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Psychological Distress, Couple Interactions, and Parenting: A Dyadic Analysis of African American Couples

Parental depression is a well-established risk factor for couple conflict and ineffective or hostile parenting (M. C. Lovejoy, P. A. Graczyk, E. O'Hare, & G. Neuman, 2000; L. M. Papp, M. C. Goetze-Morey, & E. M. Cummings, 2007). Although research suggests that caregiver depression may impact parenting indirectly via increased conflict between couples (e.g., R. D. Conger et al., 2002), few studies take into account the behaviors of both caregivers in exploring these relations. The goal of the current study is to employ an actor-partner mediator model to examine the complex relations among psychological distress, negative couple interactions, and parenting. Using a sample of 162

African American couples with children, we find evidence that the psychological distress of each caregiver has an effect on couple interactions for both men and women. The effects from each caregivers' distress to parenting are mainly indirect through the interactional behaviors of the mother toward the father, consistent with the father vulnerability hypothesis (e.g., E. M. Cummings, M. Goetze-Morey, & J. Raymond, 2004).

The negative consequences of parental depression on familial relationships have been well established in the past several decades. For example, depression is related to more negative and less positive couple interactions for both depressed individuals and their partners (Papp, Goetze-Morey, & Cummings, 2007). Parental depression is also a known risk for ineffective parenting as well as greater hostility and less warmth displayed by parents toward their children (Conger et al., 2002; Lovejoy, Graczyk, O'Hare, & Neuman, 2000; McMakin et al., 2011). Importantly, some research has suggested that the effects of depression on parenting may be explained in part by the negative influence of caregiver conflict on parenting behaviors (Conger et al., 2002; Erel & Burman, 1995).

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Given ample evidence that the quality of parenting is important for promoting positive emotional and behavioral outcomes for offspring (Cutrona, Cole, Colangelo, Assouline, & Russell, 1994; Simons, Su, & Simons 2013) and for providing an environment in which messages are learned that may impact the offspring's own romantic relationships (Conger, Cui, Bryant, & Elder, 2000; Simons, Simons, Landor, Bryant, & Beach, 2014), it is important that researchers further explore factors that affect parenting quality. Thus, the goal of the current study is to employ an actor-partner mediator model (APMeM) to examine the complex relations between caregiver psychological distress, negative couple interactions, and ineffective parenting accounting for the symptoms and behaviors of both caregivers in a sample of African American families. Little research has focused on the relation between caregiver conflict and parenting in African American families (Krishnakumar & Buehler, 2000). This is unfortunate given findings indicating that African American couples experience more conflict (Broman, 2005) and are exposed to more stressors that can disrupt family relationships and the quality of parenting (e.g., financial strain, discrimination, neighborhood disorder) than their White counterparts (Barajas-Gonzalez & Brooks-Gunn, 2014; Bryant et al., 2010; Cutrona et al., 2003).

PARENTAL DEPRESSION AND FAMILY INTERACTIONS

According to Berkowitz's (1989) reformulation of the frustration-aggression hypothesis, emotional distress and negative affect, including depression and anxiety, are natural reactions to frustrating and stressful life circumstances. This psychological distress, in turn, promotes negative scanning of the environment, leading to increased hostility and decreased positive behaviors. Specifically, psychological distress is proposed to evoke physiological and emotional feelings of anger, leading to aggression, hostility, and a lack of warmth in personal relationships. Consistent with this model, research has established that depression and other indicators of psychological distress are potent risk factors for negative interactions between romantic partners and between parents and their children. This hypothesis is also consistent with other models of depression and marital adjustment, including Hammen's (1991) stress-generation model,

which holds that experiences of depression can lead to subsequent depression-generating events mainly through interpersonal difficulties such as conflict with a romantic partner.

Depression and Couple Conflict

A recent longitudinal study reported that husbands' and wives' depression each led to an increased level of couple conflict over 5 years (Faulkner, Davey, & Davey, 2005). This increase in marital conflict over time is likely related to negative interactional patterns of couples with a depressed partner. Depressed partners display greater helplessness, sadness, and withdrawal, more hostility, aggression, and anger, and lower positivity in couple interactions (Du Rocher Schudlich, Papp, & Cummings, 2004; Gabriel, Beach, & Bodenmann, 2010; Keller, Cummings, & Peterson, 2009; Knobloch-Fedders, Knobloch, Durbin, Rosen, & Critchfield, 2013). In a multilevel dyadic analysis, Papp and colleagues (2007) demonstrated that one partner's depression also influenced interactions at the dyadic level. Specifically, couples with a depressed individual demonstrated lower positivity and higher anger, sadness, withdrawal, and signs of physical distress such as crying and trembling. Thus, consistent with the frustration-aggression hypothesis, depressed individuals are at an increased risk for displaying anger, hostility, and aggression as well as decreased positive behaviors when interacting with a romantic partner.

Importantly, past research has demonstrated that the relation between depression and negative couple interactions is likely concurrent and that, as symptoms of depression or distress improve, so do couple interactions. For instance, studies have shown that the effect of couple-based interventions for depression on increased marital satisfaction are partially accounted for by changes in psychological distress or depression-related behaviors and attitudes (Cohen, O'Leary, Foran, & Kilem, 2014; Kuhlman, Tolvanen, & Seikkula, 2013). Judd et al. (2000) similarly found that levels of couple distress varied with level of depression severity over a period of 10 years. These researchers specifically found that when symptoms of depression were high, individuals rated their relationships as fair or poor, but individuals tended to rate their relationship with their spouse as good when symptoms of

depression had subsided. Therefore, the focus of the current study is a concurrent association between psychological distress and negative couple interactions.

