

Middle Class African American Mothers' Depressive Symptoms Mediate Perceived Discrimination and Reported Child Externalizing Behaviors

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Abstract Racial discrimination is a chronic stressor in the lives of African Americans. Chronic stress can lead to individual mental and physical health problems, which subsequently can have deleterious effects on family life. The current study explored the effects of perceived discrimination on youth outcomes and examined the potential mediating role of maternal depression. Using data from 189 African American mothers with children aged 7–14 years, maternal perceived discrimination accounted for variance in reported child externalizing behaviors over and beyond that attributable to other stressful life events and socio-demographic variables. Also, maternal depressive symptoms mediated the effect of maternal perceived discrimination on child externalizing behaviors. These results are consistent with the view that mothers' experience of greater discrimination leads to higher maternal depression which, in turn, leads to greater externalizing behavior among their children. The findings support the need for further exploration of macrosystemic effects that can influence African American youth externalizing behaviors. The results are discussed in terms of the need to include consideration of discrimination in preventive interventions aimed at increasing support systems available to African American mothers.

Keywords Ecological perspective · African American mothers · Externalizing behaviors · Perceived discrimination · Depressive symptomatology

Introduction

A large majority of African Americans report experiences of racial discrimination on a daily basis (Kessler et al. 1999). Perceptions of racial discrimination include everyday acts that saturate the day-to-day existence of minorities (e.g., being treated as unintelligent) or the unfair treatment that occurs in societal institutions (e.g., unequal opportunities in the workplace) (Hunt et al. 2007). To date, most of the literature on the impact of perceived racial discrimination has documented its association with physical health (e.g., Sims et al. 2012), mental health (e.g., Kessler et al. 1999), and substance use (e.g., Gibbons et al. 2004). It is well known that individual mental and physical health problems can have deleterious effects on family life (e.g., Nievar and Luster 2006); therefore, families may be indirectly and perhaps directly affected by family members' perceptions of discrimination. Although scholars have demonstrated the negative impact of parental stressors and youth's perception of discrimination on youth outcomes (Sanchez et al. 2013), there is little to no understanding of whether, and if so how, parental contextual stressors such as discrimination adversely affect youth behavior. The purpose of the current study is to explore the effects of one maternal contextual stressor—perceived discrimination—on child outcomes and to examine the potential mediating role of maternal depression in any association found using a sample of African American mothers.

A framework identifying potential contributing factors to child outcomes is the ecological perspective (e.g.,

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Bronfenbrenner 1986). This framework emphasizes the importance of macro-stressors originating outside the family and highlights the way in which they may come to influence family functioning and child outcomes, considerations that may be particularly important in understanding the relationship between parental stressors and child behaviors in ethnic minority families (Odom et al. 2010; Sanders-Phillips et al. 2009). One source of stress particularly relevant to African Americans derives from their minority status in American society. Minority status creates opportunity for perceived racial discrimination, a macro-systemic influence that can function as a chronic stressor (Clark et al. 1999), influencing a parent's health (Geronimus 1992, 2001) and well-being, and thereby indirectly children's behavior. African Americans frequently experience racial discrimination, resulting in experiences of stress, frustration, depression, and anxiety (Sanchez et al. 2013; Taylor and Turner 2002). In turn, such experiences may increase a range of negative parenting behavior (e.g., Lovejoy et al. 2000), and this may confer substantial risk for future problems among offspring (Elmore and Gaylord-Harden 2012; Goodman 2007). If adequate support systems are not in place, these negative effects may be intensified (Cooper et al. 2013; Murry et al. 2008a, b). Informed by Bronfenbrenner's (1986) approach, we propose that there will be (a) a direct link between maternally perceived discrimination and child externalizing behavior and (b) a potential mediating role of maternal depression in the discrimination-child outcomes relationship.

Although previous studies have shown that African American women have reported lower levels of racism and discrimination than African American men (Brondolo et al. 2008), the levels of racism and discrimination among African American women are markedly high (Riina and McHale 2010). Indeed, Brody et al. (2008) found that the majority (67 %) of rural African American mothers reported experiencing some form of racial discrimination in their lives and an even larger majority (86 %) reported experiencing discrimination indirectly (i.e., witness it happen to others). Similarly, 67 % of a sample of 969 urban African American mothers reported experiencing frequent discrimination and 21 % of these mothers were categorized as experiencing high levels of everyday discrimination (Ajrouch et al. 2010).

