

PARENTING BEHAVIORS AND CHILD SOCIAL COMPETENCE:
RISK FACTORS FOR ADJUSTMENT OF ADOLESCENT OFFSPRING OF
MOTHERS WITH AND WITHOUT A HISTORY OF DEPRESSION

By

Kristen L. Reeslund

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Approved:

Professor Bruce E. Compas

Professor David A. Cole

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CHAPTER I

INTRODUCTION

The high prevalence of depression in the general population represents a significant mental health problem in the United States, especially for young adult women. As reported in the National Comorbidity Survey, Kessler et al. (1994) found the lifetime prevalence of affective disorders in females to be 23.9%, in contrast to a rate of 14.7% among males. In addition, rates of depression in women are highest in young adulthood, during childbearing years (Kessler et al., 1994). The significant number of mothers who experience clinical depression during their children's lifetimes is particularly problematic as maternal depression is linked to negative outcomes in children (Cummings & Davies, 1994; Goodman & Gotlib, 1999).

Children of depressed parents have greater impairment in a variety of domains, including social competency and peer relationships, than children of non-depressed parents (Anderson & Hammen, 1993; Beardslee et al., 1985). Maternal depression is a significant risk factor for both internalizing and externalizing psychopathology, and specifically for depressive disorders, in offspring of depressed parents (Goodman & Gotlib, 1999). In fact, along with age and gender, maternal depression is one of the strongest predictors of childhood and adolescent depression (Beardslee et al., 1998). The adverse effects of maternal depression are not surprising given the recurrent nature of depression and the large proportion of adult depression that goes untreated. Children of depressed parents are thus exposed to frequent and extended periods when their parents

are in an episode and to continued stress even when parents are out of episode but experiencing subthreshold symptoms of depression (Hammen, 1997).

Early adolescence is an important developmental period of heightened risk for children of depressed parents, as this developmental period is associated with increasing rates for depression and other forms of psychopathology (Compas et al., 2004; Compas et al., 2005; Hankin et al., 1998). As many as 25% of adolescents have had at least one depressive episode by the age of 18 (Lewinsohn et al., 1993), and adolescent offspring of depressed parents are 4 times more likely to develop an affective disorder than other children (Lavoie & Hodgins, 1994). Having established that children and adolescents of depressed parents are at high risk, it is important to understand the biological, psychological, and interpersonal processes through which parental depression adversely affects adolescents (Goodman & Gotlib, 1999, 2002).

Mechanisms of Transmission

The effects of parental depression on offspring are likely transmitted through multiple mechanisms, including the heritability of depression, innate dysfunctional neuroregulatory mechanisms, exposure to negative maternal cognitions, behaviors, and affect, and the stressful context of the children's lives (Goodman & Gotlib, 1999).

One of the psychosocial mechanisms proposed by Goodman and Gotlib (1999) that is central to the present study is exposure to the negative maternal affect, cognitions and behavior that are typically present in the parenting behaviors of depressed mothers. One process by which children may be influenced by these negative thoughts and behaviors is through observation and modeling. Depressed individuals, including

parents, have more negative views of themselves, others, and the world around them, and their children may learn to think and behave more negatively simply by observing their parents (Goodman & Gotlib, 1999). For example, in a study conducted by Stark, Schmidt, and Joiner (1996), a negative maternal style of thinking was significantly related to children's negative sense of self, negative thinking about the world, and negative expectations about the future, which, in turn, were associated with child depressive symptoms. Perceived parental messages to the child about the self, world, and future were also found to be predictive of children's depressogenic style of thinking and ratings of depression (Stark et al., 1996). Mediation analyses found that the relationship between perceived parental views and child depressive symptoms was fully mediated by child cognitive style, meaning that perceived parental messages about the self, world, and future was predictive of children's symptoms only as a function of children's views of their self, world, and future. These findings support the theory that negative maternal cognitions are related to children's depressogenic thinking and provide an explanation for how interactions with parents may contribute to the development of a negative thinking style and, ultimately, to depression in children. Mother-child interactions serve as critical mechanisms through which children are exposed to risk factors associated with maternal depression—particularly negative maternal affect and cognitions and stressful family exchanges (Garber & Martin, 1999; Lovejoy et al., 2000).

Within the overall model that has guided the development of the current study, exposure to stressful parent-child interactions is one of the primary psychosocial mechanisms through which parental depression exerts its effects on children (Jaser et al., 2005; Langrock et al., 2002). In support of this mechanism, Adrian and Hammen (1993)

reported that children of unipolar depressed women experienced higher rate of family stress than children of bipolar, medically ill, or control women, and that family stress was an important predictor of both internalizing and externalizing problems in children.

Children of depressed parents tend to experience more negative exchanges with their parents, either through verbal communication (e.g., criticism, blaming) or actions (e.g., ignoring, punishing), contributing to a chronically stressful environment. For example, Cummings and Davies (1994) found that dysfunctional parenting skills, particularly inconsistent discipline, displayed by depressed parents may be perceived as stressful and are likely to result in a negative cycle of child behavior problems.

Parenting in Depressed Mothers

Depression significantly impairs parents' ability to effectively support and nurture children, leading to disruptions in parenting. Most of the research on parenting in depressed women has concentrated on parenting difficulties associated with the physical, cognitive, and emotional symptoms of depression (e.g., sad mood, irritability, lack of interest, fatigue, difficulty concentrating; Lovejoy et al., 2000)—mainly parental withdrawal (e.g., avoidant, unresponsive to their children's needs) and parental intrusiveness (e.g., irritable toward their children, overly involved in their children's lives; e.g., Cummings et al., 2001; Gelfand & Teti, 1990; Malphurs, Field, Lorraine, Pickens, & Palaez-Nogueras, 1996).

Based on many symptoms associated with depression, such as anhedonia, sleep disturbances, and low energy, mothers with a history of the disorder are hypothesized to be less able to maintain involvement, remain emotionally available, and meet the needs

of their children (e.g., Field et al. 1990; Goodman & Brumley, 1990). For example, Goodman and Brumley (1990) stated that depressed mothers may be “emotionally unavailable and withdrawn to the extent that they may be less sensitive to child behavior” (Goodman & Brumley, 1990, p. 31). That theory has been supported in research showing that, relative to nondepressed mothers, depressed mothers are less sensitive, attentive and responsive in their parenting skills (Bettes, 1988; Field et al., 1990; Murray et al., 1993). During interactions with their children, depressed mothers have also been shown to demonstrate lower rates of behavior and of affective expression. Specifically, they respond less positively, less consistently, and less quickly to their children’s attempts to engage their attention (Breznitz & Sherman, 1987; Downey & Coyne, 1990). For example, Breznitz and Sherman (1987) found that a sample of clinically depressed mothers were found to speak less often to their 3-year-old children and respond more slowly to their children's speech. In a study examining the stress of living with a depressed parent, Langrock, Compas, Keller, Merchant, and Copeland (2002) found that current parental depressive symptoms were significantly related to parental withdrawal and intrusive behaviors.

Second, research indicates that depressed mothers show heightened levels of intrusiveness, negativity, hostility and criticism when interacting with their children than well women (Breznitz & Friedman, 1988; Cohn, Cambell, Matias, & Hopkins, 1990; Malatesta-Magai, 1991). For example, interpersonal patterns between mothers currently in a depressive episode and their offspring have been characterized as having higher levels of irritability in comparison to well mothers or mothers not in episode (Tarullo et al., 1994). In the longitudinal UCLA Family Stress Project, clinically depressed mothers

were observed to be more irritable and critical and less positive than other mothers during mother-child interactions on a conflict-resolution task (Gordon et al., 1989; Hammen et al., 1987). Maternal depressive symptomatology also predicted hostility toward children in a nonclinical sample (Hammen et al., 1987).

Parenting in depressed individuals is also frequently characterized by high levels of criticism (Goodman et al., 1994). Nelson, Hammen, Brennan, and Ullman (2003) conducted a study exploring the role of maternal criticism as a predictor of child symptomatology and functioning in a sample of mothers both with a history of depression and without. A subtype of Expressed Emotion (EE), which is thought to reflect the negative emotional atmosphere in a family and is increasingly being used as an indicator of parenting, was used to assess levels of maternal criticism. EE criticism, a construct including critical comments and statements expressed by the mother, through having the mother speak for 5 minutes about her child and their relationship. Mothers with a history of depression were more likely than non-depressed mothers to exhibit critical EE; specifically, mothers with a history of depression were significantly more likely than non-depressed mothers to make critical/hostile comments regarding their children (Nelson et al., 2003).

Effects of Parenting by Depressed Mothers on Youth Psychological Symptoms

Exposure to hostile, disengaged, and inconsistent parenting, as opposed to nurturing parenting, contributes to a chronically stressful environment for children and tends to result in increased symptomatology in offspring of depressed parents. Recent studies have shown that children exposed to higher levels of parental

intrusiveness/irritability and withdrawal have higher internalizing and externalizing symptoms. For example, in the Langrock et al. (2002) study, both parental intrusiveness and withdrawal were significantly correlated with higher levels of offspring anxiety/depression and aggression (r 's ranged from .23 to .33, $p < .05$), according to parent report. A study conducted by Jaser et al. (2005) extended those findings by using adolescent reports of family stress and adolescent psychological symptoms in combination with parent reports. Cross-informant correlations showed that adolescent report of parental intrusive behaviors was significantly correlated with parent report of adolescent internalizing and externalizing symptoms; specifically, parental intrusiveness was positively correlated with anxiety/depression ($r = .24$, $p < .05$) and aggression ($r = .36$, $p < .01$). Thus, when using cross-informant analyses of parent and adolescent reports, parental intrusiveness is associated with increased levels of psychological symptoms in offspring of depressed parents.

