

CARETAKING BEHAVIORS IN ADOLESCENT CHILDREN
OF DEPRESSED PARENTS

By

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CHAPTER I

INTRODUCTION

Caring for others is a fundamental part of human relationships. In the parent-child relationship, parents typically assume caretaking responsibilities for their children. However, under some circumstances, particularly when parenting is impaired, children may assume a caretaking role in the family. This may be especially pronounced in families in which a parent suffers from depression. In this paper, I first define caretaking and discuss contextual theories that help to explain caretaking behaviors. Second, I discuss the potential costs and benefits that are associated with caretaking and explore how factors such as type and amount of caretaking may affect these potential correlates. Third, I briefly summarize the ways in which caretaking has been measured and summarize findings from representative empirical studies that have been conducted on child and adolescent caretaking (e.g., in children of divorced parents, in children of parents with a terminal illness). Fourth, I examine previous research on caretaking in children of depressed parents as children of depressed parents may be exposed to a particular set of circumstances that increase the likelihood that they will be placed into a caretaking role with their parents. Finally, I present findings from a study of caretaking behaviors in a sample of 115 child and adolescent offspring of depressed parents.

Defining Caretaking

Research and theory on caretaking of parents by children has a long history in psychology and various definitions have been offered in the literature. The term “parental child” was coined by Minuchin et al. (1967) referring to children who assume parental responsibility in the home (e.g., preparing meals, caring for younger siblings) due to 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). More recently, Jurkovic (1997) has defined caretaking (or parentification) along two dimensions as “instrumental” and “emotional.” Instrumental caretaking refers to maintaining the physical welfare of the household whereas emotional caretaking involves tending to the socioemotional needs of family members.

Although several definitions exist, the central feature of caretaking in children is defined as taking on roles or responsibilities that would typically be considered parental roles. In other words, there is a role-reversal in which the child assumes responsibility for the care and well being of other family members, most often his/her parent or siblings. Further, these definitions suggest that caretaking may be differentiated along several additional dimensions that are discussed in detail below. Most of these perspectives on caretaking have emphasized the importance of understanding parentification of children in families faced with significant levels of acute or chronic stress, including economic stress, family conflict, parental divorce, and parental illness.

Therefore, theories that have considered close personal relationships under stressful conditions also may be useful in understanding children's caretaking behavior.

Contextual Theories and Contributory Factors to Caretaking

Caretaking can be viewed within the broader context of close interpersonal relationships. This includes parent-child attachment, the concept of "tend and befriend" as a gender specific stress response, social networks, and social support. Research on these constructs that may be related to caretaking provides a perspective for understanding the characteristics and consequences of children who are in a caretaking role with their parents.

From a social-developmental perspective, Bowlby (1988) and others (e.g., Field et al., 1996; Liu et al., 1997) argue that the attachment relationship plays a central role in the development of the innate parent-child caregiving system. From a more biobehavioral perspective, research by Taylor and colleagues (2000, 2006) provides biological support for a gender difference in caretaking. Taylor et al. (2000) propose that the traditional "fight or flight" response may characterize the stress response of males, whereas the female stress response is more marked by a pattern of "tend and befriend."

Thirdly, research on social networks and social support offers further support for a gender difference in caretaking. Studies show that women are more engaged in their social networks than are men (Taylor et al., 2000). Recognition of the greater social embeddedness of women as compared with men has led to research on "social network events," i.e., stressful events that happen to others in one's social network. For example, women report significantly more social network events (e.g., major illness of a friend or

family member) relative to men and are more likely to report being involved if there is a crisis event in the life of someone in their social network (Wethington et al., 1987). This may help to explain why females are more susceptible to the effects of interpersonal stress as compared to males. In fact, according to Davis and colleagues (1999), women report that interpersonal stressors are the most common and stressful types of stressors they experience. Further, the gender difference in reports of network stressors has been shown to statistically account for the gender difference in depressive symptoms (Kessler & McLeod, 1984). Further, Wagner and Compas (1990) found that girls in early, middle and late adolescence reported more network stressful events than did boys, suggesting that gender differences in exposure to and/or awareness of stressful events in the lives emerges relatively early in development. The social support literature also provides evidence to support a meaningful gender difference with males benefiting more from informational and instrumental support, whereas females show greater benefit from emotional support (e.g., Cheng, 1998; Fuhrer & Stansfeld, 2002; Slavin & Rainer, 1990).

More recent research on gender differences in caretaking has been equivocal. For example, Dolgin (1996) and Hetherington (1999) found that divorced mothers were more likely to involve their daughters compared to their sons in emotional caretaking caretaking after the divorce; however, other studies did not find gender differences in caretaking (e.g., Jurkovic et al., 2001, Stein et al., 1999). Moreover, research on other predictors of caretaking, such as chronological age and sibling status, has also yielded mixed results. In a study of children living in urban poverty, McMahan and Luthar (2007) found that responsibility for household chores increased with chronological age whereas emotional caretaking of the parent was found to decrease with chronological

age. In the same study, being an only child was associated with emotional caretaking while being a sibling was associated with instrumental caretaking. However, Jurkovic and colleagues (2001) did not find any significant associations between sibling status and either type of caretaking.

Overall, previous studies suggest that caretaking is not inherently maladaptive. That is, there is strong evidence that the tend-and-befriend response is a fundamental biological and socially adaptive behavior in healthy adults (Taylor et al., 2000, 2006). However, in some circumstances levels of caretaking may cross a threshold and become burdensome. This may be especially true for adolescents who take on these roles at developmentally inappropriate times and especially if these behaviors are not reciprocated by their parents. Gender may play a central role in caretaking behavior, as females may experience more interpersonal stress and may tend to affiliate more with others when they are exposed to stress, both of which may lead to increased caretaking behavior. These broad conceptual theories provide a framework for understanding caretaking behaviors (for a more complete review of these broad conceptual theories, see Champion and Compas, 2008). However, much of this theoretical work has focused on adult men and women and relatively less is known on how these theories apply to children and adolescents. More research is needed to understand the role that gender and other demographic factors (e.g. age, sibling status) may play in child caretaking behaviors.

The Costs and Benefits of Caretaking

Taking on greater responsibility and showing empathy and concern for others is, of course, not in and of itself a detrimental process. In fact, one of the critical parental responsibilities 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, mentoring younger siblings). However, these roles and expectations should match the developmental capacity of the child. As a result, the costs and benefits of caring and caretaking in children and adolescents is a complex picture to understand. Some families with parentified children may appear to be functioning well, but that may be a superficial impression of the family. For example, an adolescent whose parent is terminally-ill may take that parent to doctor's visits, help with medical routines in the home, and care for younger siblings by regularly giving baths and making meals. Is it accurate to say that this child is adapting in a healthy way by being responsible and taking on roles that are needed because the biological parent can no longer adequately fulfill these roles? Or, are there costs that will inevitably take their toll on this parentified child? Further, why do some children appear to flourish when placed in a caregiving role whereas others suffer grave consequences? Empirical studies are needed to provide answers to these questions by determining the actual effects of caretaking on child and adolescent adjustment.

Research by Kessler and McLeod (1984) has shown that there is a "cost of caring" when caretaking behaviors become excessive or when the caretaker becomes overly involved with the well-being of a significant other. More generally, research on stress also suggests that there is an increased risk for persons facing multiple stressors as

compared to those facing a smaller number of stressors (Grant et al., 2003). Following that logic, caretaking may serve as a risk factor to children of parents suffering from physical or psychiatric illness because it is “the straw that breaks the camel’s back.” That is, caretaking may be an additional burden to these children who are already overloaded with so many other demands (e.g., stress of living with an ill parent, school stress, peer stress) that their capacity to cope with the additional emotional effects of caretaking breaks down (Wethington, McLeod, & Kessler, 1987).

The developmental period of adolescence further increases this burden because involvement in caretaking behaviors may come at a developmentally inappropriate time. Developmentally, adolescents may be lacking 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. Moreover, a normative developmental pattern is for the adolescent to separate from the family group and become more independent. Increased caretaking within the family may conflict with typical milestones of adolescent development, including school achievement, relationships with friends, and increased autonomy (Grant & Compas, 1995).

Importantly and consistent with the ideas of the conceptual frameworks outlined above, gender differences regarding the impact of caretaking behaviors have been documented in the literature. Building on the findings by Wethington et al. (1987) in which they argued that the gender difference in level of stress could be explained by the amount of network stress (i.e., stressful events that occur in the lives of family members and friends), Grant and Compas (1995) found that adolescent girls are not only more

likely to be affected by the stress that their loved ones experience, but that they are also more likely than boys to take on nurturing or caretaking roles.

Types of Caretaking

The complex nature of caretaking suggests that caring for others may take on more than one form. Caretaking behaviors have been distinguished on both qualitative and quantitative dimensions. Jurkovic (1997) makes a distinction between instrumental and expressive (or emotional) caretaking. Instrumental caretaking behaviors maintain the physical welfare of the family (e.g., caring for siblings, carrying out household chores, running errands) whereas emotional caretaking behaviors tend to the socioemotional needs of family members (e.g., serving as a confidante, making important family decisions).

Both types of caretaking reflect the extent to which the child takes care of the parent or takes on tasks or responsibilities that are age-inappropriate and typically considered parental roles. Instrumental caretaking specifically includes taking on household responsibilities such as watching 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 task, adjusting the parent's clothing, or correcting behavior). Examples of instrumental caretaking include potentially burdensome demands, such as a child having to forfeit spending time with friends in order to watch his younger sibling every weekend or giving practical advice to a parent, such as a child suggesting that her parent turn off her cell phone so that it won't interrupt the parent's work. Emotional caretaking, on the other hand, focuses on the

degree to which the child takes care of the emotional needs of the parent or takes on an emotional burden that may be age-inappropriate. More specifically, emotional caretaking includes displaying knowledge of the parents' problems or difficulties that do not directly involve the child (e.g., emotional problems, financial difficulties, marital problems, or interpersonal difficulties), offering solutions for the parent's emotional problems, or taking responsibility for the parent's difficulties. Examples of emotional caretaking that may be problematic include a child telling his mother, "I know your boss has been really hard on you lately; maybe you can set up a meeting with her to let her know how you feel," or a child saying, "Sometimes I feel like your fights with Dad are my fault."

Research by Stein and colleagues (1999) suggests that the type of caretaking behavior is important to consider when examining the effects of caretaking on mental health consequences in children. Their work suggests that taking on instrumental adult roles (e.g., doing laundry, dishes, helping watch siblings) does not predict negative consequences in children of parents with AIDS, whereas taking on emotional spousal or parental roles (e.g., discussing financial issues, having a lot of influence in making important decisions) does predict negative mental health consequences for children and adolescents whose parents are ill. Given this potentially important distinction, it will be important to treat instrumental and emotional caretaking as separate constructs in future research.

Jurkovic (1997) describes a second dimension on which to categorize caretaking behaviors. Rather than focusing on the type of behaviors, this categorization looks at the level of reciprocity between parents and children as well as a temporal dimension. Specifically, Jurkovic defines 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 non-reciprocal). Jurkovic also stresses the importance of determining the extent to which the child perceives his/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 et al., 2001).

Furthermore, according to cognitive models of depression (Abramson, Metalsky, & Alloy, 1989; Beck, 1967; Lewinsohn et al., 1985), negative cognitions about the self and the causes of negative events are a risk factor for depression. In several prospective studies, Garber and colleagues have shown that negative cognitions interact with stressors to predict increases in depressive symptoms in children (Hilsman & Garber, 1995; Panak & Garber, 1992; Robinson, Garber, & Hilsman, 1995). Garber, Keiley, and Martin (2002) found that increases in adolescents' depressive symptoms over five years were significantly predicted by negative attributional style in offspring of depressed mothers. These studies highlight the importance of not only measuring potential stressors, such as a child's assuming a caretaking role in the family, but also assessing the child's

perception of these new responsibilities. Although this is an important avenue for future research, it is beyond the scope of the current study.

Amount of Caretaking

In addition to the qualitative distinction between types of caretaking behaviors, there is an important quantitative distinction to consider in assessing the role of caretaking behaviors in children. The amount a child engages in either type of caretaking behavior may be an important predictor of child mental health outcomes as well.

Although moderate levels of caretaking behavior may be adaptive for children in some circumstances or to a certain degree, engaging in excessive amounts of caretaking may function as a significant risk factor. That is, either instrumental or emotional caretaking, in excess, may correlate with poor outcomes for children. Research shows that at low to moderate levels, caring for others appears to have protective effects; however, at high levels, there appears to be a cost associated with caring for others (Kessler & McLeod, 1984). It is this burden or cost of caring that may contribute to the development of psychopathology in these children.