Depression and Parenting

Parental depression is also a well-established risk factor for negative parent–child interactions and negative parenting practices, consistent with Berkowitz’s reformulation of the frustration-aggression hypothesis. In a recent meta-analysis, Lovejoy and colleagues (2000) reported a moderate effect for maternal depression on negative parenting behaviors (i.e., threatening, anger, intrusiveness), a small-moderate effect on maternal disengagement (i.e., ignoring, withdrawal), and a small effect on positive parenting behaviors (i.e., affection, praise). Similarly, Wilson and Durbin (2010) found similar and small effect sizes for paternal and maternal depression in predicting positive and negative parenting practices including warmth, affection, engagement, hostility, coercion, and critical behaviors. Other studies support these findings. For example, depressed mothers respond to their offspring with higher levels of criticism, hostility, dominance, and withdrawal and less warmth, responsiveness, problem solving, and support (Bolton et al., 2003; Cummings, Keller, & Davies, 2005; McMakin et al., 2011).

Parental depression is also associated with negative parental management techniques. Depressed parents are more likely to use harsh, physical discipline practices (Shay & Knutson, 2008) and are more likely to be inconsistent or lax in disciplining their children (Barry, Dunlap, Lochman, & Wells, 2009; Leung & Slep, 2006). Furthermore, depressed parents engage in greater intrusiveness and controlling behaviors (Cummings et al., 2005) and are more likely to be emotionally overinvolved and less effective at autonomy granting (Bolton et al., 2003; Brenning, Soenens, Braet, & Bal, 2012). Depressed parents are also less likely to engage in effective monitoring of their children (Elgar, Mills, McGrath, Waschbusch, & Brownridge, 2007).

PARENTAL DEPRESSION, CAREGIVER INTERACTIONS, AND PARENTING

Studies have clearly established that parental depression is a risk factor for negative

interactions between caregivers and between parents and their children. Research also suggests, however, that the relation between parental depression and poor parenting may be explained, at least in part, by negative caregiver interactions. Conger et al. (2002), for example, found the relation between caregiver depression and poor parenting was completely mediated by parental conflict.

According to the spillover hypothesis (Repetti, 1987), negative interactions between caregivers spillover into the parent–child dyad through the processes of social learning and the transference of affect across family subsystems (Krishnakumar & Buehler, 2000). This theoretical explanation specifically posits a significant, positive relation between negative caregiver interactions and negative parental practices as explained by an individual’s general lack of interpersonal skills and negative reactions to the stressors of caregiver conflict. Thus, caregiver conflict leaves parents with few emotional resources and little time to engage in warm and effective parenting practices. Although this explanation is not specific to families with a depressed caregiver, it provides a theoretical basis for expecting relations among caregiver distress, negative caregiver interactions, and ineffective parenting practices.

Indeed, researchers have demonstrated that negative caregiver interactions can have an impact on effective parenting practices. In a meta-analysis, Erel and Burman (1995) reported a medium effect size for the effect of marital quality, including satisfaction and conflict, on parent–child relationship quality, which was conceptualized as global quality, consistency, satisfaction, control, and discipline. In another meta-analysis that focused specifically on the impact of interparental conflict on parenting, including harsh discipline, lax control, support, and global parenting quality (Krishnakumar & Buehler, 2000), evidence for a robust, positive relationship was found. Other empirical research largely supports these findings. In one longitudinal study of rural, White families, higher marital negativity was associated with lower parental warmth by fathers, greater harsh discipline among mothers, and lower monitoring by both parents (Schofield, Conger, Martin, Stockdale, & Widaman, 2009).

Existing theoretical models and empirical evidence further support a mediating role for negative caregiver interactions in connecting

caregiver depression and parenting. One of the main propositions of the family stress model (FSM; Conger et al., 2002; Simons et al., 2016), which examines the impact of financial hardship on family interactions, is that the association between caregiver depression and parenting is indirect via caregiver conflict. Indeed, in a recent longitudinal study examining the FSM among African American families with adolescents, caregiver conflict completely accounted for the relation between caregiver depression and parenting (Landers-Potts et al., 2015). Across diverse samples, a large body of studies using the FSM supports an indirect effect from both maternal and paternal depression to hostile parenting practices through negative caregiver interactions and conflict (e.g., Benner & Kim, 2010; Conger et al., 2002). Lim and colleagues (2011) similarly found an indirect effect of paternal depression on parenting via increased caregiver conflict; however, in this study, maternal depression directly impacted parenting. Another recent study demonstrated a significant indirect effect from father's depression to mother's noninvolved parenting through the mother's perception of low marital support (Leinonen, Solantaus, & Punamaki, 2003). Together, these studies highlight the complex relation between depression, caregiver relationships, and parenting as evidenced by the negative effect of both father and mother depression on interparental interactions and, in turn, parenting.

