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### Title

Paternal Hostility and Maternal Hostility in European American and African American Families.

### Permalink

<https://escholarship.org/uc/item/4f79z350>

### Journal

Journal of Marriage and Family, 76(3)

### ISSN

0022-2445

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### Publication Date

2014-06-01

### DOI

10.1111/jomf.12107

Peer reviewed



Published in final edited form as:

*J Marriage Fam.* 2014 June 1; 76(3): 638–651. doi:10.1111/jomf.12107.

## Paternal Hostility and Maternal Hostility in European American and African American Families

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### Abstract

The authors examined the hypothesized influence of maternal and paternal hostility on youth delinquency over time. The investigation addressed significant gaps in earlier research on parental hostility, including the neglect of father effects, especially in African American families. Using prospective, longitudinal data from community samples of European American ( $n = 422$ ) and African American ( $n = 272$ ) 2-parent families, the authors examined the independent effects of paternal and maternal hostility on youth delinquency. The results indicated that paternal hostility significantly predicted relative increases in youth delinquent behaviors above and beyond the effects of maternal hostility; conversely, maternal hostility did not predict youth delinquency after controlling for paternal hostility. Multiple-group analyses yielded similar results for both ethnic groups and for boys and girls. These results underscore the importance of including both parents in research on diverse families. Neglecting fathers provides an incomplete account of parenting in relation to youth development.

### Keywords

African Americans; crime and delinquency; development/outcomes; father–child relations; mother–child relations; parenting styles

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Previous research suggests that hostile parenting behaviors (e.g., criticism, insults, arguments, shouting, hitting, threatening, and expressions of anger directed toward children; Taylor, Larsen-Rife, Conger, & Widaman, 2012) jeopardize the healthy development of

children and adolescents (for a meta-analysis, see Hoeve et al., 2009). These behaviors have also been described as “coercive” (e.g., Granic & Patterson, 2006) and have been proposed to precipitate a cycle in which these hostile behaviors are exchanged between parent and youth, escalating until one side capitulates, thereby negatively reinforcing these behaviors. According to *coercion theory* (Patterson, 1982), this type of hostile or aversive behavior by a parent teaches the youth that hostility can be an effective way to solve problems with others, thus paving a developmental path for externalizing symptoms outside as well as inside the family. Research by Patterson and his colleagues (e.g., Patterson, 1982) on parental hostility and negativity has primarily focused on the behavior of mothers in European American (EA) families. In the present study, we extended previous research by including data from mothers and fathers in both EA and African American (AA) families.

Research on fathering and child development has been relatively neglected in previous research, and few studies have considered whether parent gender influences the association between parent hostility and youth delinquency. In an exemplar of the type of research that is lacking, Stolz, Barber, and Olsen (2005) attempted to disentangle the effects fathering from mothering behaviors in terms of their influence on child development. Contrary to usual assumptions, their findings suggest that fathering may have a greater overall impact than mothering on child adjustment, suggesting that neglect of fathers misses an important dimension of parental influence on development; however, their study did not examine the effects of hostile parenting. In the current investigation we extended this work by examining the independent effects of hostile parenting behaviors, which have been linked to a range of physical and mental health problems in children and adolescents (Repetti, Taylor, & Seeman, 2002), on youth delinquency. Consistent with recommendations by Pleck (2010), we conducted analyses using prospective longitudinal data, simultaneously considered mother and father effects, and assessed the degree to which children may influence the hostile behaviors of parents. We also evaluated whether parental hostility has similar effects in EA and AA families.

## Parental Hostility

Mounting evidence implicates paternal hostility in the development of youth maladjustment (e.g., Reeb, Conger, & Wu, 2010). Despite this, findings have been inconsistent, and one question that has not been sufficiently addressed is whether paternal hostility contributes to youth delinquent behaviors beyond the effects of maternal hostility. This issue has both theoretical and practical implications. In terms of theory, it is important to know whether frameworks such as coercion theory generalize to father–child dyads. In terms of practice or intervention, research that identifies significant father effects would accentuate the need for family-based behavioral intervention and prevention programs to include fathers, whose participation is increasing but continues to lag behind that of mothers (Smith, Duggan, Bair-Merritt, & Cox, 2012). In addition, research in this area could encourage needed research evaluating the efficacy of parenting programs for fathers (Bronte-Tinkew, Burkhauser, & Metz, 2012). On the other hand, if paternal hostility does not have an impact on children beyond maternal hostility, then it would be appropriate to keep the focus on mothers.