Furthermore, the duration of caretaking may affect child adjustment. Herer and Mayseless (2000) found that in the short term parentification may be adaptive, whereas prolonged caretaking of parents by children is associated with more adverse consequences. For example, following a significant family event (e.g., divorce), parentification was adaptive and children used these newly assumed behaviors to attain closeness and contact with a parent who may otherwise become withdrawn and unavailable (Herer & Mayseless). This pattern of behavior may provide the child with a

sense of mastery and competence at a crucial developmental stage. In contrast, prolonged parentification placed a greater burden on children and prevented them from carrying out normative developmental milestones such as spending increased time with peers (Herer & Maysel).

The relationship between caretaking and adjustment may be best explained by a curvilinear pattern. That is, children who do not engage in any caretaking behaviors may not benefit from the positive effects these nurturing behaviors have on development (e.g., the development of empathy, a sense of mastery in helping others). In contrast, children who are overburdened with the responsibility of caring for parents and other family members may suffer consequences as a result of not fulfilling normal developmental milestones (e.g., development of independence). McMahon and Luthar (2007) found evidence of such a curvilinear effect between caretaking and child adjustment in a sample of children living in urban poverty. They found that a curvilinear relationship best explained the relationship between caretaking responsibility and psychological adjustment. Based on these findings and due to the fact that the relationship between caretaking and adjustment appears to be complex, it is hypothesized that a curvilinear relationship may best explain the relationship between caretaking and adjustment in children of depressed parents as well.

Measurement of Caretaking and Parentification

Given the complex nature of caretaking behaviors, it is important to consider the methods that have been used to assess and quantify caretaking. Within the relatively limited sample of empirical studies on caretaking, the majority of studies of caretaking

have been limited to the use of self-report questionnaires by children, adolescents, and adults. In contrast, direct observations of parent-child interactions may offer an important alternative method to capture caretaking behaviors in a way that is less subject to reporting biases that may limit self-reports. Using direct observational methods allows researchers to study interactions and relationships between individuals, rather than simply separate characteristics of individuals and can overcome potential problems with biases in self-reports (Kerig, 2001). The use of contextual, macro systems for coding parent and child behavior may prove especially important for measuring caretaking in children, as these behaviors must be considered in context with parental behaviors that may elicit, reinforce, or obstruct child caretaking (Melby & Conger, 2001).

On the other hand, there are some limits to using direct observations to assess caretaking. For example, there is some question as to the representativeness and generalizability of behavior in the laboratory to behavior in the natural environment. However, it has been demonstrated that behavior that is elicited in the lab still differentiates distressed from non-distressed families (Prinz, Foster, Kent & O'Leary, 1979). Additionally, a problem that arises with the use of observational research involves the challenges in minimizing observer (rater) bias and maximizing inter-observer agreement to increase reliability. Given the aforementioned limitations of each type of measurement, the proposed research will combine behavioral observations with questionnaire data in an effort to generate a more comprehensive measure of caretaking behaviors, as it is obtained using multiple methods and across multiple informants. Champion and Compas (2008) summarize the different empirical studies as well as the

different methods that have been used to assess caretaking and parentification in child and adolescent populations.

Empirical Studies of Child and Adolescent Caretaking

Although caretaking and its theoretical underpinnings have been described extensively in the literature, empirical research has been surprisingly limited. A small, but significant, number of empirical studies have been conducted looking at caretaking across diverse samples (e.g., children of immigrant families, children living in poverty, children of divorced parents, children of parents with a terminal illness, children of parents with alcoholism, children of depressed parents). These studies are briefly summarized here (see Champion & Compas, 2008, for a more complete review).

In families that have recently immigrated, the process of immigration and acculturation is often characterized by many challenges and major-life changes including but not limited to sociocultural and economic changes that have a direct impact on family relations (Walsh et al., 2006). Youth in these families may take on emotional (e.g., serving as a confidante, settling family disputes) and instrumental (e.g., translating, caring for siblings, earning income) caretaking responsibilities as the family interfaces with school, work, healthcare, and other societal systems. Studies of increased filial responsibility and adjustment in youth among immigrant families have produced mixed results. Some studies show that immigrant children who take on the role of interpreting for their parents have higher academic performance (Buriel et al., 1998). However, other studies show that immigrant youth who report a high sense of obligation to familial needs were more likely to put off schoolwork and defer post-secondary education (Suarez-

Orozco, 1995). It is noteworthy that these studies have not examined factors that could account for these different effects on children's adjustment, including the amount, duration, and reciprocity of caretaking in families.

Caretaking has also been studied in children living in urban poverty, a living environment that is characterized by high levels of chronic stress (Luthar & McMahon, 2007). In their sample of 356 adolescent children and their mothers, Luthar and McMahon set out to identify the defining characteristics and potential consequences of caretaking burden. They found that characteristics of the children, vocational-educational status of the mother, and family structure correlated with caretaking burden more consistently than psychiatric, substance use, or personality problems in the mothers. Further, they found support for a curvilinear effect of caretaking responsibility on child adjustment, with children who engaged in moderate amounts of caretaking experiencing lower levels of psychological distress compared to those children who engaged in low or high levels of caretaking.

While the stressful conditions of immigration and acculturation or of living in poverty represent more chronic conditions, divorce also marks a stressful transition for families. Early observational research looking at parent-child relationships and family structure in divorced families (e.g., Wallerstein, 1985; Weiss, 1979) found that in post-divorce, single-parent households there is often a shift from being hierarchically structured to being collaterally structured where the child takes on a "junior partner" role and tends to many of the emotional needs of the divorced parent. Weiss (1979) posited that being placed in an adult role tended to foster independence in older children, especially if their earlier developmental needs had been met. However, this role was

distressing for the younger children as they were not developmentally able to take on the age-inappropriate responsibilities (Weiss). Jurkovic et al. (2001) corroborated these observational findings. They found that the adolescents in the divorced families reported providing more emotional and instrumental caregiving as well as experiencing more unfairness in the families of origin as compared to the non-divorced group.

Parents with life threatening illnesses are faced with significant limitations in functioning, including impairment in their ability to fulfill parental roles. As a consequence, families of parents with terminal illnesses are an important population in which to study caretaking by children. Having a chronic life threatening illness such as AIDS or cancer may prevent parents from adequately fulfilling their parental roles. Stein et al. (1999) found that parentification had an impact on adjustment in these adolescent offspring of parents with AIDS. Specifically, they found that more adult role taking was associated with more self-reported distress and that those adolescents who reported greater parental role behaviors also reported more externalizing problem behaviors (e.g., greater promiscuity, alcohol/drug use, conduct problems). Grant and Compas (1995) examined stressful events within the family that involved caretaking by children whose parents had cancer. They found that the increased symptoms of anxiety and depression reported by adolescent girls whose parents had cancer were completely accounted for by gender differences between boys and girls in levels of stress related caretaking (e.g., taking care of younger siblings, doing household chores). Further, these differences were only found in families in which a mother as opposed to a father had cancer, and only in adolescent as compared with pre-adolescent girls. These findings further highlight the

importance of consider child age and gender when examining the effects of caretaking behavior.

Similar to findings from studies of physical illness in parents, parental psychiatric problems have also shown adverse effects of caretaking by children. For example, Godsall et al. (2004) found that parentification was a significant predictor of self-concept in both high-functioning and low-functioning adolescent children of parents who suffer from alcoholism. In a more recent study, Burnett and colleagues (2006), they found that parental alcoholism and family unpredictability each made independent contributions to childhood parentification.

Caretaking in Offspring of Parents with Depression

Parental depression represents a particularly important context for studying caretaking behavior by children. Parental depression has been found to be a significant risk factor for emotional and behavioral problems in children and adolescents (Goodman & Gotlib, 1999). 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).

Exposure to the negative cognitions, behaviors, and affect of depressed parents creates a chronically stressful environment for offspring of these mothers and fathers, which in turn has been associated with negative psychological consequences for these children (Goodman & Gotlib, 1999). Several sources of stress within families have been found to be associated with parental depression, including parental intrusiveness, parental

withdrawal, and marital discord (Gelfand & Teti, 1990). Specifically, parental withdrawal and parental intrusiveness are sources of stress for children of depressed parents and have been found to be predictive of increased levels of internalizing and externalizing symptoms in children of depressed parents (Jaser et al., 2005; Langrock et al., 2002). Parental withdrawal and unavailability may be a particularly important factor in eliciting caretaking behaviors in adolescent children of depressed parents.

Further, depressed parents likely experience high levels of affective distress and psychological neediness, which may impose emotional demands on their children (Radke-Yarrow et al., 1994). In the absence of stable parenting and the presence of unstable parenting (i.e., increased withdrawn and intrusive parenting and increased marital discord), children of parents with a history of depression are hypothesized to assume age-inappropriate caretaking behaviors. Thus, caretaking may serve as an important link in explaining the relationship between maternal depression and negative outcomes in children of parents with a history of depression.

Adolescence marks a period of significant increase in psychopathology across a wide range of disorders (e.g., depression, conduct disorder, eating disorders; Compas, 2004). It may be especially important to learn more about children of depressed parents as they move into adolescence since it marks a time of increased incidence in the development of psychopathology (Hankin et al., 1998). Given that adolescent offspring of depressed parents face an elevated risk for negative mental health outcomes, it is critical to examine the intergenerational mechanisms of transmission.

Parenting factors that contribute to and/or elicit caretaking in children of depressed parents. It is important to understand what may trigger or elicit caretaking of

depressed parents by their children. Research by Field (1984) looking at interactions between depressed mothers and their infants indicated that depressed mothers displayed less positive affect, less attentiveness, and more fussiness during their interactions with their babies compared to healthy control mothers. Further, studies of depressed mothers and their infants have shown that these mothers exhibit two different types of interactive styles: intrusive and withdrawn (Cohn et al., 1990; Field et al., 1990). Withdrawn interaction styles are characterized by understimulating behaviors (e.g., low levels of vocalization, touching, looking away from the infant) whereas intrusive interaction styles are characterized by overstimulating behaviors (e.g., rough tickling, poking, tugging at the infant). Hart and colleagues (1999) found that these behavior interaction styles generalize beyond the parent-child dyad to other significant relationships, suggesting that these are stable patterns of behavior.

Parental depression may exert different effects on children's caretaking when mothers vs. fathers suffer from the disorder. Specifically, the tend-and-befriend model suggests that mothers are more likely to engage in caring for their children than fathers and that these processes may be more pronounced in families that are under high levels of stress. Research on human males and females shows that, under conditions of stress, the desire to affiliate with others is substantially more marked among females than among males (Tamres et al., 2002; Taylor, 2002; Taylor et al., 2000). However, this pattern appears to be disrupted in depressed adults. Depressed adults, as compared with non-depressed controls, show greater withdrawal from social support from spouses, family members and friends, and alienate and even push others away (Coyne, 2001). Parental withdrawal from social support provided by their adult peers may result in a "double hit"

for children of depressed parents. Children may be pulled out of a social network in which there may be other adults who could provide support, while their parent is unable to successfully fulfill their responsibilities. Further, children of depressed parents may be often placed in a role of fulfilling these caretaking responsibilities for the family. These effects may have a greater impact on children of depressed mothers vs. depressed fathers, as the loss of the tend-and-befriend pattern by mothers may be more pronounced.

Although Field and colleagues (2006) posit that depressed mothers can be classified by two separate behavior interactions styles as intrusive or withdrawn, more recent research has found that these behaviors are often highly correlated and that the behaviors of depressed parents may actually cycle unpredictably between these two types of behaviors. For example, in a study examining interactions between mothers with a history of depression and their adolescent children, Jaser et al. (2007) found that mothers' withdrawn and distancing behaviors were correlated with both hostile and intrusive behaviors as coded by trained observers ($r = .50$ and $.60$, respectively; $p < .01$). This pattern of significant correlations was consistent with findings based on the adolescent's perceptions of their parents withdrawn and intrusive behaviors as well as when using the parents' self-reports of their own behaviors (Jaser et al., 2007; Langrock et al., 2002).

Researchers have also found that the mothers' interaction styles were important predictors of the infants' own behavior (Cohn et al., 1990). For example, infants of withdrawn depressed mothers showed fewer facial expressions and paid less attention to their mothers compared to infants of intrusive depressed mothers (Field et al., 1990). Mothers' interaction styles also predicted infants' physiological profiles including frontal activation as reflected in EEG recordings (Jones et al., 1997; Diego et al., 2005).

Therefore, following the logic that parental behaviors are predictive of child behavior, it will be important to examine the relationship between the levels of parental intrusiveness and withdrawal and caretaking behavior in children. It may be that particular types of parental behaviors are more likely to elicit caretaking behaviors.

