Caretaking Behaviors by Adolescent Children of Mothers With and Without a History of Depression

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Abstract

In a sample of 72 mothers with and without a history of depression and their adolescent children, maternal depression history, current maternal depressive symptoms, intrusive and withdrawn parental behavior, and adolescent caretaking behaviors were examined as predictors of adjustment in these youth. Two types of caretaking behaviors were examined: emotional (e.g., caring for a parent's emotional distress) and instrumental (e.g., looking after younger siblings). Although adolescents of mothers with and without a history of depression were comparable on levels of both types of caretaking, caretaking was associated with adolescents' reports of anxiety–depression and mothers' reports of social competence only for adolescents of mothers with a history of depression. Moreover, regression models showed that among children of mothers with a history of depression, emotional, but not instrumental, caretaking was related to adolescents' anxiety–depression symptoms and social competence after controlling for current parental depressive symptoms and stressful parenting behaviors. Theoretical and clinical implications are discussed.

Keywords

Parental depression is a significant risk factor for emotional and behavioral problems in children and adolescents (Beardslee, Versage, & Gladstone, 1998). Rates of depressive symptoms and disorders in children of depressed parents far exceed base rates in the population (e.g., Hammen, 2000; Weissman, Warner, & Fendrich, 1990). Furthermore, these children are also at increased risk for other internalizing disorders and externalizing problems (Anderson & Hammen, 1993; C. T. Beck, 1999). Adolescent offspring of depressed parents may be at particularly high risk because adolescence marks a period of significant increase in psychopathology across a wide range of disorders (e.g., depression, conduct disorder, and eating disorders; Costello, Mustillo, Erkanli, Keeler, & Angold, 2003). In this study, we examined adolescents' tendencies to assume caretaking responsibilities for their mothers as a possible source of risk for these youth in the context of other risk factors associated with maternal depression (mothers' current depressive symptoms and mothers' negative parental behaviors).

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Parental Mood and Behavior

The negative affect and behaviors of depressed mothers may contribute to a chronically stressful environment for children of these mothers, which has in turn been associated with negative psychological consequences for these children (e.g., Hammen, Brennan, & Shih, 2004). Research using direct observations of parent–child interactions has revealed significant differences in interactive communication style between depressed mothers and their children as compared with nondepressed mothers and their children. Depressed mothers and mothers with a history of depression are more likely to display more negative parental behaviors (i.e., more negative and critical, more disengaged, and less positive and warm behavior) as compared with control mothers (for a review, see Lovejoy, Graczyk, O'Hare, & Neuman, 2000). Specifically, two patterns of behavior, parental withdrawal (e.g., a mother spends time alone in her room, cries frequently, and is emotionally nonresponsive to her children) and parental intrusiveness (e.g., irritability, moodiness, and worrying), have been found to be most strongly associated with current or past parental depression (e.g., Cummings & Davies, 1994; Gelfand & Teti, 1990). These impaired parental behaviors are sources of stress for children of parents with a history of depression and have been found to be additional sources of risk for internalizing and externalizing symptoms in adolescents above and beyond parental depressive symptoms (e.g., Jaser et al., 2005; Langrock, Compas, Keller, & Merchant, 2002.). Furthermore, these patterns of negative parental behavior seem to endure even when parents are not in a depressive episode. For example, Hammen, Brennan, & Shih (2004) found that adolescent children of mothers with current or past major depressive disorder or dysthymia experienced significantly greater levels of family discord and stress than children of never-depressed mothers.

Child Caretaking

Parental sadness, withdrawal, and irritability may elicit efforts to tend to and care for their depressed parent (Radke-Yarrow, Zahn-Waxler, Richardson, Susman, & Martinez, 1994). Research and theory on caretaking of parents by their children has a long history in psychology, and various definitions have been offered. The term *parental child* was coined by Minuchin, Montalvo, Guerney, Rosman, and Schumer (1967), referring to children who assume parental responsibility in the home (e.g., preparing meals or caring for younger siblings) because of economic or social conditions (e.g., parental job loss). Broszormenyi-Nagy and Spark (1973) later defined a process of "parentification" in which the parent expects the child to fulfill a parental role within the family system. This construct has also been referred to as *role reversal* (Kabat, 1996) and *crossing generational boundaries* (Frances & Frances, 1976). The central feature of these various perspectives on caretaking by children involves taking on roles or responsibilities that would typically be considered parental roles.

Child caretaking behaviors have been examined across various samples, including children of alcoholic parents, victims of sexual abuse, and children of parental divorce (for reviews, see Barnett & Parker, 1998; Chase, 1999; Jurkovic, 1997), all of which represent family systems that have been disrupted by acute or chronic stress. A pattern of behavior in which children take on caretaking roles has also been observed in children of parents with life-threatening diseases, such as cancer (e.g., Grant & Compas, 1995) and AIDS (e.g., Stein, Riedel, & Rotheram-Borus, 1999), and has been associated with increased emotional distress. Similarly, Johnston (1990) found that role reversal predicted emotional and somatic problems in children of divorce. However, no studies have examined caretaking in adolescent offspring of parents with a history of depression or its association with adjustment in these at-risk youth. Moreover, previous studies have been limited to the use of parent or child reports on questionnaires rather than direct observations of interactions between parents and children to assess child–adolescent caretaking.

