected interviews and indicated 93% agreement ($\kappa = 0.71$) for diagnoses of MDD.

Additionally, parents' current depressive symptoms were assessed with the Beck Depression Inventory—II (BDI–II), a standardized and widely used self-report checklist of depressive symptoms with adequate internal consistency ($\alpha = .91$) and validity in distinguishing severity of MDD (Beck, Steer, Ball, & Ranieri, 1996; Steer, Brown, Beck, & Sanderson, 2001). Internal consistency in the current sample was $\alpha = .93$. This measure was included to account for the presence of depressive symptoms that may not constitute a diagnosis for current MDD but could still influence parenting behavior and child adjustment, as well as to provide an indication for the degree of impairment the target

parent is experiencing. BDI-II scores were obtained for 177 of the 180 parents in the study.

Observed parenting behaviors. A global coding system—the Iowa Family Interaction Rating Scales (IFIRS; Melby et al., 1998)—was used to code two videotaped 15-min conversations between the target parent and child. The first conversation was about a pleasant activity that the target parent and child enjoyed doing together in the past several months, and the second was about a stressful time when the target parent was really depressed, down, or grouchy, which created an unpleasant atmosphere or difficult circumstances for the family. The IFIRS system is designed to measure behavioral and emotional characteristics of the participants at both the individual and dyadic level. Individual Characteristic Scales describe the general mood or state of being of a person regardless of with whom that person is interacting in the task. Dyadic Interaction Scales are scales designed to assess the behavior directed by one person toward another person in an interaction context. Each behavioral code is rated on a 9-point scale, ranging from 1 (not at all characteristic of the participant during the interaction) to 9 (the behavior is mainly characteristic of the participant during the interaction). In determining the score for each code, the frequency and the intensity of behavior, as well as the contextual and affective nature of the behavior, are considered. This macro-level system is ideal for assessing patterns of behavior that comprise the ongoing, dynamic process of interaction (Melby & Conger, 2001). The validity of the IFIRS system has been established with correlational and confirmatory factor analyses (Alderfer et al., 2008; Melby & Conger, 2001).

The parent-child interaction tasks were each independently coded by pairs of

trained research assistants (i.e., clinical graduate students or undergraduate research honors students). Training for the IFIRS consisted of in-depth studying of the manual, a written test of the scale definitions, and establishment of inter-rater reliability. Successful completion of training consisted of passing a written test with at least 90% correct and achieving at least 80% reliability on observational tests. Raters remained naive to the randomization of families to the family group cognitive–behavioral intervention compared with the written information condition. Weekly training meetings were also held in order to prevent coder drift and to provide a forum in which questions about the different codes could be addressed. Each interactions was double-coded by two independent observers, and the mean rate of agreement for codes assessing parent's behavior was 73%. Coders met to establish consensus on any discrepant codes (i.e., codes that were rated greater than 2 points apart on the 9-point scales).

Although parents and children were scored on a wide range of emotional and behavioral dimensions, the current study focuses on eight of the codes that were selected to assess the parenting behaviors of interest—withdrawn parenting and harsh parenting—based on theory-driven and empirically supported distributions in parenting related to depression. Following procedures used previously with the IFIRS codes (e.g., Compas et al., 2010; Lim, Wood, & Miller, 2008; Melby et al., 1998), scores were averaged across the two tasks and combined to create a composite code for each parenting category.

Despite findings that depression predicts affective changes in parent-child interaction (e.g., low positive expression and more flat and negative emotional expression to children), IFIRS codes assessing emotions of the parent were not included in the composites. Because the present study is concerned specifically with withdrawn or harsh

behaviors of the parents that were directed at the child, codes were chosen from the Dyadic Interaction Scales.

The withdrawn parenting composite included codes of neglecting/distancing, child monitoring [reverse coded], quality time [reverse coded], and listener responsiveness [reverse coded] ($\alpha = .76$). The harsh parenting composite included hostility, intrusiveness, guilty coercion, and inconsistent discipline ($\alpha = .79$). These codes were selected because they (a) parallel parenting behaviors associated with depressive symptoms, as confirmed by select literature reviews and (b) directly involved the target parent's behavior toward the child. Table 3 presents further rationale for the selection of these IFIRS codes by presenting more detailed code definitions, and citing the parenting deficits associated with depression (discussed in depth earlier in this paper) that each code represents. The relationship between the composite parenting codes was examined, and withdrawn parenting was found to be significantly associated with harsh parenting ($p \leq .01$). However, a correlation of $r= .48$ suggests that the composites are not synonymous and can therefore serve as differential indicators of parenting behaviors. Observational measures of parenting behaviors were obtained for 169 participants.

Emotional and behavioral problems. The Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001) was used to assess total internalizing and externalizing problems in children and adolescents. These scales were selected to represent the range of problems that have been identified in children of depressed parents and to match the scales reported by Clarke et al. (2001) or Beardslee, Wright, Gladstone, and Ford (2007). The CBCL includes a 118-item checklist of problem behaviors that parents rate as 0 (not true), 1 (somewhat or sometimes true), or 2 (very true or often true) of their child in the

past six months.