Studies of maternal speech samples that code for critical EE have yielded significant findings in the effects of maternal criticism on children's adjustment. Nelson et al. (2003) used structural equation modeling to demonstrate that critical EE mediated the relationship between maternal history of depression and adolescents' externalizing symptoms and impaired functioning. Similarly, Frye and Garber (2005) found that both severity and chronicity of mothers' depression and critical EE predicted adolescents' internalizing and externalizing symptoms.

Social Competence as a Protective Factor

Although children of affectively ill parents are at an increased risk for depression

and other forms of psychopathology, a number of studies have demonstrated that many offspring of ill parents actually do well. These individuals, identified as "resilient," exhibit the ability to adapt successfully despite the presence of significant adversity. Research has shown that both actual and perceived social competence may serve as protective factors contributing to resilient outcomes and preventing adolescent depression (e.g., Kistner et al., 2003). A core feature of cognitive processes associated with child depression involves youth's self-perceptions of their own behavior and competencies (Weisz et al., 1992). Furthermore, children rated as more socially competent by others have been found to exhibit less depressive symptoms (Frank et al., 1997). Research has shown that higher levels of depressive symptoms, externalizing symptoms, and overall psychopathology have all been related to lower levels of perceived (self-reported) social competence and actual competence as reported by peers, teachers, and parents (Cole et al., 1996; Dalley et al., 1994; Frank et al., 1997; Kistner et al., 2003; Seroczynski et al., 1997; Weisz et al., 1992).

An important issue in the association between social competence and adolescent depression is whether negative self-evaluations represent reality, or if low perceived competence is a result of cognitive distortions characteristic of depression. Dalley and colleagues (1994) compared self-ratings and teacher-ratings of adolescent social competence. Youth with higher levels of depressive symptoms rated themselves as less socially competent, a finding that was echoed by teachers' reports. This implies that depressed individuals may have accurate negative self-perceptions of their social abilities. However, perceptions of low social competency may contribute to depressive symptoms even when they are not congruent with objective reports. Further, the effects

of actual competence on depressive symptoms appear to be mediated by perceptions of personal competence (Cole et al., 1997). Thus, assessing perceived and actual competence is important in understanding the relationship between social competence and depressive symptoms.

Deficits in social competence have been implicated as both a cause and consequence of depression in adolescents (Kazdin et al., 1982; Weisz et al., 1992). A competence-based model of depression in children and adolescents developed by Cole and colleagues asserts that young people use feedback from others to form perceptions of their competencies (Cole, 1990; Cole et al., 1996; Jacquez et al., 2004). Youth internalize this feedback and develop a concept of themselves as either competent or incompetent. A low self-perception of competency, particularly in the social domain, puts adolescents at risk for developing depression (Weisz et al., 1993, Seroczynski et al., 1997). Feedback characterized as disapproving or critical serves to negatively impact adolescents' self-perceptions, whereas positive and approving feedback has the converse effect on adolescents' sense of competency. Such a model may be especially important for offspring of depressed parents, who are subjected to higher levels of criticism, expressed dissatisfaction, and less positive feedback and warmth (Lewinsohn & Rosenbaum, 1987).

Effects of Parenting of Depressed Mothers on Youth Social Competence

Parental depression is likely to affect both children's perceived and actual social competence through multiple pathways. The model put forth by Cole and colleagues explains how depressed parents' tendency to express more criticism and less positive

feedback towards their children may inhibit the emergence of a sense of self-competency (Cole, 1990; Cole et al., 1996). Parents who have suffered from depression may also be less able to provide the necessary security and support for adequate social development. Behaviors characteristic of depressed parents, such as withdrawal (e.g., unresponsiveness, avoidance) and intrusiveness, hostility, or irritability are associated with unpredictable parent-child interactions and a lack of parental support (Goodman & Gotlib, 1999; Lovejoy et al., 2000). Such interaction styles fail to foster a sense of self-confidence in children. Children who feel insecure about their abilities are less able to explore and develop new relationships with confidence (Putallaz & Heflin, 1990).

In addition to perceived competency, parental depression may also affect children's actual social competency. Social learning theory maintains that children are likely to acquire behaviors that resemble those exhibited by their depressed parents through modeling. Youth may directly observe maladaptive ways in which to relate to others and develop poor skills for preventing or resolving interpersonal disputes. Moreover, parent-child interactions may serve as a critical mechanism through which other risk factors (e.g., family stress, parental negative cognitive style) affect children of depressed parents. These interactions are likely to be an important context in which parents may model poor interpersonal skills and ineffective ways of coping and interacting with others, thus creating a relative lack of actual social competence in children (Adrian & Hammen, 1993). Studies have shown that negative feedback from parents affects children's actual competence, which leads to lower levels of perceived competence, and the effects of actual competence on depressive symptoms are mediated by perceived competence (e.g., Cole, 1990, 1991; Cole et al., 1997).

Parent-Child Observational Studies

Direct observations of parent-child interactions are an important method in research to assess constructs such as parenting processes and social competence. Early work investigating the parenting difficulties of depressed parents relied on self-report, finding that depressed women reported increased levels of hostility and less emotional involvement (Weissman & Paykel, 1974; Weissman, Paykel, & Klerman, 1972). However, the extent to which self-reports reflect actual parent-child interactions is unclear. Studies further explored the relation between depression and parenting behaviors through directly observing parent and child interactions. Lovejoy et al. (2000) conducted a meta-analytic review of 46 observational studies that investigated parenting deficits in depressed women and their children. Significant differences were observed in parent-child interactions between mothers with and without depression. Specifically, depressed mothers showed higher levels of negative and disengaged parenting than their control counterparts, showing moderate effect sizes for both ($d = .40$ and $.29$, respectively).

The studies that Lovejoy et al. (2000) included in the meta-analysis included mostly depressed women and their younger children, indicating that there are fewer studies observing parent-child interactions with adolescent children. However, the studies that did explore parenting behaviors with adolescent children find similar findings as those including younger children (Hamilton et al., 1993; Hammen et al., 1987). For example, depressed women were found to display increased levels of dysphoric affect and diminished levels of caring and happy affect when compared to control women interacting with their children (Hops et al., 1987).

Since many of the parenting deficits hypothesized to be found in depressed parents are assumed to be directly associated with depressive symptoms, it is important to consider the methods used to assess for depression. The two most frequently used methods for determining depression are elevated scores on self-report questionnaires (e.g., BDI), aimed at determining current symptom levels, and interview-based assessments, used to obtain clinical diagnostic history. Advantages of each method have been noted. As depression is a highly recurrent illness and children of formerly depressed individuals continue to experience significant adjustment difficulties even after maternal symptoms subside (Billings & Moos, 1986), difficulties in parenting and problematic parent-child interactions would be expected to continue even when out of episode. However, it has been hypothesized that women with current depressive symptoms would demonstrate greater parenting deficits than those with just a history of the disorder. This hypothesis was tested in the meta-analytic review conducted by Lovejoy et al. (2000), to which they found that the effect size for negative parenting behaviors was significantly larger in studies with samples of currently depressed mothers ($d = .45$) than in studies examining the effects of lifetime depression ($d = .22$), although women with a history of depression still showed significantly more negative/coercive behaviors than control women. Current symptoms versus past depressive episode, however, were not related to the magnitude of the effect size for disengaged maternal behaviors. A more recent study conducted by Hammen, Brennan, and Shih (2004) found that children with mothers meeting criteria for current depression, past depression, and dysthymia all experienced increased levels of conflict and stress when compared to children of well women. Research thus indicates that both a history of depression and

current depressive symptoms may be important in observations of depressed mothers' interactions with their offspring

Direct observation of children's social interactions provides important information for developing a thorough understanding of youth social competence. Early observational systems based measurement of social competence on quantitative data, rather than qualitative aspects of social functioning, using global interaction codes such as social participation (e.g., Guralnick & Groom, 1987) or social initiations, responses, and interactions (e.g., Greenwood et al., 1981). These, however, provide only a limited understanding of children's social development and any specific abilities related to children's social competence (Asher, Markell, & Hymel, 1981; Odom & Ogawa, 1992). More recent research, however, has focused on specific groups of behaviors considered to be important indicators aspects of social competence: communicative behavior (e.g., Inderbitzen, 1994), social problem solving (e.g., Rubin & Rose-Krasnor, 1992), aggressiveness (e.g., Parker & Asher, 1987), and social withdrawal (e.g., Farmer-Dougan & Kaszuba, 1999). Considering the perspective of others and coordinating individual actions with others' actions are also both integral components of socially competent behavior that can be captured using observational methods (Cooper & Cooper, 1992; Havighurst, 1974; Parke, 1992). For example, Hartup et al. (1967) assessed positive social reinforcement, including attention, approval, affection, and submission, and negative reinforcement, such as noncompliance, interference, derogation, and attack.

The majority of observational studies on child social competence have focused on early and middle childhood (e.g., Farmer-Dougan et al., 1999; Odom & Ogawa, 1992); research investigating adolescent social competence is more limited. Most of the

research examining older children and adolescents has evaluated social competence almost exclusively using peer sociometric data, which may be subject to bias in evaluations and lacks information about the precise nature of children's competence or incompetence (Dodge, 1985; Parke, 1992). One exception is a study conducted by Englund and colleagues (2000), who used observational methods to rate adolescents on task enjoyment, involvement, self-confidence, and global social competence when interacting with peers in a camp setting. Observational ratings on these behaviors were strongly correlated with camp counselor ratings of social skills and positive peer nominations, providing support for the validity and significance of behavioral observations of adolescent social competence.