Despite continued research on the effects of discrimination as a stressor and its prevalence among African American women, only a few studies have expanded this research to the family context. Murry et al. (2001, 2008a, b) explored the associations of maternal experiences of discrimination with both relationship quality and parent-child relationships. In a sample of married or engaged African American mothers, those who reported greater levels of discrimination had stronger associations between

stressor pile-up with psychological distress, lower intimate partnership quality, and parent-child relationship quality than those mothers with less discrimination experiences (Murry et al. 2001). In a similar sample, maternal experiences of discrimination were found to affect parenting behaviors for African American mothers in both single-parent and dual-parent households (Murry et al. 2008a). Furthermore, racial discrimination has been found to relate negatively to co-parenting cooperation for African American mothers but not for fathers (Riina and McHale 2010). These findings show the need to further examine the effects of discrimination on African American families. Although perceived discrimination has been shown to be prevalent in the lives of African American mothers (Maureen and Richeson 2012) and affect both their marital and parent-child relationship (Murry et al. 2008a, b; Riina and McHale 2010), examinations of mothers' experience of discrimination on child outcomes remain to be documented.

Increased negative life events, experiences of daily stressors and lifetime abuse have been shown to relate to increased depressive symptomatology in African American mothers (Mitchell and Ronzio 2011; Murry et al. 2001). In addition, discrimination may exacerbate the effect of stress on depression across the lifespan (Banks et al. 2006; Brondolo et al. 2008), increasing its association with poorer mental health outcomes in African Americans (Banks et al. 2006; Brondolo et al. 2011; Murry et al. 2001). More specifically, ethnic discrimination has been positively related to depression, anxiety, and hostility and negatively related to self-reported overall health (Brondolo et al. 2011), mood, and social interactions (Broudy et al. 2007) in African Americans. Brody et al. (2008) demonstrated the temporal sequencing of maternal discrimination and depressive symptoms in an African American sample, showing that maternal discrimination predicts later depressive symptoms and not vice versa.

In addition to the well-documented association between mothers' perceived discrimination and depression in African Americans, a relationship also exists between maternal depression and child externalizing behaviors (Harnish et al. 1995; Koblinsky et al. 2006; McCarty et al. 2003; Miner and Clarke-Stewart 2008). Numerous studies have found that maternal depression is associated with externalizing behaviors during all stages of child development (Cummings and Davies 1994; McCarty et al. 2003). In a review of 46 observational studies of the parenting behavior of depressed women, Lovejoy et al. (2000) found that depressed mothers displayed more withdrawn behavior as well as more negative parenting behavior. Further, poorer maternal parenting quality appears to confer much of the risk for future problems among offspring of depressed parents (Goodman 2007), and so supports the hypothesis that depression may be one of the factors accounting for

stress spillover effects across family subsystems (Gerard et al. 2006).

There are only a few studies that explore the nature of this relationship in African American families. In a high-risk sample, Boyd et al. (2011) found that African American mothers with elevated depressive symptoms reported greater levels of externalizing behavior in their children. Furthermore, in a lower-risk African American sample, the interplay of child behavior and maternal depression was also present (Smith-McKeever and Gao 2010). Though higher SES often serves to buffer the effects of depression, it does so more for White mothers than African American mothers (Smith-McKeever and Gao 2010). This documented higher level of risk underscores the importance of examining maternal depression as a mechanism that might account for an association between perceived discrimination and child externalization in African American families.

The current study uses Bronfenbrenner's (1986) Ecological Theory to conceptualize the direct and indirect link between one parental stressor and child behaviors, specifically maternal perceived discrimination and child externalizing behaviors. Examining this relationship is important in the relative absence of research on the impact of perceived discrimination on child outcomes. We hypothesize that (a) greater levels of maternal perceived discrimination will relate to higher levels of child externalizing behaviors and (b) maternal depressive symptoms will mediate the relationship between maternal perceived discrimination and child externalizing behaviors. Documenting these relationships may shed light on macrosystemic underpinnings of child externalizing behaviors and a potential contributing pathway. Because African American caregivers experience a multitude of stressors that relate to higher levels of psychological distress (Murry et al. 2001), the present study also controls for the additional effect of maternal life stressors on child externalizing behaviors.

Method

Sample and Procedure

This study utilized data from the Program of Strong African American Marriages (ProSAAM), a project designed to enhance relationship quality among African American couples. A sample was recruited that comprised 487 married or engaged, African American couples representing both urban and rural sections of the southeastern United States. All participants were at least 21 years of age, and were either engaged to be married, or married at least 1 year prior to the recruitment period. To be eligible for the

study, at least one partner had to be African American and the couple must have been willing to pray and have others pray for them as a couple. All participants completed questionnaires before completing the program and the data reported here come from this pre-intervention assessment of 189 mothers with children aged 7–14 years (50.8 % boys). If mothers had more than one child within this age range, the target child was randomly selected for completion of child measures. All mothers reported their race as African American and their mean age was 37.06 (SD = 6.57). The majority of the sample was married (90.4 %) on average 9.38 years (SD = 7.20). Mothers reported a mean household income range of \$40,000–\$50,000, which is slightly higher than the national median household income for African Americans, and places them in the middle class (US Census Bureau 2011). Most mothers (91.5 %) had at least some college or technical school.

