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Effects of Physical and Emotional Maternal Hostility on Adolescents' Depression and Reoffending

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This study examines whether (1) mothers vary in the way they express hostility toward their delinquent adolescent offspring, (2) different types of maternal hostility differentially affect adolescents' depression and recidivism, and (3) adolescent depression serves as a mechanism through which maternal hostility predicts later reoffending. The sample consists of 1,216 male first-time offenders, aged 13–17 years (M = 15.80, SD = 1.29). Confirmatory factor analysis supported the premise that maternal hostility could be distinguished into two subtypes: emotional and physical hostility. Adolescent offenders who experienced emotional or physical hostility by their mothers reported greater depressive symptoms and reoffending 6 months later. Further, the relation between maternal hostility (of each type) and adolescent reoffending was partially explained by depressive symptomology.

Parents play a vital role in adolescent development, and research consistently demonstrates that parenting factors are some of the most important predictors of adolescent outcomes. Parent–adolescent hostility, in particular, has been associated with youth internalizing problems, such as depression, (Low & Stocker, 2005; Norman et al., 2012; Schwartz et al., 2011) and externalizing behaviors, such as delinquency (Castellani et al., 2014; Klahr, Rueter, McGue, Iacono, & Burt, 2011; Krischer & Sevecke, 2008; Lansford et al., 2007). Research suggests that these factors may be interrelated in complex ways (Castellani et al., 2014); therefore, this study proposes a model to explain how these factors operate together to predict reoffending among a sample of first-time offending adolescents.

Up to this point, much of the literature on parental hostility has focused on the extreme end of the hostility spectrum (i.e., child abuse); however, not all acts of hostility warrant classification as abuse. Some parents engage in more modest forms of hostility that, while not brought to the attention of or deemed as abusive by child protective services, may nonetheless be detrimental to adolescent well-being. For the purposes of this article, parental hostility is defined as parent–adolescent interactions that are negative or aggressive in tone or lacking warmth. This definition includes a range of behaviors of varying degrees of severity, from emotional forms of hostility (such as criticism, exhibitions of anger, and shouting) to acts of physical aggression (such as pushing, grabbing, slapping, hitting, or striking with an object). Although similar to other elements of negative parenting, such as parental rejection, parental hostility is distinguishable in that it is characterized by overt actions. Parental rejection, on the other hand, tends to be conceptualized as the underlying attitudes that may lead to hostility (Rohner, 1980). However, not all parents who engage in hostility toward their adolescent children may harbor feelings of rejection toward them. Rejection is only one of several possible explanations for parent–adolescent hostility. Other potential reasons for parent–adolescent hos-

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tility include spillover from interparental conflict (Fosco, Lippold, & Feinberg, 2014), parental intrusiveness (Weymouth & Buehler, 2016), and the combination of high economic strain and parental depressed mood (Reeb, Conger, & Martin, 2013).

Many prior studies have been limited to examining the effects of past parental hostility that occurred during childhood. However, it is also important to consider the distinctive aspects of parent-initiated hostility that occurs during adolescence. Adolescence is a period marked by normative developmental changes that have been shown to affect the parent–youth relationship, such as puberty (Marceau, Ram, & Susman, 2014) and adolescents' increasing needs for autonomy (Blos, 1979; Van Petegem, Beyers, Vansteenkiste, & Soenens, 2012). Although findings have been mixed, some research indicates that parent–adolescent conflict increases during the transition from childhood to adolescence (Marceau et al., 2014; Weymouth, Buehler, Zhou, & Henson, 2016), whereas parental warmth decreases for most youth during this time (Fleming, Catalano, Haggerty, & Abbott, 2010; Shanahan, McHale, Crouter, & Osgood, 2007; Trentacosta et al., 2011). Considering the numerous changes to the parent–child relationship that occur during adolescence, research is needed that focuses specifically on parental hostility that occurs during this developmental period. Furthermore, although prior literature has largely relied on retrospective data, the present research utilizes adolescents' self-reports of current parental hostility and a longitudinal design to detect how such hostility affects adolescents both in the short and long term.