Although several studies of parent hostility have included data from mothers and fathers, most have been limited by several factors. For example, some of the studies on parental hostility have examined fathers and mothers in separate analyses and affirmed that paternal and maternal hostility each predict youth externalizing problems when examined separately (Carrasco, Holgado, Rodríguez, & del Barrio, 2009; Denham et al., 2000; Harold, Elam, Lewis, Rice, & Thapar, 2012; Patterson & Dishion, 1988; Stocker, Richmond, Low, Alexander, & Elias, 2003). Other, similarly designed studies have obtained evidence that paternal hostility predicts youth outcomes but maternal hostility does not (Chang, Schwartz, Dodge, & McBride-Chang, 2003; Low & Stocker, 2005; Verlaan & Schwartzman, 2002). Thus, the weight of evidence from these studies suggests that paternal hostility is more strongly related than maternal hostility to youth delinquency. Nevertheless, these findings are somewhat ambiguous because the studies did not examine additive effects of paternal and maternal behavior. Parke and colleagues (2004) considered the additive influence of mothers and fathers in a cross-sectional study, concluding that paternal hostility has a greater impact than maternal hostility on youth adjustment. Overall, the existing research seems to indicate that the father has greater influence on the association between hostility and youth development. But given the limited number of studies that have examined these issues and the usual practice of not controlling for mothering when predicting the effects of fathering, and vice versa, this finding is in serious need of replication.

Another significant limitation of the literature on parental hostility has been a reliance on cross-sectional research designs (for a review, see Pleck, 2010), thus limiting inferences about causation and the direction of effects. Using data collected at a single point in time obscures whether a parent's hostility predicts the youth's delinquent behavior, or whether an antisocial youth elicits parental hostility, or both. Findings of bidirectional influences between parent and child also would be congruent with Bronfenbrenner's (1986) concept of *proximal process*, which emphasizes the reciprocal and increasingly complex interactions between parent and child that drive development. Yet almost all of the studies reviewed in the previous paragraph were cross-sectional. There have been a few exceptions. Carrasco and colleagues (2009) used structural equation models with repeated measures of parent and youth behavior, demonstrating that paternal and maternal hostility were each predictive of externalizing problems; however, they used separate models to assess these paternal and maternal effects, thus precluding an evaluation of the unique explanatory power of each parent's hostility. To our knowledge, Stolz and colleagues (2005) conducted the only longitudinal study that disentangled the effects of fathering and mothering from one another. As noted earlier, though, they did not examine parental hostility, so their findings do not shine direct light on the focus of the present study.

## Model Tests In Diverse Populations

Bronfenbrenner's (1979) ecological model helped establish the importance of contextual elements such as ethnic background and family structure in youth development, yet families headed by single mothers continue to predominate research on AA families (Vereen, 2007). This persistence stems from the greater probability that AA mothers are single parents (Williams, Auslander, Houstin, Krebill, & Haire-Joshu, 2000) and serve as providers as well as primary caregivers in their homes (Cain & Combs-Orme, 2005). As a result, the extant

research on AA fathers has largely focused on their absence from the home, and little attention has been paid to their roles in two-parent households (Caldwell et al., 2004; McAdoo & Younge, 2009). In addition, particularly few studies have examined the effects of paternal hostility on children in AA families (for exceptions, see Carrère & Bowie, 2012, and Gutman, McLoyd, & Tokoyawa, 2005). Thus, the present study of parental hostility in both AA and EA families addresses an important omission in earlier research.

## The Present Study

On the basis of insights from coercion theory, ecological theory, and recent findings consistent with the primacy of paternal effects, we proposed the following three hypotheses:

*Hypothesis 1:* Parental hostility will predict relative increases in youth delinquent behaviors over time.

*Hypothesis 2:* Paternal hostility will have a greater influence on youth delinquent behaviors than maternal hostility.

*Hypothesis 3:* Youth delinquent behaviors will reciprocally affect parental hostility.

Although neither coercion nor ecological theory proposes youth gender or ethnic differences related to these hypotheses, we examined these possibilities in the following analyses. Furthermore, on the basis of a growing body of empirical evidence, we expected that parent behavior would have equivalent effects on adolescent adjustment over time (e.g., Carrasco et al., 2009; Hale, VanderValk, Akse, & Meeus, 2008).

In all analyses, several covariates were included to control for potential confounds. We controlled for youth gender because of research suggesting that, compared to mothers, fathers have a greater influence on the development of externalizing problems among sons (for a meta-analysis, see Hoeve et al., 2009). Likewise, research suggests that mothers have a greater influence than fathers on the externalizing problems of their daughters (Liu, 2004; Roelofs, Meesters, Ter Huurne, Bamelis, & Muris, 2006; Shek, 2005). We also included youth age as a statistical control because delinquency varies across development, usually peaking during mid-to late adolescence (Moffitt, 1993). In addition, we controlled for socioeconomic status (SES) because it has been linked to parenting behaviors and youth development (e.g., Conger et al., 2002; Knutson, DeGarmo, Koepl, & Reid, 2005). Finally, we controlled for geographic location in the AA analyses because, unlike the EA families, who were all located in Iowa, AA families resided in two different states.