Adolescents completed the Youth Self-Report (YSR; Achenbach & Rescorla, 2001), the self-report version of the CBCL for adolescents ages 11 to 18 years old. Reliability and validity of the CBCL and YSR are well established (Achenbach & Rescorla, 2001). Internal consistency (α) for the scales used in this study ranged from .84 to .94 for the CBCL and from .84 to .90 for the YSR. Test–retest reliability (r) ranged from .82 to .91 for the CBCL and from .74 to .89 for the YSR. Internal consistency (α) in the current sample ranged from .79 to .91 for the scales used in this study. Despite the age range for the YSR, children 9 and 10 years of age also completed this self-report to allow for complete data on all measures. The internal consistency for the YSR scales was adequate with this younger age group in the current sample (all $\alpha s \geq .80$).

The *T* scores for the CBCL and YSR were averaged to create a total score for children's internalizing symptoms and a total score for children's externalizing symptoms, as these composites were deemed to be the best representations of child maladjustment for this population. The measure of Internalizing Problems combines the Social Withdrawal, Somatic Complaints, and Anxiety/Depression scales, while the Externalizing Problems measure combines the Delinquent Behavior and Aggressive Behavior scales. Bivariate correlations supported this approach by demonstrating significant relationships between the YSR Internalizing *T* scores and CBCL Internalizing *T* scores ($r = .40$, $p \leq .01$), and YSR Externalizing *T* scores and CBCL Externalizing *T* scores (.47, $p \leq .01$) (see Table 5). Using normalized *T* scores allowed an individual's data to be compared with norms for the same age and sex in the general population. Composite scores of internalizing and externalizing symptoms were available for

analyses for 169 of the 180 target children.

Procedure

The participants in the current study were part of a larger study testing the efficacy of a family group cognitive-behavioral intervention to prevent depression and other mental health problems in children of parents with a history of MDD. Families were recruited through a variety of sources in and around Nashville, Tennessee and Burlington, Vermont, including mental health clinics and local media outlets. After the family made initial contact with a member of the research team, a trained research assistant conducted a telephone screen with the target parent to determine whether the family met all eligibility requirements for the study (see Compas et al., 2009, for a more detailed description of the enrollment process).

Inclusion criteria included at least one child in the targeted age range (9-15 years) and a parent who had experienced at least one episode of MDD in the child's lifetime. Exclusion criteria for the target parent included a history of bipolar-I, schizophrenia, or schizoaffective disorder. Exclusion criteria for the child included a diagnosis of mental retardation, autism spectrum disorder, bipolar-I, schizophrenia, or conduct disorder, as these were all deemed to be inappropriate for the family group intervention. In addition, if a target parent met criteria for a current diagnosis of MDD along with a Global Assessment of Function (GAF) score of 50 or less, was actively suicidal, had a history of drug or alcohol use disorders along with a GAF of 50 or less, or if the child met criteria for a current diagnosis of MDD, then the family was put on hold and re-contacted three months later for a follow-up assessment. At the re-assessment period, if the parent was no

longer actively suicidal, their GAF score was above a 50, or if the child no longer met diagnostic criteria for MDD, the family was considered eligible to participate in the study.

Eligible families from the phone screen were invited into the laboratory to participate in a baseline assessment where they completed more extensive semi-structured interviews to confirm their eligibility for the preventive intervention program, a battery of questionnaires, and two 15-minute parent-child videotaped interaction tasks. In the first task, the parent and child were instructed to discuss a recent pleasant family activity using a list of prompted questions that were written to elicit positive affect from the dyad (e.g., what are some other fun activities that we would like to do together? How could we do more pleasant activities together in the future?). In the second task, the parent and child discussed a recent family stressful event that involved the parent and child using a list of prompted questions that were written to elicit negative affect from the dyad (e.g., when mom/dad is sad, down, irritable or grouchy what usually happens? What kinds of feelings or emotions do we usually have when mom/dad is sad, down, irritable, or grouchy?). Eligible families from the baseline assessment were randomized to either the family group cognitive behavioral intervention program or the written information comparison condition.

The Institutional Review Boards at Vanderbilt University and the University of Vermont approved all procedures. Clinical graduate students completed all semi-structured interviews and parent-child interaction tasks at the Department of Psychology and Human Development at Vanderbilt University and the Psychology Department at the

University of Vermont. All participants were compensated $40 for the baseline assessment.

Data Analyses

Descriptive statistics. Means, standard deviations, and minimum and maximum scores for observed parenting behaviors, composite scores of children's internalizing and externalizing symptoms, and parents' BDI were calculated (see Table 4). Because the SCID results are categorical (i.e., coded as a 1 for at-threshold for current MDD or coded as a 0 for below threshold for current MDD), SCID scores were not included in the descriptive analyses.

Correlational analyses. Bivariate Pearson's correlations were calculated to examine associations among observed withdrawn and harsh parenting behaviors with children's internalizing and externalizing behaviors (see Table 5). Parents' BDI score, SCID summary score for current MDD, and child's age were also added into the correlation matrix to account for possible relationships of parenting and child adjustment with parents' depressive symptoms and/or age of the target child.

Linear multiple regression analyses. To examine the extent to which parenting behaviors and parental depressive symptoms predict children's internalizing and externalizing behaviors, a series of linear multiple regressions were calculated (see Tables 6-11).