This study seeks to advance past research in several important ways. First, this study explores the effects of parental hostility among a sample of delinquent adolescents. This is important because youth delinquency has been shown to be associated with poorer quality parent–child relationships (Keijsers, Loeber, Branje, & Meeus, 2011) and parental rejection (Loeber & Stouthamer-Loeber, 1986). Further, in an examination of the reciprocal links between parenting and adolescent adjustment among juvenile offenders, problematic adolescent behavior was found to evoke parenting that becomes less warm over time (Williams & Steinberg, 2011). Therefore, delinquent adolescents represent an important population to study, as they may be especially likely to encounter hostile parenting.

Second, this study examines the effects of mother-perpetrated hostility specifically. Prior studies of parental hostility have largely examined parenting behavior more generally, with few studies distinguishing between mother-perpetrated and father-perpetrated hostility. Yet, mothers, in particular, play a crucial role in adolescent adjustment (Laible & Carlo, 2004) and many adolescent offenders do not live with their father (Demuth & Brown, 2004). Also, past research indicates that the effects of maternal hostility toward the adolescent may be more severe and pervasive than hostility by fathers (Chang, Schwartz, Dodge, & McBride-Chang, 2003; Moretti & Craig, 2013). Some research suggests that the effects of parental hostility on adolescent well-being may be more detrimental when such hostility comes from the mother, as compared to the father. In a study that compared the effects of maternal and paternal hostility on female adolescents' depression, only mother-perpetrated hostility was found to significantly predict adolescent depression symptoms (Lewis, Collishaw, Thapar, & Harold, 2014).

Third, past research acknowledges the existence of different types of parental hostility (Miller-Perrin, Perrin, & Kocur, 2009), but it is unclear whether mothers specifically engage in different types of hostility and how these different forms of maternal hostility affect adolescent outcomes. This study aims to examine whether mothers express different types of hostility toward their adolescent offspring and, if so, whether these subtypes of hostility are associated with adolescents' depression and reoffending behavior. Indeed, research suggests that some forms of parental hostility may leave adolescents more vulnerable to depression and delinquency than others. For example, although neglect, physical abuse, and emotional abuse are all causally linked to youth depression, the strongest association is found with emotional abuse (Norman et al., 2012). Likewise, some research finds that physical abuse and neglect during childhood are predictive of later juvenile offending, whereas sexual and emotional abuse are not (Stewart, Waterson, & Dennison, 2002). We hypothesize that mothers exhibit hostility toward their children in distinct types, and that both emotional and physical maternal hostility will be important factors for predicting adolescent depression symptoms and reoffending.

Finally, our study proposes a theoretical model to explain the effects of maternal hostility on adolescent depression and reoffending. Although research clearly documents that adolescents who experience hostile parental relationships face a greater risk for delinquent behavior (Ford, Chapman, Mack, & Pearson, 2006), it is less evident *how*

parental hostility leads to adolescent delinquency. We propose a model in which mother-to-adolescent hostility leads adolescents to experience symptoms of depression, which in turn leads the adolescent to "act out" by engaging in delinquency. We hypothesize that adolescent depressive symptoms are the mechanism through which maternal hostility is associated with adolescent reoffending. Indeed, considerable research suggests parental hostility is associated with youth depression (Gilbert et al., 2009; Seeds, Harkness, & Quilty, 2010; Yap & Jorm, 2015). Substantial literature documents the link between depression and delinquency during adolescence (Kofler et al., 2011; Measelle, Stice, & Hogansen, 2006); however, this is the first study to directly test whether adolescents' experiences of depressive symptoms explain the effects of maternal hostility on adolescent offending. Research suggests that depressed individuals are more likely to engage in illegal activity (Wiesner & Kim, 2006; Wolff & Ollendick, 2006); this may especially be the case for adolescents who have a history of delinquency. Therefore, we hypothesize that justice system–involved adolescents who experience maternal hostility (as compared to those who do not experience such hostility) will report greater symptoms of depression and reoffending 6 months later. Further, we propose that the effect of maternal hostility on adolescents' reoffending will be partially explained by adolescents' symptoms of depression.