In a study by Radke-Yarrow and colleagues (1994), preschool-age children's sensitivity and responsiveness to mothers' needs were investigated under conditions of high (depressed mothers) and low (control mothers) parenting risk in two settings, one in which mothers simulated sadness in the laboratory and a second in a naturalistic setting. They found that girls were significantly more caring than boys and that more severe maternal depression was needed to elicit high levels of responding in boys. Radke-Yarrow et al. also examined child characteristics such as affect regulation and attachment style and found that the highest frequencies of caring were from children with severely depressed mothers, problems with child affect regulation, and secure attachment.

One recent study has provided some evidence on emotional and instrumental caretaking in a population of adolescents at risk for psychopathology by having a depressed parent and/or a parent with a history of depression (Champion et al., 2008). This is the only study to directly observe caretaking behavior by adolescent offspring of depressed parents, an age group that may be at particularly high risk for difficulties associated with increased caretaking demands. As noted above, most of previous studies have relied solely on the use of retrospective self-reports of caretaking behaviors to predict adult adjustment rather than examining caretaking behaviors and childhood adjustment concomitantly. Champion et al. (2008) addressed both of these limitations by

using direct observation of caretaking behavior and gathering parent- and child self-reports of adolescent adjustment concurrently.

Champion et al. (2008) used direct observations of interactions between mothers with and without a history of depression and their adolescent offspring to study levels of correlates of instrumental and emotional caretaking behaviors. Correlational analyses indicated that both adolescents' instrumental and emotional caretaking behaviors were related to greater symptoms of anxiety/depression in the adolescents, and that maternal withdrawn parenting was correlated specifically with adolescents' instrumental but not emotional caretaking. Linear multiple regression analyses indicated that mothers' withdrawn parenting style and adolescents' emotional (but not instrumental) caretaking are separate, independent sources of risk for internalizing symptoms in children of mothers with a history of depression. The effects for emotional, but not instrumental caretaking, may be due in part to the high correlations between these two behaviors ($r = .69$), leading to issues of multicollinearity in the regression analyses. Further, the findings suggest that adolescents' emotional caretaking is related differently to mothers' as compared with adolescents' reports of adolescents' anxiety/depression symptoms.

Contrary to the hypotheses, adolescents' observed caretaking behaviors were not related to mothers' diagnostic history of depression or to her current level of depressive symptoms (Champion et al., 2008). It is possible that no differences were found in adolescents' caretaking behavior because the mothers in this study were recruited for the presence or absence of a history of depression and were screened out for the presence of a current depressive episode. Even when considering mothers' current levels of depressive symptoms, the mean score on the Beck Depression Inventory for the mothers in this

study with a history of depression was approximately 13, which falls in the “minimal depression” range according to Beck et al. (1996). Therefore, this study may have been limited in its ability to test the relation between current maternal depression and adolescents’ caretaking behaviors, as there was limited variability in the range of current maternal depressive symptoms.

While the hypothesis that caretaking would be related to parental depression (i.e., history of and current depressive symptoms) was not supported, there was support for the hypothesis that caretaking would be related to negative parenting (Champion et al., 2008). Specifically, maternal withdrawn (but not hostile/intrusive) parenting was significantly correlated with adolescents’ observed instrumental caretaking but not emotional caretaking. Mothers’ negative parenting styles, which are highly correlated with their current depressive symptoms, may be manifestations of their depression that persist even out of episode and may be more readily observable to their children. Further, maternal withdrawal may be more likely to elicit caretaking behavior from adolescents than maternal hostile/intrusive parenting because it elicits greater feelings of sympathy, responsibility, and guilt. Further, emotional caretaking was significantly and positively related to mothers’ reports of their own withdrawn parenting. The relationship between maternal withdrawal and adolescents’ increased engagement in emotional caretaking suggests that adolescents may be more likely to try to meet the parental needs of a mother who is needy and withdrawn as compared to a more hostile/intrusive parent who may be critical of the child’s attempts to help solve problems or offer emotional support.

Unexpectedly, and contrary to previous research on caretaking behavior, Champion et al. (2008) did not find gender differences in adolescents' emotional or instrumental caretaking. One possible explanation for this lack of differences is that this sample consisted of mothers only and not fathers. Although research suggests that girls are more likely to assume a caretaking role (e.g., Grant & Compas, 1995), perhaps sons are equally likely to demonstrate caretaking roles in response to their mothers; i.e., there may be an interactive effect between parent and child gender. This scenario may be especially true of boys in households with single mothers where the boys are expected to be the "man of the house." Unfortunately, the sample size of this study was not large enough to test this interactive effect.

There was a significant and positive association of adolescents' self-reports of their internalizing symptoms with both emotional and instrumental caretaking (Champion et al., 2008). In contrast, when using mothers' reports of their children's adjustment, there was a negative association with emotional caretaking that approached significance and no association with instrumental caretaking. This trend is consistent with other research (Welch, Wadsworth, & Compas, 1996) in which the adolescents whose parents had cancer self-reported elevated symptoms of anxiety and depression, but their parents seemed to be unaware of the emotional problems that their children were experiencing and did not report that their children were distressed.

When looking at the role that caretaking behaviors play in predicting the adjustment of these children along with other maternal predictors (i.e., current depressive symptoms and withdrawn parenting), Champion et al. (2008) found that emotional caretaking and withdrawn parenting were the only two factors that remained as

significant predictors of adolescent adjustment, explaining approximately 15% of the total variance. These results suggest that both withdrawn parenting and emotional caretaking function as separate and unique risk factors for adolescents of parents with a history of depression.

This study had several limitations regarding the characteristics of its sample and design that should be addressed (Champion et al., 2008). As noted above, mothers were only included in the study if they had a history of depression and not if they were in a current depressive episode. Further research is needed to test the extent that caretaking is related to parental depression status and depressive symptoms when looking at more severe cases. Additionally, fathers were not included in this study. Inclusion of fathers in future research would be useful to better understand the effect that parent-child gender matching has on caretaking behaviors. Further, caretaking was measured using direct observation only. Although this method is an improvement compared to studies that relied solely on adults' retrospective reports of child caretaking, further improvement could be made by measuring caretaking using multiple methods and informants (e.g., child self reports and parent reports). Finally, 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 caretaking and adolescent adjustment.

Summary of Previous Research

In sum, caretaking is a multidimensional, complex construct. While these studies provide an initial understanding of the effect of caretaking on children, further

investigation is needed. For a more detailed review of these studies see Champion and Compas (2008).

At this point, no clear conclusions can be drawn as to whether caretaking is universally adaptive or maladaptive for children and adolescents. What is clear, however, from the results of the studies summarized above is that parenting can be significantly disrupted in the family due to stressful events (e.g., immigration, poverty, divorce), parental illness, or parental psychopathology. It is also clear that in the absence of stable parenting, children often assume caretaking roles. What is unclear, however, is exactly how parenting is disrupted as well as the impact that children's engagement in caretaking has on adjustment. It is critical that future research examines these questions. Therefore, caretaking cannot be considered "all good" or "all bad." Rather, it needs to be studied along a continuum in which both costs and benefits of engaging in caretaking behaviors are considered.

There is some evidence in the literature to suggest that age and gender are related to caretaking and psychological adjustment (Bossard & Boll, 1956; Goglia et al., 1992; Wagner & Compas, 1990). Some researchers suggest that girls may be more likely than boys to engage in caretaking behaviors partly because females are expected and socialized to nurture and maintain relationships (Brody, 1996; Buchanan et al., 1991). Understanding the interplay between parent and child gender may also offer insight into the development of child caretaking behaviors. For example, the gender match between parent and child may play an important role in understanding gender differences in child and adolescent caretaking behaviors. In a sample of divorced and nondivorced parents, Hetherington (1999) found that mothers were more parentifying than fathers, although

both mothers and fathers parentified their daughters more than sons. Furthermore, parents may engage with their children in ways that solicit caretaking behaviors. In addition to gender effects, Herer and Mayseless (2000) found age effects for caretaking behaviors in a sample of nonclinical adolescents. They found that girls and first-borns showed a higher tendency to role-reversal as compared to boys and later-born children.

At this point in weighing the evidence, it appears as though the costs of caretaking outweigh the benefits. However, it may be that many of these studies did not examine potential benefits. Therefore, future research should include measures that capture both potential benefits, such as increased competency, as well as potential costs of caring. Furthermore, factors to consider include 1) characteristics of the caretaking, such as subtype (emotional v. instrumental) amount, duration, and level of reciprocity; 2) the characteristics of the child, such as age and gender; 3) characteristics of the family, such as intact v. single parent homes, siblings v. only child homes; and 4) the perceived burden of caretaking should all be included as there is preliminary evidence that these factors may either exacerbate or diminish the likelihood of a child assuming a caretaking role and/or the effects of disrupted parenting on outcome. The present study was designed to address several of these important factors.

Rational for the Current Study and Proposed Hypotheses

The proposed study was designed to examine the psychosocial correlates of caretaking behaviors in a sample of 9-15 year old children of depressed parents. The proposed research had two primary aims: 1) to better understand parental and child factors that are associated with a child's assuming a caretaking role in the family and 2)

to further explore the relationship between caretaking and adjustment for these children. The specific hypotheses for this study were divided into three sets and each of these hypotheses was tested separately for observed instrumental and emotional caretaking, as well as for child self-reported caretaking behaviors. The first set of hypotheses addressed demographic factors including child and parent characteristics:

1-1. Child Factors: (a) It was expected that there would be a main effect for child gender, such that girls of depressed parents would show significantly more caretaking behaviors compared to boys of depressed parents. (b) It was expected that there would be a main effect for child age, with older children of depressed parents showing significantly more caretaking behaviors compared to younger children. (c) It was hypothesized that child caretaking behaviors would be related to whether or not the child has a sibling in the home; that is, children who live in households with siblings will show significantly more caretaking behaviors compared to only children.

1-2. Parent Factors: (a) It was expected that children's caretaking behaviors would be related to parental gender; that is, children of depressed mothers would show significantly more caretaking behaviors compared to children of depressed fathers. (b) It was hypothesized that children's caretaking behaviors would be negatively associated with parental age. (c) It was predicted that children's caretaking behaviors would be related to parental marital status; that is, children in single parent homes would show significantly more caretaking behaviors compared to children in intact families. (d) It was hypothesized that current employment status would be a significant predictor of children's caretaking behaviors, with children of parents who are not currently working engaging in significantly more caretaking behaviors compared to children of parents who

are currently working.

The second set of hypotheses examined the relationship between caretaking and observations of parental functioning and parenting behaviors. The specific hypotheses were:

2-1. Parental Psychopathology: (a) Children's caretaking behaviors would be negatively associated with parental functioning as measured by the Global Assessment of Functioning on the SCID. (b) Children's caretaking behaviors would be positively associated with indicators of parental depression (i.e., current MDD diagnosis, parent self-report of depressive symptoms, and observed sadness).

2-2. Parenting. Children's caretaking behaviors would be positively correlated with withdrawn parenting, but not with intrusive parenting, and would be negatively associated with positive parenting behaviors (i.e., high levels of warmth and structure).

The final set of hypotheses was designed to address the relationship between caretaking and child adjustment. Both linear and curvilinear were tested using multiple regression analyses to examine these relationships.

3-1. It was hypothesized that a curvilinear model would best account for the relationship between caretaking and adjustment with low and high levels of caretaking associated with problematic behaviors (i.e., increased depressive symptoms) and moderate levels of caretaking associated with positive adjustment (i.e., increased competency).

CHAPTER II

METHOD

Participants

Participants included 89 depressed parents and their adolescent children (57 girls and 58 boys). This age group was selected because the risk for depression increases significantly during the transition from childhood to adolescence, making this an optimal time for prevention of the onset of depression (e.g., Hankin et al., 1998). Children younger than 9-years-old may be unable to benefit from the relatively complex cognitive portions of the intervention, and adolescents older than 15 years of age are likely to leave home during the 2-year follow-up period and therefore be less available for follow-up.

Participants were drawn from a sample of families recruited to participate in a two-site randomized family-based, cognitive-behavioral intervention for children of depressed parents being conducted at Vanderbilt University in Nashville, Tennessee and the University of Vermont in Burlington, Vermont. Recruitment and randomization procedures, measures, and diagnostic interviews were matched across sites. As of May 1, 2008 a total of 189 families (including 215 children) had been enrolled in the study. Coding of observations of 115 parent-child dyads had been completed as of this date (May 1, 2008). The sample for the current analyses included those families with completed coded observation data.

Parents were screened to determine that at least one parent met criteria for at least one episode of major depressive disorder during the lifetime of their children.

Participants were excluded if neither parent met criteria for a current or past history of depression, or if either parent met criteria for lifetime Bipolar Disorder Type I (BP-I) or lifetime Schizophrenia. Exclusion criteria for children included current Conduct Disorder, current Substance or Alcohol Abuse or Dependence, mental retardation or a history of an autism spectrum disorder. Furthermore, following the protocol for the larger intervention study, if any family member was acutely suicidal the family was temporarily placed on-hold, as were families in which any participating child was currently depressed. If a parent was currently depressed, the family was permitted to participate as long as extreme functional impairment (i.e., GAF < 50) or active suicidal ideation was not present. Families who were placed on hold were re-contacted on a monthly basis and were eligible to participate when parents no longer met criteria for being extremely functionally impaired or acutely suicidal and children were no longer in a Major Depressive episode.