Measures

Maternal Perceived Racial Discrimination

The 13-item Perceived Racism/Discrimination scale (Murry et al. 2001) was used to assess the level of maternal perceived discrimination. Participants were asked to rate how often they experienced racism or discrimination on a 4-point Likert scale (1 = *Never*; 2 = *Once or twice*; 3 = *A few times*; 4 = *Several times*). Sample items included “How often has someone said something derogatory or insulting to you or your partner just because you are African American or are a part of an African American family?” and “How often has someone yelled a racial slur at you or your partner?” A composite measure of maternal perceived racial discrimination was constructed by summing the 13 items ($\alpha = 0.88$). As regards to validity, this index has been shown to be linked to experiencing more stressful life events and to deterioration in mother–child relationships (Murry et al. 2001).

Maternal Depressive Symptomatology

Maternal depressive symptomatology was measured by the Beck Depression Inventory II (BDI-II; Beck et al. 1996). For each of the 21 symptoms, respondents were to rate the statement that best described them in the past week on a 4-point scale [e.g., Sadness—(0) *I do not feel sad*; (1) *I feel sad*; (2) *I am sad all the time and I can't snap out of it*; (3) *I am so sad or unhappy that I can't stand it*]. The severity of mothers' depressive symptomatology was constructed by summing the responses of each item. The internal reliability for this scale was high ($\alpha = 0.89$).

Child Externalizing Behaviors

Child Externalizing Behaviors was measured by the Mother-Target version of the Externalizing Behaviors subscale (32-items) of the Child Behavior Checklist completed by mothers (CBCL; Achenbach and Edelbrock 1983). Responses were rated on a 3-point scale ranging from 1 (*Not true*) to 3 (*Very true or often true*) and were summed to make a composite score for Child Externalizing Behavior. The internal reliability of the scale for this sample was high ($\alpha = 0.87$).

Control Variables

Mothers' demographic data including age, education level (1 = *less than high school*; 2 = *high school diploma/GED*; 3 = *some college/technical degrees*; 4 = *college degree*; 5 = *some graduate school*; 6 = *advanced degree*), child age, child gender, and maternal stressful life events were used as control variables. The List of Threatening Experiences Questionnaire (LTE-Q; Brugha and Cragg 1990) was used to assess maternal stressful life events and consisted of 13 threatening events that are often experienced as stressors. Participants were asked to identify which stressful events were experienced in the last 3 months and the impact of each threatening event on a 5-point Likert scale (1 = *little or no negative impact*, 2 = *some negative impact*, 3 = *substantial negative impact*, 4 = *substantial and sustained negative impact*, 5 = *overwhelming negative impact*). Sample events included "a parent, child, or mate died," "separation due to marital difficulties," and "you had a major financial crisis." The amount of stress from life events was assessed by summing the impact score from each event.

Results

Analytic Strategy

Because previous research shows that boys tend to have higher rates of externalizing behaviors than girls (see Silverthorn and Frick 1999, for review), preliminary analyses were conducted to determine if there were any gender differences in child externalizing behavior. Bivariate analyses using Pearson correlations were then conducted with the predictor, dependent, and control variables to observe any significant relationships with the outcome variable.

Next, hierarchical linear regression was used to assess whether maternal perceived discrimination was associated with child outcome after controlling for maternal age, maternal education level, child age, child gender, and

maternal stressful life events. Demographic variables were entered in the first block, maternal stressful life events in the second block, and maternal perceived discrimination in the third block to assess if perceived discrimination explained additional variance beyond that of other stressors controlling for age, years married, and education level on the outcome.

Finally, we examined whether maternal depression mediated the effects of maternal discrimination on child externalizing behavior (see Fig. 1). To test for mediation we used a bootstrapping procedure to assess indirect effects (see Preacher et al. 2007; <http://www.afhayes.com/spss-sas-and-mplus-macros-and-code.html>). This method is superior to traditional approaches (e.g., Baron and Kenny 1986; Sobel 1982) to mediation as it estimates direct and indirect effects simultaneously, does not assume a standard normal distribution when calculating the p value for the indirect effect, and repeatedly samples the data to estimate the indirect effect (Preacher et al. 2007). We used 1,000 resamples of the data, 5 % alpha significance level, and examined bias corrected and accelerated bootstrap confidence intervals (95 %) to adjust for any bias in the sampling distribution (Mackinnon et al. 2004). Full mediation is met if both the indirect effect is significantly different from zero (evidenced by the confidence interval not capturing zero) and the direct effect of the independent variable on the dependent variable is not significantly different from zero ($p > .05$).

