

Protective Factors for Depression Among African American Children of Predominantly Low-Income Mothers with Depression

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Abstract Maternal depression has a deleterious impact on child psychological outcomes, including depression symptoms. However, there is limited research on the protective factors for these children and even less for African Americans. The purpose of the study is to examine the effects of positive parenting skills on child depression and the potential protective effects of social skills and kinship support among African American children whose mothers are depressed and low-income. African American mothers ($n = 77$) with a past year diagnosis of a depressive disorder and one of their children (ages 8–14) completed self-report measures of positive parenting skills, social skills, kinship support, and depression in a cross-sectional design. Regression analyses demonstrated that there was a significant interaction effect of positive parenting skills and child social skills on child depression symptoms. Specifically, parent report of child social skills was negatively associated with child depression symptoms for children exposed to poorer parenting skills; however, this association was not significant for children exposed to more positive and involved parenting. Kinship support did not show a moderating effect, although greater maternal depression severity was correlated with more child-reported kinship support. The study findings have implications for developing interventions for families with maternal depression. In particular, parenting and child social skills are potential areas for intervention to prevent depression among African American youth.

Keywords Maternal depression · African American families · Positive parenting · Kinship support · Child social skills

Introduction

Major Depressive Disorder (MDD) is experienced by approximately 16 % of Americans in the course of their lives (Kessler et al. 2005) and is expected to be the leading cause of disability among all diseases by the year 2030 (World Health Organization 2008). Although recent research has reported that rates of MDD are lower for African Americans than for the general population (Breslau et al. 2006; Williams et al. 2007), depression is significant for African Americans for several reasons. When African Americans experience MDD, the disorder is often more severe and poses a greater burden than observed with other ethnic groups (Williams et al. 2007). African Americans with depression are also less likely to utilize treatment services (Garland et al. 2005; Neighbors et al. 2007). Specifically, a recent study found that 40 % of African Americans with MDD received treatment compared to 54 % of non-Latino Whites with MDD, suggesting a significant health disparity (González et al. 2010).

Maternal depression is also a significant issue for African American families, as demonstrated by a recent study, which found that the lifetime prevalence of MDD for African American mothers was 14.5 % (Boyd et al. 2011). Despite the substantial amount of research on maternal depression, African American families with maternal depression are understudied. This is a critical area of research because African American women and their children are disproportionately confronted with environmental and life stressors that may increase their

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vulnerability to depression (Goodman et al. 2011; Riley et al. 2009).

The children of mothers with depression are at risk for a range of negative developmental and psychological outcomes. For example, they are more likely to be depressed or anxious themselves, and more likely to have problems with disruptive and oppositional behavior (Goodman et al. 2011; Luoma et al. 2001). Longitudinal research has shown that the negative effects of maternal depression begin in childhood and continue into adolescence and adulthood (Campbell et al. 2009; Lewinsohn et al. 2005; Weissman et al. 2006). A 2011 meta-analysis of 193 studies found significant small-magnitude effects of mothers' depression on children's outcomes, including both internalizing and externalizing behavior (Goodman et al. 2011). Although only a small number of the studies assessed ethnic minorities, the relationship between maternal depression and negative child outcomes was shown to be even stronger among these populations.

Mechanisms for Transmission of Depression

In order to prevent or reduce depression in African American children, it is important to consider the processes by which depression develops. Hammack's (2003) integrated theoretical model for the development of depression in African American youth outlines a potential pathway starting with social and environmental stress, leading to parent psychopathology and subsequent impaired parenting, which then results in youth depression. Several studies have found evidence that family environment and parent-child interactions impact the transmission of depression (Carter et al. 2001; Jones et al. 2001). Specifically, mothers' depressive thoughts and behaviors may prevent them from engaging in more positive parenting behaviors that would better meet children's emotional and developmental needs (Goodman 2007; Goodman and Gotlib 1999). Depression has also been shown to interfere with effective parenting by making mothers less responsive to their children or less supportive, and by increasing the use of negative or harsh parenting behaviors (Mitchell et al. 2010). In a meta-analysis of 46 observational studies of the relationship between depression and parenting, Lovejoy et al. (2000) found that mothers with depression showed significantly higher levels of negative parenting behaviors, were significantly more disengaged, and demonstrated significantly less positive parenting behavior.