Parents' included 89% mothers with a mean age of 41.7 ($SD = 7.8$) and reported a mean education level of 3.5 ($SD = 1.2$), which corresponds to completion of some college and a mean annual income of 5.7 ($SD = 2.2$), which corresponds to \$25-40K. The sample was 67% Caucasian, 17% African American, 5% Asian American, and 11% Other, which is roughly representative of the regions in which the study was conducted. Of the parents in the sample, 58% were married/partnered, 27% were divorced/separated, and 14% were single, 69% were currently employed outside of the home, and had a mean number of children equal to 2.4 ($SD = 1.21$; range = 1-6). Children's mean age was 11.4 ($SD = 2.0$), with approximately 50% female and approximately 18% being only children in their family (see Table 1 for a summary of these descriptive statistics).

Table 1. *Descriptive Statistics for Demographic Variables*

Child Demographic Characteristics (N = 115)	Descriptive statistics	Possible values
Age	11.4 (2.0)	9-15
Gender (female)	50% (57)	yes/no
Sibling Status (only child)	18% (21)	yes/no
Ethnicity (Caucasian)	67% (77)	yes/no
Parent Demographic Characteristics (N = 89)		
Age	41.7 (7.8)	26-69
Gender (female)	89% (79)	yes/no
Married/Partnered	58% (52)	yes/no
Currently Employed	69% (61)	yes/no
Low-Income (< \$25,000/year)	24% (21)	yes/no
Education (\leq High School Graduate)	18% (16)	yes/no
Number of Children	2.4 (1.2)	1-6

Note. Descriptive statistics represent the mean for continuous variables with the standard deviation in parentheses and the percent for categorical variables with the number of participants in parentheses.

With regard to parental depression, 27% of the parents in this sample met criteria for a current diagnosis of Major Depressive Disorder, 53% were in current psychiatric treatment, and parents reported approximately 10 episodes of Major Depression ($M = 9.7$; $SD = 14.4$; range = 1-75) during the lifetime of their oldest participating child.

Procedure

At both sites, families were primarily recruited via mental health clinics and practices. Brochures were placed in appropriate waiting rooms and mental health specialists were educated about the intervention and provided with referrals accordingly. Other methods of recruitment were implemented as necessary and included advertising through the television, radio, newspapers, and through mass email mailing lists. Potential participants contacted the research staff and participated in a 30-45 minute diagnostic

phone screening interview to determine a history of depression and to rule out any exclusionary criteria. Upon completion of this initial screening, families who were ineligible were informed of their status, provided with treatment referrals if needed and asked if they would like to be re-contacted for future studies; families placed on-hold were re-contacted on a monthly basis, while families who met all inclusion criteria were eligible to come in for further in-person interviews.

Potential participants who came into the laboratory for further interviews were consented and asked to participate in an extensive battery of assessments, including diagnostic interviews, questionnaires, and videotaped interactions. The identified target parent (i.e., the parent with the history of depression) was interviewed using the Structured Clinical Interview for DSM-IV (SCID, First et al., 2001) about his/her history of psychopathology. Both children and parents were interviewed with the Schedule for Affective Disorders and Schizophrenia for School-Aged Children – Present and Lifetime Version (KSADS-PL, Kaufman et al., 1997).

Upon completion of these interviews, parents and children were asked to complete questionnaires. In addition to providing demographic data, parents were asked to complete a measure of their current depressive symptoms, a measure of parenting style, and a measure of their child's functioning. Adolescents were asked to complete measures of their own depressive symptoms and functioning, a measure of their caretaking behaviors, and a measure of their perception of their parent's parenting.

Next, parents and adolescents participated in two 15-minute video-taped interactions. Following the protocol we developed and used successfully in previous research, the parent-child interactions were conducted in a private laboratory space,

including comfortable seating and a video camera. The length of the interactions was chosen due to the fact that the coding system being used was designed for use with 15-minute interactions (Melby & Conger, 2001). For the first interaction, the dyad was instructed to spend 15 minutes discussing a recent pleasant activity in which they both participated (e.g., a family outing or holiday). A cue card with stems for standardized prompting questions was given to the family to guide the interaction (e.g., What happened when we [went camping]? How did we feel when we [went camping]? What prevents us from doing activities together that we like? How could we do more pleasant activities?). These questions were chosen to provide an opportunity to generate positive affect and behavior, and to give the interaction a problem-solving component, which has been included in the majority of research using the IFIRS system (Melby & Conger, 2001). After providing these instructions, the experimenter started the video camera and left the room. The experimenter returned after 15 minutes, stopped the camera, and prepared the parent and child for the second interaction.

In preparation for the second interaction, parents and adolescents were asked to discuss a recent time in which mom or dad was feeling depressed or down and it was making it difficult for the family. The dyad was given a second cue card with 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 the 15-minute period, the experimenter returned, turned off the camera, and debriefed the participants.

At the conclusion of these assessments, eligible families were randomly assigned

either to a group cognitive-behavioral intervention or to a control condition (education self-study program). Assessment sessions were repeated at post-intervention and at 6-, 12-, 18-, and 24-months follow-ups. Parents and children were each offered \$40 in monetary compensation at each assessment point. Data for the present study were drawn only from the initial, baseline assessment.

Measures

Demographic Information. Demographic information was obtained from parents in a questionnaire asking for their date of birth, gender, marital/partner status, current employment status, income, level of education, and their total number of children. Additionally, parents were asked to provide information on the age, gender, and relationship for each child living in the home.

Diagnostic interviews. As described above, the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID; First et al., 2001) and the Schedule for Affective Disorders and Schizophrenia for School-aged Children -- Present and Lifetime Version (K-SADS-PL; Kaufman et al., 1997) were used to assess target parents and their children in order to determine if they met eligibility criteria for the study. The SCID is a semi-structured psychiatric interview that was used to assess the target parents current and lifetime history of psychiatric diagnoses. Information regarding the target parent's overall functioning, current psychiatric treatment status, as well as the total number of Major Depressive episodes that were experienced during the oldest eligible child's

lifetime was also obtained from this interview. The KSADS is also a semi-structured interview designed to ascertain present episode and lifetime history of psychiatric illness according to DSM-IV criteria. Inter-rater, and test- re-test reliability have been established for both interviews, as well as convergent and discriminant validity (First et al., 2001, Kaufman et al., 1997). In the current sample, inter-rater reliability for the diagnosis of Major Depressive Disorder was adequate on the SCID and KSADS interviews ($\kappa = .78$; 96% agreement and $\kappa = .63$; 93% agreement, respectively).

Observed Behaviors from Parent-Child Interaction Tasks. Direct observations of parent-child interactions were used in the present study as a means to sample the stressful context that characterizes families struggling with depression and the way children react to this stress in their lives. A global coding system (Iowa Family Interaction Rating Scales (IFIRS); Melby, Conger et al., 1998) was used to code the previously described two, 15-minute video-taped conversations between depressed parents and their children. IFIRS is a global coding system designed to measure behavioral and emotional characteristics at both the individual and dyadic level. This macro-level system is ideal for assessing patterns of behavior that comprise the ongoing, dynamic process of interaction (Melby & Conger, 2001). The validity of the IFIRS system has been well-established using correlational and confirmatory factor analyses (Kashy & Kenny, 1990).

The IFIRS coding system requires that each tape be viewed a total of 5 times: once to obtain an overall sense of the interaction, and an additional 2 times per focal (parent and adolescent). Behaviors are then 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 which indicates that the behavior is “not at all characteristic” of the subject during the interaction to a 9 which indicates 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. The Individual Characteristic scales measure each participant’s expression of specific behaviors, regardless of the other interactor, whereas the Dyadic Interaction Scales measure the behavior of each participant toward the other interactor. Additionally, several Parenting Codes, a type of dyadic scale, were used to assess the parent’s observed and reported childrearing behaviors displayed and/or discussed during the interaction.

Training for the IFIRS consisted of in-depth studying of the manual, a written test of 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. Weekly training meetings are also held in order to prevent coder drift and to provide a forum in which questions about the different codes may be addressed. All interactions were double-coded by two independent observers using a total of 22 codes to assess parents and 14 codes to assess children. The specific codes that were used for the present study are explained below.

For any code in which the two raters were off by one point, the higher of the two scores was used as the consensus code; however, for any code in which the two raters’ scores were greater than two points apart, the raters met to establish consensus. For the present study, consensus codes were used for all hypothesis testing; however, the original

scores for each rater were used to determine inter-rater reliability. Ratings showed adequate inter-rater reliability (73% inter-rater agreement).

Caretaking behaviors. Caretaking behaviors were measured using both child self-report and direct observations of child behavior in two video-taped interactions with the target parent. The Parentification Questionnaire-Youth (PQ-Y; Godsall & Jurkovic, 1995) is an adaptation of the Parentification Questionnaire (PQ; Sessions & Jurkovic, 1986) modified for children and adolescents and it written at a 3rd grade reading level. This measure is a 20-item, true-false self-report questionnaire that assesses the subjective experience of caretaking responsibility between children and their families. The items include both emotional caretaking (e.g., “I often feel like a referee in my family,” “I feel I’m asked too often to take care of some other family member”) as well as instrumental caretaking (e.g., “I often have to do other family members' chores,” “I have to help a lot with the family bills”). Internal consistency reliability of this measure is adequate ($\alpha = .75-.83$) and in the current sample was also found to be adequate ($\alpha = .80$).

To assess direct observations of child caretaking behaviors, two codes were used which were developed in a recent study in our laboratory (Champion et al., 2008). These codes, *Emotional Caretaking* and *Instrumental Caretaking*, were developed based on the guidelines of the IFIRS manual to provide a measure of adolescent’s observed and reported caretaking behaviors displayed during the interaction. Extensive research of the literature was conducted in order to develop appropriate definitions for these constructs.

Instrumental and Emotional Caretaking were defined as follows. The Instrumental Caretaking scale measures the extent to which the child takes care of the parent or takes on tasks or responsibilities that are age-inappropriate and typically considered parental roles. It includes taking on household responsibilities such as watching siblings or other family members, cleaning, doing dishes, preparing meals, etc., or carrying out parental roles during the interaction (e.g., taking charge of the interaction, adjusting the parent's clothing, or correcting misbehavior). At high levels, the child may seem very mature for his/her age. The Emotional Caretaking scale measures the extent to which the child takes care of the emotional needs of the parent or takes on an emotional burden that may, especially at high levels, be age-inappropriate. At lower levels, the child may display knowledge of the parents' problems or difficulties (e.g., emotional symptoms, financial difficulties, marital problems, or interpersonal difficulties). At higher levels, the child may offer solutions for the parent's emotional problems or take responsibility for the parent's difficulties and may seem overly mature for his/her age. Both codes are scored for frequency and severity using a 9-point scale, as are all other codes within IFIRS system.

Parental functioning and parenting. Multiple informants and methods, including parent and child reports as well as direct observations, were used to assess parenting behaviors and affect. The parental depression version of the Responses to Stress Questionnaire (Connor-Smith et al., 2000; Langrock et al., 2002) was used to assess how often in the last six months adolescents were exposed to stressors related to parent behaviors associated with depression. Twelve stressful events were selected to provide

examples of three areas which research has shown to be affected by parental depression: marital conflict, parental withdrawal (or disengagement) and parental intrusiveness.

Prior research with this measure has found adequate internal consistency (Chronbach's alphas ranged from $\alpha = .49$ to $.67$) and good test-retest reliability over a 3-month period (r 's ranged from $.57$ to $.80$, all $p < .01$) (Jaser et al., 2005). Based on previous analyses that indicated the marital conflict items were not related to child adjustment, these items were dropped in analyses for the proposed study (Langrock et al., 2002).

To measure direct observations of parenting behaviors and affect, several IFIRS codes were used. Specifically, Sadness was used to reflect affective state during the interaction tasks. Neglect/Distancing was used to reflect parental withdrawn behavior; Intrusiveness was used to reflect parental intrusive behavior; and, Warmth/Support and Child Monitoring were used to reflect positive, authoritative parenting.

The Global Assessment of Functioning (GAF) index and the presence or absence of a current diagnosis of a Major Depressive Episode from the SCID were used as indicators of parental functioning. Finally, to further assess current parental affect and mood, parents were asked to complete the Beck Depression Inventory-II (BDI-II; Beck, Steer, Ball & Ranieri, 1996) to assess their current depressive symptoms. The BDI-II is a standardized and widely used self-report checklist of depressive symptoms and has adequate internal consistency, reliability and validity. In the current sample, the BDI-II was found to have excellent internal consistency ($\alpha = .91$).