Although behavioral observations have been employed extensively in the assessment of social functioning, this research has been mostly limited to peer interactions, neglecting familial influences on the development of interaction skills (MacDonald & Parke, 1984; Putallaz, 1987). Few, if any, published investigations have focused on observations of adolescent social competence during parent-child interactions.

Behavioral Observation Coding Systems

Using direct observational methods allows researchers to study relationships between individuals, rather than simply separate characteristics of individuals (Kerig, 2001). Observational methods also allow researchers to obtain information independent of self- and other-reports and unaffected by reporting biases that influence the reports of parents and children (Kerig, 2001). For example, children may under-endorse problems or answer randomly to questionnaires (Garber & Kaminski, 2000). In addition, no clear

solution exists for dealing with discrepancies between parent and child reports of child's behavior (Achenbach, McCaughy, & Howell, 1987). Combining observational data with questionnaire data is not only beneficial for avoiding some of the problems inherent in questionnaires, but it allows for multi-method and cross-informant reports of behavior. In addition, there may also be some behaviors that are less likely to be captured in a structured laboratory task, such as withdrawal, making the lab task less representative of the participants' true behavior.

In the current study, interactions between mothers and adolescents were coded to understand the influence that maternal depression has on adolescent adjustment. The system used in the current study was a macro, global coding system (the Iowa Family Interaction Rating Scales; IFIRS; Melby, Conger et al, 1998) because this type best captures the broader, more trait-like aspects of family members' behavior and their general style of interaction (Melby & Conger, 2001).

Current Study

The current study compares women with and without a history of depression and their adolescent children on parent behaviors, adolescent social competence, depressive symptoms, and internalizing and externalizing problems. To better understand the role of child competence and parenting behaviors in the prediction of child symptoms, the current study uses a global coding system (IFIRS) to assess observed behaviors in videotaped parent-child interactions with mothers both with and without a history of depression. Several codes will be used to further evaluate parenting behaviors (e.g.,

intrusive, withdrawn) and child competence in families with a history of maternal depression.

The methodology of the current study consists of two videotaped interactions—one regarding a pleasant activity in which the mother-child dyad have recently participated, and one surrounding a parental behavior the pair rated as stressful. Observing behavior in a positive and stressful task is expected to elicit a wider sample of positive and negative parent and child behaviors. The women with a history of depression were not currently in episode, as the focus of the study is on examining the effects of the chronic stress related to living with a depressed mother, rather than the acute stress related to living with a mother who is experiencing an episode of depression. Research has shown that depressed women continue to experience interpersonal impairment, including impaired parenting, even when not in episode (Hammen, 2003).

A recent study by Hammen et al. (2004) found that the relationship between maternal depression and offspring depression was mediated by maternal interpersonal stress, parenting quality in the mothers, and youth perceived social competence. Exposure to parental interpersonal difficulties and parenting characterized by increased levels of hostility and little warmth, typical of living with a depressed parent, affected perceived social competency and predicted adolescent depression. Although parental depression is a broad risk factor for depression and other disorders, the social competencies that youth possess play an important role in contributing to individual differences in vulnerability and resilience to stress caused by parental depression (Copeland et al., 2005).

Building on the study conducted by Hammen et al. (2004), the current study will investigate the role of negative parenting behaviors and actual and perceived child

competence, as observed in parent-child interactions and obtained through mother- and adolescent-report, in the transmission of psychopathology from depressed parents to their children. These mechanisms were selected because research has shown they are closely linked to one another and are important influences on the emotional and behavioral health of children of depressed parents (Compas et al., 2002; Hammen, 1991; Jacquez et al., 2004; Jaser et al., 2005; Langrock et al., 2002). Rather than relying solely on self-report measures, behavioral observations were used in conjunction with questionnaire data to obtain multi-method and cross-informant information to examine these processes. The current study will extend prior research through the concurrent observation of parenting and child social functioning to provide information about the direct relationship between the two.

The first goal of the current study is to replicate past findings, in that I expect the mothers with a history of depression and mothers experiencing more current symptoms of depression to exhibit more intrusive and more withdrawn parenting behaviors than mothers without a history of depression or those with fewer current symptoms of depression.

Second, I expect that higher levels of negative parenting behaviors, characterized by intrusive and disengaged behaviors, would be associated with lower levels of both perceived and actual adolescent social competence.

Third, I expect to find that higher levels of these negative parenting behaviors will be correlated with increased levels of depressive symptoms and internalizing and externalizing problems in children.

Fourth, extending on previous research, I expect that both actual and perceived adolescent social competence will mediate the relation between maternal parenting behaviors and adolescent adjustment.

CHAPTER II

METHOD

Participants

Participants included 72 women (35 with a history of depression and 37 with no history of depression) and their adolescent offspring (36 girls and 36 boys) between the ages of 10 and 14 years old (mean age = 12.2 years; $SD = 1.07$) from the greater Nashville, TN area. This age range is similar to previous studies of offspring of depressed parents (e.g., Anderson & Hammen, 1993; Rudolph & Hammen, 2000) and was selected because the rate of depression increases significantly during the transition from childhood to adolescence, making this developmental period the optimal time for understanding the onset of depression (Hankin et al., 1988). This study focused on families with a child age 10 or older as the minimum age for completing the self-report measures selected for this study was 10-years-old. This age range represents early adolescence, following the guidelines set by Steinberg and Lerner (2004) defining adolescence as the second decade of life. Mothers and children were offered \$25 each in monetary compensation for their time.

Depressed mothers and their children were recruited to participate in the study from the roster of a completed study at the Department of Psychiatry at Vanderbilt University, conducted by Richard Shelton, M.D., as well as through email advertisements sent out through the Vanderbilt University Medical Center. Mothers without a history of depression were also recruited through the same email advertisements for the study.

To meet inclusion criteria for the study, mothers must have a child between the ages 10 and 14-years-old. When mothers had multiple children in the age range, one child was randomly selected by the researcher for participation in the study. Women who had experienced a major depressive episode in the lifetime of the child within the designated age range were categorized as having a history of major depressive disorder (MDD).

Participating mothers may have had a history of major depressive disorder (MDD) during the lifetime of the child within the designated age range or no history of MDD. Families with a mother who met current criteria for an episode of MDD were not included in the study. Recent research has shown that current parental depressive symptoms are a strong predictor of quality of parent-child interactions and current child adjustment among parents with a history of depression, suggesting that parenting and other factors continue to place children at risk even when parents are out of episode (Jaser, 2005). Other exclusionary criteria include any other principle DSM-IV diagnosis in the mother.

Out of the 115 women who were screened, 36 did not participate. Seven women were not eligible because they were currently experiencing an episode of depression, and six women were not eligible because they had another DSM-IV Axis I diagnosis (4 reported anxiety disorders and 1 reported an eating disorder). In addition, 7 eligible families were not interested and 16 families failed to attend their scheduled appointments. Seventy-nine families participated in the study, but six families were excluded from the current sample due to substantial missing data (they either did not complete the questionnaires or they failed to complete both interactions) and one family was excluded

because the child did not live with his mother. Thus, the current sample consists of 72 mother-adolescent dyads.

The mean age for the mothers was 41.7 ($SD = 5.13$). Median mothers' education was 16 years (4 year college degree), and median occupational status, based on the Hollingshead (1975) 9-point occupational scale, was 6 (e.g., technicians, office managers). Of the mothers in the study, 82% were Caucasian, 14% African American, and 3% Asian-American, and 1% Other, which is representative of the region in middle Eastern Tennessee from which the sample was drawn. In the sample, 68% of the mothers were married, 28% were either divorced or separated, and 4% were single. Mothers with and without a history of depression did not differ by group on age, race, education, occupational level, or marital status (See Table 1). Of the mothers with a history of depression, time since last episode ranged from 1 to 120 months, with a mean of 31 months. The number of depressive symptoms endorsed for the last episode ranged from 5 to 9, with a mean of 6.9. Seventy four percent of the women with a history of depression ($n = 26$) reported taking medication for their depression, and 34% ($n = 12$) reported being in counseling.

Table 1.

Demographic Information on Families of Mothers with and without a History of Depression.

	History of Depression		Significance tests	
	History	No History	<i>t</i> or χ^2	<i>p</i>
Child's Age				
<i>M</i>	12.18	12.24	.23	<i>ns</i>
<i>SD</i>	1.24	.95		
<i>N</i>	33	37		
Mother's Age				
<i>M</i>	41.45	41.92	.37	<i>ns</i>
<i>SD</i>	5.43	5.05		
Mother's Education				
<i>M</i>	4.52	4.76	.73	<i>ns</i>
<i>SD</i>	1.39	1.36		
Child's Gender				
Females, <i>N (%)</i>	19 (57.6)	16 (43.2)	1.43	<i>ns</i>
Males, <i>N (%)</i>	14 (42.4)	21 (56.8)		
Mother's Marital Status ^a				
Married, <i>N (%)</i>	21 (63.6)	27 (73)	.71	<i>ns</i>
Other, <i>N (%)</i>	12 (36.4)	10 (27)		
Mother's Race ^b				
Caucasian, <i>N (%)</i>	26 (78.8)	32 (86.5)	.73	<i>ns</i>
Other, <i>N (%)</i>	7 (21.2)	5 (13.5)		

^aFor marital status, the category "Other" includes the following family constellations: single parent, separated, divorced, widowed.