On the other hand, there is recent research suggesting that the use of positive parenting practices (e.g., praise, encouragement of appropriate behavior) buffers children from the impact of their mother's depression. This is an understudied area; however, it has been found that maternal symptoms of depression impact a young child less when

the mother is more responsive and affectionate (Leckman-Westin et al. 2009). Other studies with African American and Caucasian adolescents have found that positive or supportive parenting is associated with lower rates of depression and anxiety currently and 6 and 12 months later (Compas et al. 2010; Jones et al. 2002; Zimmerman et al. 2000). Although there is some good evidence of the beneficial impact of positive parenting practices, further examination of their potential protective role in families with maternal depression is needed.

Protective Factors

Children's social skills are another source of resilience for children at risk for negative outcomes (Luthar et al. 2000). There is evidence that children's social competence is linked to positive psychosocial and educational outcomes (Ladd 1990; McClelland et al. 2000; Welsh et al. 2001). At the same time, studies of pre-adolescent and adolescent depression have determined that poorer social skills and deficits in social problem-solving are significantly related to youth depression symptoms (Becker-Weidman et al. 2010; Frye and Goodman 2000; Ross et al. 2010). Unfortunately, social skill development may be impeded for children whose mothers have depression. These children are less likely to be exposed to enriching social situations with peers and positive adults, and more likely to observe and learn their mother's negative cognitive style as it relates to social interactions (Hipwell et al. 2005; Silk et al. 2006; Taylor and Ingram 1999; Wu et al. 2011). On the other hand, coping efficacy, emotion regulation skills, and social skills have been shown to foster resiliency among children exposed to maternal depression (Beardslee and Podorefsky 1988; Riley et al. 2008; Silk et al. 2007). As such, we hypothesize that children's social skills buffer them against the lower levels of positive parenting behavior often associated with maternal depression.

Kinship support is another factor proven to buffer children from negative psychosocial outcomes. Research with urban African Americans has shown that kinship support moderates the effect of negative family interactions on children's and adolescents' internalizing and externalizing behavior (Li et al. 2007; Taylor 2010). Higher levels of kinship support have been found to be associated with greater maternal warmth, emotional support, and better maintenance of routines within the family (Taylor 2011). In this same study, Taylor found that the beneficial impact of kinship support on mother's supportive parenting behavior was less for mothers with more depression symptoms. In a different sample of mothers with depression, mothers' lower satisfaction with their social support networks was associated with more internalizing disorders in their children 1 year later (McCarty et al. 2003). While there is good

preliminary evidence for the protective function of kinship support in families with maternal depression, its role along with other protective factors in preventing children's depression merits closer examination.

In the present study, we examine the effects of positive parenting behaviors on child depression and the potential protective effects of social skills and kinship support among low-income African American children whose mothers are depressed. Specifically, we will test whether kinship support and child social skills moderate the impact of positive parenting skills on children's symptoms of depression. We hypothesize that more positive and involved parenting practices will be associated with less child depression. We also hypothesize that both kinship support and child social skills will serve as protective factors and moderate the impact of positive parenting skills on child depression.

Method

Participants

The participants were 77 mother–child dyads. The children ranged in age from 8 to 14 years with a mean age of 11.1 (SD = 2.0) years. Their school grade ranged from second to tenth with a mean of grade 5.6 (SD = 2.1). Approximately half (58 %; $n = 45$) of the children were female. All mothers identified their children as African American, however, 7.8 % ($n = 6$) also identified with other races (i.e., White, Native Hawaiian/Pacific Islander, Asian, American Indian/Alaskan Native). Five children (6.5 %) were also of Latino ethnicity.

The mothers ranged in age from 23 to 63 years with a mean age of 38.6 (SD = 7.4) years. All mothers identified their race as African American, with 6.5 % ($n = 5$) also identifying with other races (i.e., White, Native Hawaiian/Pacific Islander, Asian, American Indian/Alaskan Native) and 1.3 % ($n = 1$) also identifying with Latino ethnicity. The majority of the mothers were never married (63.6 %, $n = 49$), while 15.6 % ($n = 12$) were married or living with a partner and 20.8 % ($n = 16$) were separated, divorced or widowed. The majority of the mothers received public assistance (59.2 %, $n = 45$). Total household income for the sample was as follows: 33.8 % ($n = 26$) between \$0 and \$10,000; 28.6 % ($n = 22$) between \$10,001 and \$20,000; 9.1 % ($n = 7$) between \$20,001 and \$30,000; 11.7 % ($n = 9$) between \$30,001 and \$40,000; 6.5 % ($n = 5$) between \$40,001 and 50,000; and 6.5 % ($n = 5$) \$50,000 or greater. Data was not available for three households. In terms of education level, approximately 72 % ($n = 55$) of the mothers had either high school degree equivalency or higher. Specifically, 22 %