CHAPTER III

RESULTS

Descriptive Statistics

Parents who met criteria for current depressive disorder based on the SCID were significantly higher on the BDI-II (M = 27.9; SD = 10.9) compared to parents who were not in episode (M = 16.1, SD = 11.7), $t(175) = 6.04$, $p < .001$. Means, standard deviations, and minimum/maximum values for withdrawn and harsh parenting behaviors, parents' prorated BDI scores, and standardized T scores for children's internalizing and externalizing behaviors (as measured with the YSR, the CBCL, and both tests combined) are presented in Table 4. The observed parenting variables and reports of children's internalizing and externalizing problems had relatively normal distributions, were not highly skewed, and had sufficient variance to test them in the correlation and regression analyses.

Correlational Analyses

Bivariate Pearson's correlations for variables of child adjustment, parenting, parents' depressive symptoms, and child's age are presented in Table 5. Thirty-seven of the 54 correlations calculated were statistically significant ($p \leq .05$), all in the hypothesized directions. Child age was not significantly related to total internalizing or externalizing behavior composites, harsh parenting, or parents' BDI score ($p > .10$), but child age was marginally associated with withdrawn parenting ($r = .15$, $p \leq .10$) and significantly associated with self-reported externalizing symptoms ($r = .19$, $p \leq .05$).

Hypothesis 1: Observed parenting behaviors and child adjustment scores will be significantly related to parents' depressive status

Parents' BDI score was significantly positively correlated to self-reported internalizing symptoms ($r = .16$, $p \leq .05$), parent-reported internalizing symptoms ($r = .29$, $p \leq .01$), and the composite score for children's internalizing symptoms ($r = .28$, $p \leq .01$). For externalizing symptoms, parents' BDI was significantly positively associated with self-reported ($r = .15$, $p \leq .05$), parent-reported ($r = .29$, $p \leq .01$), and total externalizing symptoms ($r = .27$, $p \leq .01$). Parents' BDI score was significantly related to observed withdrawn parenting behaviors ($r = .26$, $p \leq .01$) as well as observed harsh parenting behaviors ($r = .17$, $p \leq .05$).

Parents' current diagnostic status as determined by the SCID was not correlated with any measures of parenting or child adjustment. To further examine whether parenting behaviors or levels of children's internalizing and externalizing problems varied as a function of parents' current MDD, independent samples *t*-tests were calculated for each dependent variable. Tests yielded no significant differences for measures of parenting or child adjustment as a function of parents' diagnostic status (*p*'s $> .24$).

Hypothesis 2: Observed harsh parenting will be uniquely associated with externalizing symptoms in children

Consistent with the first hypothesis, observed harsh parenting was significantly and positively correlated with the total composite of children's externalizing symptoms (*r*

= .39, $p \leq .01$) as well as parent (CBCL) reported ($r = .33$, $p \leq .01$) and self reported (YSR) externalizing symptoms ($r = .35$, $p \leq .01$).

Harsh parenting was also associated with internalizing symptoms ($r = .27$, $p \leq .01$), suggesting that the relationship between harsh parenting and externalizing symptoms may not be unique. A Z-test was conducted to examine the relationship between the correlation for harsh parenting and externalizing symptoms ($r = .35$) and harsh parenting and internalizing symptoms ($r = .27$), and found that the correlations were not significantly different ($Z = -1.24$; $p = .215$).

Hypothesis 3: Harsh parenting will predict externalizing symptoms in children when withdrawn parenting and parents' depression status are accounted for

Linear multiple regression analyses were conducted to further test the relationship between harsh parenting and externalizing behaviors when accounting for withdrawn parenting, the interaction between withdrawn and harsh parenting, parents' depressive symptoms, and parents' current diagnostic status. The first model exclusively included parenting variables as predictors and is presented in Table 6. In Step 1 of the linear regression, harsh parenting was a significant predictor of children's externalizing problems ($\beta = .39$, $p \leq .01$). Harsh parenting remained a significant predictor when withdrawn parenting was entered alongside harsh parenting in Step 2 ($\beta = .30$, $p \leq .01$), but withdrawn parenting also significantly predicted externalizing problems ($\beta = .19$, $p \leq .05$). Step 3 of the model incorporated the interaction of harsh by withdrawn parenting as a predictor, and this interaction was non-significant ($\beta = -1.16$, $p = .13$); however, the effects of harsh parenting ($\beta = .28$, $p \leq .01$) and withdrawn parenting ($\beta = .20$, $p \leq .05$)

remained significant in Step 3.

Further linear regressions were calculated to account for effects of parents' depressive symptoms on children's externalizing symptoms. When accounting for parents' BDI in the regression, harsh parenting remained a significant predictor (β = .28, p ≤ .01) and withdrawn parenting remained a marginal predictor (β = .15, p ≤ .07). Parents' BDI score also significantly predicted externalizing symptoms in this model (β = .19, p ≤ .05).

When the linear regression was conducted to incorporate parents' current diagnostic status, harsh parenting remained a significant predictor of externalizing problems (β = .27, p ≤ .01), but the SCID Summary Score for Current MDD was not a significant predictor (β = .05, p = .460) (see Table 10).