The Role of Caregiver Gender

A limited number of researchers have examined gender differences in the relation between negative caregiver interactions and parenting. The goal of these types of studies is to determine if behaviors in the parent-child subsystem are more affected by the negative couple behaviors of one caregiver over the other on the basis of gender. Most research in this area supports the father vulnerability hypothesis (Cummings, Goeke-Morey, & Raymond, 2004; Davies, Sturge-Apple, Woitach, & Cummings, 2009), which states that fathers' parenting is more likely to be affected by couple hardships and conflict than mother's parenting. Researchers have suggested that this vulnerability of fathers may be the result of a less clearly defined parental role for fathers when compared with mothers, making the support of a female caregiver especially important for men (Coiro & Emery, 1998). In

contrast to a spillover process, which involves within-person transference of emotion or behavior from one family subsystem to another, the father vulnerability hypothesis is consistent with the concept of a crossover effect, in which a transference of behavior or affect occurs between individuals (e.g., mother's couple behaviors to father's parenting). Several studies have found support for this idea (Coiro & Emery, 1998; Krishnakumar & Buehler, 2000; Pedro, Ribeiro, & Shelton, 2012; Zvara et al., 2015). Davies and colleagues (2009), for example, reported that interparental conflict predicted fathers' insensitivity and psychological control with children, but interparental conflict was unrelated to the parenting behaviors of mothers. Similarly, Pedro et al. (2012) found that mothers' marital conflict behaviors had a stronger effect on fathers' parenting than vice versa. Some studies, however, have provided evidence that marital hostility and withdrawal have a similar impact on the parenting of each caregiver regardless of gender (Klausli & Owen, 2011).

Taken together, research suggests that one's own conflict behaviors will spillover into the parent-child relationship for both men and women (e.g. Erel & Burman, 1995) but that a partner's behaviors during couple interactions may have a crossover effect on parenting for men only. Thus, in the context of the current study, if fathers are indeed more vulnerable to the conflict behaviors of their partner than mothers, we would expect that either caregiver's psychological distress would be indirectly linked to the father's parenting through the mother's negative couple behaviors. On the other hand, if both mothers and fathers are similarly affected by the negative couple behaviors of their partner, we would expect to find an indirect relation between psychological distress and parenting through a partner's couple behaviors for both men and women.

THE ACTOR-PARTNER INTERDEPENDENCE MODEL

Few studies have taken into account the depressive symptoms and negative couple behaviors of both caregivers in predicting parenting behaviors. Despite a growing body of literature examining the impact of both partners' depression on couple interactions (e.g., Papp et al., 2007), there are a few studies that consider the behaviors of both partners toward one another

in predicting parenting. Rather, research has tended to use a global measure of the couple relationship that combines the behaviors of both parties to predict parenting by either partner (e.g., Schofield et al., 2009). This is unfortunate as the use of summed or averaged measures across two caregivers can be difficult to interpret, can lead to mismeasurement, and precludes drawing conclusions about gender differences in these associations (Cook & Kenny, 2005). On the other hand, the actor-partner interdependence model (APIM) enables researchers to adequately account for the interdependence of dyadic data such as data from mother-father dyads. In the current study, we employed an extended version of this model, the APM_eM, which incorporates a mediator into the more basic APIM model (see Ledermann, Macho, & Kenny, 2014). This model allowed us to test for both actor effects (e.g., the effect of one caregiver's psychological distress and couple behaviors on their own parenting) and partner effects (e.g., the effect of one caregiver's psychological distress and couple behaviors on the other caregiver's parenting). This approach also allows researchers to test for actor effects controlling for partner effects and vice versa. In the current study, this approach further enabled us to examine gender differences in the effect of one partner on the other.

Three recent studies have applied a basic APIM model to examining the effect of caregiver depression or caregiver couple interactions on parenting. First, Ponnet and colleagues (2013) found evidence of partner effects between the depressive symptoms of one parent and less open parent-child communication by the other after accounting for parenting stress. Klausli and Owen (2011) examined the effects of negative and positive marital interactions on parenting behaviors. In this study, marital hostility and withdrawal exerted a partner effect on parenting sensitivity, and marital support exerted an actor effect on parenting sensitivity. Results in each of these studies were similar for men and women. Yet, Zvara et al. (2015) found evidence that crossover effects from couple conflict behaviors to parenting may vary by both gender and race. Specifically, although there were no crossover effects for mothers regardless of race, mothers' interparental withdrawal predicted fathers' harsh parenting among African American but not White couples. The present research extends the focus of these studies by

incorporating both parental psychological distress and negative couple interactions as predictors of parenting and by focusing on African American families.

THE CURRENT STUDY

There are several gaps in the current literature in relation to the effects of parental depression or psychological distress on familial relationships that need to be addressed. First of all, studies generally have focused on the impact of a mother's distress on parenting rather than the impact of psychological distress of both caregivers. For example, in an analysis of studies between 1992 and 2004, Phares, Fields, Kamboukos, and Lopez (2005) concluded that studies examining the impact of fathers' depression on family relationships have not significantly increased over 13 years. Second, studies on the relation between caregiver interactions and parenting have generally focused on White families, but there is a lack of research on these processes within minority families (Krishnakumar & Buehler, 2000). Third, there is a need for more studies examining gender differences in the effect of one partner's couple behaviors on the other partner's behaviors with offspring. Last, few studies have used analytic techniques that allow for the examination of both partners' psychological distress and couple behaviors in predicting ineffective parenting. In the current study, we aim to address these gaps using an APM_eM with a sample of African American mothers and fathers from Georgia and Iowa with preadolescent children.