($n = 17$) were high school graduates or obtained a GED, 32 % ($n = 24$) attended some college or vocational school, 9 % ($n = 7$) graduated from vocational school, and 9 % ($n = 7$) graduated from college or higher. In the majority (90.9 %; $n = 70$) of the mother–child dyads, the mother was the child's biological parent.

Procedures

Participants were drawn from two related studies focusing on maternal depression within African American families. Mothers were eligible for the study if they: (1) were African American; (2) had a primary current or past-year psychiatric diagnosis of MDD, Dysthymic Disorder or Depressive Disorder, Not Otherwise Specified; and (3) were the primary caregiver of a school-age child who resided with them on at least a part-time basis. Mothers could *not* have: (1) a history of Bipolar Disorder or any psychotic disorder; (2) current or past year diagnosis of substance dependence; or (3) mental retardation (determined by mothers stating that they had been diagnosed with mental retardation within their lifetime). Children reported by their mothers as having a diagnosis of mental retardation were also excluded from the study.

Study participation involved three steps. First, mothers completed a telephone screening to assess their preliminary eligibility for the study. If appropriate, the diagnostic eligibility of the mothers was then determined by a clinical interview (Structured Clinical Interview for DSM-IV-TR Axis I Disorders, First et al. 2001) conducted by the primary author (a licensed clinical psychologist). Finally, eligible mothers and one of their children completed a battery of questionnaires read aloud by research staff. Mother and child were each paid \$20 for the assessment interview. The consent process was conducted in person by the principal investigator or another member of the research staff such that the study team obtained written consent for participation from the mother and verbal assent from the child. The studies were approved by the Institutional Review Boards of the Children's Hospital of Philadelphia, the University of Pennsylvania, and the Philadelphia Department of Public Health.

Recruitment

The principal investigator and research staff developed relationships with staff at clinic and community sites throughout a large metropolitan area in order to recruit study participants. These recruitment sites included outpatient mental health agencies, other research studies, homeless shelters, schools, and health fairs. Recruitment flyers were also given to community site staff for dissemination and put on public display at participating sites.

Additionally, recruitment advertisements were placed in several local newspapers. Interested participants contacted research staff via telephone or completion of consent to contact forms at recruitment sites. The largest recruitment sources were newspaper advertisements and research studies. To facilitate recruitment, childcare was provided and participants received bus tokens or reimbursement for parking costs.

Measures

To assess positive parenting skills, mothers completed the *Parenting Practices Scale* (Tolan et al. 2000), which has four scales: Positive Parenting, Extent of Involvement in the child's life, Discipline Effectiveness, and Avoidance of Discipline. The Positive Parenting scale assesses the use of rewards and encouragement of appropriate behavior. The Extent of Involvement scale assesses parents' involvement in the child's daily activities and routines. For the current study, the Positive Parenting and Extent of Involvement scales were summed for a Positive Parenting Skills total score. The Discipline scales were not utilized in the current study as they are more relevant for delinquent youth and do not assess positive parenting skills. Confirmatory factor analyses demonstrated a latent construct representing both positive parenting and extent of involvement (Gorman-Smith et al. 1996, 2000) supporting the validity of the Positive Parenting Skills total scale. The scales of the Parenting Practices Scale have previously demonstrated adequate internal consistency (0.78–0.84) with caregivers of urban youth (Gorman-Smith et al. 1996; Tolan et al. 2000). In the current sample, the Cronbach alpha coefficient was 0.77 for the overall Positive Parenting Skills total score, 0.85 for the Positive Parenting scale, and 0.63 for the Extent of Involvement scale.