Hypothesis 4: Observed withdrawn parenting will be uniquely associated with internalizing symptoms in children

A significant positive correlation between withdrawn parenting and the composite score for internalizing behaviors is presented in Table 5 (r = .17, $p \leq .05$). Withdrawn parenting was significantly correlated with self-reported internalizing symptoms on the YSR (r = .15 $p \leq .05$) and marginally associated with parent-reported internalizing symptoms on the CBCL (r = .13, $p \leq .102$). Bivariate correlations revealed that withdrawn parenting was also associated with externalizing symptoms in children (r = .34, $p \leq .10$). A Fisher's z-test of the correlations for withdrawn parenting and internalizing symptoms (r = .17) and withdrawn parenting and externalizing symptoms (r = .34) was used to test whether withdrawn parenting was uniquely related to one aspect

of child adjustment. The result of the Fisher's *z*-test suggested that the relationships are marginally different from one another ($z = -1.58$; $p = .11$).

Hypothesis 5: Withdrawn parenting will predict internalizing symptoms in children when harsh parenting and parents' depression status are accounted for

Linear regressions confirmed that withdrawn parenting is a significant predictor of internalizing behaviors ($\beta = .17$, $p \leq .05$) (see Table 7). However, when harsh parenting was added into the regression, withdrawn parenting was no longer a significant predictor of internalizing symptoms ($\beta = .06$, $p = .501$). Harsh parenting was a significant predictor of internalizing behaviors in Step 2 of this model ($\beta = .24$, $p \leq .01$), and remained a significant predictor when the interaction of harsh and withdrawn parenting was accounted for in step 3 ($\beta = .27$, $p \leq .01$). Withdrawn parenting ($\beta = .05$, $p = .563$) and the interaction of harsh and withdrawn parenting behaviors ($\beta = -.12$, $p = .120$) were not significant predictors of internalizing behaviors in the final step of the regression.

Parents' BDI scores were significantly correlated to children's total internalizing symptoms ($r = .28$, $p \leq .01$) as well as withdrawn parenting ($r = .26$, $p \leq .01$), indicating a possible relationship between depressive symptoms and the etiology of children's internalizing behaviors. To test this relationship, linear regressions were run accounting for parents' current depressive symptoms (BDI) and diagnostic status (SCID) as additional predictor variables for internalizing symptoms. When parents' BDI is added into the regression (see Step 4 of Table 9), harsh parenting remained significantly correlated to internalizing behaviors ($\beta = .27$, $p \leq .01$), the interaction of harsh and withdrawn parenting was marginally significant ($\beta = -.14$, $p \leq .072$), and BDI was

significantly correlated with internalizing symptoms (β = .25, p ≤ .01). Harsh parenting also remained significantly correlated to internalizing problems when the SCID Summary Score for Current MDD was added into the regression (β = .27, p ≤ .01); current diagnostic status was not a significant predictor of internalizing behaviors (β = .06, p = .460) (see Table 11).

CHAPTER IV

DISCUSSION

The findings from the present study replicate and extend previous research by examining internalizing and externalizing symptoms in relation to harsh and withdrawn parenting behaviors in children of depressed parents. Previous research has consistently demonstrated a deficit in parenting associated with depression and has cited parenting behavior as an important risk factor for significant current and future psychosocial problems in offspring. However, research on parental depression has lacked specificity in examining these associations. Generally, studies have broadly examined "negative parenting," in relation to a wide array of behavioral problems in children. The current study was unique in several respects. First, the category of negative parenting was further divided into withdrawn and harsh behaviors, as guided by past literature reviews on depression and parenting and evidence of specificity for the etiology of internalizing and externalizing symptoms. Second, past studies have largely relied on survey-based measures to assess parenting and child behavior. By analyzing observational measures of parenting behaviors, parent- and child-reported internalizing and externalizing symptoms, and depressive symptoms via diagnostic interviews and self-report, results of the present study contain relatively little overlap in shared method variance. Finally, the present sample size was relatively large, especially considering the use of observational measures.

Although not a focal point of the present study, it should be noted that age was significantly, positively related to self-reported externalizing symptoms ($r = .19$, $p \leq .05$),

possibly suggesting an increased self-awareness of disruptive behaviors over time, or a tendency for older children to exhibit greater levels of externalizing problems. Age was also moderately correlated with withdrawn parenting, which may reflect a tendency of depressed parents to avoid the difficult behaviors typical of some adolescents.

In support of the first hypothesis, parents' BDI-II scores were significantly positively correlated to internalizing and externalizing behaviors in children, and withdrawn and harsh parenting behaviors in adults. The same results were not found when depression was examined categorically, however. Current diagnostic status as measured by the SCID was not related to any aspects of parenting or child adjustment. One possible explanation for this phenomenon arises from recent work suggesting that depression would best be understood as a dimensional rather than categorical disorder (e.g., Hankin, Lahey, & Waldman, 2005; Hyman, 2010). In support of this notion, Goodman and colleagues (2011) suggest that research on depression has largely ignored the extensive knowledge of the nosology of depression in adults by grouping together mothers who vary in severity, chronicity, current levels, and history of depression within the target child's lifetime by using a categorical approach. The lack of association between parents' diagnostic status and elements of parenting or child adjustment could therefore be an indication that depression more accurately analyzed on a dimensional scale of symptom severity rather than with a categorical diagnostic approach.