^bFor race, the category "Other" includes the following ethnicities: African American, Asian American, Latino, Native American, and self-identified Other.

Procedure

Participants who responded to email advertisements, either by phone or email, were contacted to receive an introduction to the study. Interviews were conducted with all potential participating mothers using a diagnostic phone interview to assess symptoms of Major Depressive Disorder (MDD) and Dysthymia (DYS) using rules for deriving diagnoses using the MDD section of the Structured Clinical Diagnostic Interview (SCID; First, Spitzer, Gibbon, & Williams, 2001). The interviews were used to screen for a maternal history of MDD or DYS during the lifetime of at least one of their children within the designated age range and to rule out mothers who currently met criteria for this disorder. If it was determined that they had experienced an episode of depression during the lifetime of their child, they were screened for current depression. In addition, women were screened for bipolar disorder, psychotic symptoms, and any other primary Axis I disorder they considered to be more serious than their depression. Women without a history of depression were excluded if they reported experiencing any other primary Axis I disorder during the lifetime of the child. If eligibility criteria were met, the family was sent copies of the consent and assent forms in the mail. Mothers and adolescents were then asked to complete written questionnaires and participate in a videotaped parent-child interaction.

Families completed questionnaires upon arriving to the laboratory, prior to the interaction. Mothers were asked to complete a demographic form, a measure about their current depressive symptoms, a measure regarding their child's exposure to stress related to parental behavior, and a measure of their child's functioning. Adolescents were asked

to complete measures of their own depressive symptoms and functioning and their exposure to stress related to parental behavior.

Following the protocol we developed and used successfully in previous research (Dausch et al., 2001; Morrow et al., 2005), the parent-child interactions were conducted in a private laboratory space, including comfortable chairs and a video camera. Parents and adolescents were asked to participate in two 15-minute interactions. The length of the interactions was chosen because the coding system being used (IFIRS) was designed for use with 15-minute interactions (Melby & Conger, 2001).

The first interaction allowed mother-adolescent dyads to discuss a recent positive experience. Prior to participating in the interaction, families were asked to pick a recent activity that both mother and child engaged in and found enjoyable (e.g., family outing, holiday). Participants were then given a cue card with stems for standardized prompting questions to help guide the interaction (e.g., What happened when we [went to Disneyland]? How did we feel when we [went to Disneyland]? What prevents us from doing activities together that we like? How could we do more pleasant activities?). These questions were chosen to create positive affect and behavior and to incorporate a problem-solving component to the interaction, which has been included in the majority of research using the IFIRS system (Melby & Conger, 2001).

Once the interaction process was explained and the family was given the cue card, the experimenter turned the video camera on and left the room. After 15 minutes, the examiner returned and turned the video camera off. The family then began the second interaction.

The second interaction involved discussing a recent stressor in the family. Prior to the interaction, both mothers and adolescents were asked to identify stressful issues that occur in the family using an 8-item checklist. The checklist items were taken from the parental depression version of the Responses to Stress Questionnaire (Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman, 2000; Langrock et al., 2002), and were chosen to represent areas of parental behavior identified by previous research as stressful for adolescents of depressed parents: parental intrusiveness and parental withdrawal (Cummings & Davies, 1994; Gelfand & Teti, 1990; Hammen et al., 2004). An example of an item for parental withdrawal is, “My child wishes that I would spend more time with her;” and for parental intrusiveness, “My child thinks I worry about bad things happening to him.” Respondents were asked to report on the frequency of such occurrences within the past 6 months on a five-point Likert scale (0 = never, 1 = hardly ever, 2 = sometimes, 3 = quite often, and 4 = all the time) and to then rank the top three stressors. Adolescent self-report and parent report of adolescent responses were obtained through parallel versions of the checklist (e.g., My mom does not listen to me, or pay attention to events in my life/My child thinks I do not listen or pay attention to events in her life). Although these items were chosen to reflect stressors associated with living with a depressed parent, many of them generalize to families without depression.

A common stressor was chosen by comparing the top three stressors ranked by the mother and adolescent. In cases where the mother and child did not rank one of the same stressors, a sum of the rating scores was obtained and the highest rated was selected by the experimenter. Like the first interaction, the parent-child dyad was given a cue card with questions related to the stressor to prompt conversation (e.g., What happened

the last time [Mom was upset, tense or grouchy]? When [Mom gets upset, tense or grouchy,] what usually happens? What kind of feelings or emotions do we usually have when [Mom is upset, tense or grouchy]? What can we do to reduce this stress?). After the second 15-minute interaction, the experimenter turned the camera off and debriefed the participants.

Measures

Interview for Maternal Diagnosis. Maternal diagnosis was determined using the screening interview to assess symptoms of Major Depressive Disorder (MDD) and Dysthymia (DYS). The rules for deriving these diagnoses were based on the MDD and DYS sections of the Structured Clinical Diagnostic Interview (SCID), a semi-structured psychiatric interview (First et al., 2001). This screening interview was administered to all potential participants to distinguish between women with and without a history of depression in the lifetime of their child and to rule out women who were currently experiencing episodes of depression, who met criteria for bipolar disorder or psychotic symptoms, or who reported another primary Axis I disorder they considered to be more serious than their depression.

Questionnaires.

Demographics. Demographic information was obtained from a questionnaire completed by the mother including her birth date, the birthdates of all children in the

family, parents' level of education, parents' occupation, ethnicity of both parents, and marital/partner status.

Maternal Depressive Symptoms. The Beck Depression Inventory-II (BDI-II, Beck, Steer, & Brown, 1996) was used to assess current maternal depressive symptoms, regardless of diagnostic history. This measure is a standardized and widely used self-report checklist of depressive symptoms and has adequate internal consistency (ranging from .73 to .92), reliability and validity (Beck et al., 1988).

Adolescent Emotional and Behavior Problems. The Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2002) was given to the mother to assess her perceptions of internalizing and externalizing symptoms in her child over the past six months. Reliability and validity of the CBCL are well established. Adolescents completed the Youth Self-Report (YSR; Achenbach & Rescorla, 2002), the self-report version of the CBCL designed for youth ages 11 to 18-years-old, to obtain their own perception of their functioning. The Achenbach System of Empirically Based Assessment has strong test-retest reliability (.79-.95), and criterion-related validity has been established (Achenbach & Rescorla, 2001). The scales are based on factor analyses of data from 4,994 clinically referred children and were normed on 1,753 children from a nationally representative sample. Normalized *T* scores allow an individual's data to be compared to norms for the same age and sex in the general population. *T* scores of greater than or equal to 65 (\geq 93rd percentile) for DSM-based scales (affective disorders and conduct disorder), and *T* Scores of greater than or equal to 60 (\geq 84th percentile) for Broadband Scales (internalizing and externalizing problems) represent the borderline clinical range. *T* scores of greater than 69 ($>$ 97th percentile) for DSM-based Scales and greater than 63 ($>$

90th percentile) for Broadband Scales constitute the clinical range. These cutoffs are based on scores that best differentiate referred versus non-referred children and adolescents (Achenbach & Rescorla, 2001).

Adolescent Depressive Symptoms. Depressive symptoms were assessed with the Children's Depression Inventory (CDI, Kovacks, 1980), a self-report measure of the frequency of 27 depressive symptoms over the past two weeks using a 3-point Likert scale. The CDI has been used widely in studies of clinically referred and non-referred child and adolescents. Internal consistency is adequate (e.g., $\alpha = .80$) and meets criteria for test-retest reliability and stability over time (Smucker, Craighead, Craighead, & Green, 1986).

Stressful Parent-Child Interactions. The parental depression version of the Responses to Stress Questionnaire (Connor-Smith et al., 2000; Langrock et al., 2002) was given to both adolescents and mothers to assess adolescents' exposure to family stressors related to parent behavior within the past six months. Eight stressful events were selected to provide examples of two areas which research has shown to be affected by parental depression: parental intrusiveness and parental withdrawal (or disengagement) (see above for description of items). Prior research with this measure has found good internal consistency (Cronbach's alphas ranged from $\alpha = .49$ to $.67$) and good test-retest reliability over a 3 month period (r 's ranged from $.57$ - $.80$, all $p < .01$) (Jaser et al., 2005).

Perceived Social Competence. The social competence scale on the Youth Self-Report Inventory (YSR; Achenbach & Rescorla, 2002) was used to assess adolescents' own perceptions of their social functioning. The YSR includes a competence scale with

three subscales measuring competencies in the following domains: activities (e.g., sports, hobbies); social (e.g., friendships, interpersonal skills); and school (e.g., performance, ability, school problems). The Social Competence subscale was used in the current study and includes reports of the number and degree of participation in clubs or organizations, the number of close friends and the degree of contact with them, how well the individual gets along with peers and family members, and how well the individual plays and works alone. See above for information regarding psychometric properties.

Actual Social Competence. The social competence scale on the Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2002) completed by mothers was used to obtain relatively objective indicators of the adolescent's competence. The Social Competence scale contains parents' reports concerning the child's functioning in social relationships (with peers, siblings, and parents). See previous description of the CBCL for more information regarding psychometric properties.

Observed Behaviors. Mothers and their adolescent children participated in a dyadic interaction consisting of two 15-minute tasks (a discussion of a recent positive event followed by a discussion of a recent source of conflict in their relationship). Mother and child behaviors were coded using the Iowa Family Interaction Rating Scales (IFIRS, Melby et al., 1998), a global, or macrolevel, system designed to measure behavioral and emotional characteristics of individuals. This type of system is best suited to studying an ongoing dynamic system and its patterns of behaviors (Melby & Conger, 2001). The validity of the IFIRS system has been established against reports from self and other family members using correlational and confirmatory factor analyses (Melby &

Conger, 2001). Although the IFIRS system was designed to study rural, Midwestern families, it has been used to produce valid results across diverse samples, including studies with African Americans (e.g., Melby, Hoyt, & Bryant, 2003).