Bivariate Results

The results of a t test showed that there were no gender differences in scores on externalizing behaviors, $t(176) = 0.57$, $p > .05$, therefore, boys and girls were analyzed together. Correlations, means, and ranges of variables are displayed in Table 1. Child externalizing behavior was positively associated with maternal perceived discrimination, maternal stressful life events, and maternal depressive symptoms. Maternal perceived discrimination was associated with greater levels of maternal stressful life events, greater levels of maternal depressive symptoms, and higher educational attainment. In addition, younger mothers and mothers with lower educational attainment were more likely to have an increased level of maternal stressful life

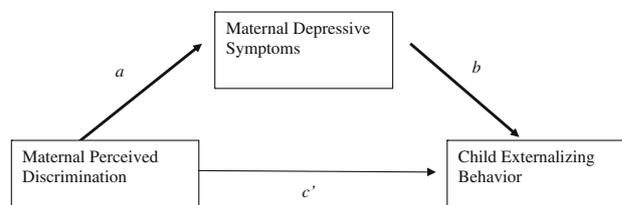


Fig. 1 Conceptual model

events. These results provide preliminary support for our main hypotheses.

Hierarchical Linear Regression

Table 2 shows the results of the hierarchical linear regression used to test the direct effect of maternal perceived discrimination on child externalizing behavior. The demographic controls entered in step 1 were age, child gender, and maternal education level. None of the controls significantly predicted child externalizing behavior. Next, the measure of maternal stressful life events was entered in step 2. Maternal stressful life events improved the model, accounting for an additional 4 % of the variance in child externalizing behavior. Finally, maternal perceived discrimination was entered in step 3 and explained additional variance ($\Delta R^2 = .04$) over and beyond that of maternal stressful life events. Because of its significant effect on child externalizing behavior, the stressful life events score was used as a control variable in the subsequent mediation analysis.

Mediation Analysis

To test the second hypothesis that maternal depression mediates the maternal perceived discrimination and child externalizing behavior association, Preacher and Hayes’ (2008) INDIRECT procedure was used. The results (Table 3) revealed a significant positive effect of maternal perceived

discrimination on child behavior through maternal depression. More specifically, maternal perceived discrimination was associated with more depressive symptoms (Fig. 1 path a) and maternal depressive symptoms was associated with greater child externalizing behavior (Fig. 1 path b), reducing the direct effect of maternal perceived discrimination on child externalizing behavior (Fig. 1 path c’, $.11 p > .05$). Therefore, the mechanism by which maternal perceived discrimination predicts child externalizing behavior is through maternal depressive symptoms.

Discussion

The purpose of this study was to examine the effects of a contextual stressor, discrimination experienced by mothers, on child outcomes in an African American sample. A robust relationship was found between maternal experience of discrimination and child externalizing problems with variance accounted for by socio-demographic variables controlled. This relationship did not simply reflect the effect of overall stress as it remained even after controlling for the occurrence of major life events, explaining significant additional variance in child outcome. This result therefore attests to the potential importance of discrimination as a contextual process that may help account for outcomes among African American youth. Documenting a robust association between perceived discrimination and child externalizing behavior raises the question of the mechanism linking them, a topic we also addressed.

Given the extensive literature linking maternal depressive symptomology to child externalizing behaviors (Harnish et al. 1995; Koblinsky et al. 2006; McCarty et al. 2003; Miner and Clarke-Stewart 2008), we hypothesized that maternal depression might serve as a mediator between perceived discrimination and child externalizing outcomes. We replicated results showing that maternal depressive symptoms are associated with child externalizing behavior, as well as those suggesting that perceived discrimination is related to depressive symptoms (Brondolo et al. 2011), setting the stage for an examination of mediation. As hypothesized, maternal depressive symptomatology fully mediated the pathway between maternal perceived discrimination and child externalizing behavior controlling for the impact of stressful life events. These results indicated that mothers’ experience of greater discrimination are linked to more maternal depressive symptoms, and that depressive symptoms, in turn, are linked to higher levels of externalizing behavior among children. These results also suggest that the macrosystemic influence of discrimination penetrates the microsystem (mother’s health) and, in turn, the parent–child subsystem to influence child outcomes.