On the basis of the theoretical and empirical work reviewed in this article, we have several hypotheses. Consistent with Berkowitz's (1989) frustration-aggression hypothesis and literature showing the impact of one partners' depression on the marital interactions of both partners (e.g., Gabriel et al., 2010), we expect that the psychological distress of both caregivers will be related to their own and their partner's negative couple interaction behaviors (actor and partner effects).

Second, consistent with the spillover hypothesis (Repetti, 1987) and related empirical research (e.g., Erel & Burman, 1995; Schofield et al., 2009), we expect that caregiver's behaviors within the couple relationship (high hostility and low warmth) will predict their own poor parenting for both mothers and fathers (actor effect). Furthermore, consistent with work

that supports a crossover effect and the father vulnerability hypothesis (Cummings et al., 2004; Davies et al., 2009), we expect that maternal negative couple interactions will have a significant effect on the father's parenting but that the father's behaviors in the couple relationship will not have a significant impact on mother's parenting.

Last, on the basis of a main proposition of the well-established family stress model (FSM; Conger et al., 2002; Simons et al., 2016) and a large body of work that demonstrates a mediating role of negative caregiver interactions in the relation between depression and parenting (e.g., Landers-Potts et al., 2015; Leinonen, Solantaus, & Punamaki, 2003), we expect to find evidence of several indirect effects via maternal negative couple interactions. Specifically, we expect there will be an indirect effect between (a) paternal psychological distress and paternal parenting, (b) paternal psychological distress and maternal parenting, (c) maternal psychological distress and paternal parenting, and (d) maternal psychological distress and maternal parenting via the mother's negative couple interactions. Also, in line with our hypothesis that men's behaviors in their romantic relationship will affect their own but not their partner's parenting, we expect to find indirect effects between (a) maternal psychological distress and paternal parenting and (b) paternal psychological distress and paternal parenting through the father's negative couple interactions. We do not expect father's behaviors with their partner to play a role in linking caregiver psychological distress to maternal parenting. Given existing evidence of a moderate relation between depression and parenting (e.g., Lovejoy et al., 2000), it is possible that psychological distress will still exert a direct effect on parenting when accounting for caregiver interactions for both mothers and fathers.

METHOD

Sample and Procedures

Data for this study came from Waves 1 and 2 of the Family and Community Health Study (FACHS), a multisite investigation of African American families in rural and urban areas of Iowa and Georgia. FACHS was designed to identify family and neighborhood factors that affect the development and well-being of

African American youth over time. The sample was recruited from block group areas in which African Americans made up 10% or more of the population, and 84% of the families contacted agreed to participate in the study.

Wave 1 of the data was collected in 1997 when youth were between the ages of 10 and 12 years. Every 2 to 3 years, data were collected from a target child, a sibling (if present), a primary caregiver, and a secondary caregiver (if present) through structured, in-home interviews. To be included in the study, the secondary caregiver had to live in the home with the target and primary caregiver. Of primary caregivers at Wave 1, 83.3% were the target's mother, 5.5% were the target's father, 5.6% were the target's grandmother, and 5.6% were another relative or adoptive parent. Of secondary caregivers, 35.1% were the target's father, 21.9% were the mother's spouse or significant other, 11.3% were the target's grandmother, 6.2% were the target's mother, and 25.5% were another relative or adoptive parent. The full sample consisted of 411 female and 478 male African American youth. Interviews were completed in the participants' homes or nearby. During each visit, participants completed a self-report questionnaire administered using computer-assisted personal interviewing. In addition, the two caregivers participated in a 20-minute video task in which they were asked about enjoyable and difficult aspects of their relationship. Videotaped data were coded using the Iowa Family Interaction Rating Scales (Melby & Conger, 2001).

The current analysis focused on data from 162 dyads consisting of the target's mother and her male romantic partner (324 individuals) at Wave 1 (1997) and Wave 2 (1999). Couples were only included if the mother indicated that she was the primary caregiver of the target youth and if her romantic partner was identified as the secondary caregiver at both waves. Of the fathers, 67.9% were the target's biological father, 29.0% were the target's stepfather, and 3.1% were the mother's significant other. Furthermore, 86.4% of the caregivers were married and 13.6% were living together in a committed romantic relationship. At Wave 1, mother's ages ranged from 27 to 51 years (mean age [M_{age}] = 36.0, standard deviation [SD] = 5.1), and father's ages ranged from 22 to 62 years (M_{age} = 38.7, SD = 7.4). Target youth in these families (50% male) were, on average, 11.0 years of age (SD = 0.6) at Wave 1 and 12.7 years of age (SD = 0.7) at Wave 2.

Measures

Caregiver psychological distress. At Wave 1, caregiver psychological distress was measured using the general distress subscale of the Mini Mood and Anxiety Questionnaire (Clark & Watson, 1997). Caregivers indicated whether they felt depressed, discouraged, hopeless, like a failure, or worthless during the past week. Response categories ranged from 1 = *not at all* to 3 = *extremely*. The scale was coded so that higher scores indicated greater psychological distress, and items were summed to form the final scale ($\alpha = .77$ for mothers, $\alpha = .76$ for fathers).