METHOD

Participants

The sample is comprised of 1,216 male first-time offenders who were between 13 and 17 years of age (M = 15.3, SD = 1.3) at the time of their initial arrest. Participants in this sample come from the Crossroads Study, a longitudinal study following first-time offending males after their first official contact with the juvenile justice system. Youths in this sample had each been arrested for a range of misdemeanor offenses (felonies were excluded), with the most frequent charges including vandalism (17.5%), theft (16.7%), and possession of marijuana (14.8%). This sample was restricted to English-speaking youth with no prior offenses. Participants were recruited in three areas of the United States: Orange County, California (n = 532); Philadelphia, Pennsylvania (n = 533); and Jefferson Parish, Louisiana (n = 151). These sites were selected to represent three culturally distinct regions of the country (East, South, and West) and to contribute demographic diversity in the study sample. The sample was ethnically and racially diverse: 45.8% self-identified as Latino/Hispanic, 36.9% as Black/African American, 14.8% as White/Caucasian, and 2.5% as another race. Approximately 82% of the sample reported living with their biological mother. Analyses were consistent, however, if models were limited to this subsample of youth. Slightly more than half of the sample (54%) reported living with any father figure (e.g., biological father, stepfather, adopted father). Of the youth who lived with their biological mother, approximately 53% also lived with a father figure.

Approximately, 80% of the eligible adolescents participated in the study, yielding 1,216 youth at the baseline assessment. Of those enrolled in the study at baseline, approximately 96% completed the 6-month interview. Fewer than 8% of cases had missing data on the key study variables (N = 94). Results of Little's test of missing completely at random (Little, 1988, 1992) indicated that data were missing completely at random ($\chi^2(3) = 5.68$, p = .128).

Procedures

Institutional review board approval was obtained for all three sites. After case dispositions were imposed, adolescents who were male, between 13 and 17 years of age, spoke English, had at least one eligible charge, and were first-time offenders (no prior arrests) were approached about study involvement. The study received contact information for the eligible adolescents from respective justice system databases. Written parental consent and verbal adolescent assent were acquired for each participant prior to enrolling in the study. Participants were informed of the nature of the study and were told that there was no penalty for not participating. A privacy certificate issued by the U.S. Department of Justice protects participants' privacy by exempting their identity and responses from subpoenas, court orders, or other types of involuntary disclosures. Youth completed the baseline interview within approximately six weeks after their first arrest, as well as a follow-up interview approximately six months after their baseline interview. Face-to-face interviews with the youth ranged from 2 to 3 hours in duration and were documented using a secure computer-administered program on a laptop. These interviews were conducted one-on-one between the participant and a trained undergraduate or graduate student

research assistant. Interviews were conducted in the community (e.g., at participants' homes or nearby locations that afford privacy) or secure facilities (for participants who were detained at the time of the interview).

Measures

Maternal hostility. To examine the degree of hostility in participants' maternal relationships, participants completed the Quality of Parental Relationships Inventory (Conger, Ge, Elder, Lorenz, & Simons, 1994) at the baseline assessment. This measure assesses the affective tone of each participant's relationship with his mother or maternal guardian during the 6 months preceding the baseline assessment. Participants were asked to answer the questions about their mother or female guardian (if they were living with a stepmother or another adult woman at the time of the interview or in the 6 months preceding the interview, they were asked to answer the questions about this woman instead). An initial item asked participants to identify the relationship of this person to them by selecting from 15 potential relationship options. Approximately 89.99% of youth reported on their biological mother, 4.5% on their biological grandmother, and 5.51% on another female guardian (e.g., stepmother, aunt, adoptive mother). Results did not vary when nonbiological mothers were excluded from analyses; therefore, all data (including nonbiological mothers) were included in the final analyses.