The *Social Skills Rating System* (SSRS; Gresham and Elliott 1990) was used to assess children's social skills (i.e., cooperation, assertion, responsibility, empathy, and self-control). The SSRS has child-report and parent-report versions for different developmental levels. For purposes of the present study, total standard scores were combined across elementary and secondary levels. The standard scores are based on normative data for gender and grade and provide an equivalent metric across the multiple versions of the SSRS. The child-report version has good internal consistency ($\alpha = 0.83$) and adequate 4-week test-retest reliability ($r = 0.68$). The child-report and parent-report versions for children from kindergarten to 12th grade demonstrate adequate reliability and validity (Gresham and Elliott 1990). The Cronbach alpha coefficients for the child-report version with the current sample are 0.87 for elementary-age children and 0.91 for secondary school-age children. The Cronbach alpha coefficients for

the parent report version are 0.70 for elementary-age children and 0.72 for secondary school-age children (Gresham and Elliott 1990).

The *Kinship Support Scale* (Taylor et al. 1993) was completed by mothers and children in order to assess each individual's perception of the amount of social and emotional support received from extended family members. Construct validity of this measure is demonstrated by positive correlations with measures of family routines and informal kinship support (Jones 2007; Taylor et al. 2008). The Kinship Support Scale has adequate internal consistency (0.72–0.86) for African American youth (Hall et al. 2008; Jones 2007; Kenny et al. 2003; Taylor et al. 1993). Strong internal consistency ($\alpha = 0.88$) has been found in a sample of low-income African American mothers (Taylor and Roberts 1995). The Cronbach alpha coefficients for the current sample are 0.74 for the children and 0.89 for the mothers.

The *Children's Depression Inventory* (CDI, Kovacs 1992) is a self-report scale of depressive symptoms suitable for youth ranging in age from 7 to 17 years. It has demonstrated good concurrent validity with other measures of depression, cognitive distortions, and self-esteem (Myers and Winters 2002). The CDI has adequate internal consistency (0.82–0.87) for African American youth (Cardemil et al. 2007; DuRant et al. 1994). The Cronbach alpha coefficient for this measure in the current sample is 0.83.

The *Beck Depression Inventory-II* (BDI-II; Beck et al. 1996) was used to measure the severity of mothers' depressive symptoms in areas such as mood, pessimism, sense of failure, and somatic symptoms. There is strong evidence of the reliability, validity, and utility of the instrument (Dozois et al. 1998; Steer et al. 1999). It has excellent internal consistency ($\alpha = 0.90$) with African American samples (Gary and Yarandi 2004; Grothe et al. 2005). The Cronbach alpha coefficient for this measure in the current sample is 0.89.

Data Analytic Plan

The goals of the analyses were to assess the effect of positive parenting skills (as measured by maternal report on the Parenting Practices Scale) on child depression (as measured by the CDI) and to test whether child social skills (as measured by maternal and child reports on the SSRS) and kinship support (as measured by maternal and child reports on the Kinship Support Scale) moderate that effect. We analyzed maternal depression severity (as measured by the BDI-II) as a covariate, as it is potentially an important variable in the transmission of depression from a mother to her child. Preliminary analyses included descriptive statistics including means and standard deviations, as well as bivariate associations measured with Pearson correlations for all study variables.

Two multiple linear regression equations were performed in the primary analyses. The first regression used maternal reports of child social skills and kinship support as the moderating variables. The second regression used child report of their social skills and kinship support as the moderating variables. The positive parenting skills, kinship support and maternal depression severity variables were standardized by calculating z-scores to be used in the regression analyses. The independent variables were entered in three blocks. In the first step, maternal depression severity was entered in a block as a covariate. In the second step, positive parenting skills, child social skills, and kinship support were entered in a block to test for main effects. In the third step, the interaction between positive parenting skills and child social skills and the interaction between positive parenting skills and kinship support were entered in a block to test for moderation effects. Additionally, we conducted post hoc analyses consisting of two regression analyses separately examining the effects of the two positive parenting skills scales (Positive Parenting and Extent of Involvement) on child depression.

Results

Descriptive Analyses and Correlations

Means, standard deviations, and Pearson correlations of all study variables are presented in Table 1. The mean of child-reported depression symptoms was within the normative range. Similarly, means of maternal and child reports of child social skills were within the average range. The mean of maternal depression symptoms was in the clinical range, indicating moderate severity of depression in this sample. Maternal depression symptoms were negatively correlated with maternal report of kinship support

($r = -0.28, p = .02$), but positively correlated with child report of kinship support ($r = 0.30, p = .01$). Maternal report of positive parenting skills was positively correlated with maternal report of child social skills ($r = 0.42, p < .001$) and child report of kinship support ($r = 0.25, p = .03$), but was negatively correlated with child depression symptoms ($r = -0.26, p = .02$). Child report of kinship support was also positively correlated with child-reported social skills ($r = 0.39, p = .001$) but negatively correlated with child depression symptoms ($r = -0.23, p = .04$).