Caretaking behaviors have been distinguished into two broad categories, instrumental and emotional (Jurkovic, 1997). Both types of caretaking measure the extent to which the child takes care of the parent or takes on tasks or responsibilities that may be age inappropriate and are typically considered parental roles. Instrumental caretaking refers to maintaining the physical welfare of the household, whereas emotional caretaking involves tending to the socio-emotional needs of family members. On one hand, instrumental caretaking includes taking on household responsibilities such as being responsible for siblings or other family members, cleaning, doing dishes, preparing meals, or carrying out parental roles during an observed interaction in the laboratory (e.g., taking charge of the interaction task, adjusting the parent's clothing, or correcting parental behavior). Emotional caretaking, on the other hand, focuses on how much the child assumes responsibility for the emotional needs of the parent or takes on the emotional burden of a parent's problems. More specifically, emotional caretaking includes displaying knowledge of parents' problems or difficulties that do not directly involve the child (e.g., emotional problems, financial difficulties, and marital problems), offering solutions for parents' emotional problems, or taking responsibility for the parents' emotional difficulties.

Research by Kessler and McLeod (1984) has shown that there can be a "cost of caring" when caretaking behaviors become excessive or when the caretaker becomes overly involved with the well-being of a significant other. Emotional caretaking may place a greater burden on children and adolescents than instrumental caretaking. For example, Stein et al. (1999) found that taking on instrumental adult roles (e.g., doing laundry, dishes, and helping watch siblings) did not predict negative consequences in children of parents with AIDS, whereas taking on emotional spousal or parental roles (e.g., discussing financial issues or having inappropriate levels of influence in making important adult decisions) predicted negative mental health consequences. Given this potentially important distinction, in this study we examined instrumental and emotional caretaking as separate constructs.

Taking on greater responsibility and showing empathy and concern for others is not in and of itself a detrimental process. In fact, an important parental responsibility is to teach children to assume appropriate roles that involve greater responsibility and concern for others (e.g., doing chores, taking care of pets, taking on part-time jobs, and mentoring younger siblings). Some research has demonstrated positive developmental correlates of caretaking including maturity, sense of responsibility, and increased social skills (e.g., Hetherington, 1999), and other studies of increased filial responsibility and adjustment in youth have produced mixed results. For example, in a sample of immigrant children, Buriel, Perez, De-Ment, Chavez, and Moran (1998) found that youth's taking on the role of interpreter for their parents was associated with higher academic performance, whereas another study showed that immigrant youth who reported a high sense of obligation to familial needs were more likely to put off schoolwork and defer postsecondary education (Suarez-Orozco & Suarez-Orozco, 1995). Furthermore, Herer and Mayseless (2000) found that in the short term, parentification can be adaptive (e.g., the child is able to attain closeness with the parent), whereas prolonged caretaking of parents by children is associated with more adverse outcomes. Given the mixed findings regarding psychosocial correlates of caretaking, it is important to examine both potential beneficial and problematic psychosocial correlates of caretaking behaviors. However, given the adverse effects for children associated with a parent's depression, we anticipate that caretaking of a depressed parent will primarily be associated with negative functioning in children.

The association between caretaking and measures of adolescent adjustment may also be affected by age and gender. The developmental period of adolescence represents a complex period for caretaking behaviors directed at parents because adolescents balance the tasks of developing greater independence while sustaining close ties to their families (e.g., Allen, McElhaney, Kuperminc, & Jodl, 2004). However, increased caretaking within the family may conflict with typical milestones of adolescent development, such as school achievement,

relationships with friends, and increased autonomy. Adolescents may also lack the cognitive and social skills needed to be an effective caretaker and as such may not be able to effectively handle or cope with their role as caretaker. With regard to gender, girls may be more likely to assume and to be affected emotionally by the stress of caring for a physically or emotionally ill parent (Wethington, McLeod, & Kessler, 1987). Girls are not only more likely than boys to take on nurturing roles, but they are also more likely to be affected by the stress that their loved ones experience, as evidenced by higher levels of anxiety and depressive symptoms (e.g., Grant & Compas, 1995). Thus, it is important to examine the role of age and gender in the two types of caretaking in adolescents whose parents have depression.

Study Hypotheses

In this study, we examine the relation among adolescent caretaking behaviors, parenting behaviors, and measures of adolescent adjustment in a population of adolescents at risk for psychopathology because they have a parent with a history of depression compared with a group of adolescents of parents without a history of depression. The specific hypotheses are as follows:

1. Adolescent children of mothers with a history of depression will have higher rates of anxiety–depression symptoms and lower levels of social competence (as reported by both parent report and adolescent self-report) than adolescents of mothers without a history of depression.

2. Adolescents' caretaking behaviors will be positively related to their own anxiety–depression symptoms and their mothers' current depressive symptoms and withdrawn and intrusive parenting behaviors. Adolescents' caretaking behaviors will be negatively related to social competence. We tested these associations separately for adolescents of mothers with and without a history of depression.

3. Adolescents' anxiety–depression symptoms and social competence will be accounted for by their level of emotional and instrumental caretaking after controlling for the effects of current maternal depressive symptoms and negative parental behaviors.

Method

Participants

The sample consisted of 72 women (34 with a history of depression and 38 with no history of depression) and their adolescent children (36 girls and 36 boys; mean age = 12.2, *SD* = 1.07, range = 11–14 years old) from an urban area in the southeastern United States. We recruited mothers with a history of depression from the roster of a completed depression treatment study and through an e-mail advertisement of the study at a large university medical center. We recruited mothers without a history of depression through the same e-mail advertisement. We attempted to achieve group-level matching for mothers with and without a history of depression in terms of socioeconomic status, ethnicity, age and gender of child, and marital status. When mothers had multiple children in the desired age range, one child was randomly selected to participate. The children, who ranged in age from 11 to 14, represent early adolescents according to Lerner and Steinberg's (2004) definition of adolescence as the second decade of life. This developmental period is also associated with increasing rates of depression and increasingly stressful parent–child interactions (Hankin & Abramson, 2001).