Participants were then asked to report how frequently their mother or female guardian engaged in 12 different types of hostile actions, following the introductory statement "During the past six months, when you and your mother have spent time talking or doing things together, how often did your mother. . ." Some of the items refer to actions that are considered more physical in nature (i.e., "slap or hit you with her hands"), whereas others refer to actions that are more emotionally based (i.e., "criticize you or your ideas"). Participants responded to each question on a 4-point Likert scale ranging from *always to never*, with higher scores indicating a more hostile relationship.

Reoffending. The Self-Report of Offending Scale was administered at the baseline (control) and 6-month follow-up interviews to assess participants' engagement in antisocial and illegal behavior (SRO; Huizinga, Esbensen, & Weiher, 1991). At each time point, adolescents self-reported the number of different types of offenses they engaged in during the previous 6 months out of 24 possible items (e.g., *stolen something from a store (shoplifted)*; *taken something from someone by force*; *broken into a car to steal something*). A variety of offending score was calculated using a count of the total number of illegal behaviors that the adolescent endorsed. Variety scores are commonly used in studies of offending because they are highly correlated with measures of seriousness of antisocial behavior, yet are less prone to recall errors than self-reported frequency scores, especially when the antisocial act is committed frequently, such as using drugs. In this way, variety scores represent a preferred method of measuring antisocial behavior (Hindelang, Hirschi, & Weis, 1981; Thornberry & Krohn, 2000). Higher scores on this scale indicate engagement in more types of illegal behavior. Adolescents reported an average of 1.49 (SD = 2.11; range = 0–17; positive skew) types of offenses at the baseline interview and an average of 1.36 (SD = 2.25; range = 0–18; positive skew) types at the 6-month follow-up. Because the variables were positively skewed (baseline Shapiro–Wilk $W = .77$, $p < .001$; 6-month Shapiro–Wilk $W = .79$, $p < .001$), the variables were log-transformed for analyses.

Depressive symptoms. Adolescents' current depressive symptoms were assessed at the baseline interview using the Major Depressive Disorder (MDD) subscale of the Revised Child Anxiety and Depression Scale (adapted from Chorpita, Yim, Moffitt, Umemoto, & Francis, 2000). The MDD subscale consists of 10 items evaluating depressive symptoms such as feelings of worthlessness, anhedonia, emptiness, and sleep disturbances. Participants were presented the items and asked to rate how frequently each item (e.g., "Nothing is much fun anymore") represented how they felt. Response choices ranged from 0 = *never* to 3 = *always*, such that higher scores indicate more depressive symptoms (M = 5.80, SD = 4.66, range 0–30; $\alpha = .807$). Because the scale was significantly positively skewed ($p < .001$), the scale was log-transformed.

Plan of Analysis

The first step was to establish, based on prior literature, whether the two-factor model of maternal hostility fit the data. A confirmatory factor analysis in structural equation modeling (SEM) was run. SEM is an ideal method for handling measurement errors with multiple indicators and for conducting mediation analysis (e.g., Cheung & Lau, 2008;

Frazier, Tix, & Barron, 2004; Jang & Chiriboga, 2010). Thus, SEM using maximum-likelihood estimation was used for all analyses. Because indices of hostility were slightly positively skewed, the model was confirmed using maximum-likelihood estimation with robust standard errors (Bentler, 1995; Brown, 2015). However, because results did not change, the model without robust standard errors is presented for clarity. Next, an SEM model was constructed to examine whether latent maternal emotional hostility at baseline was associated with self-reported reoffending at the 6 month follow-up, accounting for age, race (dummy-coded as Black, Latino, and Other, with White omitted as the reference group), and baseline self-reported offending. Models were re-analyzed including site as a covariate, but models are presented without site included because the number of participants at each site did not satisfy the minimum sample size for SEM ($n > 200$; Garver & Mentzer, 1999; Harris & Schaubroeck, 1990). To test the proposed theoretical model, a second SEM model was fit to examine whether the effect of baseline maternal emotional hostility on self-reported reoffending at 6 months was mediated through depressive symptomatology at baseline, accounting for the same set of covariates. A combination of model fit indices were used to comprehensively assess model quality (see Hu & Bentler, 1999; Kline, 2005; Thompson, 2004), including the comparative fit index (CFI; adequate if >.90; Bentler, 1990), the Tucker-Lewis index (TLI; adequate if >.90; Tucker & Lewis, 1973), the root mean square error of approximation (RMSEA; adequate if <.70; Browne & Cudeck, 1992), and the standardized root mean square residual (SRMR; adequate if <.08; Hu & Bentler, 1999). Both SEM models were then re-analyzed using maternal physical hostility in place of emotional hostility.