Hypothesis 2 was partially confirmed. Harsh parenting was significantly and positively correlated with all measures of children's externalizing symptoms. However, harsh parenting was also significantly correlated with children's internalizing symptoms. A Fisher's *z*-test revealed that theses correlations were not significantly different,

indicating that the relationship between harsh parenting and child adjustment may be more diffuse than originally hypothesized.

Further testing was conducted to examine the extent to which harsh parenting was associated with externalizing behaviors. Linear multiple regression analyses revealed that harsh parenting was significantly associated with externalizing behaviors in all conditions (i.e., when withdrawn parenting, the interaction of harsh and withdrawn parenting, parents' BDI-II score, and parents' SCID score for current MDD were accounted for in the regression models). This finding confirms hypothesis 3.

Additionally, unexpected findings emerged in the linear regression analyses for children's externalizing symptoms by which withdrawn parenting was significantly correlated with externalizing symptoms in the first regression model (Table 6). This finding may attributable to the tendency of depressed parents vacillate between high levels of withdrawn and intrusive, irritable behavior and emotions with their children (e.g., Hammen et al. 2004; Jaser et al. 2005, 2008).

Hypothesis 4 was also partially confirmed. Bivariate correlation analyses demonstrated a significant relationship between withdrawn parenting and internalizing behaviors, as predicted, but did not confirm that this relationship is unique. Withdrawn parenting was also significantly positively correlated with externalizing symptoms in offspring, and a Fisher's *z*-test of the correlations demonstrated that this association was marginally stronger than that of withdrawn parenting and internalizing symptoms ($p = .11$). Despite consistent findings that disengaged parenting is associated with internalizing symptoms in children, aspects of child monitoring and boundary setting may explain the relationship between withdrawn parenting externalizing symptoms in this

sample. In other words, depressed parents who exhibit withdrawn parenting behaviors may be promoting negative reinforcement for children's externalizing symptoms by failing to engage in age-appropriate limit setting and supervision to curb or stop children's disruptive and/or aggressive behavior (Kawabata, Tseng, Ijzendoorn, & Crick, 2011). Additionally, parental withdrawal may be most influential in developing externalizing problems for youth who reside in a social context of danger and risk; future studies should take into account the environment of families with depression to better understand the relationship between withdrawn parenting and externalizing symptoms (e.g., Petit, Bates, Dodge, & Meese, 1999).

Contrary to hypothesis 5, linear multiple regression analyses demonstrated that withdrawn parenting initially predicted internalizing symptoms, but significance was diminished when harsh parenting was accounted for in the model. Instead, harsh parenting was consistently associated with internalizing symptoms throughout all regression analyses. One possible explanation for this finding arises from the makeup of the harsh parenting composite, which could contain IFIRS codes that contribute to both types of child problems. The code for guilty coercion was included in the harsh parenting composite because of evidence that harsh parents expressing negative affect to their children also tend to use coercive techniques (Lovejoy et al., 2000) which may contribute to the development of conduct and behavior problems (Downey & Coyne, 1990; Morris et al., 2002). However, studies have also implicated coercive parenting practices, such as psychological over-control, as a risk factor for internalizing problems (e.g., Barber et al. 2005; Eccles et al. 1997; Whaley et al. 1999). Differing findings regarding the use of

guilt-inducing and coercive techniques in past research may indicate a multifinality in its' effects that could have contributed to the present study's findings.

Limitations

The present study has several limitations that should be noted. First, there are some limitations in the sample in that children who had a diagnosis of Conduct Disorder or Major Depressive Disorder were excluded from participating in the study. As a consequence, the sample is not entirely representative of children of depressed parents, as those at highest risk based on level of symptoms were excluded. Additionally, excluding these particular sub-sets of children likely decreased the incidence of children's maladjustment in the sample's population, as these disorders are directly related to externalizing and internalizing symptoms, respectively. Second, because this study utilized cross-sectional methodology, directionality could not be established. Although this study was based on a purely uni-directional risk transmission model for internalizing and externalizing problems in children of depressed parents, current behavioral genetic research has stressed the importance of examining child effects by demonstrating how genetically transmitted characteristics of children have actively shaped their surroundings, including parental behavior. Factors of child temperament and possible influences of child behavior for parenting were not incorporated in this study, but could provide a more accurate picture of the relationship between parenting and child adjustment.

Implications for Future Research

Several steps can be taken to extend the findings from the present study in future research. First, research should replicate an association between parental depression and withdrawn and harsh parenting behaviors to better understand the dimensions of parenting that are consistently impaired in depressed parents. Research should also continue to examine levels of internalizing and externalizing problems in children of depressed parents. Second, future research should more fully examine and investigate bi-directional relations between parental depression, withdrawal, and harshness, and child internalizing and externalizing symptoms. Studies should also incorporate elements of socioeconomic status, family makeup (e.g., single parents versus two-parent household), child's gender, and paternal versus maternal depression in order to more fully understand possible mediators and moderators of the relationship between parenting and child adjustment. Finally, future research should investigate the effects of positive parenting on child adjustment, as this may serve as a protective factor in the presence of high levels of withdrawn or harsh parenting.