Out of the 115 women who were screened, 36 did not participate. Among those who did not participate, 7 women were not eligible because they were currently experiencing an episode of depression, and 6 women were not eligible because they had another principal *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; American Psychiatric Association,

1994) diagnosis (4 reported anxiety disorders and 1 reported an eating disorder). In addition, 16 of the eligible families failed to show for a scheduled appointment, and 7 families who were eligible were not interested in participating. Seventy-nine families participated in the study, but 7 were excluded from the current sample as a result of substantial missing data (they either did not complete the questionnaires or they failed to complete the interaction), and 1 family was excluded when it became evident that the child did not live with his mother. There were no significant differences on any demographic variables between participants who were excluded and those in the final sample.

Mothers' mean age was 41.7 ($SD = 5.13$), and mothers' median education was 16 years (i.e., completion of a 4-year college degree). The sample was 82% Caucasian, 14% African American, 3% Asian American, and 1% other. Of the mothers in the study, 68% were married or partnered, 28% were divorced, and 4% were single. Mothers did not differ by group on age, race, education, or marital status. Children's mean age was 12.2 ($SD = 1.07$), and 50% were female. Children of mothers with and without a history of depression did not differ on age or gender. Means, standard deviations, and percentages by group (mothers with and without a history of depression) are reported in Table 1. Of the mothers with a history of depression, time since last episode ranged from 2 to 120 months, with a mean of 31 months.[1] The number of depressive symptoms endorsed for the last episode ranged from 5 to 9, with a mean of 6.9. Of the women with a history of depression, 76% ($n = 26$) reported taking medication for their depression, and 35% ($n = 12$) reported receiving counseling.

Procedure

Mothers were interviewed by telephone using the affective disorders section of the Structured Clinical Interview for DSM–IV–TR Axis I Disorders (SCID I/P; First, Spitzer, Gibbon, & Williams, 2001) to determine eligibility. Mothers who met full criteria for at least one episode of major depressive disorder or dysthymia during the lifetime of their 11- to 14-year-old adolescent child and women without a history of depression were eligible to participate. To examine the effects of a history of maternal depression on these offspring without the confounding effects of a current depressive episode, we excluded mothers who met criteria for a current episode of depression. We also screened mothers with a history of depression for any other current, primary Axis I disorder that served as their principal diagnosis and excluded them if they met criteria. We excluded women without a history of depression if they had experienced any Axis I disorder during their child's lifetime. This method of diagnostic phone screening has been successful in recruiting depressed parents in previous research (e.g., Langrock et al., 2002). On enrollment in the study, participants were asked to complete questionnaires and participate in a videotaped interaction. All participants provided informed consent before participating in any part of the study and received $25 monetary compensation for their participation.

On arrival at the laboratory, families completed the battery of questionnaires. Mothers' questionnaires included demographic information, a measure of their current depressive symptoms, and a measure of their child's functioning. Adolescents' questionnaires included a measure of their own functioning. Additionally, to generate a topic for discussion during the interaction task, we asked mothers and their adolescents to identify current sources of stress in their relationship by completing a standardized checklist of items associated with parental depression, specifically, parental withdrawal, parental intrusiveness, and marital conflict (e.g., Cummings & Davies, 1994; Gelfand & Teti, 1990; Hammen et al., 2004). The experimenter determined a common stressor by comparing the top three stressors ranked by the mother and

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[1] We reran all analyses with the dyad including the mother with a duration of 120 months since her last major depressive episode removed, and results did not change compared with analyses conducted with the entire sample.

the adolescent and selected the most highly ranked common item between the 2 participants for use in the interaction task. Although we chose these items to reflect stressors associated with living with a depressed parent, many of them generalize to families without depression.

After completing questionnaires, participants took part in a 15-min videotaped interaction in which they discussed the source of stress selected on basis of the process described above. The experimenter provided the family with a cue card that listed several standardized questions to prompt discussion on this topic (e.g., What happened the last time [Mom was upset or tense]? When [Mom gets upset or tense], what usually happens? What kind of feelings or emotions do we usually have when [Mom is upset or tense]? What can we do to reduce this stress?). After 15 min, the experimenter returned and debriefed the family. This interaction task was designed to address a wide range of adolescent behaviors, including caretaking in the family.

Measures

Demographics—We obtained demographic information from the mother in a questionnaire asking for her birth date and her child's birth date, her level of education, and her occupation, ethnicity, and marital or partner status.

Maternal depression history—We determined maternal diagnosis by means of the screening interview, which we used to assess symptoms of major depressive disorder and dysthymia using rules for deriving diagnoses using their respective sections of the SCID I/P (First et al., 2001), including the date of the most recent episode and the child's age at the time of this episode. We used this screening interview regardless of the source or method of recruitment, allowing us to determine which women met the criteria of major depressive disorder during the life of the child and to rule out women who were currently in an episode, who met the criteria for bipolar disorder or psychotic symptoms, or who reported another primary Axis I disorder that they considered more serious than their depression. Mothers were interviewed to determine whether at least one episode of major depressive disorder or dysthymia had occurred within the lifetime of the participating child. The interview also included questions to assess mothers' current medication and psychotherapy status.

Maternal depressive symptoms—The Beck Depression Inventory–II (BDI–II, A. T. Beck, Steer, & Brown, 1996) was administered to all of the women, regardless of diagnostic history, to determine current levels of depressive symptoms. The BDI–II has been widely used to assess the typical attitudes and symptoms presented by depressed individuals. The BDI has been shown to have excellent reliability, with an internal consistency of .91 and test–retest reliability of .93 (A. T. Beck, Steer, Ball, & Ranieri, 1996). In the current sample, internal consistency was .94.