## Method

### Participants

**Iowa Youth and Families Project**—The Iowa Youth and Families Project is an epidemiological study originally designed to analyze economic stress and familial processes in rural EA families ( $n = 451$  families). The participants were lower-middle-class to middle-class families drawn from central Iowa, each household consisting of the two biological parents of the target youth, one target youth, and a near-age sibling at the first year of data collection. Although the first year of data collection was 1989, when the target youth were in

seventh grade ( $M$  age = 12.6 years), we used 1990 as the first year of assessment ( $n = 422$ ) because the variables used in the present analyses did not become available until that time. In 1990, fathers averaged 40.9 years of age and mothers averaged 38.8 years of age. The average youth age at each time of measurement in the present study was 13.6 years in 1990, 15.6 years in 1992, and 17.7 years in 1994. Sample retention was over 90% from study initiation through 1994.

**Family and Community Health Study**—The Family and Community Health Study was designed to assess the risks and resources that impede or facilitate AA family functioning in contexts other than the inner city. The study began in 1997 with 897 families from Iowa and Georgia, each including a youth between the ages of 10 and 11 years at the time of recruitment (Conger et al., 2002). The average age of the youth at each of the three times of assessment in the present study was 10.5 years in 1997, 12.3 years in 1999, and 15.6 years in 2002. To maintain consistency with the EA analyses, and to address study hypotheses, we included in the analyses two-parent AA families ( $n = 272$ ) consisting of either biological fathers (68%) or stepfathers (32%), and either biological mothers (97%) or stepmothers (3%).

**Comparison of sample demographics**—Selected demographic characteristics of the EA and AA samples are compared in Table 1. Independent-sample  $t$  tests revealed significant differences between EA and AA participants for each characteristic. The EA youth ( $M = 13.6$  years) were older than AA youth ( $M = 10.5$  years) at study initiation. On average, EA fathers and mothers were slightly older than their AA counterparts and had a higher SES as indicated by their greater educational attainment and income-to-needs ratios (total family income divided by the poverty level for that size family). The only attribute that did not significantly differ across the two studies was the percentage of boys in each study, which was separated by less than 2 percentage points.

Attrition analyses indicated that families who dropped out of the study during data collection did not significantly differ from those who remained in the study in terms of paternal hostility, maternal hostility, income-to-needs ratio, youth gender, father's education level, or mother's education level at Wave 1. This finding held for both EA and AA families. The only variable for which there was a significant difference was youth delinquent behaviors ( $M$  difference score = .258,  $p = .036$ ). Highly delinquent youth at the first wave of assessment were slightly more likely to drop out for both EA and AA families.

### Assessment: EA Families

Data collection for the EA participants followed a series of contacts for recruitment, informed consent, and scheduling. Each family was subsequently visited twice in their home each year of assessment by a trained interviewer. These visits lasted an average of 2 hours each and usually occurred within a 2-week period. Family members completed questionnaires related to individual characteristics, parenting practices, family interactions, and economic conditions. The present analyses for the EA families were based on reports of parent behavior and youth behavior during 1990, 1992, and 1994.

**Parental hostility**—Youth responded to seven questionnaire items indicating the frequency with which the mother had exhibited hostility toward them during the previous month, including the following behaviors: “shout or yell at you because she was mad at you”; “criticize you or your ideas”; “insult or swear at you”; “get angry at you”; “argue with you whenever you disagreed about something”; “push, grab, hit, or shove you”; and “threaten to hurt you physically.” They responded to the same questions pertaining to their father in a separate section of the questionnaire. Because the responses about each parent were in separate sections of the questionnaire, the risk for statistical multicollinearity was reduced (Plunkett, Ainsworth, Henry, & Behnke, 2011). The items were drawn from Conger’s (1989) Behavioral Affect Rating Scale, a 22-item scale that has demonstrated reliability and validity in other studies of hostility in close relationships (e.g., Taylor et al., 2012). The seven hostility items used in the current analyses were available at each of the three waves of data collection for both samples. For the EA families, possible responses to these items ranged from 1 (*always*) to 7 (*never*); responses were recoded so that higher scores indicated more frequent exposure to parental hostility. Because there were only four possible responses to the questions for the AA families, we collapsed the highest four categories for the EA families into one to match the corresponding AA scales, which ranged from 0 to 3. With this change for the EA families, the distributions for parental hostility were similar across groups. Internal consistency coefficients for this measure were .84, .85, and .87 for fathers and .82, .84, and .86 for mothers in 1990, 1992, and 1994, respectively.

Youth in this study also reported on their own delinquency. Some researchers might find the use of youth reports for both their own behavior and their parents’ behavior to be problematic because of method variance biases. Although this view has merit, there is reason to believe that basing these two measures on youth report does not constitute a significant problem for the present study. First, parents have a tendency to underreport their own negative behaviors toward youth because of social desirability bias (Bögels & van Melick, 2004). To the extent that this observation is correct, using parent report for this measure may be problematic. In any case, we do not have parent reports for this measure. Moreover, symbolic interaction theory postulates that subjective perception, more than objective reality, determines how people respond to situations (Openshaw, Thomas, & Rollins, 1983). From this perspective, parental hostility is unlikely to have an effect unless it is perceived as hostile by the youth (Plunkett, Henry, Robinson, Behnke, & Falcon, 2007). Thus, youth report may be an especially important source of information for parenting behaviors, in particular when other sources of information are not available, as in the present study (Barry, Frick, & Grafeman, 2008; Bögels & van Melick, 2004; Greco & Morris, 2002; Scott, Briskman, & Dadds, 2011). Finally, in the following analyses we made predictions from parenting to delinquent behavior controlling for earlier delinquent behavior, mitigating at least in part the influence of a single reporter on study findings.