Caregiver negative couple interactions. At Wave 1, two scales developed by Matthews, Wickrama, and Conger (1996) and Conger et al. (2002) were used to assess the quality of the relationship between caregivers: (a) participant reports of their partner's relational warmth and hostility and (b) observer ratings of each partner's displayed warmth and hostility. Mothers and fathers each reported on their romantic partner's warmth and hostility in interactions. Warmth was measured using nine items indicating how often the respondent's partner had engaged in supportive behaviors in the past 12 months. Example items include "act loving and affectionate toward you" and "listen carefully to your point of view." Response categories ranged from 1 = *never* to 4 = *always*. Warmth items were reverse coded so that higher scores indicated lower warmth and supportiveness ($\alpha = .89$ for mothers, $\alpha = .91$ for fathers). Hostility was measured using 12 items indicating how often the respondent's partner had engaged in hostile or aggressive behaviors in the past 12 months. Example items include "push, grab, hit, or shove you" and "insult or swear at you." Response categories ranged from 1 = *never* to 4 = *always*. Hostility was coded so that higher scores indicated greater hostility and aggression ($\alpha = .88$ for mothers, $\alpha = .83$ for fathers).

Second, trained observers rated the warmth and hostility directed by the mother to the father and by the father to the mother. Four items were used for each caregiver to indicate warmth during the interaction task and included behaviors such as warmth, listener responsiveness, and prosocial behavior. Four items were used for each caregiver to indicate hostility during the interaction task and included behaviors such as hostility, verbal attack, and coercion. A rating

scale from 1 = *no evidence of this behavior* to 9 = *high level of behavior displayed* was used to generate a measure of low warmth (reverse coded) and high hostility. According to intra-class correlations, interobserver reliability was over .70 on all assessments. Scores for caregiver reports and observer reports of warmth and hostility were standardized and then summed to form a measure of negative couple interactions ($\alpha = .85$ for mothers, $\alpha = .85$ for fathers).

Hostile, ineffective parenting. At Wave 2, three indicators of hostile, ineffective parenting were used: (a) poor parental management, (b) caregiver hostility to target, and (c) caregiver warmth to target. Target youth reported on their mother's and father's management skills, and caregivers reported on their own management skills on 22 items that assessed several dimensions: monitoring, consistent discipline, positive reinforcement, inductive reasoning, and communication. Response categories ranged from 1 = *never* to 4 = *always*. Items were reverse coded so that higher scores indicated poorer child management skills.

Target children also reported on the amount of warmth and hostility displayed by their mother and father toward them. For caregiver warmth and support, targets indicated how often in the past 12 months each caregiver had engaged in nine different behaviors including listening, acting affectionate, helping with something important, and acting supportive and understanding. Warmth items were reverse coded so that higher scores indicated lower warmth and support. Caregiver hostility toward the target was measured using 14 items indicating how often each caregiver had engaged in behaviors such as shouting, criticizing, lecturing, and physical aggression in the past 12 months. Response categories ranged from 1 = *never* to 4 = *always*. Hostility was coded so that higher scores indicated greater hostility and aggression. Scores for parental management, hostility, and low warmth were standardized and then summed to form a measure of hostile, ineffective parenting ($\alpha = .89$ for mothers, $\alpha = .92$ for fathers).

Control variables. Several demographic variables were used as controls in the current study, including (a) caregiver age, (b) relationship of father to target (1 = *biological father*, 0 = *other*), (c) caregivers' marital status, (d) target child

Table 1. Descriptive Statistics for Study Variables

	1.	2.	3.	4.	5.	6.
1. Maternal psychological distress (W1)	—					
2. Paternal psychological distress (W1)	.23**	—				
3. Maternal negative couple interactions (W1)	.30**	.33**	—			
4. Paternal negative couple interactions (W1)	.25**	.19*	.54**	—		
5. Maternal parenting (W2)	.05	.02	.23**	.18*	—	
6. Paternal parenting (W2)	.04	.17*	.28**	.28**	.58**	—
Mean (SD)	6.19 (1.60)	6.07 (1.63)	0.00 (13.56)	0.00 (13.94)	0.00 (22.60)	0.00 (25.35)

Note. W1, Wave 1; W2, Wave 2. * $p < .05$. ** $p < .01$.

gender, and (e) target child age. In addition, target child oppositional defiant disorder at Wave 1 was included as a control given its possible impact on parenting (Wang & Kenny, 2014). Oppositional defiant disorder was measured using The Diagnostic Interview Schedule for Children-Version 4 (Shaffer et al., 1993). A continuous measure of symptom counts rather than diagnoses were used for the analyses.

Analytic Strategy

First, to determine the appropriate method of analysis, we tested for the distinguishability of dyad members on the basis of their designation as mother or father. The distinguishability of dyad members was established using the omnibus test of distinguishability (Kenny, Kashy, & Cook, 2006, pp. 129–131). The results of the test, $\Delta\chi^2(12) = 22.802$, $p < .05$, suggest that the dyad members in the current sample can be distinguished statistically, and thus analyses were performed using structural equation modeling (SEM) with Mplus version 6 (Muthén & Muthén, 2012). To evaluate model fit in SEM, a model must be overidentified rather than just identified or saturated. Thus, paths from target gender to mother's and father's psychological distress were not included in the final model, $\chi^2(2) = 1.138$, $p > .05$. Models were rerun with these paths included, and all significant and insignificant effects were the same as well as all indirect effects (not shown). Indirect effects were tested using bias-corrected bootstrapping (iterations = 5,000), which increases the power for detecting significant indirect effects and

addresses issues of nonnormality (Preacher & Hayes, 2008). Missing data were handled with full information maximum likelihood estimation.