Stress related to parent behaviors—We used the parental depression version of the Responses to Stress Questionnaire (Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman, 2000; Langrock et al., 2002) to assess how often in the past 6 months adolescents were exposed to stressors related to parental behaviors associated with depression. We used eight items to assess two sources of stress within the family, parental withdrawal and parental intrusiveness. The specific items for parental withdrawal included "My mom does not want to spend as much time with me as I would like," "My mom does not want to do things with the family," "My mom does not listen to me, or pay attention to events in my life," and "My mom seems to be sad or cries a lot of the time," and for parental intrusiveness, "My mom is too upset, tense, grouchy, angry, and easily frustrated," "I am not sure how my mom will react when I ask her for something," "Sometimes I feel responsible for the way my mom feels," and "My mom worries too much that bad things might happen to me." In this study, internal consistency for stress related to parental withdrawal was .68 for child report and .62 for parent report;

internal consistency for stress related to parental intrusiveness was .60 for child report and .61 for parent report. Parent and adolescent reports on these scales were significantly correlated ($r = .51$ for parental withdrawal and $r = .41$ for parental intrusiveness, both ps < .001). Therefore, we converted scores to z scores and summed parent and adolescent into a single index for each type of stressful parental behavior. Cronbach's alphas for the composite measures were adequate ($\alpha = .73$ for both parental withdrawal and parental intrusiveness for the full sample). We also calculated alphas separately for families of mothers with and without a history of depression; they ranged from .71 to .75.

Adolescent adjustment—The Child Behavior Checklist (CBCL; Achenbach, 1991) was given to the mother to assess her perception of the child's internalizing and externalizing problems and competencies over the past 6 months. Adolescents completed the Youth Self Report (YSR; Achenbach, 1991) to provide their own perceptions of their functioning. The Achenbach System of Empirically Based Assessment has strong test–retest reliability (.79 –.95), and criterion-related validity has been established, as referred young adults consistently score significantly higher than nonreferred young adults on problem scales (Achenbach & Rescorla, 2001). Normalized T scores allow an individual's data to be compared with norms for the same age and sex in the general population. In these analyses, we used the Anxiety/Depression scale as the best representation of adolescents' anxiety–depression symptoms and the Social Competence scale as an indicator of beneficial adjustment. Items on the Anxiety/Depression scale included those referring to nervousness, fears, and sadness; items on the Social Competence scale included the child's involvement in organizations and teams, number and frequency of contact with friends, and a rating of how well the child is able to get along with others relative to peers. Parent and adolescent reports on the CBCL and YSR were not significantly correlated for adolescents' anxiety–depression symptoms ($r = .13$) but were significantly correlated for adolescents' social competence ($r = .51$). For consistency, we analyzed CBCL and YSR scores separately for each of these constructs.

Adolescent caretaking behaviors from observations of parent–child interaction task—In this study, we used direct observations of parent–child interactions as a means of sampling the stressful context that characterizes families struggling with depression and the way children react to this stress in their lives. We used a global coding system (Iowa Family Interaction Rating Scales [IFIRS]; Melby et al., 1998) to code a videotaped 15-min conversation between mothers and their children about a stressful topic determined on the basis of the most highly commonly ranked stressor item from the Responses to Stress Questionnaire. IFIRS is a global coding system designed to measure behavioral and emotional characteristics at both the individual and the dyadic level. This macro-level system is ideal for assessing patterns of behavior that make up the ongoing, dynamic process of interaction (Melby & Conger, 2001). The validity of the IFIRS system has been well established using correlational and confirmatory factor analyses (Kashy & Kenny, 1990).

Behaviors are coded on two general types of scales: Individual Characteristic Scales and Dyadic Interaction Scales. Each behavioral code is rated on a 9-point scale ranging from 1, indicating that the behavior is "not at all characteristic" of the participant during the interaction, to 9, indicating that the behavior is "mainly characteristic." In determining the score for each code, frequency and intensity of behavior, as well as the contextual and affective nature of the behavior, are considered.

For this study, we developed two additional dyadic codes, emotional caretaking and instrumental caretaking, on the basis of the IFIRS manual guidelines to provide a measure of adolescents' observed and parent- and adolescent self-reported caretaking behaviors displayed during the interaction. We based definitions of these constructs on previous research on caretaking and parentification (e.g., Broszormenyi-Nagy & Spark, 1973; Jurkovic, 1997).

Additionally, the team of four raters each achieved scores within 1 point of the primary coder before coding independently.

We defined instrumental and emotional caretaking as follows. The Instrumental Caretaking scale measures the extent to which the child is reported to or observed to take care of the parent or take on tasks or responsibilities that are typically considered parental roles. It includes taking on household responsibilities such as watching siblings or other family members, cleaning, doing dishes, preparing meals, or carrying out parental roles during the interaction (e.g., taking charge of the interaction, adjusting the parent's clothing, or correcting misbehavior). The Emotional Caretaking scale measures the extent to which the child is reported to or observed to take care of the parent's emotional needs or take on an emotional burden for the parent. Examples of emotional caretaking include the child displaying knowledge of the parent's problems or difficulties (e.g., emotional symptoms, financial difficulties, marital problems, or interpersonal difficulties) or offering solutions for the parent's emotional problems or taking responsibility for the parent's difficulties.