**Youth delinquent behavior**—The EA measure for delinquency was adapted from the National Youth Survey (see Elliott, Huizinga, & Ageton, 1985). Each youth reported how often during the preceding year he or she had engaged in each of 10 delinquent activities: (a) snatched someone’s purse or wallet, (b) ran away from home, (c) cut classes, (d) purposely damaged or destroyed property, (e) set fire to a building or field, (f) attacked someone with a

weapon, (g) fought someone, (h) been in trouble with the police, (i) broke into a building for fun, and (j) broke into a building to steal or damage something. Responses for each behavior ranged from 0 (*never behaved that way*) to 4 (behaved that way six or more times in the past year). The internal consistencies of the measures were .58, .62, and .69 for 1990, 1992, and 1994, respectively. We dichotomized these items (0 = absence of the behavior, 1 = presence of the behavior) and summed them for a composite youth delinquency variety score. This score served as a single indicator for youth delinquent behaviors.

**Control variables**—As stated earlier, we controlled for youth gender, youth age, and family SES. This information was obtained from self-report questionnaires during the first wave of data collection. Family SES was indicated by three measures: (a) years of education completed by the father, (b) years of education completed by the mother, and (c) family income-to-needs ratio.

### Assessment: AA Families

For the assessment of AA families, trained AA interviewers made two home visits at each wave of data collection. During each 2-hour visit, they presented questions on their laptop computers that were visible to both the interviewer and participant. Each family member was interviewed separately so that the questions and participant responses could not be heard by other family members. The questions pertained to family processes, community characteristics, psychosocial adjustment, financial circumstances, and personal accomplishments and abilities. The current analyses are based on reports of parent and youth behavior during 1997, 1999, and 2002.

**Parental hostility**—The same youth-reported questionnaire items indicating parental hostility in the EA families were used to measure parental hostility in the AA families. The wording was identical, and all scores were reverse coded so that higher scores indicated more frequent exposure to parental hostility (0 to 3). As with the EA measure, the questions about fathers were on separate pages from those about mothers. Internal reliabilities of this measure were .70, .81, and .82 for fathers and .65, .68, and .81 for mothers in 1997, 1999, and 2002, respectively.

**Youth delinquent behaviors**—The measure for delinquent behaviors was drawn from the Diagnostic Interview Schedule for Children, Version 4 (see Shaffer, Fisher, Lucas, Dulcan, & Schwab-Stone, 2000). The section on conduct disorder contained questions on whether the youth had engaged in various deviant acts during the previous year (0 = no, 1 = yes). We used nine items that were shared by the EA measure: (a) snatched someone's purse or jewelry; (b) ran away from home overnight; (c) skipped school; (d) broken or damaged property; (e) started a fire without permission; (f) been in a physical fight; (g) hurt someone with a weapon; (h) been in trouble with the police; and (i) broken into a house, building, or car. Note that we used 10 items for the EA youth but nine items for the AA youth. This approach was necessary because the EA questionnaire possessed two items for breaking into buildings (i.e., "just for fun" and "to steal or damage something"), whereas the AA measure did not. The internal consistencies of these measures were .46, .49, and .67 for 1997, 1999, and 2002, respectively. As with the EA measure, we summed these scores to obtain a



composite youth conduct problem score that served as a single indicator for the manifest variable representing youth delinquent behaviors.

**Control variables**—We used the same control variables as in the EA analyses (i.e., youth gender, youth age, and family SES). We also controlled for geographic location in the AA analyses because some of the AA families resided in Iowa and some resided in Georgia. All of this information was obtained during the first wave of data collection.

## Analysis

Once the measures for both the EA and AA families were matched in items and scales, we randomly assigned the parental hostility items to three parcels. This process resulted in “argue” and “insult” for Parcel 1, “shout” and “hit” for Parcel 2, and “angry,” “criticize,” and “threaten to hit” for Parcel 3. Each of the same three parcels was used as an indicator of parental hostility across Waves 1, 2, and 3 (1990, 1992, and 1994 for EA families and 1997, 1999, and 2002 for AA families, respectively). Our decision to parcel was motivated by several factors, but our primary reason was to enable the use of three indicators for the latent variable and to improve model fit. Three is the optimal number of indicators needed to identify a latent construct (Little, Cunningham, Shahar, & Widaman, 2002), and initial efforts to use each item as one of seven separate indicators of parental hostility produced the same hypothesized results but with poor model fit: The comparative fit index (CFI) fell short of .900 (Bentler, 1990), and the root-mean-square error of approximation (RMSEA) exceeded .05. Furthermore, we expected the concurrent paternal and maternal hostility constructs to be highly correlated with one another. Random parceling mitigated this problem by reducing the correlations between their residuals. Finally, we were more interested in relations between the constructs than between the individual items, and parceling has been found to engender more stable solutions while reducing the likelihood of spurious correlations and sources of variance that may not be of primary interest (Little et al., 2002).