Table 1 Correlations, range, means, and standard deviations among study variables

Variables	1	2	3	4	5	6
1. Maternal perceived discrimination	–					
2. Maternal stressful life events	.15*	–				
3. Maternal depression	.23**	.34***	–			
4. Child externalizing behavior	.16*	.19**	.22**	–		
5. Highest education level	.34**	–.16*	–.07	–.08	–	
6. Maternal age	.08	–.15*	–.02	–.00	.09	–
Range	13–44	0–33	0–38	32–73	1–6	23–56
Mean	21.41	4.02	7.41	40.14	3.77	37.01
SD	6.62	5.37	7.36	6.83	1.20	6.54

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 2 Hierarchical linear regression predicting externalizing child outcomes

Variable	Step 1			Step 2			Step 3		
	<i>B</i>	SE <i>B</i>	β	<i>B</i>	SE <i>B</i>	β	<i>B</i>	SE <i>B</i>	β
Child age	.19	.19	.08	.19	.19	.08	.20	.18	.08
Child gender (0 = male, 1 = female)	-.58	1.06	-.04	-.63	1.05	-.05	-.80	1.03	-.06
Mother highest education level	-.51	.44	-.09	-.35	.43	-.06	-.81	.46	-.14
Maternal stressful events				.24	.10	.19*	.19	.10	.15
Maternal perceived discrimination							.23	.08	.22**
ΔR^2						.04*			.04**
R^2					.02	.05			.09

* $p < .05$; ** $p < .01$ **Table 3** Maternal depression as a mediator of the relationship between maternal discrimination and child externalizing behavior

Path/effect	β	SE	<i>t</i>
<i>a</i> Maternal discrimination → maternal depression	.21	.08	2.73*
<i>b</i> Maternal depression → child externalizing behavior	.14	.07	2.01*
<i>c'</i> Maternal discrimination → child externalizing behavior	.11	.08	1.40
Partial effect of maternal life stressful events on child externalizing behavior	.16	.10	1.63
Bootstrap results for indirect effect			
	M	SE	BC 95 % CI
<i>ab</i> Maternal discrimination → maternal depression → child externalizing behavior	.03	.03	[.002, .115]

BC bias corrected; $R^2 = .07$ * $p < .05$

The findings presented here fit well within the extant body of literature documenting the relationship between maternal stressors and child behaviors. However, we focused on the impact of a macrosystemic stressor specific to minority groups, discrimination. Additionally, the study is useful due to its attention to unique stressors that may influence African American families. It is possible that current findings may generalize to other racial minority groups that experience systemic discrimination, and may extend even further to non-racial minorities. This may be a large group given growth in the numbers of minority and multi-cultural families in America, and the effects that discrimination can have on families in this rapidly growing segment of American society.

One implication of these results is that prevention and intervention programs may need to provide strategies to help minority mothers cope with the discrimination. Development of effective strategies for decreasing the strain induced by discrimination could likely decrease the prevalence of co-occurring maternal discrimination and child externalizing behaviors. It is likely that efforts to reduce discrimination would also contribute to minority health, mental health, and outcomes for minority children. At a minimum, it seems likely that family based programs designed for minority families will need to attend carefully

to the macro-context of these families, providing them with tools to manage common stressful experiences, including those related to discrimination.

The findings from this study must also be considered in light of its limitations. As is common with research that uses cross-sectional data analyses, inferences about direction of effects must be viewed tentatively. Because neither experiences of discrimination or child externalizing behaviors are constant, studies utilizing multiple time points would be helpful in testing direction of effects. Although one longitudinal study has previously documented a temporal connection between maternal depression and child externalization in African-Americans, more longitudinal examinations—particularly with African American and other minority samples—would be helpful to determine how maternal depressive symptomology and other stressors and child externalizing behaviors are connected over time. An additional limitation is that all constructs were measured from the perspective of mothers. Future studies would benefit from including the responses of others within the multi-layered environment of the mothers and children, such as partners, teachers, and other family members or other caregivers, especially due to evidence showing that depressed mothers tend to over-report externalizing problems in their children (e.g., Miner

and Clarke-Stewart 2008). However, it should be noted that maternal reports are particularly informative with regard to mother's stressful experiences and symptoms of depression.

Finally, although the focus on African American families is a valuable contribution to the existing literature, generalizing to other minority groups may be limited if their experience of discrimination is more subtle or takes different forms. Similarly, discrimination may take different forms even among African Americans in urban versus rural contexts, as a function of SES, skin complexion, or due to gender differences. Nonetheless, the current results add to a growing body of research on discrimination in the context of minority families, and such a focus is warranted in light of the rapidly growing multi-racial and multi-cultural population.

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