Regression Analysis Using Parent-Report Measures

Table 2 displays the results of the final regression model using *parents'* reports of the moderators. In the first step, the covariate, maternal depression severity, was not associated with child depression symptoms. In the second step, parent report of child social skills was negatively and significantly associated with child depression symptoms. In the third step, the interaction of positive parenting skills and parent-reported child social skills was significant. To explicate this interaction, separate regression analyses were conducted testing the association between parent report of child social skills and child depression symptoms, using median splits to classify positive parenting skills as low or high. Results showed that higher parent-reported child social skills were associated with lower depression symptoms in children of parents with lower positive parenting skills ($B = -0.33, t = -3.23, p = .003$); however, the interaction analysis was not significant when positive parenting skills were high. The interaction was plotted in graphical form (Fig. 1), displaying positive parenting skills (low and high) and child social skills (low and high). There was no significant interaction between positive parenting skills and parent-rated kinship support.

Table 1 Correlations, means and standard deviations of study variables

Measure	1	2	3	4	5	6	7	8	9
1. Maternal depression	–								
2. Positive parenting skills	0.02	–							
3. Positive parenting	0.07	0.80**	–						
4. Extent of involvement	–0.03	0.82**	0.32**	–					
5. Child social skills (mother)	–0.05	0.42**	0.19	0.48**	–				
6. Child social skills (child)	0.05	0.19	0.20	0.11	0.08	–			
7. Kinship support (mother)	–0.28*	0.16	0.12	0.13	0.01	0.00	–		
8. Kinship support (child)	0.30*	0.25*	0.20	0.20	0.13	0.39**	–0.00	–	
9. Child depression	–0.17	–0.26*	–0.16	–0.27*	–0.31**	–0.29*	0.03	–0.23*	–
M	26.26	60.68	18.70	41.97	88.16	102.99	33.13	39.06	48.71
SD	10.87	7.74	4.63	4.91	15.65	18.78	8.55	5.69	9.44

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

Table 2 Linear regression of positive parenting skills and mother-reported moderators on child depression

Variables	Child depression				
	B	SE	ΔR^2	t	p
Step 1			0.03		
Maternal depression	-1.64	1.08		-1.52	.133
Step 2			0.13		
Parenting skills	1.66	1.15		-1.45	.153
Child social skills*	-0.15	0.07		-2.02	.047
Maternal kinship support	0.23	1.08		0.21	.832
Step 3			0.11		
Parenting skills \times Child social skills**	0.19	0.06		3.12	.003
Parenting skills \times Maternal kinship support	0.14	1.04		0.14	.893

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

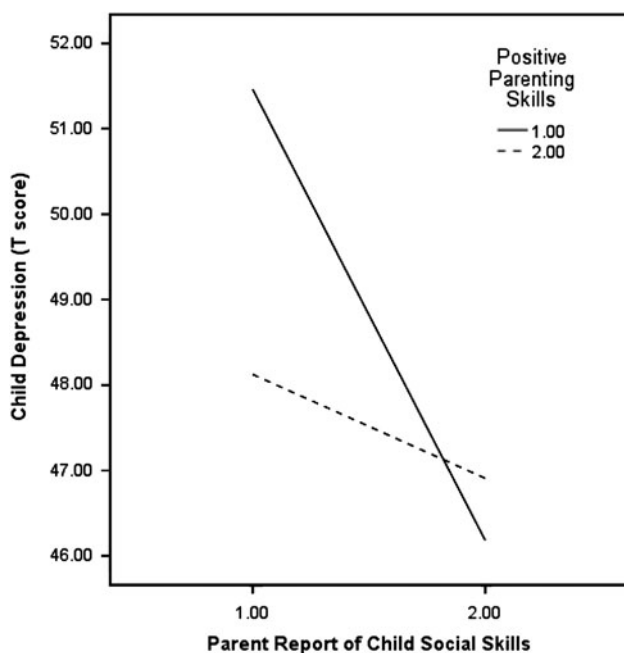


Fig. 1 Interaction of parent report of child social skills and positive parenting skills on child depression

Regression Analysis Using Child-Report Measures

Table 3 displays the results for the final regression model using *children's* reports of the moderators. In the first step, the covariate, maternal depression severity, was not associated with children's depression symptoms. In the second step, none of the main effect variables were significantly associated with children's depression symptoms. In the third step, neither the interaction between positive parenting skills nor the interaction between child-rated social skills and positive parenting skills and child-rated kinship support were associated with children's depression symptoms.