We used the Mplus Version 6 software package (Muthén & Muthén, 1998–2011) to obtain mean and variance-adjusted weighted least squares estimates that were entered into initial confirmatory factor analyses and subsequent structural equation models (SEMs). We handled missing data with full-information maximum likelihood, which produces estimates that are more efficient and less biased than those from ad hoc methods such as listwise deletion, pairwise deletion, or imputation of means (Arbuckle, 1996; Schafer, 1997).

Our first analyses encompassed a series of model fit difference tests for measurement invariance of hostility across time, across gender groups, and across ethnic groups using multiple-group analysis (MGA). Chi-square difference tests revealed seemingly significant differences across time and across groups; however, Cheung and Rensvold (2002) demonstrated that chi-square difference tests are highly sensitive to large sample sizes and that even trivial differences for studies with large samples such as ours ( $N = 694$ ) can produce significance for chi-square difference calculations. For that reason, they advocated using the CFI as a more practical standard for invariance. In accordance with their recommendations, we rejected the null hypothesis of invariance across waves or across

groups only when the change in CFI value exceeded  $-.01$  (Cheung & Rensvold, 2002). We also report the RMSEA, another index that is not as sensitive to sample size as the chi-square difference method.

After establishing measurement invariance, we tested for structural invariance in correlations, stabilities, and cross-lagged paths in the SEMs. With the earlier constraints kept in place, one of the MGAs tested for moderation by youth gender once the gender covariate was removed. Another MGA tested for moderation by ethnicity. This time, we removed the covariate representing geographic location because all EA families resided in one state (Iowa).

We constrained paternal effects to be equal to maternal effects to determine whether paternal hostility differed from maternal hostility as a predictor of youth delinquency. Our analyses also probed for interaction effects to determine whether one parent's hostility varied in the context of the other's and whether this interaction influenced youth delinquent behaviors. Finally, we analyzed paternal hostility and maternal hostility in separate models to determine how the findings might differ when mother effects were estimated without controlling for father effects, and vice versa.

## Results

### Descriptive Statistics and Tests for Measurement Invariance

The mean scores for study variables are presented in Table 2. Mean hostility scores were generally higher for mothers than fathers, and  $t$  tests revealed significantly higher scores for AA mothers than AA fathers for 10 out of 21 items (e.g., for Wave 1 "shout,"  $t = 1.97$  for mothers and 1.52 for fathers), and significantly higher scores for EA mothers than EA fathers (e.g., for Wave 1 "shout,"  $t = 2.03$  for mothers and 1.90 for fathers) for six out of 21 items. Fathers were not significantly more hostile for any of the hostility items.

Our confirmatory factor analyses demonstrated that the hostility measures did not vary across time, ethnicity, or gender. Having established measurement invariance, we created a single group for the final analyses consisting of both boys and girls in both EA and AA families. The factor loadings for the combined sample, all of which were substantial and statistically significant, are shown in Table 3. For example, the factor loadings for maternal hostility at Wave 3 were .85, .93, and .87. Table 4 displays the zero-order correlations among study variables, including the latent constructs for paternal and maternal hostility and the manifest variable for youth delinquent behaviors. All nine of the zero-order correlations between paternal hostility and youth delinquent behaviors were positive and significant, as were all nine of the zero-order correlations between maternal hostility and youth delinquent behaviors (e.g., maternal hostility at Wave 1 with delinquency at Wave 2,  $r = .22, p < .05$ ).

### Evaluating the SEMs

In the next set of analyses, we tested for invariance in correlations, stabilities, and cross-lagged paths in the SEMs across groups. These structural parameters did not significantly vary across boys and girls in our MGA of gender. They also did not vary across the EA and AA groups in our MGA of ethnicity. The exceptions to the latter were the concurrent

correlations between paternal and maternal hostility, which were more highly associated in the EA families than the AA families. Once we relaxed that correlation, the CFI differential between this model and the unconstrained model did not exceed .01. For that reason, two different coefficients are shown for those correlations in the model (see Figure 1).

The standardized regression coefficients for the final model ( $N = 694$ ) are depicted in Figure 1. The theoretical model fit the data well, as evidenced by a CFI of .903 and an RMSEA of .047. Because all four cross-lags evidenced invariance across time, we constrained them to be equal over time. For example, we constrained the path from paternal hostility to youth delinquent behaviors from Wave 1 to Wave 2 to equal the same path from Wave 2 to Wave 3. We then constrained the paths from parental hostility to youth delinquent behaviors to be equal for fathers and mothers. This change significantly deteriorated model fit, supporting the notion that paternal effects differed from maternal effects. Thus, we left these last constraints out of the final model.