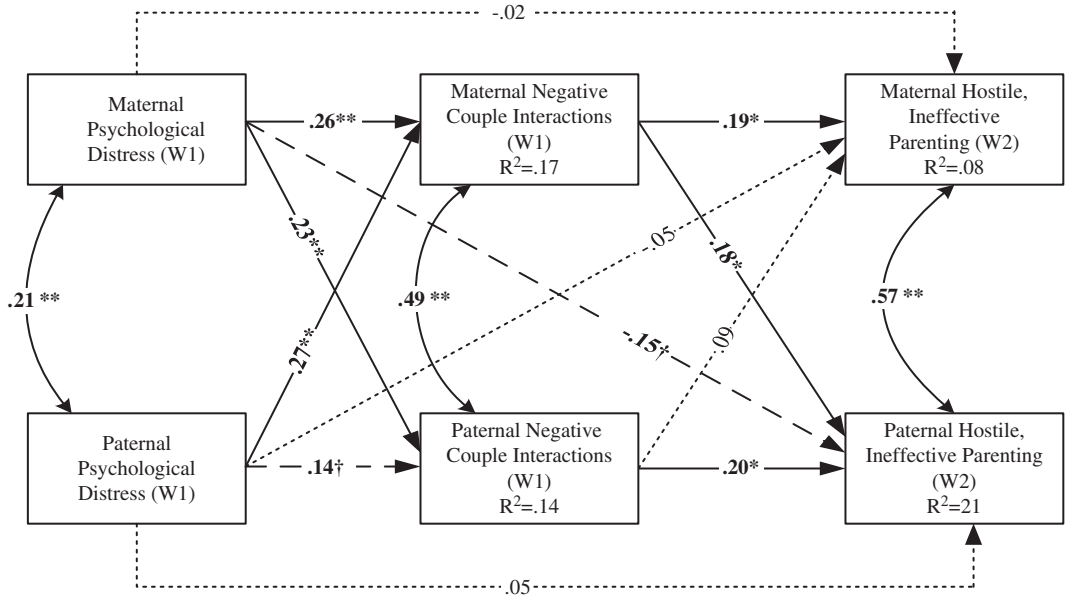
RESULTS

Correlations and descriptive statistics for the study variables are shown in Table 1. All significant correlations were in the expected direction. Maternal psychological distress was significantly correlated with all other variables with the exception of mother's and father's parenting. Paternal psychological distress was significantly associated with maternal psychological distress, negative couple interactions, and father's parenting. Both mother's and father's negative couple behaviors were significantly correlated with all other variables. Last, maternal and paternal parenting were significantly correlated with one another.

Structural Model

Results of the structural equation model are shown in Figure 1. Fit indices were consistent with excellent fit of the data to the model: Comparative Fit Index: 1.00; Tucker-Lewis Index: 1.00; Root Mean Square Error of Approximation: 0.00; Standardized Root Mean Square Residual: 0.01. According to our first hypothesis, we expected the psychological distress of each caregiver would be related to their own (actor effect) and their partner's (partner effect) negative couple interactions. This hypothesis was fully supported for mothers and

FIGURE 1. RESULTS OF THE ACTOR–PARTNER MEDIATOR MODEL FOR CAREGIVER DEPRESSION (W1), NEGATIVE CAREGIVER INTERACTIONS (WAVE 1), AND PARENTING (WAVE 2).



Note. W1, Wave 1; W2, Wave 2. Caregiver age and gender, father’s relationship to child, parent’s marital status, target child’s age and gender, and oppositional defiant disorder entered as covariates. Not shown for clarity. Comparative Fit Index: 1.00; Tucker-Lewis Index: 1.00; Root Mean Square Error of Approximation: .00; Standardized Root Mean Square Residual: .01.

** $p < .01$; * $p < .05$; † $p < .10$.

partially supported for fathers. Maternal psychological distress was positively significantly related to mother’s own conflict behaviors in the couple relationship ($\beta = .256, p = .003$), and father’s psychological distress approached significance in relation to his own behaviors toward the mother during couple interactions ($\beta = .140, p = .071$). For partner effects, maternal psychological distress was significantly associated with father’s high hostility and low warmth with his partner ($\beta = .230, p = .004$), and father’s psychological distress was positively, significantly related to mother’s interactional behaviors in the couple relationship ($\beta = .274, p = .000$).

Second, we hypothesized that each caregiver’s negative couple interactions would have a direct impact on their own parenting (actor or spillover effect). Consistent with the father vulnerability hypothesis, we also expected that mother’s, but not father’s, negative couple behaviors would have an effect on the parenting of their partner (partner or crossover effect). Indeed, mother’s negative couple interactions

were significantly and positively associated with her own parenting ($\beta = .193, p = .045$), and father’s couple behaviors exerted a significant effect on his own parenting ($\beta = .196, p = .025$). Father’s behaviors in his romantic relationship were unrelated to the mother’s parenting as expected, and mother’s negative couple interactions with her partner was significantly related to the father’s hostile, ineffective parenting ($\beta = .182, p = .040$). Psychological distress did not have a direct actor or partner effect on parenting for either caregiver, taking into account negative couple interactions.