Table 3 Linear regression of parenting skills and child-reported moderators on child depression

Variables	Child depression				
	B	SE	ΔR^2	t	p
Step 1			0.03		
Maternal depression	-1.66	1.10		-1.51	.137
Step 2			0.14		
Parenting skills	-2.14	1.08		-1.99	.051
Child social skills	-0.12	0.06		-1.93	.059
Child kinship support	-0.46	1.21		-0.38	.703
Step 3			0.00		
Parenting skills \times child social skills	0.01	0.06		-0.20	.841
Parenting skills \times child kinship support	0.55	1.31		0.42	.674

Post Hoc Analyses of Parenting Scales

To further explore the moderation of the relationship between parenting and child depression by child social skills, we conducted separate post hoc regression analyses for the *positive parenting* and *extent of involvement* scales. In each case, the regression analysis included a three-step model with maternal depression severity added in the first step, positive parenting skills and parent report of child social skills added in the second step, and the interaction between positive parenting skills and parent report of child social skills added in the third step. The interactions of both *positive parenting* and parent report of child social skills ($B = 0.10$, $t = 2.07$, $p = .042$) and *extent of involvement* and parent report of child social skills ($B = 0.17$, $t = 2.72$, $p = .008$) were significant. To explicate these interactions, separate regression analyses were conducted to test the association between parent report of child social skills and children's depression symptoms using median splits to

classify *positive parenting* as low or high. Similar analyses were conducted using median splits to classify *extent of involvement* as low or high. For children exposed to low levels of *positive parenting*, parent report of child social skills was negatively associated with children's depression symptoms ($B = -0.33$, $t = -3.23$, $p = .003$). Similarly, for children exposed to low levels of *extent of involvement*, parent report of child social skills was negatively associated with children's depression symptoms ($B = -0.31$, $t = -3.20$, $p = .003$).

Discussion

The present study examined the interrelations of positive parenting, child social skills and kinship support in determining child depression in a sample of African American children who have mothers with depressive disorders. This is a unique and understudied population that may be vulnerable to a host of mental health difficulties (Boyd et al. 2011). The findings support factors that protect against the development of depression among this population. Positive parenting practices and child social skills appear to be associated with lower depression symptoms in children, while the impact of kinship support is less clear.

As hypothesized, our results demonstrated a significant interaction effect of parenting and child social skills on child depression. Social skills were negatively associated with child depression symptoms only for those children exposed to poorer parenting skills, suggesting that social skills are a protective factor in these circumstances. There is substantial evidence demonstrating the deleterious effects of negative parenting on child and adolescent behavior (e.g., Goodman 2007; Lovejoy et al. 2000); however, evidence of social skills weakening this impact is not as well documented. In a study with predominantly African American 2nd to 6th graders, negative parenting behavior was no longer associated with higher levels of depression symptoms once children's perceived competence was added into the model (Dallaire et al. 2008). Further research on this topic is needed, as social skills have been identified as a potential protective factor for children experiencing overall adversity (Luthar et al. 2000) and maternal depression in particular (Beardslee and Podorefsky 1988).

Surprisingly, maternal depression severity was not associated with child depression symptoms. This may be the case because there was a limited range of depression for both the mothers and the children. All the children in the sample have been exposed to significant levels of maternal depression symptoms as demonstrated by moderate clinical level of depressive symptoms on the BDI-II. However, the children's depression scores were in the normative range.

Another explanation could involve depression in the context of other adversity. For example, Silk et al. (2007) found that low maternal depression was associated with positive child functioning only for those children who had low to moderate neighborhood risks. This may have occurred in our study as well, given that the majority of the women in the sample were single, low-income mothers. Economic stressors have been found to compound the impact of maternal depression and parenting on child outcomes (Barnett 2008; Boyd et al. 2006; Murry et al. 2001), however, we cannot determine if this was the case in our study since we did not explicitly assess the conditions of economic stress or neighborhood disorganization. Nonetheless, it is important to recognize that a number of risk and protective factors interact in very complex ways to determine whether children will develop depression (Li et al. 2007; McCarty et al. 2003).