Children's Psychosocial Adjustment. The Center for Epidemiological Studies-Depression Scale (CES-D) (Radloff, 1977) was used as a measure of child depressive

symptoms. Children completed the CES-D, a self-report measure of the frequency of 20 depressive symptoms over the past week using a 5-point Likert scale. The use of self-report scales such as the CES-D as a measure of depressive symptoms has been successfully validated with both adults (Dohrenwend & Shrout, 1984) and adolescents (Fendrich et al., 1990; Lewinsohn et al., 1991). The CES-D is short and easy to read, has been successfully administered in several large school samples (Lewinsohn et al., 1991; Schoenbach et al., 1982), and has good psychometrics with youth (Roberts et al., 1990). In the current sample, the CES-D was found to have strong internal consistency ($\alpha = .88$).

In addition to measuring a potential risk factor associated with caretaking, social competency was measured as a way to assess for potential beneficial correlates of caretaking. The Social Competence Scale of The Child Behavior Checklist (CBCL, Achenbach, 1991) was given to the parents to assess their perceptions of their children's social competence over the past 6 months. Adolescents also completed the Social Competence Scale on of the Youth Self Report (YSR, Achenbach, 1991) to provide their own perceptions of their functioning. Items on this scale include 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.

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 non-referred young adults on problem scales (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. For the Total Competence scales, *T* Scores of less than or equal to 40 (< 16th percentile) are in the borderline clinical range and *T* scores of less than 35 (< 10th percentile) are in the clinical range. These cutoffs are based on scores that best differentiate referred versus non-referred children and adolescents (Achenbach & Rescorla, 2001). Descriptive statistics are presented separately for parent and child report. However, in order to reduce the number of analyses conducted and due to the moderate and significant correlation between parent and child reports of child social competence ($r = .44$), raw scores were converted to z-scores and then summed to create a single index of child social competence.

Data Analyses

Data analyses were conducted in several stages. First, descriptive statistics (i.e., central tendency, variability, skewness, kurtosis) were examined for all study variable distributions, and any multivariate outliers were identified and removed. Second, bivariate Pearson correlations were conducted as a first step in examining relationships among indicators of caretaking with child and parent demographic variables, measures of parenting behaviors and psychopathology, and child adjustment (see Table 5). Next, to test the first three sets of hypotheses, which focus on between group comparisons related to child and parent characteristics that predict caretaking, a series of t-tests analyses and bivariate correlations were used. Finally, to address the final hypothesis regarding the relationship between caretaking and psychosocial costs or benefits, a series of linear and curvilinear multiple regression analyses were conducted. The focus of the current

analyses is on the bivariate relationships among the variables of interest. More complex multivariate models will be conducted once coding of the parent-child interactions has been completed on the full sample. To generate the maximum sample size and statistical power, multiple children from several families were included in the present analyses. Subsequent analyses will be conducted with one child randomly selected from those families to include analyses to rule out possible interdependence of children from the same family. The details of the analytic procedure used for each hypothesis are detailed below.

CHAPTER III

RESULTS

Summary of Descriptive Statistics for the Clinical Characteristics of the Sample

Descriptive statistics for observed and reported instrumental and emotional caretaking behaviors, indicators of parental psychopathology, withdrawn, intrusive, and positive parenting behaviors, and adolescent adjustment are presented in Table 2. All variables had adequate variance and distribution to allow for correlation and regression analyses. Most of the measures do not have normative data available. However, the mean score for parents' current depressive symptoms ($M = 18.6$) fell in the minimal to moderate depressive symptom range. Children's depressive symptoms on the CES-D ($M = 14.0$) fell in the mild depressive symptom range, approaching the cutoff of 16 recommended by Radloff (1977) to identify clinically significant symptoms of depression. Children's social competence scores on the CBCL and the YSR fell in the normal range.

Table 2. *Descriptive Statistics for Clinical Variables*

Construct and variable	Descriptive statistics	Possible values
Caretaking		
Observed Emotional Caretaking-Task 1	2.3 (1.4)	1-9
Observed Emotional Caretaking-Task 2	3.6 (2.0)	1-9
Observed Instrumental Caretaking-Task 1	3.1 (1.5)	1-9
Observed Instrumental Caretaking-Task 2	3.5 (1.6)	1-9
Child Self-report of Caretaking (PQY)	5.4 (3.4)	0-20
Parental Functioning		
Global Assessment of Functioning (GAF)	69.2 (9.1)	0-100
Current MDD Diagnosis	27% (24)	yes/no
Parent Self-report of depressive symptoms (BDI-II)	18.6 (11.5)	0-63
Observed Parental Sadness-Task 1	4.2 (1.5)	1-9
Observed Parental Sadness-Task 2	5.4 (1.6)	1-9
Withdrawn Parenting		
Child Report of Withdrawn Parenting	2.1 (2.0)	0-12
Parent Report of Withdrawn Parenting	4.4 (2.0)	0-12
Observed Neglect/Distancing-Task 1	2.5 (1.6)	1-9
Observed Neglect/Distancing-Task 2	2.9 (1.8)	1-9
Intrusive Parenting		
Child Report of Intrusive Parenting	3.8 (2.5)	0-12
Parent Report of Intrusive Parenting	4.8 (2.0)	0-12
Observed Intrusive Parenting-Task 1	2.5 (1.7)	1-9
Observed Intrusive Parenting-Task 2	2.8 (1.7)	1-9
Positive Parenting		
Observed Parental Warmth/Support-Task 1	5.0 (1.5)	1-9
Observed Parental Warmth/Support-Task 2	4.8 (1.9)	1-9
Observed Parental Child Monitoring-Task 1	5.5 (1.4)	1-9
Observed Parental Child Monitoring-Task 2	5.0 (1.3)	1-9
Child Adjustment		
Child Self-report of Depressive Symptoms (CES-D)	14.0 (10.0)	0-60
Child Self-report of Social Competence (YSR)	47.4 (10.6)	0-100 (<i>T</i> scores)
Parent Report of Child Social Competence (CBCL)	48.5 (10.4)	0-100 (<i>T</i> scores)

Note. Descriptive statistics represent the mean for continuous variables with the standard deviation in parentheses and the percent for categorical variables with the number of participants in parentheses.

Patterns of Caretaking

As presented in Table 2, the children in this sample exhibited moderate levels of both emotional and instrumental caretaking during the positive (task 1) and stressful (task 2) interactions with their parents, and they also reported moderate levels of self-reported caretaking behaviors on the PQY. Correlation coefficients listed in Table 3 indicate that there are positive, moderate correlations between emotional caretaking and instrumental caretaking (r 's range from .22 to .47), suggesting that they represent conceptually distinct, but related dimensions of a single complex construct. However, as evidenced by the non-significant correlations between the scores on the PQY with ratings of both emotional and instrumental caretaking, it appears that the PQY and observations of caretaking may actually be capturing different constructs.

To further understand caretaking behaviors in the context of the positive and stressful tasks, the means for observed instrumental and emotional caretaking were compared using paired-samples t -tests for task 1 versus task 2. These results indicated that children of depressed parents displayed more emotional caretaking in the context of a stressful discussion compared to the context of a discussion of a pleasant activity, $t(94) = -5.65, p < .001$; however, there was no task difference for instrumental caretaking, $t(94) = -1.64, p = .10$.

Finally, paired-samples t -tests were conducted to compare emotional and instrumental caretaking within each task. The results indicated that children of depressed parents displayed significantly more instrumental caretaking than emotional caretaking during the positive interaction, $t(107) = -5.12, p < .001$; however, there was no difference for type of caretaking during the stressful interaction, $t(101) = .72, p = .47$.

Table 3. *Correlations among indicators of caretaking*

Caretaking	1.	2.	3.	4.	5.
1. Observed Emotional Caretaking-Task 1	--				
2. Observed Emotional Caretaking-Task 2	.38**	--			
3. Observed Instrumental Caretaking-Task 1	.37**	.22*	--		
4. Observed Instrumental Caretaking-Task 2	.34**	.47**	.42**	--	
5. Child Self-report of Caretaking (PQY)	-.02	-.09	-.01	.05	--

* $p < .05$, ** $p < .01$

Relationship of Child and Parent Demographic Factors with Caretaking Behaviors

Hypothesis 1-1a: Child Gender. It was expected that there would be a main effect for child gender, with girls of depressed parents showing significantly more caretaking behaviors compared to boys of depressed parents. Means and standard deviations for children's caretaking behaviors by gender are reported in Table 4. Independent sample t-tests were conducted and contrary to expectations, boys and girls did not differ significantly on any of the observed or self-reported caretaking behaviors.

Table 4. *Descriptive statistics for caretaking by child gender*

Caretaking	Girls	Boys	Significance Tests
	Mean (SD)	Mean (SD)	
Observed Emotional Caretaking-Task 1	2.5 (1.7)	2.2 (1.1)	$t(106) = -.94, p = .35$
Observed Emotional Caretaking-Task 2	3.6 (2.0)	3.7 (2.1)	$t(100) = .27, p = .79$
Observed Instrumental Caretaking-Task 1	3.0 (1.5)	3.3 (1.5)	$t(106) = .82, p = .41$
Observed Instrumental Caretaking-Task 2	3.3 (1.6)	3.6 (1.6)	$t(100) = .98, p = .33$
Child Self-report of Caretaking (PQY)	5.1 (3.7)	5.7 (3.9)	$t(113) = .85, p = .40$

Hypothesis 1-1b: Child Age. Correlations were conducted to test the hypothesis that there would be an association between child age and caretaking, with older children

of depressed parents showing significantly more caretaking behaviors compared to younger children. Child age was positively correlated with child self-reports of caretaking on the PQY, $r = .19, p < .01$, but child age was not related to any of the observed indicators of caretaking. See Table 5 for complete correlations of caretaking with all other continuous variables that pertain to hypotheses.

Table 5. *Correlations of caretaking with child and parent age, parental functioning, parenting, and child adjustment.*

Construct and variables	EC1	EC2	IC1	IC2	PQY
Child Age	-.01	.01	.01	-.06	.19*
Parent Age	-.17+	-.03	.03	-.22*	-.18+
Parental Functioning					
Global Assessment of Functioning (GAF)	-.13	-.20+	-.17+	-.24*	-.22*
Parent Self-report of depressive symptoms (BDI-II)	.18+	.19+	.11	.22*	.23*
Observed Parental Sadness-Task 1	.45**	.21*	.35**	.32**	.16
Observed Parental Sadness-Task 2	.19+	.43**	.17+	.33**	.33**
Withdrawn Parenting					
Child Report of Withdrawn Parenting	.10	.07	.05	.02	.53**
Parent Report of Withdrawn Parenting	.29**	.12	-.00	.16	.15
Observed Neglect/Distancing-Task 1	.25**	.22*	.19+	.36**	.04
Observed Neglect/Distancing-Task 2	.29**	.17+	.18+	.38**	.24*
Intrusive Parenting					
Child Report of Intrusive Parenting	.20*	-.01	.06	-.04	.57**
Parent Report of Intrusive Parenting	.22*	.10	-.01	.16	.31**
Observed Intrusive Parenting-Task 1	.12	.10	.04	.25*	.06
Observed Intrusive Parenting-Task 2	-.04	-.01	-.14	-.01	.05
Positive Parenting					
Observed Parental Warmth/Support-Task 1	-.07	.13	.05	-.08	-.01
Observed Parental Warmth/Support-Task 2	.01	.15	.06	-.06	-.34**
Observed Parental Child Monitoring-Task 1	-.01	-.01	.03	-.09	-.03
Observed Parental Child Monitoring-Task 2	-.17	-.08	-.18+	-.29**	-.19+
Child Adjustment					
Child Self-report of Depressive Symptoms (CESD)	.04	-.18+	-.12	-.12	.47**
Child Self-report of Social Competence (YSR)	.03	.08	.00	-.06	.00
Parent Report of Child Social Competence (CBCL)	-.12	.05	-.19+	.06	-.05

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

Note. EC1: Observed Emotional Caretaking-Task 1; EC2: Observed Emotional Caretaking-Task 2; IC1: Observed Instrumental Caretaking-Task 1; IC2: Observed Instrumental Caretaking, Task 2. PQY: Parentification Questionnaire for Youth.

Hypothesis 1-1c: Sibling Status. Child caretaking behaviors were expected to be related to whether or not the child has a sibling in the home; that is, children who live in households with siblings were expected to show significantly more caretaking behaviors compared to only children. Means and standard deviations for children’s caretaking behaviors by sibling status are reported in Table 6 and a series of independent *t*-tests were conducted. Contrary to the hypothesis, there was some evidence suggesting that only children engaged in more rather than less caretaking behaviors compared to children who have siblings. Children who did not have siblings displayed more emotional caretaking during the stressful interaction (task 2), $t(100) = 2.90, p = .005$, but sibling status was not related to emotional caretaking for the positive interaction (task 1). There was also an effect for sibling status serving as a predictor of instrumental caretaking for the positive interaction (task 1), with only children displaying more instrumental caretaking than children with siblings, $t(105) = 2.38, p = .02$. Finally, self-reported caretaking did not differ as a function of sibling status.