Taken as a whole, the present study found significant relationships between harsh parenting, withdrawn parenting, child internalizing problems, child externalizing problems, and parents' depressive symptoms. Unexpectedly, harsh parenting was found to predict child internalizing and externalizing problems more strongly than withdrawn parenting. Future research should replicate and build on the findings from the present study to better understand whether harsh parenting is more influential to children of depressed parents, or whether this relationship is moderated by other factors, and continue to examine parenting behaviors as an important and influential pathway by

which parents may negatively or positively impact child adjustment. Findings from this and future studies may lead to the development of parental education and skills training programs focused on decreasing internalizing and externalizing problems in children of depressed parents.

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Table 1. Parenting Classifications Used in Select Literature Reviews and Meta-Analyses of Parenting and Parental Depression.

Citation	**Parenting categories**	**Parenting subcategories, definitions, or examples**
1. Lovejoy et al. (2000)	1. Negative, hostile exchanges 2. Disengagement 3. Positive social interactions	1. Negative maternal affect; hostile/coercive behavior 2. Neutral affect and involvement with the child (e.g., ignoring, withdrawal, silent gaze aversion) 3. Pleasant and enthusiastic interaction with child
2. Dix & Meunier (2009)	Low parenting competence	Withdrawal; intrusiveness; flat and negative emotional expression to children and low positive expression; ineffective disciple
3. Goodman et al. (2011)	Inadequate parenting	Harsh, inconsistent parenting; withdrawal; more aversive; less warm; less responsive
4. Wilson, & Durbin (2010)	1. Positive parenting behaviors 2. Negative parenting behaviors	1. Warm, affectionate, sensitive, engaged, positive, accepting, and supportive behaviors/interactions 2. Hostile, coercive, intrusive, restrictive, controlling, negative, critical, and dysfunctional behaviors/ interactions
5. Berg-Nielsen, Vikan, & Dahl (2002)	1. Parental negativity 2. Ineffective discipline	1. Parents' negative behavior toward their children, including a lack of parental warmth and element of hostility (e.g., rejecting, nagging, accusing, etc). 2. Harsh, disruptive and inconsistent discipline practices
6. Kiff, Leguna, & Zalewski, (2011)	1. Parental control 2. Responsive parenting	1. Behavioral control strategies; Psychological control strategies 2. Acknowledging, supporting, and guiding children's emotional responses
7. McLeod, Wood, & Weisz (2007)	1. Rejection 2. Control	1. Includes measures of withdrawal, aversiveness, and warmth 2. Includes measures of over-involvement and autonomy granting
8. Prinzie et al. (2009)	1. Warmth 2. Behavior control 3. Autonomy support	1. Nurturance, positive affect, sensitivity, caregiving, positive support, rejection [r.c.], negative affect [r.c.] 2. Structure, guidance, gentle control, sensitivity, inconsistent parenting [r.c.], laxness [r.c.], lack of structure [r.c.] 3. Cognitive stimulation, autonomy respect, overprotective parenting [r.c.], intrusiveness [r.c.], harsh discipline [r.c.], and over-reactivity [r.c.]

Note. r.c. denotes reverse coded.

Table 2. Demographic Characteristics of the Sample

	Parents (N=180)	Children (N=180)
Gender [*n* (%)]		
Female	160 (88.9)	89 (49.4)
Male	20 (11.1)	91 (50.6)
Age [*M* (SD)]	41.96 (7.53)	11.46 (2.00)
Race/ethnicity [*n* (%)]		
Euro-American	148 (82.2)	134 (74.4)
Black or African-American	21 (11.7)	23 (12.8)
Asian	2 (1.1)	6 (3.3)
Latino/Hispanic	4 (2.2)	3 (1.7)
Other ethnicity	5 (2.8)	14 (7.8)
Education [*n* (%)]		
Some high school	10 (5.6)	n/a
Graduated high school	16 (8.9)	n/a
Some college or technical school	55 (30.6)	n/a
Graduated college	57 (31.7)	n/a
Graduate education	42 (23.3)	n/a
Marital Status [*n* (%)]		
Married/Living with someone	111 (61.7)	n/a
Divorced	39 (21.7)	n/a
Separated	9 (5.0)	n/a
Never married	19 (10.6)	n/a
Widowed	2 (1.1)	n/a
Annual Household Income [n (%)]		
< $5,000	12 (6.7)	n/a
$5,000-$9,999	7 (3.9)	n/a
$10,000-$14,999	4 (2.2)	n/a
$15,000-$24,999	18 (10.0)	n/a
$25,000-$39,999	35 (19.4)	n/a
$40,000-$59,999	30 (16.7)	n/a
$60,000-$89,999	35 (19.4)	n/a
$90,000-$179,999	26 (14.4)	n/a
≥ $180,000	5 (2.8)	n/a

Note. n/a denotes not applicable.

