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Clarifying the Association Between Mother-Father Relationship Aggression and Parenting

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Abstract

Although much research examines the association between fathers' relationship aggression and mothers' parenting, little attention is given to mothers' aggression, mutual aggression, or fathers' parenting. Using a sample of coresiding couples from the Fragile Families and Child Wellbeing Study ($N = 973$), the authors examine the association between mothers' and fathers' relationship aggression, measured as frequency and perpetration-victimization types (mutual, mother-only, father-only), and mothers' and fathers' parenting. Fixed effects regression models show that fathers' aggression—father-only or mutual—is positively related to mothers' parenting stress, whereas father-only or mother-only aggression is related to fathers' stress. For both parents, aggression perpetration is negatively related to their own engagement with children. Mother-only aggression is negatively related to mothers' spanking and positively related to fathers' spanking. These findings suggest the importance of examining both parents' aggression and perpetrators' as well as victims' parenting to better understand the link between relationship aggression and parenting.

Keywords

fixed effects models; gender; interparental conflict; intimate partner abuse; parenting; stress

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Much research has shown that there is an association between mother-father relationship quality and parenting (Carlson, Pilkauskas, McLanahan, & Brooks-Gunn, 2011; Deater-Deckard, 2004; Erel & Burman, 1995; Krishnakumar & Buehler, 2000). In particular, mother-father relationship aggression—i.e., mothers' and fathers' hostile and controlling behavior toward each other, verbal aggression, physical aggression, or both (Cui, Durtschi,

Donnellan, Lorenz, & Conger, 2010; Schumacher & Leonard, 2005)—is related to more parenting stress, defined as general feelings of difficulty in the parenting role (Levendosky, Leahy, Bogat, Davidson, & von Eye, 2006; Owen, Thompson, & Kaslow, 2006; Renner, 2009; Taylor, Lee, Guterman, & Rice, 2010), and more ineffective parenting practices, such as less engagement with children, more lax control, and greater harshness toward children (Edleson, 1999; Holden & Ritchie, 1991; Ritchie & Holden, 1998; Taylor, Guterman, Lee, & Rathouz, 2009).

Despite a large volume of studies examining the association between relationship aggression and parenting, three limitations cloud understanding of this association. First, inadequate attention has been paid to possible selection effects. That is, characteristics that "select" parents into relationship aggression—e.g., mothers' and fathers' sociodemographic or personality characteristics—can also shape parenting stress and practices. Without eliminating such unobserved characteristics that are related to both relationship aggression and parenting stress and practices, prior research might have overestimated the degree to which mother-father relationship aggression per se is related to parenting stress and practices. Second, recent studies largely focused on fathers' aggression and its consequences for mothers' parenting stress and practices (e.g., Gustafsson & Cox, 2012). This focus on the male perpetration-female victimization pattern overlooks the findings from survey-based studies that women are as likely as men to be perpetrators of relationship aggression (Johnson, Giordano, Manning, & Longmore, 2015) and that close to half of relationship aggression involves mutual aggression where both partners are perpetrators (Renner & Whitney, 2010). A third, related limitation is that gender differences in these associations remain unclear. Because the dynamics in relationships among different-sex couples continue to be gendered (Anderson, 2010; England, 2010), it is possible that consequences of relationship aggression for parenting stress and practices may differ for women and men.

In this paper, we address these limitations using longitudinal data of married or cohabiting mothers and fathers from Waves 3 and 4 in the Fragile Families and Child Wellbeing Study (FFCWS). To eliminate the influences of unobserved between-person selection factors, we use fixed effects models, which control for unmeasured time-invariant characteristics and estimate within-person differences (Allison, 2009). We examine the associations between mothers' and fathers' frequency of relationship aggression and three aspects of parenting of mothers and fathers, including parenting stress, frequency of engagement with children, and frequency of spanking. In addition, we assess perpetration-victimization type—mutual, mother-only aggression, father-only aggression, and no aggression—to better understand whose aggression matters for whose parenting. The findings of the present analysis contribute to the literature by investigating men's and women's aggression, as well as mutual aggression, and by examining their links to parenting stress and practices.