In the IFIRS coding system, behaviors are coded at two levels: Individual Characteristic scales (e.g., Externalized Negative), which measure an individual on specific behaviors, regardless of the other interactor, and Dyadic Interaction scales (e.g., Hostility), which measure the behavior of each participant toward the interactor. A subset of the Dyadic Interactions scales are Parenting Codes (e.g., Neglect/Distancing) that rate parents' observed and reported childrearing behaviors during the interaction. Frequency of behaviors, context and affect, as well as intensity and proportion are all considered when scoring each subject on the level of "characteristicness" of the scale. Each behavior is scored on a scale from 1-9, with 1 being "not at all characteristic" of the subject during the 15-minute interaction, and 9 being "mainly characteristic" of the subject during the interaction.

Both mothers and children were coded for the Individual Characteristic scale, Externalized Negative, and for the dyadic scales, Hostility and Listener Responsiveness. Children were rated on several additional dyadic scales: Communication, Prosocial, and Antisocial. Parents were also rated on the following dyadic scales: Angry Coercion and Avoidant. In addition, parents were coded for two IFIRS parenting codes: Intrusiveness and Neglect/Distancing.

These codes were selected to capture both the negative aspects of parenting (i.e., neglect/distancing, hostility) typical of depressed mothers and socially competent behaviors (i.e., prosocial, communication) that may be lacking in offspring of depressed

parents. Several compilation codes, based on content of statements and nonverbal behaviors, were created for data analyses and selected based on theoretical and statistical matches. Previous researchers have used compilation codes for Hostile Parenting, consisting of the Hostility, Antisocial, and Angry Coercion codes (e.g., Ge, Conger, & Elder, 1996; Melby & Conger, 1996), and for Nurturant/Involved Parenting, consisting of the Warmth/Support, Positive Reinforcement, Child Monitoring, and Parental Influence codes (e.g., Melby, Conger, Conger, & Lorenz, 1993). Compilation codes of maternal behavior were created in the current study as indicators of parenting behavior. Observed Intrusive Parenting consisted of the summed scores across interactions for Hostility, Angry Coercion, and Intrusiveness ($\alpha = .75$). Withdrawn Parenting was comprised of Neglect/Distancing, Avoidance, and reverse-coded Listener Responsiveness ($\alpha = .72$). These codes were selected to capture the irritability, hostility, disengagement and lack of responsiveness characteristic of depressed mothers.

Compilation codes consisting of adolescent behavior were used as additional indicators of actual social competence. Social Competence, a compilation code reflecting positive as well as negative aspects of children's social behavior, consisted of the summed scores across interactions for the codes Prosocial, Communication, Listener Responsiveness, and reverse-coded Antisocial, Externalized Negative, and Hostility ($\alpha = .85$).

Trained observers, who remained blind to maternal diagnosis, independently coded the interactions. Coders consisted of graduate and undergraduate research assistants. The IFIRS coding system requires that each tape be viewed a total of 5 times: once to develop an overall sense of the interaction, and an additional 2 times per focal

(mother and adolescent) to generate the specific codes for each participant. Reliability checks, which involve double coding (independent coding by two observers) to determine degree of agreement, will occur for each interaction. In instances where inter-rater reliability is below 80%, coders must meet to reconcile scores on codes that are discrepant (greater than two steps apart).

Data Analyses

Preliminary Analyses. The data were first examined for the presence of both multivariate and univariate outliers on the 8 variables of interest (i.e., maternal depressive symptoms, parental intrusive and withdrawn behaviors, child actual and perceived social competence, child depressive symptoms, and internalizing and externalizing symptoms). Univariate outliers were defined as observations greater than 4 standard deviations from the mean, and multivariate outliers were defined as participants with Mahalanobis distances at chi-square values of $p < 0.001$. Two multivariate outliers were identified using these criteria. The two multivariate outliers were removed from the data set, and the covariates were re-examined for normality and to identify any remaining univariate outliers. No participants were identified as univariate outliers, and the distributions of the covariates were judged to be acceptably normally distributed.

To avoid problems with multicollinearity and reduce the number of measures used in subsequent analyses, the relation between multiple measures of the same constructs (i.e., intrusive parenting, withdrawn parenting, actual child social competence) from different informants were investigated to determine if composite variables could be formed. Observed intrusive parenting and parent- and child-reports of intrusive parenting

behaviors were significantly positively correlated with each other (See Table 2). The same was found for reports of withdrawn parenting (See Table 3). To create an intrusive parenting composite, observed intrusive behavior scores, parent-report intrusive scores, and child-report intrusive scores were all standardized and then averaged, thus giving equal weight to observational and questionnaire data in the composites. The same was done to form the withdrawn parenting composite. A single index of adolescent actual social competence could not be achieved as parent-report of youth competence on the CBCL and observations of social competence were not significantly related ($r = .19$).

Table 2.

Correlations between Multi-informant Reports of Intrusive Parenting Behaviors.

	1.	2.	3.
1. Child-report of Intrusive Parenting	--	.51***	.34**
2. Mother-report of Intrusive Parenting		--	.26*
3. Observed Intrusive Parenting			--

+ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table 3.

Correlations between Multi-Informant Reports of Withdrawn Parenting Behaviors.

	1.	2.	3.
1. Child-report of Withdrawn Parenting	--	.43***	.31*
2. Mother-report of Withdrawn Parenting		--	.25*
3. Observed Withdrawn Parenting			--

+ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Analysis of Variance. To test for main effects for maternal diagnostic history, as outlined in Hypothesis 1, an analysis of variance was conducted with intrusive and

withdrawn parenting behaviors as the dependent variables and maternal history of depression as the independent variable. Planned comparisons were used to test these main effects.

Correlational Analyses. Bivariate Pearson correlations were conducted to test the relationship between maternal depressive symptoms and parenting behaviors in Hypothesis 1. To test Hypothesis 2, correlations were run as a first step to determine the relationship between parenting and observed child competence behaviors and mother- and adolescent-reports of social competence. In addition, to test Hypothesis 3, the relationships between these predictor variables and outcome, as measured by adolescents' self-reported depressive symptoms on the CDI and both child- and parent-reported symptoms on the CBCL and YSR, were also tested through correlation analyses. Lastly, in order to test the mediation model in Hypothesis 4, correlation analyses were conducted to determine the relationship between child social competence and outcome variables.

Multiple Regression Analyses. To test for the mediation model proposed in Hypothesis 4, a series of linear multiple regressions were conducted with the adolescents' CDI scores and CBCL and YSR scores on the Internalizing and Externalizing scales as the dependent variables, and intrusive and withdrawn parenting and actual and perceived child social competence as predictors. The Sobel test was then used to test whether the indirect effects of the independent variables on the dependent variables via the mediator were significant (Sobel, 1982).

CHAPTER III

RESULTS

Descriptive Analyses

Demographic characteristics of the sample by group (mothers with and without a history of depression) are presented in Table 1. Importantly, the two groups of mothers did not differ with respect to mother's age, $t(68) = .37, p = .71$, education, $t(68) = .73, p = .47$; marital status, $\chi^2(1, N = 70) = .71, p = .40$; or race, $\chi^2(1, N = 70) = .73, p = .39$. The groups also did not differ with respect to child's age, $t(68) = .23, p = .82$, or gender, $\chi^2(1, N = 70) = 1.43, p = .23$. Tests for offspring gender differences were conducted for key variables, but no significant differences were found. In addition, correlations were run to determine if child age was related to any key variables. The only significant relationship was between child age and the composite measure of withdrawn parenting behaviors ($p < .05$), in that based on self-report, child-report, and direct observations, mothers were reported to use significantly less withdrawn parenting behaviors with older children than with younger offspring. Because adolescent age was not correlated with any of the variables and gender was only correlated with one key variable, neither were included in the correlation and regression analyses. Clinical characteristics (i.e., means and SDs for maternal depressive symptoms, maternal intrusiveness and withdrawal, social competence, and adolescent adjustment) of the sample by group are presented in Table 4.

Table 4.

Current Maternal Depressive Symptoms, Composite measures of Maternal Intrusive and Withdrawn Behaviors, Parent-report, Child-report, and Observed Child Social Competence, and Outcome Variables in Families with and without a History of Maternal Depression.

	History of Maternal Depression		No History of Maternal Depression		Significance Test	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i> or χ^2	<i>p</i>
Mom self-report of depressive symptoms (BDI)	12.75	9.64	6.12	6.46	-3.34	.002
Composite Intrusive Parenting	.05	.77	-.04	.76	-.50	<i>ns</i>
Composite Withdrawn Parenting	.31	.74	-.27	.64	-3.53	.001
Mother Report Child Social Competence (CBCL)	8.24	2.60	9.11	2.24	1.49	<i>ns</i>
Self Report Child Social Competence (YSR)	8.42	2.41	9.34	2.33	1.58	<i>ns</i>
Observed Social Competence	70.21	9.65	72.27	11.61	.80	<i>ns</i>
Child Depressive Symptoms (CDI)	9.06	8.63	5.57	5.29	-2.07	.043
CBCL Internalizing Symptoms	9.15	6.30	5.22	3.58	-3.26	.002
YSR Internalizing Symptoms	14.64	8.22	10.00	6.80	-2.58	.012
CBCL Externalizing Symptoms	9.88	8.43	5.03	5.43	-2.89	.005
YSR Externalizing Symptoms	11.18	7.07	9.41	6.72	-1.08	<i>ns</i>

Hypothesis 1: Mothers with a history of depression and experiencing more current symptoms of depression will exhibit more intrusive and more withdrawn parenting behaviors than mothers without a history of depression or fewer current symptoms of depression.