As shown in Figure 1, paternal hostility predicted delinquent behaviors but maternal hostility did not. The standardized coefficients for the paths from paternal hostility to subsequent delinquent behaviors were both statistically significant: .181 from Wave 1 paternal hostility to Wave 2 delinquent behaviors, and .146 from Wave 2 paternal hostility to Wave 3 delinquent behaviors. For mothers, neither of the paths from hostility to subsequent delinquent behaviors was statistically significant. Delinquent behaviors did not predict significant relative changes in paternal hostility or maternal hostility. The stability coefficients for all three variables in the model were statistically significant and at least moderate in magnitude (e.g., the stability coefficient for paternal hostility from Wave 1 to Wave 2 was .601), demonstrating stability in paternal hostility, maternal hostility, and delinquent behaviors over time. The three constructs were allowed to concurrently correlate with one another in the model, resulting in significant associations at every instance.

A post hoc analysis incorporating interaction terms did not suggest that one parent's hostility varied in the context of the other parent's hostility in its influence on delinquency. The regressions of delinquency onto the interaction term were not significant. Finally, we also tested paternal and maternal hostility individually in separate models. As expected, each was a significant predictor of relative change in delinquent behaviors when isolated from the other.

## Discussion

On the basis of coercion and ecological theories, we hypothesized that parent hostility would predict relative increases in delinquent behaviors (Hypothesis 1) and that delinquent behaviors would reciprocally affect parental hostility (Hypothesis 3). Our findings supported Hypothesis 1, but only for fathers. The results did not support Hypothesis 3. Hypothesis 2 was based on our extension of Stolz and colleagues' (2005) disentanglement of paternal effects from maternal effects. This particular proposal was that paternal hostility would predict delinquent behaviors beyond the effects of maternal hostility once each was accounted for and that the paternal effects would be significantly greater than the maternal

effects. We found support for the second hypothesis, but we were not necessarily expecting the maternal effects to attenuate to nonsignificance.

The stronger effect for paternal hostility occurred despite the fact that the youth in both ethnic groups reported more frequent occurrences of maternal hostility than paternal hostility (see Table 3). Moreover, the correlations in Table 4 evidenced associations between youth delinquency and both paternal hostility and maternal hostility. Yet, once paternal and maternal hostility were both accounted for, paternal hostility explained relative increases in delinquent behaviors, but maternal hostility did not. These associations persisted for both ethnic groups even after controlling for differences in youth gender, youth age, SES, and geographic location. Also, they replicate Patterson and Dishion's (1988) finding that the effects of paternal aversive behaviors exceeded those of maternal hostility in explaining delinquent behaviors. One possible interpretation of these findings is that, although fathers might not enact hostile behaviors as frequently as mothers, the instances in which they do carry greater potency in exacerbating delinquent behaviors. Any explanation here would be speculative, but these results underscore the theoretical importance of considering fathers in studies of parenting and in the construction of preventive interventions designed to improve parenting. Future research should examine possible qualitative differences in the forms of hostility used by mothers and fathers as a possible explanation for differential effects.

Using longitudinal methodology, we also were able to test for reciprocal effects and make other temporal observations. Our results suggest that the association between parental hostility and delinquent behaviors was unidirectional: Parental hostility was driven by the parent, not by the youth. In addition, the effects of paternal hostility and maternal hostility did not significantly vary across waves, corroborating previous findings of consistency of parent effects across adolescence (e.g., Carrasco et al., 2009; Hale et al., 2008). Finally, the high stabilities of paternal hostility, maternal hostility, and delinquent behaviors replicate prior research documenting the continuity of aggressive behaviors (Caspi, 2000; Moffitt, 1993).

There were no significant group differences in these associations. Both boys and girls were more affected by paternal hostility than maternal hostility in both EA and AA families. Most of the existing literature on AA families suggests that they tend to be matriarchal, in large part because of the absence of fathers (Vereen, 2007). Very few studies have examined two-parent AA families even though they account for between 30% and 40% of AA families (U.S. Census Bureau, n.d.). The present research helps remedy some of the limitation of earlier studies. Despite previous reports of ethnic differences in the influence of parenting behaviors (e.g., Poloha, Larzelere, Shapiro, & Pettit, 2004), the results of the current analyses do not suggest that EA families and AA families differ in terms of the developmental consequences of parental hostility on youth delinquency. Indeed, the only significant differences between the two ethnic groups were the concurrent correlations between paternal hostility and maternal hostility. It is interesting that these associations were higher for two-parent EA households than for two-parent AA households, suggesting that paternal and maternal hostility may be more interdependent in EA families than AA families. Nonetheless, caution should be exercised when drawing ethnic comparisons from these results. Although our analyses accounted for differences in SES, family structure,

youth gender, and youth age across the two studies, there likely were many other differences between the two groups that were not controlled in the analyses.

Several limitations in this study should be noted. First, the attrition analyses revealed significant differences for delinquent behaviors. Youth in families who stayed in the study through all three waves had significantly lower scores on delinquent behaviors than those who dropped out at some point, though the discrepancy was relatively small. In addition, the internal consistencies for the measures of delinquent behavior were somewhat low. Both the greater attrition of more delinquent youth and the relatively low reliabilities of this measure should make it more difficult to find hypothesized effects when they exist. Thus, the current findings require replication in future studies without these limitations.