The finding that positive parenting skills were negatively correlated with child depression suggests that positive parenting skills may serve as a protective factor for child depression. Parenting has been identified as a major mechanism in the transmission of depression from a mother to her child (e.g., Goodman 2007; Goodman and Gotlib 1999). Much of the maternal depression research has focused on the impact of negative parenting behaviors. Importantly, our findings suggest that positive parenting can be beneficial for families suffering from maternal depression. The results of the current study are in line with other research demonstrating positive parenting to be associated with less depression in youth (Compas et al. 2010; Jones et al. 2002) and to protect against psychological problems among children exposed to interpersonal violence, children in Head Start, and children whose mothers are HIV positive or have AIDS (Graham-Bermann et al. 2009; Koblinsky et al. 2006; Murphy et al. 2009; Riley et al. 2009).

Contrary to the study hypotheses, kinship support was neither significantly related to child depression through main effect nor by interaction with parenting skills. Further examination of this finding using the correlation matrix reveals that maternal depression severity was negatively correlated with maternal report of kinship support, but positively correlated with child report of kinship support. One interpretation of this finding is that the children of mothers with depression in this study were receiving good support from their extended family, even if their mothers did not perceive this to be the case. This is an interesting finding since it contradicts the theory that the increased social isolation resulting from maternal depression can limit the social support available to children (Coyne et al. 1987; Riley et al. 2008). Child report of kinship support was negatively correlated with child depression symptoms, which mirrors the finding for mothers. These results were

expected, as there have been several studies showing that weaker social support is associated with greater depression and psychological distress within African American populations (Ceballos and McLoyd 2002; McKnight-Eily et al. 2009; Thompson et al. 2000). For instance, kinship support has been found to be negatively correlated with adolescent depression symptoms and behavior problems in single-parent households (Hall et al. 2008; Taylor et al. 1993). Also, in a study with both African American and Caucasian mothers with depression, lower satisfaction with support networks was associated with higher rates of internalizing disorders in their children (McCarty et al. 2003).

Given the empirical evidence for the protective role of kinship support in multiple domains, the lack of significant findings for kinship support as a moderator or protective factor against depression in this sample was unexpected. It may be that child social skills are more important than kinship support in protecting children against depression. A possible explanation is that having strong social skills can enable a child to enlist the support they need from adult friends and family given that children in our sample who rated themselves as having good social skills also rated themselves as having good kinship support. This is consistent with Beardslee and Podorefsky's (1988) description of resilient children of parents with depression as possessing characteristics to promote positive interpersonal relationships. Another possible explanation for the lack of findings related to kinship support is that child social skills are more proximal determinants of child depression, while kinship support may be important, but more distal.

There are several limitations to the present study. First, although we were able to achieve statistically significant interaction effects in our regression analyses, the sample size is relatively small. The sample size may limit the power to detect significant associations in the multiple regression analyses, thereby increasing the likelihood of Type II error. Second, without a non-clinical control group, we cannot compare African American children with and without exposure to maternal depression to determine how the interplay of kinship support and social skills may differ. Third, the study does not include child report of the mother's parenting behaviors. There may be differences in how mothers and children evaluate and perceive the mothers' parenting, and depressed mothers may not be the most accurate reporters of their own behavior. Fourth, the cross-sectional design of the study limits our ability to establish the direction of effect among the variables. Finally, the sample was predominantly low-income and thus the results may not generalize to middle- and high-income African American families.

Overall, findings from the current study highlight valuable areas for future research and intervention. Investigation of these protective factors in a longitudinal study with

a larger and more economically diverse sample of African American families is needed to confirm these initial findings. Such a study should assess additional processes in the development of depression over time, such as life stressors, exposure to racism and community violence, and biological markers. Furthermore, qualitative research on protective factors for African American families with maternal depression could supplement the quantitative data and could help with hypothesis generation to better understand these processes. Our findings also suggest that improving parenting and child social skills are important elements to include in a preventive intervention programming. Intervention research for families with maternal depression is lacking in general (Boyd and Gillham 2009), and is especially scarce for African American children whose mother has depression. For example, Compas et al. (2009) tested a cognitive-behavioral family intervention focusing on parenting skills, psychoeducation, and stress coping skills with positive findings, however, only a small number of African Americans were included in the trial. There is a clear need to include more African American families in these preventive interventions, and also to examine cultural adaptations of already empirically-supported interventions to better address the needs of this population.

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