To provide support for the causal ordering of our model, an alternative model was run, switching the causal order of caregiver psychological distress and negative couple interactions. Although negative couple interactions predicted psychological distress, distress was unrelated to parenting (not shown). This additional analysis provided further justification for examining caregiver interactions as a mediator between psychological distress and parenting.

Table 2. Indirect Effects Analysis Using Bias-Correct Bootstrapping (5,000 Iterations)

Paths	<i>B</i>	β	95% CI
Maternal parenting			
Maternal distress → Maternal couple interactions → Maternal parenting	.696	.049	0.004, 2.031*
Paternal distress → Maternal couple interactions → Maternal parenting	.733	.053	-0.020, 1.986
Paternal parenting			
Paternal distress → Maternal couple interactions → Paternal parenting	.737	.047	0.018, 2.082*
Maternal distress → Maternal couple interactions → Paternal parenting	.777	.050	0.012, 2.219*
Maternal distress → Paternal couple interactions → Paternal parenting	.712	.045	-0.057, 2.350

Note. CI = confidence interval. *Significant at .05.

Indirect effects. Indirect effects were tested using 95% confidence intervals generated using the bias-corrected bootstrapping option in Mplus. As shown in Table 2, there was a significant indirect effect from maternal psychological distress to mother's hostile, ineffective parenting via mother's negative couple behaviors with the father, $\beta = .049$, 95% confidence interval (CI) [0.004, 2.031]. Similarly, there was a significant indirect effect from both maternal psychological distress, $\beta = .050$, 95% CI [0.012, 2.219], and paternal psychological distress, $\beta = .047$, 95% CI [0.018, 2.082], to father's ineffective parenting via mother's high hostility and low warmth toward her romantic partner. Two indirect effects were not significant: the effect of paternal psychological distress on mother's parenting via maternal negative couple interactions and the effect of maternal psychological distress on father's parenting via paternal negative couple interactions.

DISCUSSION

Past research has established that parental depression is a risk factor for negative couple interactions as well as ineffective and negative parenting practices (Lovejoy et al., 2000; McMakin et al., 2011; Papp et al., 2007). There is further evidence that the impact of caregiver psychological distress on parenting may be indirect via increased negative interactions between romantic partners (e.g., Conger et al., 2002; Landers-Potts et al., 2015). Few studies, take into account the behaviors of both caregivers in exploring these relations. The goal of the current study was to examine the longitudinal relations among caregiver psychological distress, negative couple interactions, and parenting using the APMEM with a sample of African American caregivers of preadolescents. This is one of the

first studies to apply this technique to examine such relationships.

Findings generally supported our hypotheses. First, consistent with the frustration-aggression hypothesis (Berkowitz, 1989) and previous research (e.g., Gabriel et al., 2010; Hammen, 1991; Knobloch-Fedders et al., 2013), each caregiver's psychological distress was related to their own negative couple behaviors as well as their partner's behaviors in couple interactions (actor and partner effects). Thus, our study suggests that both men's and women's psychological distress has a significant effect on the negative couple behaviors of their partner, replicating some previous work (Gabriel et al., 2010). Still, it is important to note that the association between men's psychological distress and their own negative couple interactions only approached significance. It is possible that men's distress is more strongly related to withdrawal, or reduction in both negative behaviors (e.g., anger, hostility) and positive behaviors (e.g., interest, warmth) than to increased hostility (Gabriel et al., 2010; Jacob & Johnson, 2001).

Both women's and men's negative couple behaviors were significantly associated with their own ineffective parenting practices (actor effects). Thus, consistent with the spillover hypothesis (Reppetti, 1987), caregivers who engage in ineffective behaviors with their romantic partner likely have few skills to deal with conflict in general and have few emotional resources to parent effectively because of the stress of negative couple interactions. On the other hand, results were mixed with regard to the impact of an individual's negative couple interactions on their romantic partner's parenting. Specifically, mothers' couple behaviors had a significant positive relation with fathers' parenting practices, but men's behaviors toward their partners did not exert an effect on mothers'

parenting behaviors. Together, these findings are concomitant with the father vulnerability hypothesis (Cummins et al., 2004; Davies et al., 2009) in that the parenting of fathers, but not of mothers, was related to the negative couple behaviors of their partner. Researchers have suggested that women may act as gatekeepers between fathers and children (De Luccie, 1994; Pedro et al., 2012), and given greater socialization of and clarity in the parenting role for women, men may feel incompetent to engage in effective parenting without the support of the female caregiver (Coiro & Emery, 1998).

All significant indirect effects from psychological distress to parenting were through mothers' negative behaviors in their romantic relationship with one exception. Specifically, there were significant indirect effects between maternal psychological distress and maternal parenting, paternal psychological distress and paternal parenting, and maternal psychological distress and paternal parenting via mother's high hostility and low warmth toward her partner in couple interactions. However, the indirect effect from paternal psychological distress to maternal parenting through mother's negative couple behaviors did not reach significance. This may indicate that a mother's own distress is more important in ultimately determining her parenting than her partner's distress when accounting for negative couple interactions. Again, these results support a spillover effect for mothers and a vulnerability to marital hardship for fathers (crossover effect) in relation to parenting.