Table 6. *Caretaking behaviors for only children vs. children with siblings*

Caretaking	Only Child Mean (SD)	Sibling Mean (SD)	Significance Tests
Observed Emotional Caretaking-Task 1	2.7 (1.3)	2.3 (1.5)	$t(105) = 1.31, p = .19$
Observed Emotional Caretaking-Task 2	4.8 (1.8)	3.3 (2.0)	$t(100) = 2.90, p = .005$
Observed Instrumental Caretaking-Task 1	3.9 (1.1)	3.0 (1.5)	$t(105) = 2.38, p = .02$
Observed Instrumental Caretaking-Task 2	3.9 (1.5)	3.4 (1.6)	$t(100) = 1.42, p = .16$
Child Self-report of Caretaking (PQY)	5.0 (3.6)	5.5 (3.9)	$t(112) = -.44, p = .66$

Hypothesis 1-2a: Parent Gender. It was expected that children’s caretaking behaviors would be related to parental gender; that is, children of depressed mothers

would show significantly more caretaking behaviors compared to children of depressed fathers. Means and standard deviations for children’s caretaking behaviors by parental gender are reported in Table 7. Independent sample *t*-tests were conducted and there was some evidence to support that children of depressed mothers engage in increased caretaking compared to children of depressed fathers. Specifically, children of depressed mothers displayed more instrumental caretaking during the stressful interaction (task 2), $t(100) = 2.93, p = .004$, but parental gender was not related to instrumental caretaking for the positive interaction (task 1). Parental gender was not related to observed emotional caretaking or children’s self-reported caretaking behaviors on the PQY.

Table 7. *Caretaking behaviors for children of mothers vs. fathers with a history of depression*

Caretaking	Mothers	Fathers	Significance Tests
	Mean (SD)	Mean (SD)	
Observed Emotional Caretaking-Task 1	2.4 (1.5)	1.8 (1.1)	$t(106) = 1.28, p = .20$
Observed Emotional Caretaking-Task 2	3.6 (2.1)	3.8 (1.5)	$t(100) = -.26, p = .80$
Observed Instrumental Caretaking-Task 1	3.2 (1.5)	2.7 (1.8)	$t(106) = 1.17, p = .24$
Observed Instrumental Caretaking-Task 2	3.6 (1.6)	2.0 (1.1)	$t(100) = 2.93, p = .004$
Child Self-report of Caretaking (PQY)	5.4 (3.8)	5.2 (3.5)	$t(113) = .18, p = .86$

Hypothesis 1-2b: Parent age. It was expected that parental age would be negatively related to children’s caretaking behaviors. Correlations were used to test the hypothesis that there would be a negative association between parent age and child caretaking, with children of younger parents displaying more caretaking behaviors compared to children of older parent. Partial support was found for this hypothesis; parental age was found to be negatively associated with instrumental caretaking during

the stressful interaction (task 2), $r = -.22, p < .05$, but parental age was not found to be related to any of the other indicators of caretaking (see Table 5).

Hypothesis 1-2c: Marital status. Children’s caretaking behaviors were hypothesized to be related to parental marital status; that is, children in single parent homes were expected to show significantly more caretaking behaviors compared to children in intact families. Means and standard deviations for children’s caretaking behaviors by marital status are reported in Table 8. Independent sample *t*-tests were conducted and contrary to expectations, marital status did not differ significantly on any of the observed or self-reported caretaking behaviors.

Table 8. *Caretaking behaviors for children of parents who are married vs. parents who are not married*

Caretaking	Parent Married Mean (SD)	Parent Not Married Mean (SD)	Significance Tests
Observed Emotional Caretaking-Task 1	2.3 (1.4)	2.4 (1.5)	$t(106) = -.14, p = .89$
Observed Emotional Caretaking-Task 2	3.5 (1.9)	3.9 (2.3)	$t(100) = -.96, p = .34$
Observed Instrumental Caretaking-Task 1	3.0 (1.4)	3.3 (1.7)	$t(106) = -.96, p = .34$
Observed Instrumental Caretaking-Task 2	3.3 (1.6)	3.7 (1.7)	$t(100) = -1.21, p = .23$
Child Self-report of Caretaking (PQY)	5.0 (3.6)	5.9 (4.0)	$t(113) = -1.26, p = .21$

Hypothesis 1-2d: Employment status. It was hypothesized that parents’ current employment status would be significantly related to children’s caretaking behaviors, with children of parents who are not currently working engaging in significantly more caretaking behaviors compared to children of parents who are currently working. Means and standard deviations for children’s caretaking behaviors by parental employment

status are reported in Table 9 and a series of independent *t*-tests were conducted. Consistent with the hypothesis, there was limited evidence suggesting that children of parents who are not currently employed display more caretaking behaviors than children of parents who are currently employed. Children of parents who were not employed outside of the home showed more instrumental caretaking during the positive interaction (task 1), $t(106) = -2.47, p = .02$, but parental employment status was not related to instrumental caretaking for the stressful interaction (task 2) nor was it related to emotional caretaking for either interaction or to self-reports of caretaking on the PQY.

Table 9. *Caretaking behaviors for children of parents who are currently employed vs. parents who are not currently employed*

Caretaking	Parent Currently Employed Mean (SD)	Parent Not Currently Employed Mean (SD)	Significance Tests
Observed Emotional Caretaking-Task 1	2.3 (1.5)	2.5 (1.3)	$t(106) = -.78, p = .44$
Observed Emotional Caretaking-Task 2	3.6 (1.8)	3.7 (2.5)	$t(100) = -.23, p = .82$
Observed Instrumental Caretaking-Task 1	2.9 (1.4)	3.7 (1.6)	$t(106) = -2.47, p = .02$
Observed Instrumental Caretaking-Task 2	3.3 (1.7)	3.8 (1.4)	$t(100) = -1.38, p = .17$
Child Self-report of Caretaking (PQY)	5.5 (3.9)	5.0 (3.5)	$t(113) = .64, p = .53$

*Relationship of Parental Functioning and Parenting
with Caretaking Behaviors*

Hypothesis 2-1a: Parental functioning. It was hypothesized that children’s caretaking behaviors would be negatively correlated with parental functioning as measured by the Global Assessment of Functioning (GAF) index on the SCID. Consistent with this hypothesis, parental functioning was found to be negatively

associated with almost all indicators of caretaking. Parental functioning was found to be significantly negatively correlated with child reports of caretaking on the PQY, $r = -.22$, $p < .05$, as well as with observed instrumental caretaking during the stressful interaction, $r = -.24$, $p < .05$. There was also a trend of a negative correlation between parental functioning on the GAF with emotional caretaking during the stressful interaction ($r = -.20$) and instrumental caretaking during the positive task ($r = -.17$) (see Table 5).

Hypothesis 2-1b: Parental depression. It was predicted that children's caretaking behaviors would be positively associated with indicators of parental depression (i.e., current MDD diagnosis, parent self-report of depressive symptoms on the BDI-II, and observed sadness during the parent-child interactions). As a first step in testing the relationship between caretaking and psychopathology, parental current depressive diagnostic status was used to predict each of the caretaking measures. The means and standard deviations for these groups are listed in Table 10. Contrary to the hypothesis, children of parents with a current diagnosis of Major Depression versus children of parents who were not currently in episode did not differ significantly on any of the observed or self-reported caretaking behaviors.

To further explore the relationship between psychopathology and caretaking behaviors, more proximal and continuous markers of depression were used. Correlations among parent self-reports of depression symptoms as well as observations of parental sadness were examined in relationship to each of the caretaking measures (see Table 5). Strong support was found for this hypothesis, with parent self-report of depressive symptoms as well as observations of parental sadness during both positive and stressful

interactions being positively correlated with emotional, instrumental, and self-reported caretaking.

Table 10. *Caretaking behaviors for children of parents who are currently depressed vs. parents who are not currently depressed*

Caretaking	Parent Currently Depressed	Parent Not Currently Depressed	Significance Tests
	Mean (SD)	Mean (SD)	
Observed Emotional Caretaking-Task 1	2.5 (1.8)	2.3 (1.3)	$t(105) = .84, p = .40$
Observed Emotional Caretaking-Task 2	3.8 (1.7)	3.5 (2.2)	$t(100) = .50, p = .62$
Observed Instrumental Caretaking-Task 1	3.4 (1.5)	3.1 (1.5)	$t(105) = 1.14, p = .26$
Observed Instrumental Caretaking-Task 2	3.6 (1.9)	3.4 (1.5)	$t(100) = .31, p = .75$
Child Self-report of Caretaking (PQY)	5.8 (4.3)	5.2 (3.6)	$t(112) = .73, p = .46$

Hypothesis 2-2: Parenting. It was hypothesized that children’s caretaking behaviors would be positively correlated with withdrawn parenting, but not with intrusive parenting, and would be negatively associated with positive parenting behaviors (i.e., high levels of warmth and structure). Parent and child reports of parental withdrawn and intrusive parenting behaviors as well as observations of withdrawn, intrusive, and positive (measured by parental warmth/support and child monitoring) parenting behaviors were tested using a series of Pearson correlations to better understand their relationship with emotional, instrumental and self-reported caretaking behaviors.

With regard to withdrawn parenting, four of the eight correlations with emotional caretaking were significant and one correlation approached significance, all in the positive direction. These significant correlations represent small to medium effects (r 's range from .22 to .53). Child and parent-reports of withdrawn parenting were not

associated with instrumental caretaking; however, observations of withdrawn parenting were significantly positively correlated with instrumental caretaking during the context of a stressful interaction and showed a trend in the same direction during the positive interaction (r 's range from .18 to .38). Two of the four correlations with the self-report measures of caretaking were also significant (r 's range from .24 to .53). Overall, the pattern of correlations with withdrawn parenting and caretaking behaviors shows that increased withdrawn parenting behaviors are associated with increased emotional caretaking.

Five of the twenty correlations for intrusive parenting with caretaking behaviors were significant and also in the positive direction (r 's range from .20 to .57). This pattern suggests intrusive parenting may also be associated with increased caretaking behaviors.

With regard to positive parenting, emotional caretaking was not found to be associated with either observed warm, supportive behaviors or with behaviors indicative of structure. That is, instrumental caretaking was not related to warm, supportive parental behaviors, nor was this construct related to structure/parental monitoring during the pleasant interaction. Consistent with the hypothesis, instrumental caretaking was significantly negatively associated with child monitoring during the stressful interaction. Self-reports of caretaking were significantly and negatively associated with both indicators of positive parenting, but only during the stressful parent-child interaction.

Relationship of Child Adjustment with Caretaking Behaviors

Hypothesis 3-1: Child Adjustment. It was hypothesized that a curvilinear model would best account for the relationship between caretaking and adjustment with low and high levels of caretaking associated with problematic behaviors (i.e., increased depressive symptoms) and moderate levels of caretaking associated with positive adjustment (i.e., increased social competence and lower levels of symptoms). Two series of linear and quadratic regression equations were used to test the relationship between caretaking and two measures of child adjustment.

The first series of equations was used to predict child depressive symptoms as measured by the CESD with each of the five measures of caretaking entered as the independent variable. Of the five equations, emotional caretaking during the stressful interaction and the self-report of caretaking as measured by the PQY were the only significant predictors of child depressive symptoms (see Figure 1). Emotional caretaking in the context of the stressful interaction yielded a marginally significant linear effect ($F(1,97) = 3.42, p = .07$), and a significant quadratic effect ($F(2,96) = 3.71, p < .05$), accounting for 7% of the variance in depressive symptoms. Child self-reports of caretaking also yielded significant linear and quadratic effects ($F(1,110) = 30.93, p < .001$; $F(2,109) = 15.62, p < .001$, respectively), each accounting for approximately 22% of the variance. Because both models were significant, only the linear effect was interpreted as it provides the simplest explanation of the relationship between the variables.

Of the five equations conducted to predict social competence, only instrumental caretaking in the context of the stressful interaction was found to be a significant predictor (see Figure 2). Observations of children's instrumental behaviors during the stressful interaction was found to yield a significant quadratic effect, ($F(2,95) = 3.69, p = .03$), but it was in the opposite direction of what was hypothesized; that is, children who were observed to engage in moderate levels of caretaking appeared to be less socially competent than their peers who were observed to be engaging in either low or high levels of instrumental caretaking. The linear effect was not significant ($F(1,96) = .02, p = .90$).