Training for the IFIRS consisted of in-depth study of the manual and a written test on the scale definitions and coding conventions. Successful completion of training consisted of passing a written test with at least 90% correct and achieving at least 80% reliability on observational tests. Raters remained unaware of mothers' diagnostic status and independently coded the interactions. We also held weekly training meetings to prevent coder drift and to provide a forum in which questions about the different codes could be addressed. All interactions were double coded by two independent observers. In the event that interrater reliability was below 80%, coders met to establish consensus on any discrepant codes (i.e., greater than two steps apart). Overall rates of agreement for these codes were strong (89% for emotional caretaking and 83% for instrumental caretaking). We ran average measure intraclass correlations to test the interrater reliability between the primary and reliability coder scores for caretaking behaviors. Rating for both emotional and instrumental caretaking showed strong interrater reliability (rs = .89 and .81, ps < .001, respectively). Initial concurrent validity has also been established for these codes in another sample of depressed parents and their adolescent children (Champion, Reeslund, Fear, Potts, & Compas, 2008). In that sample, child and parent report measures of child caretaking behaviors were included and small but statistically significant positive associations were found between observed emotional and instrumental caretaking with both adolescent and parent reports of caretaking behaviors (rs ranged from .22 to .28, all ps < .01). The relatively low magnitude of these correlations suggests that self-reports and observations of caretaking are measuring somewhat distinct aspects of the same underlying construct of caretaking. Moreover, the low-magnitude but statistically significant correlations are not surprising, given the very different methods used for measuring these constructs.

Data Analyses

Correlational analyses—We conducted bivariate Pearson correlations as a first step in examining relationships among variables for adolescent caretaking, mothers' self-reported depressive symptoms and parenting behaviors, and mother and adolescent self-reports on adolescent adjustment. These included the correlations between ratings of observed instrumental and emotional caretaking and the mothers' current depressive symptoms on the BDI–II and composite scores of mothers' intrusive and withdrawn parenting behaviors on the Responses to Stress Questionnaire. We examined the relationships between these predictor variables and adolescents' adjustment as measured by self-reported and parent-reported symptoms and social competence on the CBCL and YSR (see Table 2). The associations among these variables were conducted separately for adolescents of mothers with and without a history of depression.

Multiple regression analyses—We conducted a series of linear multiple regression analyses to examine adolescents' instrumental and emotional caretaking as predictors of adolescents' anxiety–depression symptoms and social competence after accounting for the effects of mothers' depression history status, current depressive symptoms, and mothers' intrusive and withdrawn parenting. Because the two types of caretaking were significantly correlated with indictors of adjustment on the CBCL and YSR only for children of mothers with a history of depression (see correlational analyses below), we conducted regression analyses only with this subsample of participants (see Table 3).

Results

Preliminary Analyses

Demographic characteristics of the sample by group (maternal depression history) are presented in Table 1. The two groups (mothers with and without a history of depression) did not differ with respect to mother's age, education, marital status, or race. The groups also did not differ with respect to child's age or gender. Furthermore, none of these demographic variables, including child age and gender, were related to adolescents' caretaking behaviors.

Clinical characteristics (i.e., means and standard deviations for current maternal depressive symptoms, maternal intrusiveness and withdrawn parenting, adolescents' instrumental and emotional caretaking, and adolescent functioning) of the sample by group are presented in Table 4. The two groups were significantly different on mothers' self-reports of current depressive symptoms on the BDI–II, $t(70) = -3.36$, $p < .001$, and on the composite measure of withdrawn parenting, $t(70) = -2.42$, $p = .02$. That is, mothers with a history of depression reported more current depressive symptoms and showed more withdrawn parenting behaviors relative to mothers without a history of depression.

We conducted preliminary analyses for the sample of mothers with a history of depression to determine whether factors related to their depression (i.e., time since last episode, number of depressive symptoms endorsed on the SCID I/P, and types of treatment received) were associated with any of the variables of interest in this study (i.e., adolescents' caretaking, mothers' BDI–II scores, parenting behaviors, adolescents' anxiety–depression symptoms, and adolescents' social competence). These analyses revealed that time since the mother's last episode was significantly correlated with levels of adolescents' emotional caretaking ($r = -.45$) and mothers' medication status was associated only with mothers' reports of adolescents' anxiety–depression symptoms on the CBCL ($r = .36$). Because mothers' medication status was related to adolescents' anxiety–depression symptoms on the CBCL but not with anxiety–depression on the YSR or social competence on either the CBCL or the YSR, we did not include them in the regression analyses predicting these measures of adjustment.

There were significant positive associations between emotional and instrumental caretaking for adolescents of mothers with and without a history of depression (rs = .61 and .73, respectively). These significant positive relationships suggest that these two indicators of caretaking may represent related but relatively distinct aspects of a larger construct. To control for multicollinearity effects in the regression analyses, we entered emotional and instrumental caretaking separately.

Hypothesis 1: Adolescent Adjustment and Maternal Depressive History

Means and standard deviations of adolescents' self- and parent-reported anxious–depressed symptoms and social competence as measured by the Anxiety/Depression and Social Competence subscales of the CBCL and YSR are reported in Table 2 by maternal diagnostic group (children of mothers with and without a history of depression). Consistent with the

hypothesis, adolescents of mothers with a history of depression were significantly higher in symptoms of anxiety and depression than were adolescents of mothers without a positive history of depression according to both mother and adolescent self-reports on the CBCL and YSR, $t(70) = -2.88$, $p = .01$, and $t(70) = -2.12$, $p = .04$, respectively.