Replication of our findings within urban centers also would provide a broader picture of the roles that ethnicity, parent gender, and youth gender play in the impact of parental hostility on youth outcomes. If similar findings are obtained, subsequent studies should seek to understand why hostility exhibited by the father evinces a greater impact than that exhibited by the mother. Future longitudinal research also must address other negative youth outcomes commonly associated with parental hostility, such as depressive symptoms. Finally, further inquiry is needed to determine whether these results generalize to younger children and at what age their socioemotional development may be most vulnerable to parental hostility.

Despite these limitations, we believe that the present study makes two major contributions to the existing literature. First, it highlights the importance of fathers in youths' socioemotional growth and demonstrates their significant and unique role in the development of delinquent behaviors over time; previous work has failed to use longitudinal data and control for mother effects. Second, to our knowledge this is the first study to specifically examine the impact of father hostility on delinquency in AA families. This population has been largely neglected in family and developmental research. One of the important implications of our findings is that the behavior of AA fathers plays a role similar to the behavior of EA fathers in two-parent families. These findings add to a growing body of evidence suggesting that paternal hostility may be even more deleterious than maternal hostility for youth development (Chang et al., 2003; Hovee et al., 2011; Low & Stocker, 2005; Parke et al., 2004; Verlaan & Schwartzman, 2002), and they attest to the importance of including fathers in clinical endeavors to reduce parental hostility and its seemingly adverse effects on youth.

## Acknowledgments

This research was supported by grants from the Eunice Kennedy Shriver National Institute of Child Health and Human Development, the National Institute of Mental Health (HD064687, HD051746, and MH051361), and the National Institute on Alcohol Abuse and Alcoholism. The content is solely the responsibility of the authors and does not necessarily represent the official views of the funding agencies.

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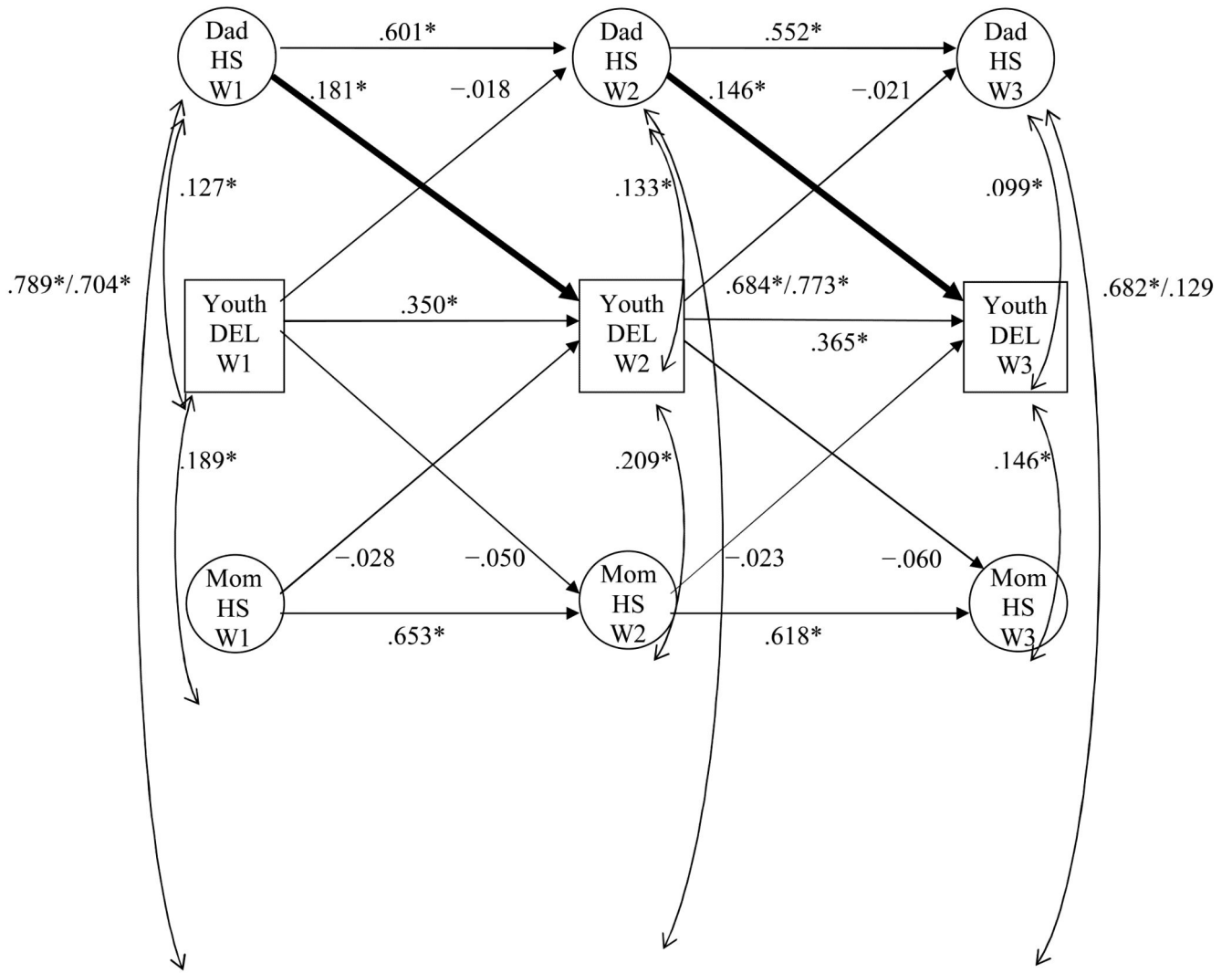
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**Figure 1.** Results for Paternal Hostility, Maternal Hostility, and Youth Delinquent Behaviors, European American and African American Families.