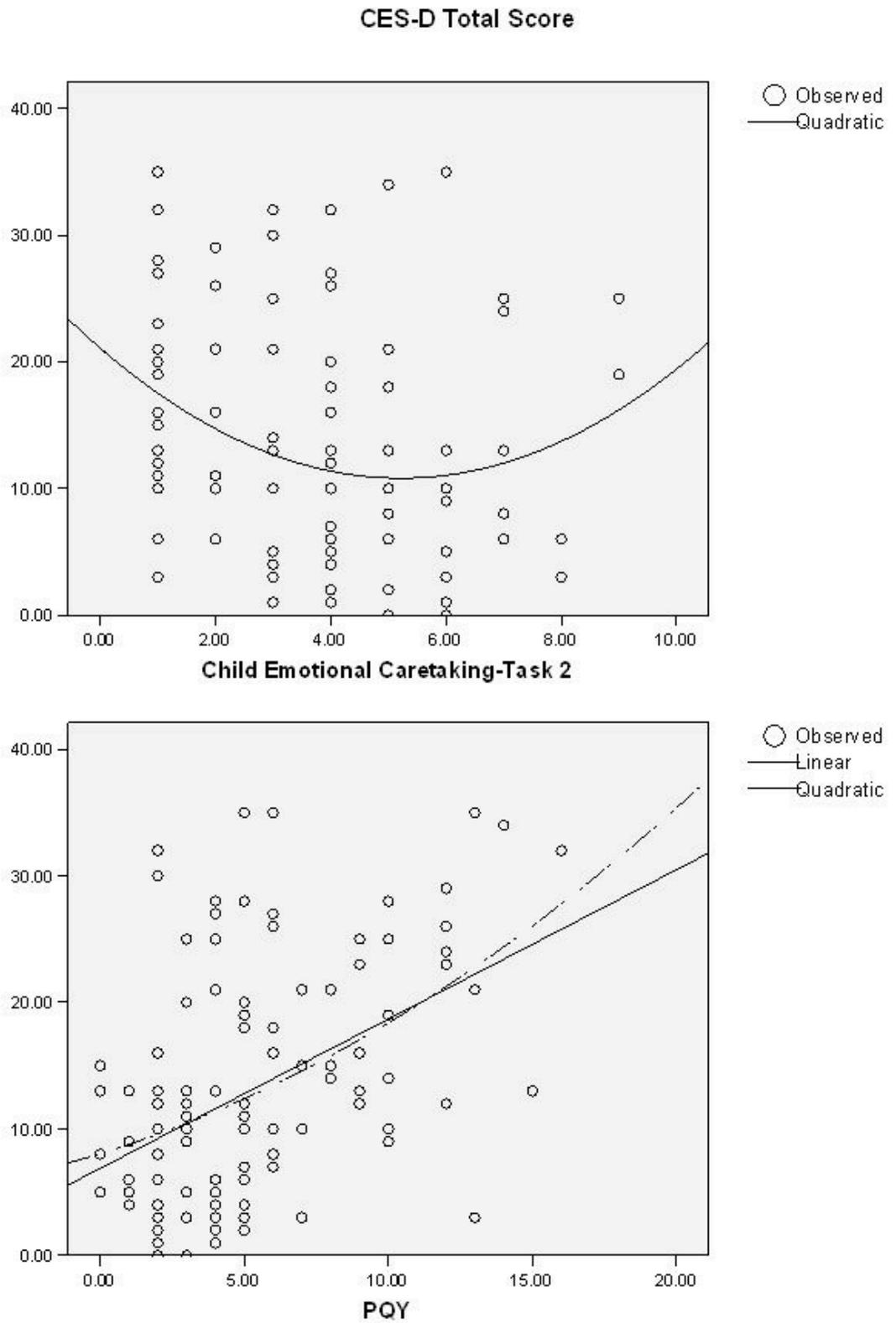


Figure 1. Significant quadratic and linear effects between children’s depressive symptoms and caretaking behaviors.

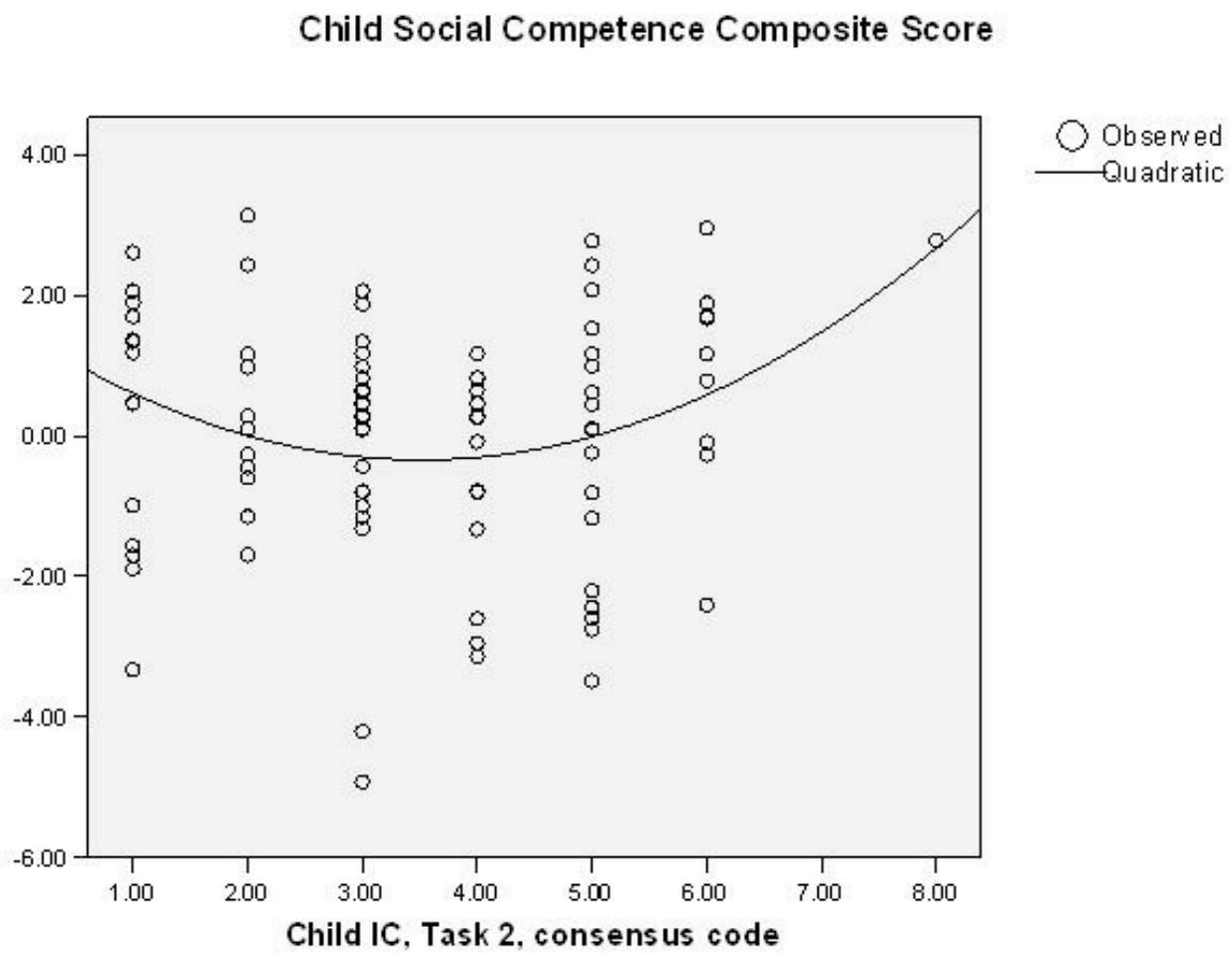


Figure 2. Significant quadratic effect between children’s social competence and caretaking behaviors.

CHAPTER IV

DISCUSSION

The present study was designed to replicate and extend past research on the role of children's caretaking of their parents within families. Although child caretaking has been studied in various samples, the evidence regarding parent and child characteristics that are associated with engaging in caretaking behaviors as well as the psychosocial correlates of caretaking are mixed. Therefore, this study had two primary aims: to identify predictors (both child and parent characteristics) of caretaking behaviors and to better understand how caretaking behaviors are associated with child adjustment. Further, the present study examined caretaking in a sample of parents with a history of depression and their children. Given the high risk for psychopathology in children of depressed parents, this may be a particularly important population to understand the correlates of the ways that children may engage in caretaking of their parents.

Most studies to date have relied on self-report measures of caretaking, with the majority of those relying on retrospective recall by adult participants, to measure this construct (see Champion & Compas, 2008, for a review). The current study addressed this limitation by incorporating multiple methods to assess child caretaking behaviors, including children's self-report of caretaking and behavioral observations of child caretaking behaviors during a positive and a stressful interaction task with their parents. Behavioral observations may allow for a more objective view of caretaking that is not skewed by the bias of the participant. However, observational methods bring their own

biases with them, including limitations in the situations that can be observed in the laboratory and limitations in the range of behaviors that can be coded. By utilizing multiple methods, this study was designed to capture a more full picture of child caretaking, which has proven to be a complex and multiply determined construct.

As evidenced by the descriptive statistics of this sample, it is clear that children of depressed parents are engaging in caretaking behaviors. Children endorsed moderate levels of caretaking behavior on the PQY, and the mean scores for observed emotional instrumental caretaking on the two laboratory tasks ranged from 2.3 to 3.6 on a 9-point scale. However, what is less clear is how the different indicators of caretaking fit together. Observations of emotional and instrumental caretaking yielded moderate, positive correlations (r 's ranged from .22 to .47) suggesting that they represent conceptually distinct, but related dimensions of a single complex construct. However, the child self-reports of caretaking as measured by the PQY were not significantly correlated with observed emotional or instrumental caretaking behaviors on either the positive or stressful interaction tasks. These non-significant associations suggest that the items on the self-report questionnaire (PQY) and the behaviors that were coded as either emotional or instrumental caretaking may not be capturing the same construct or may be reflective of very different aspects of caretaking. Many of the items on the PQY (e.g., "I seem to get the blame for most of what happens in my family" or "I often feel like an outsider in my family"), appear to pull for negative aspects of caretaking and may therefore represent other associated aspects of caretaking, such as perceptions of unfairness by the child, rather than caretaking behaviors per se.

In addition to using multiple methods to assess caretaking behaviors, this study examined caretaking across two different contexts, a parent-child discussion of a recent shared positive event and a parent-child discussion of a source of stress. This methodology enabled several important questions about the relationship between context and caretaking to be answered by comparing behaviors across task and comparing types of caretaking within tasks. Within task comparisons showed that children of depressed parents displayed significantly more instrumental caretaking than emotional caretaking during the positive interaction, but for the level of the two types of caretaking did not differ during the stressful interaction. The across task comparisons showed that children of depressed parents displayed significantly more emotional caretaking in the context of a stressful discussion compared to the context of the discussion of a pleasant activity, but did not indicate a task difference for instrumental caretaking. These results suggest that instrumental caretaking was not sensitive to a positive vs. a negative task; children were quite stable in the degree to which they took on tangible parental tasks (e.g., led the discussion using the prompts provided by the examiner, talked about watching younger siblings or helping them get ready for school, talked about making meals for the family). However, children increased their emotional caretaking when discussing a stressful task with their parents (e.g., expressing awareness of a parent's problems or symptoms, offering comfort to the parent when he/she shows distress, providing solutions to the parents problems). This suggests that emotional caretaking may be particularly important in the context of families of depressed parents, as these families are characterized by high levels of chronic family stress (e.g., Hammen, Shih, & Brennan, 2004).

Overall, these findings suggest that there is a need for increased consensus in the field in defining child caretaking behaviors as well as how to measure this complex construct. In order to clearly answer questions about how caretaking relates to parent and child characteristics and to child adjustment, it will be important to keep the assessment of caretaking behaviors distinct from the effects that these behaviors may have on the child or other family members, as well as their perceptions of fairness or reciprocity. Although these are all important pieces to understanding the puzzle of how children take on caretaking roles in the family and how their role affects their adjustment, measurement of caretaking should not be confounded with measures of its correlates.

In the first set of hypotheses, child and parent demographic characteristics (i.e., child gender, child age, sibling status, parent gender, parent age, marital status, and current parental employment) were tested as predictors of levels of children's caretaking behavior. Surprisingly, child gender was not found to be related to any of the indicators of caretaking; that is, boys and girls did not differ on any of the observed or self-reported caretaking behaviors. Although this finding was unexpected, as some studies have found higher levels of caretaking by girls than boys (e.g., Hetherington, 1999), other studies have found similar null effects for child gender (e.g., Jurkovic et al., 2001). These mixed findings suggest that child gender may only be a significant predictor in certain populations or in certain circumstances. More research is needed to compare different samples on how child gender plays a role in the development of caretaking behaviors. The findings from the current study suggest that the challenges presented by living with a parent who suffers from depression may be strong enough to pull for caretaking from both boys and girls.