RESULTS

A confirmatory factor analysis was performed to assess the factor structure of the maternal hostility subscale of the Quality of Parental Relationships Inventory (Conger et al., 1994). Based on previous work (Conger et al., 1994; Dhingra, Debowska, Sharratt, Hyland, & Kola-Palmer, 2015; Reid & Piquero, 2016), items on this measure were hypothesized to assess two domains of hostility: six items assess emotional hostility (e.g., "How often did your mother get angry at you?"), and five items assess physical hostility (e.g., "How often did your mother push, grab, hit, or shove you?"). One item ("How often did your mother get so mad at you that she broke or threw things?") did not fit cleanly into either domain due to the ambiguity in the phrasing. For instance, it is unclear whether the mother threw things at the youth (which would be considered physical hostility) or not. Throwing objects in the vicinity of the youth (but not at the youth) could be seen as intimidation, which would be categorized as emotional hostility. As a result of this vagueness, this item was not included in the factor analysis. The other 11 items were included in the analyses.

A one-factor model for maternal hostility did not fit the data well on multiple indices (χ^2 (44, 1,199) = 769.57); CFI = 0.82; TLI = 0.77; RMSEA = 0.12; SRMR = 0.07). Confirmatory factor analysis indicated adequate fit for the two-factor model for maternal hostility (χ^2 (43, 1,199) = 296.17); CFI = 0.94; TLI = 0.92; RMSEA = 0.07; SRMR = 0.04). This resulted in a six-item emotional hostility subscale ($M = 1.99$, $SD = 0.62$, range = 1–4, $\alpha = .800$; CFI = 0.96; TLI = 0.94; RMSEA = 0.08; SRMR = 0.03) and a five-item physical hostility subscale ($M = 1.16$, $SD = 0.35$, range = 1–4, $\alpha = .763$; CFI = 0.93; TLI = 0.87; RMSEA = 0.14; SRMR = 0.04). As all factor loadings were statistically significant (Tables 1 and 2), each latent variable was accurately represented by the observed variables.

Second, bivariate correlations were computed among the study variables (Table 3). Maternal emotional and physical hostility were moderately correlated, and each was associated with depressive symptoms and self-reported reoffending. Depressive symptoms were also associated with both previous and subsequent self-reported reoffending.

TABLE 1
Factor Loadings for Hypothesized Emotional Hostility Subscale ($N = 1,199$)

Item	*Factor loading (SE)*	*p*-Value
Get angry at you?	.69 (.02)	<.001
Shout or yell at you because she was mad at you?	.71 (.02)	<.001
Criticize you or your ideas?	.56 (.02)	<.001
Argue with you when you disagreed about something?	.63 (.02)	<.001
Boss you around a lot?	.57 (.02)	<.001
Insult or swear at you?	.63 (.02)	<.001

TABLE 2
Factor Loadings for Hypothesized Physical Hostility Subscale (N = 1,199)

Item	*Factor loading (SE)*	*p*-Value
Threaten to hurt you physically?	.64 (.02)	<.001
Push, grab, hit, or shove you?	.77 (.02)	<.001
Slap or hit you with her hands?	.67 (.02)	<.001
Strike you with an object?	.59 (.02)	<.001
Throw things at you?	.64 (.02)	<.001