*Note:* Comparative fit index = .903, root-mean-square error of approximation = .047,  $N = 694$ . For better clarity of presentation, control variables for youth gender, youth age, family socioeconomic status, and geographic location are not shown. Significant parent effects are bolded. HS = hostility; W1 = Wave 1; W2 = Wave 2; W3 = Wave 3; DEL = delinquent behaviors. \* $p < .05$ .

**Table 1**  
**Demographic Characteristics for the European American (EA) and African American (AA) Participants**

Characteristics at first wave of data collection	EA ( <i>n</i> = 422)	AA ( <i>n</i> = 272)
Youth's mean age (years) at Time 1	13.6	10.5
% boys	47.5	49.3
Father mean education (years)	13.5	12.9
Mother mean education (years)	13.4	12.8
Father mean age (years)	40.9	38.1
Mother mean age (years)	38.8	35.6
Income-to-needs ratio (median)	2.6	1.9

*Note:* All sample characteristics are significantly different ( $p < .05$ ) for the two projects except for % boys.

**Table 2**  
**Descriptive Statistics: Means (N = 694)**

Response to stem: "How often did your [dad/mom] ..." <sup>a</sup>	Wave	EA		AA	
		Dads	Moms	Dads	Moms
Get angry at you?	1	2.15	2.38	2.02	2.52
	2	1.71	1.94	2.10	2.72
	3	1.84	2.01	2.13	2.71
Shout or yell at you because s/he was mad at you?	1	1.90	2.03	1.52	1.97
	2	1.64	1.92	1.59	2.17
	3	1.63	1.82	1.79	2.42
Argue with you whenever you disagreed about something?	1	1.58	1.72	1.18	1.29
	2	1.59	1.87	1.25	1.64
	3	1.96	2.07	1.67	2.04
Insult or swear at you?	1	0.73	0.66	0.44	0.51
	2	0.69	0.63	0.57	0.64
	3	0.91	0.78	0.64	0.75
Criticize you or your ideas?	1	1.10	1.08	0.51	0.52
	2	1.14	1.16	0.50	0.45
	3	1.38	1.39	0.79	0.93
Push, grab, hit, or shove you?	1	0.41	0.33	0.29	0.45
	2	0.27	0.28	0.28	0.37
	3	0.35	0.31	0.28	0.45
Threaten to hurt you physically?	1	0.25	0.18	0.22	0.24
	2	0.22	0.18	0.15	0.28
	3	0.33	0.26	0.28	0.46
Youth delinquent behaviors Self-report composite scores <sup>b</sup>	1	0.46		0.42	
	2	0.65		0.69	
	3	1.00		1.04	

Note: EA = European American; AA = African American.

<sup>a</sup> Responses were recoded so that scores ranged from 0 (*not at all*) to 3 (*always*).

<sup>b</sup> Responses were recoded so that scores ranged from 0 (*no symptoms*) to 9 (*all symptoms*).

**Table 3**  
**Standardized Factor Loadings for Parental Hostility for Combined Sample of European American and African American Families**

Wave and parcel	Loadings	
	Fathers	Mothers
Wave 1		
Parcel 1	.87	.84
Parcel 2	.88	.85
Parcel 3	.87	.81
Wave 2		
Parcel 1	.85	.86
Parcel 2	.97	.87
Parcel 3	.96	.81
Wave 3		
Parcel 1	.85	.85
Parcel 2	.93	.93
Parcel 3	.90	.87

**Table 4**  
**Summary of Intercorrelations for Combined Sample of European American and African American Families**

Variable	Paternal hostility			Maternal hostility			Youth delinquent behaviors		
	Wave 1	Wave 2	Wave 3	Wave 1	Wave 2	Wave 3	Wave 1	Wave 2	Wave 3
1.	—								
2.	.63*	—							
3.	.57*	.59*	—						
4.	.84*	.47*	.50*	—					
5.	.52*	.75*	.47*	.65*	—				
6.	.42*	.45*	.65*	.54*	.60*	—			
7.	.21*	.11*	.10*	.21*	.10*	.12*	—		
8.	.23*	.20*	.17*	.22*	.28*	.12*	.42*	—	
9.	.22*	.29*	.26*	.12*	.23*	.19*	.38*	.46*	—

\*  $p < .05$ .