Table 3. Composite IFIRS Codes for Withdrawn and Harsh Parenting

	Parenting Behavior(s) Predicted by Depressive Symptoms	IFIRS Code	IFIRS Code Definition
Withdrawn Parenting	Self-focused attention; low motivation for social interaction with children	Neglect/ Distancing (ND)	The degree to which the parent is uncaring, apathetic, uninvolved, ignoring, aloof, unresponsive, self-focused, and/or adult-oriented; the parent displays behavior that minimizes the amount of time, contact, or effort he/she has to expend on the child.
	Low responsiveness and high disengagement; lack of emotional support or reciprocity; tendency to select responses that require low effort [Reverse coded]	Listener Responsiveness (LR) [Reverse coded]	The degree to which the focal attends to, shows interest in, acknowledges, and validates the verbalizations of the other person (the speaker) through the use of nonverbal backchannels and verbal assents. A responsive listener is oriented to the speaker and makes the speaker feel like he/she is being listened to rather than feeling like he/she is talking to a blank wall.
	Lack of interest in the activities of the child [Reverse coded]	Child Monitoring (CM) [Reverse coded]	Assesses the parent's knowledge and information as well as the extent to which the parent pursues information concerning the child's daily life and daily activities. It measures the degree to which the parent knows what the child is doing, where the child is, and with whom.
	Less social involvement; lack of involvement between parent and child [Reverse coded]	Quality Time (QT) [Reverse coded]	Assesses the extent or quality of the parent's involvement in the child's life outside of the immediate setting; represents time "well-spent" versus superficial involvement
Harsh Parenting	Negative emotionality; disturbed contingent responses to child behaviors; tendency to react to challenging child behaviors with anger	Hostility (HS)	Measures the degree to which the focal displays hostile, angry, critical, disapproving, and/or rejecting behavior toward the other interactor's behavior (actions), appearance, or state.
	Increased disruptive and inconsistent discipline; Increased ineffective, indulgent, and/or harsh discipline	Inconsistent Discipline (ID)	Assesses evidence of parental inconsistency and failure to follow through on an expected consequence or punishment, as well as failure to maintain and adhere to rules and standards of conduct set for the child's behavior. This scale applies to both implicit and explicit rules and standards of conduct.
	Use of harsh control associated with thoughts of parental incompetence	Intrusive (NT)	Assesses intrusive and over-controlling behaviors (e.g., over-monitoring, interfering with child's autonomy) that are parent-centered rather than child centered. Does not reflect positivity or warmth. Task completion or the parent's own needs appear to be more important than promoting the child's autonomy.
	Increased manipulative parenting (e.g., guilt induction, shaming, conditional loving)	Guilty Coercive (GC)	The degree to which the focal achieves goals or attempts to control or change the behavior or opinions of the other by means of contingent complaints, crying, whining, manipulation, or revealing needs or wants in a whiny or whiny-blaming manner. These expressions convey the sense that the focal's life is made worse by something the other interactor does.

Table 4. Descriptive Statistics for Observed Parenting Behaviors, Parents' BDI scores, and Children's Internalizing and Externalizing Symptoms

	N	Mean (SD)	Minimum	Maximum
Withdrawn Parenting	169	4.57 (.81)	3.13	6.88
Harsh Parenting	169	2.86 (1.10)	1.00	6.25
BDI Score	177	19.23 (12.58)	0.00	52.50
YSR Internalizing T score	173	54.62 (11.53)	27.00	82.00
YSR Externalizing T score	173	49.58 (10.19)	29.00	76.00
CBCL Internalizing T score	174	59.38 (10.62)	33.00	82.00
CBCL Externalizing T score	174	54.51 (10.53)	33.00	81.00
YSR and CBCL Internalizing T Score	169	56.91 (9.30)	35.50	74.50
YSR and CBCL Externalizing T Score	169	52.06 (8.94)	34.00	74.50

Note. Sample sizes vary because of missing data on some measures.

Table 5. Bivariate Pearson's Correlations Among Parenting, Children's Internalizing and Externalizing Problems, Child Age, and Parents' Depressive Symptoms.

		1	2	3	4	5	6	7	8	9	10	11
1	CBCL Internalizing	---										
2	CBCL Externalizing	.55**	---									
3	YSR Internalizing	.40**	.35**	---								
4	YSR Externalizing	.24**	.47**	.73**	---							
5	CBCL/YSR Internalizing	.82**	.54**	.85**	.59**	---						
6	CBCL/YSR Externalizing	.47**	.86**	.63**	.85**	.66**	---					
7	Withdrawn Parenting	.13	.31**	.16*	.28**	.17*	.34**	---				
8	Harsh Parenting	.20**	.33**	.23**	.35**	.27**	.39**	.48**	---			
9	BDI Score	.28**	.29**	.16*	.15*	.28**	.27**	.26**	.17*	---		
10	SCID: Current MDD	.08	.12	.05	.04	.08	.09	.08	.06	.42**	---	
11	Child Age	-.02	-.04	.03	.19*	.01	.08	.15†	.03	.09	.04	---

Note. $p \leq .05$*, $p \leq .01$**

Table 6. Linear Multiple Regression Analysis Testing Associations Between Observed Parenting and Children's Externalizing Behaviors

Dependent Variable: *Externalizing Behaviors*

Model	Beta	t-value	p-value	R Squared
Step 1				.150
Harsh Parenting	.39	5.28	.000	
Step 2				.179
Harsh Parenting	.30	3.58	.000	
Withdrawn Parenting	.19	2.36	.019	
Step 3				.181
Harsh Parenting	.28	3.30	.001	
Withdrawn Parenting	.20	2.39	.018	
Interaction of Harsh x Withdrawn Parenting	.04	0.58	.565	

Note. All predictor variables were centered before entry into the regression model.