Maternal Emotional Hostility

A direct-effect model was tested with a direct path from maternal emotional hostility to self-reported reoffending variety at 6 months, accounting for key covariates (continuous age; dummy-coded race of Black, Latino, and Other with White omitted as the reference group; baseline self-reported offending variety). This direct effects model showed acceptable fit (CFI = 0.94; TLI = 0.92; RMSEA = 0.06; SRMR = 0.03). Results indicate that age and race were unrelated to reoffending. Prior offending at baseline was related to subsequent offending at 6 months (β = .43, 95% CI = 0.38, 0.47, *SE* = .02, $p < .001$). Maternal emotional hostility was directly related to self-reported reoffending variety at the 6-month follow-up assessment (β = .13, 95% CI = 0.07, 0.19, *SE* = .03, $p < .001$).

A mediation model was tested to determine whether the effect of maternal emotional hostility was mediated by depressive symptomatology (CFI = 0.94; TLI = 0.92; RMSEA = 0.05; SRMR = 0.03). As shown in Figure 1, depression symptoms were predicted by maternal emotional hostility (β = .37, 95% CI = 0.31, 0.42, *SE* = .03, $p < .001$), which in turn predicted self-reported reoffending at 6 months (β = .07, 95% CI = 0.01, 0.12, *SE* = .03, $p = .017$). Maternal emotional hostility also predicted self-reported reoffending (β = .11, 95% CI = 0.05, 0.18, *SE* = .03, $p = .001$). The standardized indirect effect of emotional hostility on self-reported reoffending is 0.03 and the total effect is 0.13, indicating that 23% of the effect of emotional hostility on self-reported reoffending operates through depression symptoms.

Maternal Physical Hostility

A direct-effect model was tested with a direct path from maternal physical hostility to self-reported reoffending variety, accounting for the same set of covariates. This direct effects model showed acceptable fit (CFI = 0.94; TLI = 0.91; RMSEA = 0.06; SRMR = 0.03). Results indicate that, as with the emotional hostility model, age and race were unrelated to reoffending. Prior offending at baseline was again related to subsequent offending at the 6-month follow-up assessment (β = .44, 95% CI = 0.39, 0.48, *SE* = .02, $p < .001$). Maternal physical hostility was directly related to self-reported reoffending variety at 6 months (β = .13, 95% CI = 0.07, 0.18, *SE* = .03, $p < .001$).

A mediation model was tested to determine whether the effect of maternal physical hostility was mediated by depressive symptomatology (CFI = 0.92; TLI = 0.89; RMSEA = 0.06; SRMR = 0.04). As shown in Figure 2, depression symptoms were predicted by maternal physical hostility (β = .21, 95% CI = 0.15, 0.27, *SE* = .03, $p < .001$), which in turn predicted self-reported reoffending (β = .08, 95% CI = 0.03, 0.13, *SE* = .03, $p = .003$). Maternal physical hostility also predicted self-reported reoffending (β = .11, 95% CI = 0.06, 0.17, *SE* = .03, $p < .001$). The standardized indirect effect of physical hostility on self-reported reoffending is 0.02 and the total effect is 0.13, indicating that approximately 15% of the effect of physical hostility on self-reported reoffending operates through depression symptoms.

DISCUSSION

This study examined the effects of two types of maternal hostility (i.e., emotional and physical) on

TABLE 3
Bivariate Correlation Matrix of Study Variables (N = 1,199)

	M (SD)	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*
1. Emotional hostility	–	–				
2. Physical hostility	–	.53***	–			
3. Age	15.3 (1.3)	.15***	−.03	–		
4. Depression	5.80 (4.66)	.33***	.22***	.05	–	
5. Baseline self-reported offending variety	1.49 (2.11)	.28***	.20***	.19***	.24***	–
6. 6 Month self-reported reoffending variety	1.36 (2.25)	.22***	.22***	.04	.24***	.50***

Note. *$p < .05$, **$p < .01$, ***$p < .001$.