The mean T scores for the Anxiety/Depression scales for the adolescents of mothers with a history of depression on the CBCL and YSR were approximately 0.5 standard deviation higher than the scores for the adolescents of mothers with no history of depression, reflecting medium effects for maternal depression history. This indicates that as expected, the adolescents whose mothers had a history of depression were experiencing higher levels of symptoms ($Ts = 58.38$ and 56.85 on the CBCL and YSR, respectively) than those adolescents whose mothers had no history of depression ($Ts = 53.58$ and 53.79 on the CBCL and YSR, respectively) at an effect size of approximately 0.3 to 0.5, or a small to medium effect (Cohen, 1988). However, the mean scores for adolescents whose mothers had a history of depression were below the clinical cutoff for the CBCL and YSR, suggesting that most of the adolescents in this sample were not experiencing clinical levels of distress. We expected this pattern of results because the sample was identified as at risk rather than as necessarily experiencing clinical levels of symptoms.

We found minimal support for the hypothesis regarding adolescents' social competence. Although there was a trend for a group difference on mothers' reports of adolescent social competence on the CBCL, $t(69) = 1.95$, $p = .06$, there was no difference between groups according to adolescents' self-reports of their own social competence.

Hypothesis 2: Adolescents' Caretaking, Adolescents' Adjustment, and Mothers' Current Depressive Symptoms and Withdrawn and Intrusive Parenting Behavior

We used correlations to test the relationship between adolescents' emotional and instrumental caretaking behaviors and their level of psychosocial adjustment separately for adolescents of mothers with and without a history of depression (see Table 3). For adolescents of mothers with a history of depression, instrumental caretaking was significantly correlated with the composite measure of withdrawn parenting ($r = .39$). Moreover, for adolescents of mothers with a history of depression, both emotional caretaking ($r = .43$) and instrumental caretaking ($r = .39$) were significantly correlated with adolescents' reports of their symptoms of anxiety–depression on the YSR. Conversely, for adolescents of mothers with a history of depression, emotional caretaking was correlated with mothers' ratings of their children's social competence on the CBCL ($r = .39$). In contrast, instrumental and emotional caretaking were not significantly correlated with any of the measures of maternal behavior, maternal depressive symptoms, or adolescent adjustment for adolescents of mothers without a history of depression, and mothers' depressive symptoms were not significantly correlated with any of the measures of adolescents' adjustment.

We used Fisher's z tests to compare the correlations for children of mothers with and without a history of depression. The correlations for emotional caretaking with mothers' reports of adolescents' competence approached significance ($p = .08$), and the other comparisons were not significant (ps ranged from .13 to .18). The failure of these comparisons to reach significance is most likely because of the conservative nature of the Fisher's z test, the relatively small sample sizes of the two groups, and the resulting limitations in the statistical power in these comparisons.

Hypothesis 3: Adolescents' Anxiety–Depression Symptoms and Levels of Emotional and Instrumental Caretaking

Because the correlations between caretaking and adolescent adjustment were nonsignificant for adolescents of mothers without a history of depression, we conducted regression analyses

only for adolescents whose mothers had a history of depression. We used eight regression equations to examine the effects of adolescents' instrumental and emotional caretaking as predictors of adolescents' anxiety–depression symptoms and social competence after accounting for the effects of mothers' current depressive symptoms and composite measures of mothers' intrusive and withdrawn parenting.

In the regression equation predicting adolescents' self-reports of anxiety–depression symptoms on the YSR, we entered mothers' current depressive symptoms on the BDI–II, maternal intrusiveness and withdrawal, and adolescents' emotional caretaking as predictors. The overall equation was significant, accounting for a total of 28% of the variance in adolescents' symptoms (see Table 4). Adolescents' emotional caretaking was the only significant independent predictor, accounting for 17% of the variance in adolescents' anxiety–depression ($\beta = 0.43$) when entered simultaneously with maternal depressive symptoms and intrusive and withdrawn behaviors. Although instrumental caretaking was significantly correlated with anxiety–depression on the YSR in the bivariate analyses, the regression that included instrumental caretaking did not reach statistical significance.

The equation predicting mothers' reports of adolescents' social competence on the CBCL was significant, accounting for 29% of the variance (see Table 4). Mothers' depressive symptoms on the BDI–II approached significance, accounting for 9% ($\beta = 0.36$) of the variance, and emotional caretaking was a significant predictor, explaining 19% of the variance ($\beta = 0.46$). Instrumental caretaking was not significantly correlated with social competence on the YSR in the bivariate analyses, and the overall regression equation predicting YSR social competence was also not significant.

Discussion

We designed this study to replicate and extend past research on the increased risk for psychopathology associated with parental depression, particularly with regard to the role of adolescents' caretaking within families. As hypothesized and consistent with prior research, children of mothers with a history of depression had increased anxiety and depression symptoms compared with normative data as reflected in both parent and adolescent self-report. More important, this elevated risk was evident in this sample consisting of mothers who were not in a current episode of major depression. This suggests that symptoms of emotional distress in offspring of depressed parents persist outside of an episode of parental depression, perhaps in part as a result of the ongoing features of the environment within these families.

It is noteworthy that we were able to observe examples of emotional and instrumental caretaking, both in observed behaviors and in spontaneously reported examples, within the constraints of a laboratory observation. For example, in the course of the parent–child interaction, a 13-year-old boy talked about regularly preparing dinner for his mother and younger siblings (instrumental caretaking) and a 9-year-old girl offered suggestions to her mother for ways to feel better and reduce her stress at work, including setting up an appointment to talk with her boss (emotional caretaking). Although these two types of caretaking were strongly correlated ($r = .69$), the current results indicate that only emotional caretaking was a significant predictor of adolescents' symptoms of anxiety–depression and social competence, suggesting that they may be related but distinct constructs. Future research is needed to determine the extent to which these constructs are related and how they may affect adjustment in similar or different ways.