Parenting Behaviors as a function of Maternal Depressive History. Means and standard deviations for parents' intrusive and withdrawn behaviors are reported in Table 4 by group (mothers with and without a history of depression). Contrary to expectations, the groups did not differ significantly on levels of maternal intrusive behaviors, as measured by observed behavior and parent- and child-report, $t(68) = -.50, p = .62$. However, mothers in the two groups did differ significantly in their withdrawn behavior, $t(68) = -3.53, p = .001$. Thus, according to multi-informant reports, mothers with a history of depression engaged in more withdrawn behaviors than mothers who had not experienced depression.

Correlations between Current Maternal Depressive Symptom and Parenting Behaviors. Correlations were used to further test the first hypothesis regarding the relations between current maternal depressive symptoms with parenting behaviors. The groups differed significantly on mothers' level of self-reported depressive symptoms as measured by the BDI, $t(68) = -3.41, p = .001$. Maternal depressive symptoms were significantly correlated with the composite measures of both intrusive, $r = .37, p < .01$, and withdrawn parenting behaviors, $r = .43, p < .001$. The composite scores for the two

types of negative parenting behaviors also showed a significant positive correlation with one another, $r = .61, p < .001$ (see Table 5).

Table 5.

Correlations among Current Maternal Depressive Symptoms, Intrusive Parenting, and Withdrawn Parenting.

	1.	2.	3.
1. BDI	--	.37**	.43***
2. Intrusive Parenting Index		--	.61***
3. Withdrawn Parenting Index			--

+ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Hypothesis 2: Higher levels of negative parenting behaviors, characterized by intrusive and disengaged behaviors, will be associated with lower levels of perceived and actual adolescent social competence.

Correlations of Parenting Styles with Maternal Reports and Observations of Actual Adolescent Social Competence. This part of the second hypothesis received partial support. Actual social competence, as reported by mothers, showed a significant negative correlation with the composite measures of both intrusive parenting, $r = -.32, p < .01$, and withdrawn parenting, $r = -.33, p < .01$. Actual competence, as measured by direct observation, only approached statistical significance with withdrawn parenting, $r = -.22, p = .065$, and did not correlate significantly with intrusive parenting, $r = -.12, ns$ (Table 6).

Correlations of Parenting Styles with Adolescent Perceived Social Competence.

Contrary to the hypothesis, adolescents' perceived social competence did not correlate with parenting behaviors (Table 6).

Table 6.

Correlations among Parenting Behaviors and Adolescent Social Competence.

	1.	2.	3.	4.	5.
1. Intrusive Parenting Index	--	.61***	-.09	-.32**	-.12
2. Withdrawn Parenting Index		--	-.20	-.33**	-.22+
3. YSR Social Competence			--	.53***	.25*
4. CBCL Social Competence				--	.19
5. Observed Social Competence					--

+ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Hypothesis 3: Higher levels of intrusive and withdrawn parenting behaviors will be associated with increased levels of depressive symptoms and internalizing and externalizing problems in children.

Correlations of Maternal Parenting Style with Adolescent Symptoms.

Correlations were used to further test the relationship between parenting behaviors and adolescent adjustment (see Table 7). The composite measure of mothers' intrusive parenting was significantly and positively associated with higher levels of adolescents' current depression symptoms on the CDI ($r = .37, p < .001$) and internalizing and externalizing symptoms on the CBCL ($r = .27, p < .05$, and $r = .48, p < .001$) and YSR ($r = .32, p < .01$, and $r = .47, p < .001$). Withdrawn parenting behaviors were also

related to both child and parent report of depressive, internalizing, and externalizing symptoms (r 's ranged from .27 to .41, all $p < .05$).

Table 7.

Correlations between Parenting Behaviors and Adolescent Adjustment.

	Intrusive Parenting	Withdrawn Parenting
CDI	.37***	.31**
CBCL Internalizing	.27*	.27*
YSR Internalizing	.32**	.28*
CBCL Externalizing	.48***	.41***
YSR Externalizing	.47***	.29*

+ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Hypothesis 4: Actual and perceived adolescent social competence will mediate the relation between maternal behaviors and adolescents' adjustment.

Correlations of Maternal Reports and Observations of Actual Adolescent Social Competence with Adolescent Symptoms. Actual social competence, as measured by mother report, was negatively related to child-report of depressive, internalizing, and externalizing symptoms (r 's ranged from -.26 to -.37, all $p < .05$). Maternal report of adolescent social competence also showed a significant negative correlation with mothers' report of adolescent externalizing symptoms, $r = -.30$, $p < .015$, but only approached significance with mother-reported internalizing symptoms, $r = -.21$, $p = .077$. Adolescent actual social competence based on behavioral observation did not relate to

depressive symptoms or internalizing symptoms, as reported by either parent or child. Observed social competence did, however, correlate significantly with maternal reports of externalizing symptoms and showed a trend towards a positive association with adolescent self-reports of externalizing symptoms, $r = -.22, p = .063$.

Correlations of Adolescent Perceived Social Competence with Adolescent Symptoms. Correlations were used to determine the degree to which adolescents' perceived social competence, based on self-report, was related to adolescents' self-reported and parent-reported symptoms (Table 8). Perceived social competence showed a significant and negative correlation with self-reports of child depressive symptoms, $r = -.41, p = .001$, internalizing symptoms, $r = -.26, p < .05$, and externalizing symptoms, $r = -.30, p < .02$. Youths' perceptions of their social competence, however, did not significantly relate to mothers' reports of adolescent adjustment.

Table 8.

Correlations between Actual and Perceived Adolescent Social Competence and Adolescent Adjustment.

	Perceived	Actual	
	YSR Social Competence	CBCL Social Competence	Observed Social Competence
CDI	-.41**	-.37**	-.19
CBCL Internalizing	-.16	-.21+	-.20
YSR Internalizing	-.26*	-.26*	-.13
CBCL Externalizing	-.17	-.30*	-.25*
YSR Externalizing	-.30*	-.32**	-.22+

+ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Tests of Actual and Perceived Social Competence as Mediators and Independent Predictors of Adolescent Adjustment. The correlations among the predictor variables (maternal withdrawal, maternal intrusiveness), mediators (actual and perceived adolescent social competence), and outcome (depressive, internalizing, and externalizing symptoms) were examined to determine if they met criteria for testing mediation as outlined by Baron and Kenny (1986). Correlations involving adolescent self-reports of social competence, observations of adolescent social competence, and maternal reports of offspring internalizing symptoms did not meet the criteria needed to test for mediation. Only the composite measures of intrusive and withdrawn parenting behaviors, maternal-report of adolescent social competence, mothers' report of offspring externalizing

symptoms, and adolescents' self-reports of adjustment met criteria to test for mediation. Specifically, a series of significant correlations was found between mothers' current symptoms on the BDI and composite reports of maternal intrusive and withdrawn behaviors ($r = .37, p < .01$, and $r = .43, p < .001$, respectively), intrusive and withdrawn parenting and actual adolescence social competency based on maternal report ($r = -.32, p < .01$, and $r = -.33, p < .01$, respectively), and mothers' reports of their offspring's social competence and maternal reports of youth externalizing problems ($r = -.30, p < .05$) and adolescents' reports of depressive, internalizing and externalizing symptoms on the CDI and YSR ($r = -.37, p < .01$, $r = -.26, p < .05$, and $r = -.32, p < .01$, respectively).

The correlational analyses outlined above were followed by two separate sets of multiple regression analyses predicting adolescent depressive symptoms and internalizing and externalizing symptoms, as reported by adolescents on the YSR. Mothers' report of externalizing symptoms on the CBCL were not included in the analyses in an attempt to reduce shared informant variance since mothers' report of youth social competence was also being used. A series of six equations were used to examine the effects of mothers' current depressive symptoms, mothers' intrusive and withdrawn parenting, and maternal report of adolescent social competency on adolescents' self-reported adjustment.

In Model 1 (See Table 9), intrusive parenting was used in addition to the variables mentioned above to predict adolescent self-reported symptoms, whereas, in Model 2 (See Table 10), withdrawn parenting was used to predict adolescents' own reports of their adjustment.

Model 1. In the first equation, mothers' current depressive symptoms were entered and found to be a significant predictor of adolescents' reports of depressive

symptoms on the CDI ($\beta = .26, p = .03$). In the second step in this equation, composite reports of intrusive parenting were added. Mothers' intrusive parenting was a significant predictor of adolescents' depressive symptoms ($\beta = .32, p = .01$); however, mothers' depressive symptoms were no longer significant and remained non-significant in the subsequent equations. Maternal report of adolescent actual social competence was then added. When maternal reports of adolescents' actual competence was entered, it reached significance as a predictor ($\beta = -.30, p = .01$) and intrusive parenting was no longer significant. As an additional test of mediation, the Sobel test was conducted (Sobel, 1982), which indicated that intrusive parenting approached significant mediation of the relationship between maternal depressive symptoms and adolescents' current depressive symptoms ($z = 1.69, p = .09$), and that mothers' report of youth social competence also neared significance as a mediator of the relationship between intrusive parenting and adolescents' self-reported depressive symptoms ($z = -1.87, p = .06$).