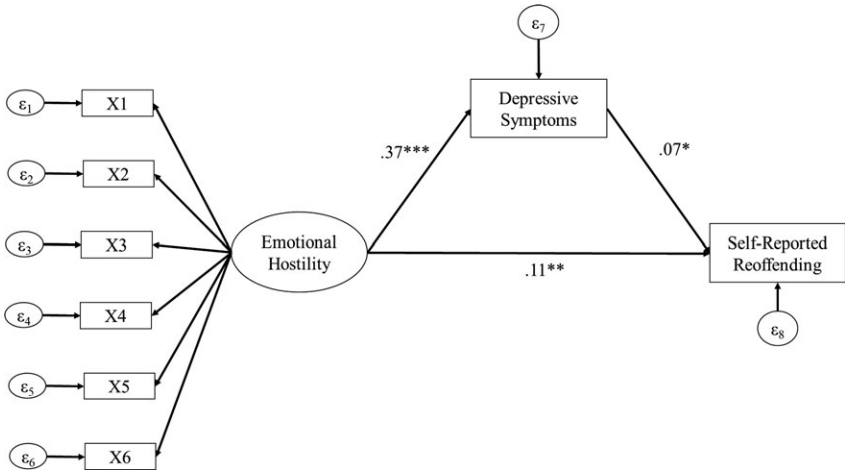

FIGURE 1 Depressive symptoms partially mediate the relation between maternal emotional hostility and self-reported reoffending among male juvenile offenders (N = 1,199). Control variables (not shown) are age, race, and baseline self-reported offending variety. Paths are standardized coefficients.
Note. *p < .05; **p < .01; ***p < .001.

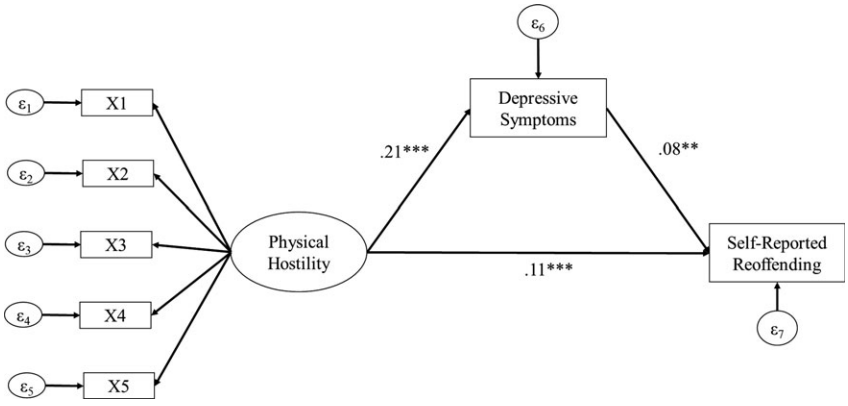

FIGURE 2 Depressive symptoms partially mediate the relation between maternal physical hostility and self-reported reoffending among male juvenile offenders (N = 1,199). Control variables (not shown) are age, race, and baseline self-reported offending variety. Paths are standardized coefficients.
Note. *p < .05; **p < .01; ***p < .001.

the depressive symptomology and future reoffending behavior of delinquent male adolescents. Importantly, this research indicates that maternal hostility does not need to be physically violent in order to be harmful to adolescents' emotional well-being and behavior. Rather, even emotional maternal hostility was found to significantly predict adolescents' depression symptoms and reoffending. Our findings suggest that even after accounting for their previous offending, justice system–involved adolescents who experience higher levels of maternal hostility are more likely to experience depressive symptoms and reoffend more than adolescents who experience lower levels of such hostility. These results are consistent with research indicating that adolescents who have experienced maternal hostility are more likely to experience symptoms of depression (Lewis et al., 2014) and engage in delinquency (Castellani et al., 2014).

This study proposed and tested a theoretical model in which the effect of maternal hostility on male adolescents' reoffending was partially explained by the association between depression symptoms and offending. In support of this model, we find that adolescents who experienced greater maternal hostility reported more depressive symptoms than those adolescents who experienced less maternal hostility. These depressive symptoms, in turn, contributed to the effect of

maternal hostility on male adolescents' reoffending 6 months later.