Mixed findings were also found for the relationship between child age and caretaking behaviors; that is, only children's self-reports of caretaking on the PQY were found to be significantly related to child age. In contrast, no age related differences were found for levels of observed emotional or instrumental caretaking. Items on the PQY (e.g., "I often feel more like an adult than a child in my family" or "I have to help a lot with the family bills") may be more directed to older adolescents whereas observations of emotional and instrumental caretaking may capture caretaking behaviors across a broader age range. Further, the age range in the current study was restricted to 9 to 15-years-old, and this limited range may have constrained the ability to identify age related differences in caretaking. It is possible that younger children may be less able to engage in caretaking of their parents and, conversely, older adolescents may take on even more of these roles.

With regard to sibling status, evidence was found that contradicted the original hypothesis. Instead of the presence of siblings predicting greater caretaking behaviors as hypothesized, some evidence was found suggesting that only children engaged in more caretaking behaviors compared to children who have siblings. It is possible that being an only child may place the child in a more vulnerable position in which the parent relies on him or her for increased emotional and instrumental support and that the presence of siblings may diffuse the responsibility held by any one child. Further, the observation paradigm used in the present study (i.e., observations of only the parent-child dyad) may have provided much greater opportunities to sample children taking care of their parents and relatively less chance to observe or sample caretaking of siblings.

With regard to the parental demographic factors, some evidence was found to support factors associated with child caretaking behaviors. First, parental gender was only found to be a significant predictor for one of the five indicators of child caretaking, with children of depressed mothers engaging in more instrumental caretaking during the stressful interaction compared to children of depressed fathers. This limited effect regarding parental gender combined with the non-significant effects for child gender in child caretaking behaviors are surprising given previous research suggesting that girls are more likely than boys to assume a caretaking role in the family (e.g., Grant & Compas, 1995). However, the empirical research on the role of both child and parental gender has been inconclusive (e.g., McMahon & Luthar, 2007). One possible explanation for the failure to identify parental gender differences in the present study is that this sample consisted of mostly mothers (approximately 90%) and only a limited amount of depressed fathers. Thus, the current study was underpowered to detect differences as a function of parental gender. Further, it is possible that sons are equally likely to demonstrate caretaking roles in response to their mothers; i.e., there may be an interactive effect between parent and child gender. This scenario may be especially true of boys in households with single mothers where the boys are expected to be the “man of the house.” Unfortunately, the limited number of depressed fathers in the current sample was not large enough to test this interactive effect. Future studies should include enough depressed fathers as well as both sons and daughters to test possible interactions of parent and child gender.

Unexpectedly, marital status was not found to be a significant predictor of caretaking behaviors. It may be that this categorical indicator of marital status is not

sensitive enough of a measure of marital “intactness.” Future research may benefit from including more sensitive measures of the quality of the marital relationship (e.g., inter-parental discord, involvement of the spouse in family responsibilities) or even more general measures of the target parent’s received social support as they may be better predictors of a child’s assuming a parental role in the family.

Limited evidence was found to support parental age or employment status as significant predictors of child caretaking behaviors. Consistent with the hypothesis, parental age was found to be negatively associated with instrumental caretaking during the stressful interaction (task 2); i.e., higher levels of children’s instrumental caretaking were observed with younger parents. However, parental age was not related to any of the other indicators of caretaking. Consistent with the hypothesis, there was limited evidence suggesting that children of parents who were not currently employed display more caretaking behaviors than children of parents who are currently employed. Children of parents who did work outside of the home showed more instrumental caretaking during the positive interaction (task 1), but parental employment status was not related to instrumental caretaking for the stressful interaction (task 2) nor was it related to emotional caretaking during either interaction or to self-reports of caretaking on the PQY. Given that parental age and current employment status were only found to be significant predictors in two out of the ten analyses conducted, results should be interpreted cautiously and replications of these results are needed.

In addition to demographic factors, parental psychopathology and parenting behaviors were analyzed to better understand their relation with child caretaking behaviors. With regard to parental psychopathology, the overall level of parental

functioning was measured using the Global Assessment of Functioning Scale from the SCID. Consistent with the hypothesis, results indicated (almost uniformly) that lower levels of functioning of a depressed parent were related to increased levels of caretaking in the family. Looking more specifically at depression, multiple indicators were used to test the relationship between parental depression and child caretaking behaviors. Using current parental depression diagnostic status (presence or absence of a current Major Depression Episode), no significant results were found. However, using more proximal and continuous indicators of parental depression (i.e., parent self-report of depressive symptoms and observed sadness during the laboratory interactions), the overall pattern of results indicated that higher levels of self-reported depressive symptoms as well as higher levels of observed sadness were related to increased emotional, instrumental, and self-reported child caretaking behaviors. These findings suggest that it may be more useful to consider depression along a continuum (e.g., level of depressive symptoms, amount of displayed sadness) as opposed to a categorical phenomenon (e.g., diagnostic status) in understanding its relationship to child caretaking.

With regard to parenting, withdrawn, intrusive, and positive parenting behaviors were tested using a series of Pearson correlations to better understand their relationship with observed emotional and instrumental caretaking as well as with self-reported caretaking behaviors. Overall, the pattern of results suggests that caretaking is more strongly related to negative parenting behaviors, compared to positive parenting behaviors. This suggests that caretaking behaviors in children of depressed parents may be more likely to be activated in response to the presence of negative parenting behaviors or symptoms (e.g., increases in sad or withdrawn behaviors) versus the absence of

positive parenting behaviors (e.g., decreases in warmth or monitoring). Furthermore, the pattern of correlations indicates that caretaking behaviors are more consistently related to withdrawn parenting behaviors versus intrusive parenting behaviors suggesting that adolescents may be more likely to try to meet the needs of a parent who is withdrawn (and possibly needy) as compared to a more intrusive parent who may be critical of the child's attempts to help solve problems or offer emotional support. The findings from this study suggest that parenting styles should continue to be tested in future research, as parenting may be an important manifestation of depression that affects the way children respond to and interact with their parents.

Finally, child adjustment was tested using two series of linear and curvilinear regression analyses to determine which model would best account for the relationship between caretaking and child adjustment. Both potentially beneficial and costly psychosocial correlates were used as dependent variables as indicators of child adjustment as the literature has found mixed results for the correlates of a child's assuming a caretaking role in the family. Child depressive symptoms were used to assess potential risks associated with caretaking and children's social competence was used as a marker of potential positive correlates of caretaking.

Of the five regression equations used to predict child depressive symptoms, emotional caretaking during the stressful interaction and child self-reports of caretaking were the two significant predictors of negative adjustment, suggesting that it is caring for the emotional well-being of parents in the context of stressful parent-child interactions as well as engaging in the types of caretaking behaviors captured on the PQY may be the more costly than doing emotional caretaking in the context of more benign parent-child

interactions or carrying out more instrumental responsibilities in the family. Support was found for both linear and quadratic effects in the association between emotional caretaking and children's depressive symptoms. Emotional caretaking in the context of a stressful parent-child interaction yielded a marginally significant linear effect; however, the depressive symptoms were better explained by a curvilinear model suggesting that, as hypothesized, children who engage in moderate amounts of caretaking (compared to either high or low levels of caretaking) experience lower levels of depressive symptoms. Conversely, children who engaged in very little emotional caretaking and those who engaged in high levels of caretaking reported higher levels of depressive symptoms, suggesting that either extreme of caretaking was associated with psychological distress.

Children's self-reports of caretaking as measured by the PQY yielded significant linear and quadratic effects; however, because they both explained the same amount of variance in depressive symptoms ($R^2 = .22$) the linear relationship provides the most parsimonious explanation for the relationship between children's depressive symptoms and their level of self-reported caretaking behaviors. That is, children who reported high levels of caretaking behaviors on the PQY also reported high levels of depressive symptoms. Given the negative nature of many of the items on the PQY as discussed above, this relationship may be better explained by a more global state of distress in children who reported both high levels of caretaking and depressive symptoms.

With regard to predicting social competence, only the quadratic effect for instrumental caretaking was found to be significant. However, contrary to the hypothesis, results showed that children who were observed to engage in either low or

high levels of instrumental caretaking showed greater social competence as compared to children who were observed to engage in moderate amounts of instrumental caretaking. A possible explanation for this pattern of results may be that children who only engage in low levels of instrumental caretaking, particularly during stressful parent-child interactions, may have more time to devote to friends and other relationships as well as to participation in extra-curricular activities. In contrast, children who provide high levels of instrumental caretaking in their families become more highly developed in their interpersonal skills. However, because this pattern did not hold across tasks, these results should be interpreted cautiously and warrant continued investigation in future research.

Overall, it appears that the relationships between observed emotional and instrumental caretaking as well as children's self-reports of caretaking on the PQY with children's psychosocial correlates are complex. More research is needed to further understand how caretaking is related to both potential costs and benefits of assuming a caretaking role in the family. Possible avenues of future research may include using sequential coding systems to investigate what parental behaviors (e.g., guilt induction) elicit caretaking behaviors in children or measuring developmental characteristics of the child (e.g., the development of empathy) that may drive their engaging in caretaking behaviors.

Limitations

This study had several limitations regarding the characteristics of the sample and design that should be addressed. As noted above, only a limited number of depressed fathers were included in the study. Inclusion of more fathers in future research would be

useful to better understand the effect, if any, that the combination of parent and child gender has on caretaking behaviors. Further, because parents who were experiencing extreme impairment (i.e., GAF < 50) or who were acutely suicidal or homicidal, as well as children who were currently depressed, were excluded from this sample, there may have been somewhat limited variability associated with parental psychopathology and child maladjustment. Inclusion of these more extremely impaired groups as well as the inclusion of a healthy control group in future research would allow more definitive conclusions to be drawn about the role that depression status and symptoms play in predicting caretaking behaviors.

Further, there is some evidence in the literature to suggest that cultural groups may have different norms and expectations for caretaking roles by children. For example, in a sample of young adult children of divorce, Jurkovic et al. (2001) found that African-American adolescents reported higher levels of instrumental caretaking as compared to European-American adolescents. Notably, the two groups did not differ in their perceptions of the fairness of their filial roles, which the authors contend reflects the differential normative role patterns between the two cultural groups. Although this study was limited in its power to test the effects of ethnicity on caretaking, future research should examine the influence of cultural differences on caretaking behaviors.

Although using multiple methods (i.e., self-report and observations) of caretaking in this study represents an improvement compared to studies that have relied solely on adults' retrospective reports of child caretaking, the findings from this study suggest that these different instruments may not actually be measuring the same construct. Future research is needed to provide consensus about how emotional and instrumental

caretaking should be defined and to develop different methodologies to measure these constructs.

A larger sample size with multiple measurements of all of the involved constructs would have allowed us to create latent variables and to detect smaller effects.

Specifically, a larger sample size is needed to test whether child gender and marital status moderate the effects of withdrawn parenting on child outcomes. As noted earlier, this study was limited to bivariate analyses due to the limited sample size (see Green, 1991); however, it will be important for more complex multivariate analyses to be conducted once the remainder of the observational data has been coded. Further, as noted above, subsequent analyses with a larger sample will examine only one child randomly selected per family for analyses and will also examine variations in caretaking with multiple siblings within families. The current analyses did not have sufficient power to address these issues.

Additionally, the conclusions that may be drawn are also limited by the cross-sectional design of this study. Prospective research is needed to determine the direction of effects of demographic factors, parental psychopathology and parenting behaviors on caretaking and adolescent adjustment. Finally, conclusions may also be limited in that the results may be better explained by some other unmeasured variable or variables (e.g., genetic factors, children's cognitive attributional style).

Implications for Future Research

Given the empirical evidence on caretaking in the field to date, it may be important to think of caretaking as a multidimensional, multidetermined construct that

represents a disruption in typical family relationships. The findings from this research on children of depressed parents suggests that caretaking is related to child and parent demographic characteristics as well as to indicators of parenting functioning and parenting behaviors. The findings also suggest children's self-reports of caretaking on the PQY or their engagement in emotional caretaking compared to their engagement in instrumental caretaking is more likely to be associated with increased psychological distress.

It will be important for future research to examine emotional and instrumental caretaking in the context of multiple indicators of and correlates of parental depression (e.g., depressive symptoms, withdrawn and intrusive parenting) to determine potential risk and protective factors that affect children of depressed parents. Doing so will better inform researchers and clinicians to develop interventions to ameliorate the effects these risk factors have on mental health outcomes for these youth and may implicate important behaviors to target in preventative intervention for families struggling with depression. For example, parents could be educated about the effects that their negative parenting styles have on their children's well-being and could be taught positive parenting skills, focused on warmth and structure. Families would also need to be educated about the limits of caretaking. 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.

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