Table 7. Linear Multiple Regression Analysis Testing Associations Between Observed Parenting and Children's Internalizing Behaviors

Dependent Variable: *Internalizing Behaviors*

Model	Beta	t-value	p-value	R Squared
Step 1				.030
Withdrawn Parenting	.17	2.20	.029	
Step 2				.073
Withdrawn Parenting	.06	0.67	.501	
Harsh Parenting	.24	2.72	.007	
Step 3				.088
Withdrawn Parenting	.05	0.58	.563	
Harsh Parenting	.27	3.04	.003	
Interaction of Harsh x Withdrawn Parenting	-.12	-1.56	.120	

Note. All predictor variables were centered before entry into the regression model.

Table 8. Linear Multiple Regression Analysis Testing Associations Between Observed Parenting and Children's Externalizing Behaviors Accounting for Parent BDI

Dependent Variable: *Externalizing Behaviors*

Model	Beta	t-value	p-value	R Squared
Step 1				.150
Harsh Parenting	.39	5.28	.000	
Step 2				.179
Harsh Parenting	.29	3.58	.000	
Withdrawn Parenting	.19	2.36	.019	
Step 3				.181
Harsh Parenting	.28	3.30	.001	
Withdrawn Parenting	.20	2.39	.018	
Interaction of Harsh x Withdrawn Parenting	.04	0.58	.565	
Step 4				.212
Harsh Parenting	.28	3.27	.001	
Withdrawn Parenting	.15	1.83	.070	
Interaction of Harsh x Withdrawn Parenting	.03	0.43	.668	
BDI Prorated Sum	.19	2.50	.013	

Note. All predictor variables were centered before entry into the regression model.

Table 9. Linear Multiple Regression Analysis Testing Associations Between Observed Parenting and Children's Internalizing Behaviors Accounting for Parent BDI

Dependent Variable: *Internalizing Behaviors*

Model	Beta	t-value	p-value	R Squared
Step 1				.030
Withdrawn Parenting	.17	2.20	.029	.
Step 2				.073
Withdrawn Parenting	.06	0.67	.501	
Harsh Parenting	.24	2.72	.007	
Step 3				.088
Withdrawn Parenting	.05	0.58	.563	
Harsh Parenting	.27	3.04	.003	
Interaction of Harsh x Withdrawn Parenting	-.12	-1.56	.120	
Step 4				.146
Withdrawn Parenting	-.01	-0.13	.900	
Harsh Parenting	.27	3.03	.003	
Interaction of Harsh x Withdrawn Parenting	-.14	-1.81	.072	
BDI Prorated Sum	.25	3.27	.001	

Note. All predictor variables were centered before entry into the regression model.

Table 10. Linear Multiple Regression Analysis Testing Associations Between Observed Parenting and Children's Externalizing Behaviors Accounting for Parents' Current Diagnostic Status

Dependent Variable: *Externalizing Behaviors*

Model	Beta	t-value	p-value	R Squared
Step 1				.150
Harsh Parenting	.39	5.28	.000	
Step 2				.179
Harsh Parenting	.29	3.58	.000	
Withdrawn Parenting	.19	2.36	.019	
Step 3				.181
Harsh Parenting	.28	3.30	.001	
Withdrawn Parenting	.20	2.39	.018	
Interaction of Harsh x Withdrawn Parenting	.04	0.58	.565	
Step 4				.184
Harsh Parenting	.28	3.29	.001	
Withdrawn Parenting	.19	2.30	.021	
Interaction of Harsh x Withdrawn Parenting	.04	0.58	.562	
SCID Summary Score for Current MDD	.05	0.74	.460	

Note. All parenting predictor variables were centered before entry into the regression model; the SCID Summary Score is a dichotomous variable and was not centered

Table 11. Linear Multiple Regression Analysis Testing Associations Between Observed Parenting and Children's Internalizing Behaviors Accounting for Parents' Current Diagnostic Status

Dependent Variable: *Internalizing Behaviors*

Model	Beta	t-value	p-value	R Squared
Step 1				.030
Withdrawn Parenting	.17	2.20	.029	
Step 2				.073
Withdrawn Parenting	.06	0.67	.501	.
Harsh Parenting	.24	2.72	.007	
Step 3				.088
Withdrawn Parenting	.05	0.58	.563	
Harsh Parenting	.27	3.03	.003	
Interaction of Harsh x Withdrawn Parenting	-.124	-1.56	.120	
Step 4				.091
Withdrawn Parenting	.05	0.53	.598	
Harsh Parenting	.27	3.03	.003	
Interaction of Harsh x Withdrawn Parenting	-.12	-1.56	.122	
SCID Summary Score for Current MDD	.06	0.74	.460	

Note. All parenting predictor variables were centered before entry into the regression model; the SCID Summary Score is a dichotomous variable and was not centered