In the second equation, maternal depressive symptoms was entered and very closely approached significance as a predictor of youth self-report internalizing symptoms ($\beta = .23, p = .057$). However, when intrusive parenting was entered, the BDI scores was non-significant, which remained true for the remaining analyses. Although the effect for BDI symptoms changed from significant to non-significant when intrusive parenting was added, the Sobel test indicated that this change was not significant. Intrusive parenting, however, significantly predicted adolescent internalizing symptoms ($\beta = .28, p = .03$). When maternal reports of actual adolescent social competence was entered, it failed to predict internalizing symptoms ($\beta = -.19, p = .12$), and intrusive parenting was no longer a significant predictor, either ($\beta = .21, p = .118$).

Finally, in the third equation, mothers' reports of their depressive symptoms were entered and found to significantly predict youth's self-reported externalizing symptoms ($\beta = .44, p < .001$). When intrusive parenting was entered, it reached significance as a predictor ($\beta = .38, p = .001$) and maternal depressive symptoms remained significant. The Sobel test indicated that intrusive parenting was a significant partial mediator of the relationship between maternal depressive symptoms and adolescents' self-reported externalizing symptoms ($z = 2.60, p < .01$). Actual social competence was added in last, significantly predicting externalizing symptoms ($\beta = -.22, p = .04$). Intrusive parenting and mothers' BDI scores remained significant, as well. The Sobel test approached significance for maternal-report of youth social competence as a mediator between intrusive parenting and adolescent-report of externalizing symptoms ($z = -1.77, p = .076$), showing support for a partial mediation model.

Table 9.

Regression Equations Predicting Adolescents' Adjustment from Maternal Depressive Symptoms (BDI), Intrusive Parenting and Actual Social Competence (CBCL)

Outcome and Predictor	<i>B</i>	<i>SE(B)</i>	Beta	<i>R</i> ²
CDI				
Step 1				
BDI	.22	.10	.26*	.07*
Step 2				
BDI	.12	.10	.14	
Intrusive Parenting	3.06	1.15	.32**	.16**
Step 3				
BDI	.15	.10	.18	
Intrusive Parenting	2.02	1.17	.21+	
Social Competence	-.90	.34	-.30*	.24***
YSR Internalizing				
Step 1				
BDI	.21	.11	.23+	.05+
Step 2				
BDI	.11	.11	.13	
Intrusive Parenting	2.82	1.27	.28*	.12*
Step 3				
BDI	.13	.11	.15	
Intrusive Parenting	2.11	1.33	.21	
Social Competence	-.61	.39	-.19	.15*
YSR Externalizing				
Step 1				
BDI	.34	.09	.44***	.19***
Step 2				
BDI	.23	.09	.30**	
Intrusive Parenting	3.37	.98	.38**	.31***
Step 3				
BDI	.25	.09	.32**	
Intrusive Parenting	2.66	1.02	.30*	
Social Competence	-.62	.30	-.22*	.36***

+ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Model 2. As before, in the first equation, mothers' current depressive symptoms were entered and found to be a significant predictor of adolescents' self-reports of their depressive symptoms on the CDI. In the second step in this equation, the composite measure of mothers' withdrawn behaviors was added. Mothers' withdrawn parenting approached significance as a predictor ($\beta = .23, p = .077$), and mothers' current depressive symptoms no longer predicted child depressive symptoms. The Sobel test showed no support, however, for withdrawn parenting as a mediator between mothers' and adolescents' current depressive symptoms ($z = 1.39, ns$). When maternal report of adolescents' social competence was added in the last step, it reached significance as a predictor of youth depressive symptoms ($\beta = -.34, p = .006$). Adolescent social competence, however, did not meet criteria for a mediation between withdrawn parenting and child depressive symptoms as the Sobel test was not significant ($z = -1.52, p = ns$). However, the Sobel test approached significance for maternal-report of youth social competence as a mediator between mothers' current depressive symptoms and adolescent-report of depressive symptoms ($z = -1.74, p = .081$), showing support for a partial mediation model.

Similar to the findings in Model 1 (see above), in the second equation, current symptoms of maternal depression approached significance in predicting child reports of their internalizing symptoms. When withdrawn parenting behaviors were added in the next step, neither mother's withdrawn parenting nor depressive symptoms were significant predictors and remained non-significant. Adolescents' actual social competence neared significance as a predictor of adolescents' internalizing symptoms when entered in the final step ($\beta = -.22, p = .087$).

In the final equation, maternal depressive symptoms were again found to predict adolescents' externalizing symptoms on the YSR. Mothers' current depressive symptoms remained significant in the next step when withdrawn parenting was added ($\beta = .39, p = .002$). Withdrawn parenting, however, was not a significant predictor of adolescent-reported externalizing problems ($\beta = .11, ns$). When adolescent social competence was entered in the third step, it was found to be a unique significant predictor ($\beta = -.32, p = .006$) in addition to mothers' depressive symptoms. The Sobel test revealed that the product terms were significant for the mediation of the relation between current level of maternal depressive symptoms and mother-report of adolescent social competence on child self-reported externalizing symptoms ($z = -2.31, p < .03$).

Table 10.

Regression Equations Predicting Adolescents' Adjustment from Maternal Depressive Symptoms (BDI), Withdrawn Parenting and Actual Social Competence (CBCL)

Outcome and Predictor	<i>B</i>	<i>SE(B)</i>	Beta	<i>R</i> ²
CDI				
Step 1				
BDI	.22	.10	.26*	.07*
Step 2				
BDI	.13	.11	.16	
Withdrawn Parenting	2.24	1.25	.23+	.11*
Step 3				
BDI	.18	.10	.21+	
Withdrawn Parenting	.93	1.27	.10	
Social Competence	-1.01	.35	-.34**	.21**
YSR Internalizing				
Step 1				
BDI	.21	.11	.23+	.05+
Step 2				
BDI	.13	.12	.14	
Withdrawn Parenting	2.19	1.36	.21	.09*
Step 3				
BDI	.16	.12	.17	
Withdrawn Parenting	1.29	1.44	.12	
Social Competence	-.69	.40	-.22+	.13*
YSR Externalizing				
Step 1				
BDI	.34	.09	.44***	.19***
Step 2				
BDI	.31	.10	.39**	
Withdrawn Parenting	1.02	1.12	.11	.20**
Step 3				
BDI	.34	.09	.44***	
Withdrawn Parenting	-.14	1.14	-.02	
Social Competence	-.89	.32	-.32**	.29***

+ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

CHAPTER IV

DISCUSSION

The current study was designed to replicate and extend upon past findings examining the role of parenting and social competence in adolescent adjustment in families with and without a history of maternal depression. Most of the previous studies have relied on questionnaire data or observations of either parenting or youth social competence. This study represents an important extension of research on the relation between parenting and social competence by using direct observation to gather data on parenting behavior and child social competence concurrently. In addition to behavioral observations, mother- and adolescent-reports were used to obtain multi-informant, multi-method assessments of both parenting behavior and youth social competence. Much of the previous observational research with depressed mothers and their children has focused on much younger children and infants (e.g., Hart et al., 1999). As such, the present study represents an important extension of this research to older children and adolescents. The overall findings from this study indicate that mothers' current depressive symptoms are sources of risk for adolescent adjustment, and that these effects are mediated to some extent by the presence of aspects of parenting in mothers' interactions with their children and adolescents' levels of actual social competence.

Maternal Depression and Parenting Behaviors

The first hypothesis, that maternal history of depression and current depressive symptoms are related to parenting, was tested in two ways: by comparing mothers with and without a history of depression and by examining the associations between current maternal depressive symptoms and parenting behaviors. As expected, mothers with a history of depression (but who were not currently in a major depressive episode) exhibited more withdrawn behavior, as measured by a combination of parent self-report, child-report, and direct observation during interactions with their adolescent children, than mothers with no history of depression. This indicates that the negative parenting behaviors associated with maternal depression may persist independent of diagnostic status. Thus, offspring of depressed mothers endure the continued stress of having a parent characterized as more disengaged and withdrawn.

Contrary to what was hypothesized, however, mothers with and without a history of depression did not differ in their composite levels of intrusive parenting. This finding might mean that intrusive behavior is more dependent on current depressive status than on depressive history. That explanation finds support in the examination of the relationship between mothers' current depressive symptoms and parenting behavior, which revealed that current maternal depressive symptoms in the current sample (as reported on the BDI) were related to higher levels of both intrusive and withdrawn parenting. Consistent with previous research (Breznitz & Sherman, 1987; Gordon et al., 1989), this finding emphasizes the negative impact of depressive symptoms on parenting. In addition, it appears that mothers with a history of depression, even though currently not in episode, reported more current depressive symptoms than mothers with no history.

Taken together, these findings highlight previous research which indicates that even when parents are out of episode, they may be experiencing subthreshold symptoms associated with negative parenting behaviors, thus exposing their offspring to a chronically stressful home environment (Hammen, 1997; 2003; Jaser, 2005).

Parenting Behaviors and Actual and Perceived Adolescent Social Competence

In testing the second hypothesis, that increased levels of negative parenting behaviors would be associated with lower levels of actual and perceived adolescent social competence, several significant associations were identified. Maternal reports of adolescents' social competence were significantly related to composite measures of both intrusive and withdrawn parenting; that is, adolescents exposed to higher levels of both types of negative parenting behaviors were reported as less socially competent by their mothers.

When direct observation was the measure for social competence, a trend was found for adolescents exposed to more withdrawn parenting to demonstrate fewer socially competent behaviors. Although this finding did not reach statistical significance, it points toward a potentially important relationship that requires further investigation. Intrusive parenting behaviors, however, were not associated with observed social competence.