This study underscores the importance of examining different dimensions of hostility as separate entities. We find not only that maternal hostility can be separated into two domains—emotional and physical hostility—but also that these two types of hostility, although related, are separate elements that each affect adolescents in important ways. There may be a tendency for practitioners and researchers to focus more on the negative effects of physical hostility, as the negative repercussions of such hostility may be more readily apparent; however, our findings emphasize the importance of also paying attention to emotional hostility, which can be quite harmful in its own right.

This study has several notable strengths. Not only do the present findings reveal novel information about the effects of lower levels of maternal hostility; this study is also the first (to the best of our knowledge) to separate the effects of maternal hostility by subtype (emotional and physical hostility). Further, this study is one of few to examine hostility within a justice system–involved sample. This is important, as delinquent adolescents may be particularly vulnerable to the effects of parental hostility. Finally, much of the literature on hostile parenting has been limited to examining effects of hostility that occurs during childhood. Less is known about the effects of parental hostility that occurs during adolescence, which is surprising considering that adolescence is a period of heightened risk for parental abuse (Sedlak et al., 2010). Recently, there has been a call for further research on the effects of parental hostility on adolescent adjustment using prospective, longitudinal studies (Trickett, Negriff, Ji, & Peckins, 2011), as is used in this study.

One limitation of this study is that we were unable to determine the duration of hostility that the adolescent participants experienced, as we asked about hostility in the maternal relationship that was experienced at any point in the past 6 months. It would be interesting to explore whether hostility preceded the adolescents' initial delinquent behavior or whether the maternal figures became more hostile as a result of the adolescents' arrest. Future research should explore the effect of adolescent arrest on mothers' hostility, as research indicates bidirectional associations between adolescent characteristics and behavior and parental hostility (Williams & Steinberg, 2011). A second limitation of the study is that we utilized only adolescents' subjective reports of maternal hostility, rather than obtaining corroborating reports from mothers themselves. However, prior work suggests that adolescents' subjective perceptions of their parents' behaviors may be more important predictors of adolescent problem behavior than parents' reports of their own parenting behaviors (Dimler, Natusaki, Hastings, Zahn-Waxler, & Klimes-Dougan, 2016). That is, in terms of adolescents' well-being, it may matter more whether an adolescent *feels* someone has treated him or her hostilely, than whether they indeed have been treated hostilely. Third, this study is limited in its ability to account for family involvement with the child welfare system. Assessing the effects of involvement as well as depth of involvement would be critically important for extending the results of this study into future research. Finally, our sample included only male adolescents and their mothers. It is possible that the effect of maternal hostility may differ for female adolescents. Likewise, these results may not hold true when considering paternal hostility. Prior work has explored the role of gender (both of the parent and the adolescent) when exploring the effect of parental hostility on adolescent outcomes; however, these findings have typically shown that maternal hostility is only associated with depression among female adolescents and that paternal hostility does not affect adolescents' depression (Lewis et al., 2014). Therefore, this study is rare in that it demonstrates an effect of maternal hostility on adolescent sons' depressive symptoms. This may be due to the fact that this study relied on a sample of justice system–involved youth, as prior research has suggested that delinquent youth are at an increased risk for depression (Lalayants & Prince, 2014).

In conclusion, it is natural for adolescents to anticipate warm relationships with their mothers. However, when the maternal relationship is hostile, instead of supportive, it can lead to problematic outcomes for adolescents. Importantly, these findings highlight that hostility does not have to be violent or reach the level of child abuse in order to have detrimental effects on adolescent well-being. Even relatively low-level hostility can have lasting emotional and behavioral consequences for delinquent or justice system–involved adolescents. Examining those factors associated with adolescent recidivism is particularly important among adolescents who are just coming to the attention of the justice system. Although many studies focus primarily on physical hostility, the results of this study demonstrate that maternal emotional hostility is particularly important for understanding

adolescents' experiences with depressive symptoms and crime engagement among male adolescents encountering the juvenile justice system for the first time.

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