Although the levels of caretaking during the mother–child interactions did not differ for dyads of mothers with and without a history of depression, there was a trend for the correlates of caretaking in offspring of mothers with a history of depression to differ from those of mothers

without a history of depression. Specifically, emotional and instrumental caretaking were significantly correlated with greater self-reported anxiety–depression symptoms only among adolescents whose mothers had a history of depression. Furthermore, instrumental caretaking was positively correlated with the composite of mothers' and adolescents' reports of mothers' withdrawn behavior for mothers with a positive depression history. Finally, adolescents' emotional caretaking was positively correlated with mothers' reports of adolescents' social competence, again only for mothers with a history of depression. These analyses suggest that although levels of caretaking may not be higher among adolescents whose mothers have experienced at least one episode of major depression, these behaviors may be more strongly associated with levels of adjustment for these adolescents. These analyses need to be replicated with a larger sample to increase statistical power for testing the differences between the correlations for mothers with and without a history of depression.

We found adolescents' emotional caretaking to be a unique predictor of higher levels of their self-reports of their symptoms of anxiety–depression only in the sample of adolescents of mothers with a history of depression, even after controlling for mothers' current depressive symptoms and negative maternal behaviors. Emotional caretaking was a unique predictor of mothers' reports of higher levels of adolescents' social competence. These findings represent an important contribution to the literature because this is the first known study to examine caretaking in children of mothers with a history of depression. Moreover, most previous studies of caretaking by children have relied solely on the use of retrospective self-reports of caretaking behaviors to predict adult adjustment rather than examining caretaking behaviors and adolescent adjustment concomitantly. Our study addressed both of these limitations by using direct observation of caretaking behavior and gathering parent and child self-reports of adolescent adjustment concurrently.

Mothers with a history of depression rated their children as less competent and more distressed than did mothers of adolescents without a history of depression. However, our findings suggest that when adolescents engage in emotional caretaking, their mothers perceive them as more competent and capable. In contrast, adolescents feel more distressed and experience more symptoms of anxiety and depression when they engage in more emotional caretaking of their parent. When using adolescent self-reports of anxiety–depression symptoms, we found a significant and positive correlation with both emotional and instrumental caretaking. In contrast, we found no significant association between mothers' reports of their adolescent children's anxiety–depression symptoms with either emotional or instrumental caretaking. This trend is consistent with other research (Welch, Wadsworth, & Compas, 1996) in which the reports about adolescents by parents with cancer differed from adolescents' own reports about their adjustment. The mothers in our sample may have been unaware of the possible burdens that caretaking places on their children. Furthermore, children may attempt to hide their distress from their parents as another means of offering emotional support or caretaking. This is important to explore in future research.

Limitations and Future Directions

This study had several limitations regarding its sample and design characteristics that should be addressed in future research. As noted above, we included mothers in the study only if they had a history of depression and not if they were in a current depressive episode, which may explain the lack of association between maternal depressive symptoms and adolescent adjustment. Further research is needed to test the extent to which caretaking may be related to parental depression status and depressive symptoms by including mothers who are currently depressed and by including additional information regarding the severity and duration of parental depressive episodes. Unexpectedly, adolescents' caretaking was not associated with mothers' current depressive symptoms on the BDI–II, but emotional caretaking was negatively

associated with time since mothers' last depressive episode. Given these mixed findings, future research is needed to clarify the associations between caretaking and characteristics of parental depression. Additionally, including fathers in future research would be useful to better understand the effect that parent–child gender matching has on caretaking behaviors.

Although the use of an observational method that combines spontaneously reported and direct observations of child caretaking behavior provides a relatively new approach to measuring this construct, it will be important for future research to determine the role of observed versus reported caretaking in predicting adjustment in youth. Furthermore, the observation paradigm we used in this study may have underrepresented the types of caretaking levels that occur in the home environments of these families and may also be limited by the same biases as self-report measures because the coded behavior included parent and adolescent reports of caretaking behaviors. Thus, future research is needed to further validate the use of observational measures of caretaking.

Furthermore, future research may benefit by measuring additional dimensions of caretaking behaviors, including level of reciprocity, duration, and perceived fairness as described by Jurkovic (1997). Specifically, Jurkovic defined two types of parentification: adaptive and destructive. In both cases, the child assumes parental roles or responsibilities. However, in adaptive parentification the child receives help carrying out these roles (i.e., caretaking is reciprocated by the parent) or caretaking is only assumed for a limited time. In destructive parentification, the child assumes roles that are developmentally inappropriate and does not receive support from the parent in carrying them out (i.e., caretaking is nonreciprocal). Jurkovic also stressed the importance of determining the extent to which the child perceives his or her having to carry out these roles to be fair or unfair. Caretaking in which the child perceives his or her contributions to be fair and reciprocated is considered to be adaptive. If the child's needs are not being met and he or she perceives a great deal of imbalance in the distribution of responsibilities with a disproportional burden falling on the child, it is considered to be destructive and found to be associated with poor outcomes (Jurkovic, Thirkield, & Morrell, 2001). The inclusion of these additional dimensions of caretaking behaviors may help to illuminate the relationship between caretaking responsibilities and psychosocial adjustment in youth.

Additionally, a larger sample size and multiple measurements of the involved constructs would have allowed us to create latent variables and to detect smaller effects. Finally, the conclusions that may be drawn are also limited by this study's cross-sectional design. The use of prospective study designs in future studies will be critical to examining caretaking as a potential mechanism through which maternal depression affects children.

Summary

These limitations notwithstanding, this study's findings suggest that it is critical to examine the specific risk factors that affect children of parents with a history of depression. Knowledge of patterns of caretaking in this population may better inform researchers and clinicians on how to intervene to ameliorate the effects these risk factors have on mental health. In particular, the finding that emotional caretaking is a significant predictor of anxiety and depression symptoms in adolescents may implicate caretaking as a target in preventative interventions for families struggling with depression. Children could be taught that their parent's depression is not their fault and they are not responsible for "fixing" their parent's depression. Instead, they could learn alternative and healthier strategies for coping with depression in their families including learning to balance sharing care and concern for their family members in ways that do not cause undue burden. This study suggests potentially important avenues for interventions to reduce the risk associated with parental depression.