Contrary to expectations, adolescents' own perceptions of their social competence were not related to negative parenting behaviors. Thus, negative parenting behaviors did not have a significant impact on adolescents' views of their social abilities. Taking these findings together, negative parenting behaviors did not affect adolescents' perceptions of

their social functioning, however, exposure to these behaviors, particularly withdrawn parenting, had an adverse effect on adolescents' actual social competence.

Several interpretations of these findings are plausible. First, it is important to recognize that the design of this study was cross-sectional and the pattern of correlations may reflect the effects of adolescent competence on parenting as much as the effects of parenting on adolescent competence. Second, the association between parenting and adolescents' behavior, regardless of the direction of this association, may be stronger than between parenting and adolescents' perceptions of their competence. This may be due to the reciprocal reinforcing qualities of maternal and adolescent behavior; i.e., maternal behavior increases the frequency of adolescents' competent behavior and vice versa. Third, these findings highlight the importance of examining these associations longitudinally and in the context of interventions designed to change parenting and/or adolescent competence.

Parenting Behaviors and Adolescent Adjustment

The third hypothesis, that negative parenting would be associated with adolescent functioning, was supported. Correlational analyses indicated that children exposed to higher levels of intrusive or withdrawn parenting behaviors were experiencing greater self-reported current depressive symptoms, as well as significantly higher rates of self-reported internalizing problems and parent-reported internalizing and externalizing problems. This finding is consistent with those reported by Langrock and colleagues (2002), who found that maternal report of both parental intrusiveness and withdrawal were significantly correlated with higher levels of offspring symptoms, and those

reported by Jaser and colleagues' (2005), in which adolescent report of parental intrusive behaviors was significantly correlated with parent report of adolescent internalizing and externalizing symptoms. The present findings add upon past research by combining direct observation of parenting behaviors, and parent- and child-reports of parenting and adolescent symptoms. These effects were found across adolescent and maternal reports, indicating that they are independent of method effects.

Actual and Perceived Adolescent Social Competence and Adolescent Adjustment

Correlational analyses demonstrated that adolescents' self-perceptions of their social competence were significantly related to self-reports of their depressive, internalizing, and externalizing symptoms. Thus, adolescents who consider themselves to be less socially competent concurrently experience more depressive symptoms and internalizing and externalizing problems, a finding consistent with previous research (Tram & Cole, 2000). Due to the cross-sectional design of the study, causation in this relationship cannot be determined from the current findings. However, a longitudinal study by Cole and colleagues (2001) found that self-perceived competence was negatively related to later levels of self-reported depressive symptoms. Interestingly, adolescents' reports of their social competence were not associated with mothers' report of adolescent symptoms. This suggests that shared method variance contributed at least in part to the association between perceived competence and symptoms.

Significant correlations between actual competence, as measured by both maternal report and direct observation, and adolescent symptoms also appeared. Specifically, adolescents rated as less socially competent by their mothers experienced

higher self-reported depressive symptoms and more internalizing and externalizing problems. According to mother report of both child social competence and functioning, offspring with lower levels of social competence also had more externalizing symptoms and marginally more internalizing symptoms.

Adolescents observed to be less socially competent were also rated by their mothers as having more externalizing symptoms and neared significance with adolescent self-reports of externalizing symptoms. This finding makes sense as externalizing problems (e.g., aggression) are more visible than internalizing symptoms (e.g., depression and anxiety), and often lead to easily observable socially incompetent behaviors (e.g., hostility).

Actual Social Competence as a Mediator

Partial support emerged for the hypothesis that negative parenting behaviors would be related to adolescents' adjustment and that this relationship would be mediated by adolescent social competence. The composite scores for withdrawn and intrusive parenting were used in the analyses, in addition to maternal report of adolescents' actual social competence and child self-report symptoms, as they met Baron and Kenny's (1986) criteria for a mediational model. The tests for mediation suggest that parent report of adolescents' actual social competence approached significance for mediating the relationship between intrusive parenting and adolescent self-reported depressive symptoms and approached significance for partial mediation in the relationship between intrusive parenting and adolescent self-report of externalizing symptoms. Due to the conservative nature of the Sobel test, results approaching significance are of interest and

thought to be worthy of interpretation. The possession of social skills may thus be an important pathway for protecting adolescents exposed to intrusive parenting from developing depression and externalizing symptoms. However, even when taking social competence into account, exposure to intrusive parenting appears to be an important pathway through which children's externalizing symptoms manifest themselves and affect offspring of depressed mothers. This finding is not surprising as intrusive parenting is characterized by externalizing-type behaviors, such as irritability and hostility, and supports the mechanism of adolescents' modeling their mothers' behavior. It is suspected that children learn maladaptive behaviors that they observe in their parents, and although social competence can help buffer the effects of intrusive and irritable parenting, those maternal behaviors still significantly contribute to the appearance of similar behaviors in their offspring.

When both intrusive parenting and mother-report of social competence were placed in the mediation model together, neither were significant predictors of internalizing symptoms, indicating a significant amount of shared variance between the two. Thus, the effects of intrusive parenting and adolescents actual levels of social competence are similar in their association with adolescent internalizing symptoms.

Although there was the suggestion for social competence to mediate between withdrawn parenting and child depressive symptoms, the Sobel test was not significant. Social competence did, however, approach significance for mediation between mother's current level of depressive symptoms and child self-report of depressive symptoms. Thus, actual social competence may provide a pathway to protect offspring of depressed mothers from developing depression themselves. Conversely, maternal depressive

symptoms and negative parenting may undermine the development of competence in children of depressed parents, further increasing their risk for emotional and behavioral problems. Maternal report of actual social competence did not mediate the relationship between withdrawn parenting and child self-report externalizing symptoms, however, actual social competence was found to mediate the relationship between maternal current depressive symptoms and adolescents' self-reported externalizing problems.

The lack of significant findings between observed adolescent social competence and parenting behaviors and adolescents' symptoms may be a function of the observational paradigm and the coding system used to assess maternal-child interactions. Some of the behaviors captured in the social competence compilation may not be behaviors that generalize to real-world settings and concepts of social competence. For example, the code Externalized Negative includes negative or critical comments regarding people, things, or events outside the immediate setting. Although high levels of criticism and complaints captured in this code may be important, low-level negative comments might not be an important element of social competence. An addition, a component of the Prosocial code was how goal-directed and on-task the children were in the conversation, which might not be applicable in normal social interactions. Another problem with the Prosocial code is that it encompasses a wide variety of behaviors, such independence, self-control, empathy, flexibility, and courteousness. Some of these behaviors may be more importance to the social competence construct than others, but all of the behaviors contribute equally when rating this code. In addition, many behaviors that might be important indicators of social competence (e.g., emotional regulation, ability to resolve conflicts, self-confidence) are also not captured in any of the codes

contributing to adolescents' observed social competence ratings. The construct of competence is much more complex in adolescence than in earlier childhood. More research must be done to attempt to capture as many aspects of the construct as possible to gain a more thorough understanding of how social competence manifests itself in adolescents of depressed parents.

Limitations

Several limitations evident in the current study regarding the characteristics of its sample and design should be mentioned. As noted above, mothers meeting criteria for current depression were excluded from the study. However, examining negative parenting behaviors and children's social competence when looking at more severe cases may be important for understanding the extent that these variables are related to parental depression status and depressive symptoms. Additionally, fathers were not included within the present study. Inclusion of fathers in future research would be useful to better understand the effect that parenting behaviors has on offspring social competence and adjustment. Moreover, the current sample, while ethnically diverse, had relatively high socio-economic status, so findings may not be generalized to a lower-SES sample. It is likely that lower-SES families are experiencing even greater levels of stress, which may exacerbate the effects of depression (e.g., Simons et al., 1993). Also, a larger sample size would have allowed us to create latent variables of the involved constructs instead of relying on the construction of composite variables.

Another limitation of the study design was that no measure of children's use of socially competent behaviors with peers was obtained. Although this is an improvement

compared to studies that relied solely on a single method for assessing social competence, further improvement could be made by observing child social competence in peer interactions. In addition, to increase the effects for observed social competence, additional codes or different tasks may be needed to better detect social competence in adolescents. Previous studies have used problem-solving tasks, which pull for certain behaviors such as expression of ideas, taking others' perspectives, considering alternative possibilities, and coordinating behaviors with others (Englund et al., 2000).

Finally, as noted above, the conclusions that may be drawn are also limited by the cross-sectional design of this study. Longitudinal research is needed to determine the direction of effects of maternal depressive symptoms and negative parenting on adolescent social competence and adjustment.

Implications for future research

The findings from this research suggest that it is critical to examine the specific risk factors that affect offspring of parents with a history of depression. Doing so better informs researchers and clinicians on how to intervene to ameliorate the effects these risk factors have on mental health. In particular, the findings that intrusive and withdrawn parenting are significant predictors of adolescent symptoms, while higher levels of social competence may help to protect children from the detrimental impacts of negative parenting, may implicate important behaviors to target in a preventative intervention for families struggling with depression. Since mothers with higher levels of depressive symptoms were found to exhibit higher levels of intrusive and withdrawn behavior, parents should be educated about the effects that their negative parenting styles have on

their children's well-being and should be taught positive parenting skills, focused on warmth and structure. Social skills training may help adolescents learn more adaptive responses to negative parenting behaviors and increase positive interactions with both parents and peers. Children of depressed mothers represent a high-risk population, and it is evident that more research is needed in this area to clarify the role of social competence in the transmission of depression from mothers to their adolescent offspring.

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