As expected, neither caregiver's distress reached significance in predicting parenting when including negative couple behaviors and the other control variables. This is consistent with previous research reporting a mediating effect of caregivers' romantic relationship in linking caregiver depression and parenting (Conger et al., 2002; Landers-Potts et al., 2015; Leinonen et al., 2003). Contrary to expectations, men's distress was not associated with men's couple interaction behaviors, precluding an indirect effect, and the indirect effect from mother's distress to father's parenting via the father's negative couple interactions was insignificant. These findings suggest that women's behavior toward their partners may be a more important determinant of men's parenting behaviors than their own behaviors within the couple dyad. In other words, crossover effects may be more influential for African American men than

spillover effects when considering the domains of caregiver relationships and parent-child relationships.

In the current study, the negative couple behaviors of the mother were the driving force in linking caregiver distress to ineffective parenting practices for both mothers and fathers. This may point to the central role of female caregivers in families, including African American families, as has been posited by several researchers (Simons, Chen, Simons, Cutrona, & Brody, 2006; Simons & Conger, 2007). Thus, African American mothers may play a unique role in the well-being and positive functioning of family members given the historical trend of women acting as sole or primary providers in African American families. Researchers have also discussed that women tend to act as gatekeepers between fathers and children (De Luccie, 1994; Pedro et al., 2012), an explanation that is consistent with the father vulnerability hypothesis (a crossover effect). Therefore, mothers may be more apt to parent effectively regardless of the negative behaviors of their romantic partner, but fathers may rely on the support of mothers within the family system. Furthermore, as suggested by the spillover hypothesis (Krishnakumar & Buehler, 2000), mothers who lack the skills or ability to interact in warm and supportive ways with their romantic partner are more likely to lack the skills or abilities to parent in positive ways as well. These explanations support our finding that women's couple behaviors were associated with the parenting behaviors of both partners, but fathers' couple behaviors were only associated with their own parenting.

Researchers have further suggested that African American men, when compared with fathers of other races or ethnicities, are more likely to face stressors outside the family, including financial strain, neighborhood disadvantage and disorder, and racial discrimination (Barajas-Gonzales & Brooks-Gunn, 2014; Bryant et al., 2010; Cutrona et al. 2003; Zvara et al., 2015). For this reason, it has been suggested that African American fathers are especially in need of the support of mothers to parent optimally. This explanation is consistent with minority stress theory, which posits that African Americans disproportionately face stressful life circumstances across multiple domains as a result of their minority status. In turn, this high level of stress can lead to

psychological distress and feelings of alienation (Meyer, 1995) and has a great impact on interpersonal relationships including marriages and parent-child relationships (Barajas-Gonzalez & Brooks-Gunn, 2014; Bryant et al., 2010; Zvara et al., 2015). In sum, African American fathers are at a high risk for experiencing multiple stressors outside the family, which may amplify their vulnerability to ineffective parenting in the context of negative couple interactions.

There are some limitations in the current study that must be acknowledged. First, although it is a strength of this study that an all African American sample was used, the FACHS sample is somewhat homogenous in that all families were originally recruited from rural and urban areas of Iowa and Georgia. This may limit generalizability of the findings to African American families from other areas of the United States. Another limitation is the fact that each caregiver reported on the couple behaviors of the other caregiver. If the caregiver was significantly distressed, this may bias their perception of their partner's negative behaviors. We attempted to mitigate this issue by including both partner and observer report of each caregiver's hostility and warmth toward one another. In addition, although we posited a concurrent association between distress and negative couple behaviors on the basis of previous research (e.g., Conger et al., 2002; Judd et al., 2000), it is possible that there is a reciprocal relation between psychological distress and negative couple interactions that occurs longitudinally. We were unable to extend our analysis to subsequent waves of data given reductions in sample size over time, so future research would benefit from replicating these findings using three waves of longitudinal, prospective data. Finally, we were unable to control for Wave 1 parenting because of our sample size and a high correlation between Wave 1 parenting and Wave 2 parenting because these scales were measured by the same respondent using the same variables at each wave.

Despite these limitations, our study has several important strengths. First, no research to our knowledge has examined the associations between psychological distress, caregiver interactions, and parenting accounting for the symptoms and behaviors of both caregivers. The availability of data for both mothers and fathers allowed us to address this gap by using an APMeM. Furthermore, little research examining the effect of caregiver interactions

on parenting has used an African American sample, making this study a needed contribution to understanding these processes across diverse samples. Third, we used longitudinal data to demonstrate the impact of psychological distress and caregiver interactions on parenting over a span of 2 years. Last, multiple reporters were used, including data from mothers, fathers, and target children as well as observer report of conflict interactions.

Our findings also have important implications for prevention and intervention. Past studies have established the efficacy of programs designed to teach effective parenting strategies (Brody et al., 2005; DeGarmo & Forgatch, 2007). Our research suggests that the focus of such interventions might be broadened to include information regarding the family context within which parenting takes place. Parents might benefit from understanding that their emotional state influences how they interact with each other as well as how that often spills over into how they and their partner interact with their child. Educating parents about these matters better enables them to monitor and control the extent to which they allow negative emotions and interactions to disrupt the quality of their parenting.

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