Acknowledgments

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Table 1

Demographic Variables on Families of Mothers With and Without a History of Depression

Variable	History of depression (*N* = 34; *M* [*SD*])	No history of depression (*N* = 38; *M* [*SD*])	Significance test	*p*
Child's age	12.24 (1.21)	12.24 (0.94)	$t(70) = 0.01$	.99
Mother's age	41.56 (5.33)	41.84 (5.01)	$t(70) = 0.23$	.82
Mother's education	4.59 (1.35)	4.71 (1.37)	$t(70) = 0.38$	.71
Child's gender	56% female (*n* = 19)	45% female (*n* = 17)	$\chi^2(1, N = 72) = 0.89$	.35
Mother's marital status	62% intact (*n* = 21)	74% intact (*n* = 28)	$\chi^2(1, N = 72) = 1.17$	.28
Mother's race	79% Caucasian (*n* = 27)	84% Caucasian (*n* = 32)	$\chi^2(1, N = 72) = 0.28$	.60

Note. Mother's education status was measured using a scale ranging from 1 to 7, with 1 = *no GED or HS diploma;* 2 = *GED or high school diploma;* 3 = *some college;* 4 = *2-year college;* 5 = *4-year college;* 6 = *master's degree,* and 7 = *doctoral degree.*

Table 2

Correlations Among Adolescent and Maternal Behaviors and Psychological Symptoms

Variable	1	2	3	4	5	6	7	8	9
1. Emotional caretaking	—	.73**	-.08	-.03	-.22	.16	.00	.16	.05
2. Instrumental caretaking	.61**	—	-.04	.16	.18	.16	.22	.05	.07
3. Maternal depressive symptoms (BDI–II)	-.08	.08	—	.45**	.41*	.13	.32	-.01	.10
4. Intrusive parenting	-.01	.30	.52**	—	.61**	.28	.40*	.14	-.25
5. Withdrawn parenting	-.14	.39*	.45**	.56**	—	.09	.34*	.08	-.12
6. Anxiety/depression (YSR)	.43*	.39*	.12	.31	.23	—	.15	.00	-.12
7. Anxiety/depression (CBCL)	-.34	-.27	.08	.21	.14	-.04	—	-.24	-.26
8. Social competence (YSR)	.09	-.27	-.02	-.07	-.11	-.29	.17	—	.40*
9. Social competence (CBCL)	.39*	-.02	.11	-.16	-.14	-.02	-.10	.55**	—

Note. Correlations above diagonal are for mothers without a history of depression; correlations below the diagonal are for mothers with a positive history for depression. BDI–II = Beck Depression Inventory–II; CBCL = Child Behavior Checklist; YSR = Youth Self Report.

*
p < .05.

**
p < .01.

Table 3

Regression Equations Predicting Adolescents' and Parents' Reports of Adolescent Adjustment for Adolescent Children of Mothers With a History of Depression

Dependent variable	β	Unstandardized B	Variance explained (sr^2)	t	p
YSR Anxiety/Depression ($F[4, 29] = 2.83$, $p = .04$)					
Maternal depressive symptoms (BDI–II)	−0.01	−0.01	.00	−0.04	.97
Intrusive parenting	0.32	0.35	.06	1.55	.13
Withdrawn parenting	0.00	0.00	.00	0.00	.99
Emotional caretaking	0.43	1.33	.17	2.66	.01
CBCL Social Competence ($F[4, 29] = 2.92$, $p = .038$)					
Maternal depressive symptoms (BDI–II)	0.36	0.10	.09	1.91	.07
Intrusive parenting	−0.21	−0.15	.03	−1.03	.31
Withdrawn parenting	−0.25	−0.18	.04	−1.27	.21
Emotional caretaking	0.46	0.90	.19	2.84	.01

Note. YSR = Youth Self Report; CBCL = Child Behavior Checklist; BDI–II = Beck Depression Inventory–II.

Table 4

Clinical Variables on Families of Mothers With and Without a History of Depression

Variable	History of depression (N = 34; *M* [*SD*])	No history of depression (N = 38; *M* [*SD*])	Significance test	*p*
Maternal depressive symptoms (BDI–II)	13.09 (10.10)	6.28 (6.44)	$t(70) = -3.36$	<.001
Intrusive parenting	8.35 (3.82)	7.53 (3.69)	$t(70) = -0.93$	.35
Withdrawn parenting	6.15 (3.81)	4.08 (3.44)	$t(70) = -2.42$	.02
Emotional caretaking	3.91 (1.36)	3.61 (1.72)	$t(70) = -0.83$	.41
Instrumental caretaking	3.91 (1.42)	3.37 (1.70)	$t(70) = -1.46$	.15
Anxiety/depression *T* score (CBCL)	58.38 (8.78)	53.58 (4.44)	$t(70) = -2.88$	.01
Anxiety/depression *T* score (YSR)	56.85 (6.81)	53.79 (5.22)	$t(70) = -2.12$	.04
Social competence *T* score (CBCL)	48.15 (9.65)	52.22 (8.12)	$t(69) = -1.95$	.06
Social competence *T* score (YSR)	48.69 (10.22)	52.28 (9.23)	$t(66) = 1.48$	.14

Note. BDI–II = Beck Depression Inventory–II; CBCL = Child Behavior Checklist; YSR = Youth Self Report.