Prior Research

Family systems theory (Cox & Paley, 1997) posits that mother-father relationships and parent-child relationships are interdependent. Using this broader framework, family scholars have examined the link between mother-father relationship aggression and parenting stress and practices (Cummings & O'Reilly, 1997; Erel & Burman, 1995; Krishnakumar &

Buehler, 2000). More recently, research has focused specifically on intimate partner violence (IPV) and its consequences for victims' parenting stress and practices (e.g., Postmus Huang, & Mathison-Stylianous, 2012; Taylor, Guterman, Lee, & Rathouz, 2009). Both lines of research have conceptualized the association into two contrasting hypotheses. The first perspective is the *spillover perspective*, which posits that higher levels of relationship aggression lead to more parenting stress and poor parenting practices (Erel & Burman, 1995). Negativity, hostility, or frustration in the mother-father relationship may be carried over into mothers' and fathers' mood and interactions with their children (Holden & Ritchie, 1991; Murray, Bair-Merrit, Roche, & Cheng 2012; Palazzolo, Roberto, & Babin, 2010; Renner, 2009; Taylor et al., 2010). The second perspective is the *compensatory perspective*, which contends that mother-father relationship aggression could result in less parenting stress and better parenting practices such as more engagement and less harshness. Parents whose intimate partnerships are hostile and antagonistic may try to invest more in their relationships with children to obtain affection and warmth (Brody, Pillegrini, & Sigel, 1986).

Empirical studies generally have supported the spillover perspective, showing a positive association between relationship aggression and parenting stress or ineffective parenting (for reviews and meta-analyses, see Erel & Burman, 1995; Krishnakumar & Buehler, 2000). Still, a few studies found support for the compensatory perspective. Using a small sample of racially-diverse mothers with preschool children, Levendosky, Huth-Bocks, Shapiro, and Semel (2003) found that IPV victimization was positively related to mothers' warm, responsive parenting practices. DeVoe and Smith's (2002) qualitative study of mothers who had been in an abusive relationship reported that some mothers consciously avoid using physical punishment in order to teach their children not to use physical force. Further, other studies showed that the link may depend on the aspect of parenting. Levendosky and Graham-Bermann (2000) found that IPV victimization was negatively related to mothers' warmth toward children, but was not related to their discipline of their children.

Three Limitations in Prior Research

In this paper, we address three limitations in prior research to advance our understanding of the link between mother-father relationship aggression and parenting. First, more attention should be paid to a third perspective, which we call the *selection perspective*. Theoretical perspectives that emphasize contextual influences on marriage and parenting (e.g., Conger, Ge, Elder, Lorenz, & Simons, 1994; Simons et al., 2002) suggest that mothers' and fathers' experiences in marital and parenting domains are largely shaped by social and life contexts in which they are embedded. Indeed, prior research has shown that there are a number of characteristics that are related to both relationship aggression and parenting experience (Slep & O'Leary, 2001). These include parents' demographic and socioeconomic (SES) characteristics such as poverty, unemployment, incarceration, and relationship status (Anderson, 2010; Conger et al., 1994; Cooper, McLanahan, Meadows, & Brooks-Gunn 2009; McLeod & Shanahan, 1993; Nomaguchi & Johnson, 2014; Turney & Wildeman, 2013), children's characteristics, such as the number of children and child health (Caetano, Cunradi, Schafer & Clark, 2000; Nomaguchi & Brown, 2011), and parents' personality characteristics, such as antisocial personality, poor interpersonal skills, or unrealistic expectations for others' behaviors (Simmons, Lehmann, & Dia, 2010). After these selection

factors are controlled for, there may be little association between relationship aggression and parenting stress or practices.

Although some studies have controlled for these background characteristics described above, it is impossible to measure and control for all variables that are related to both relationship aggression and parenting outcomes in random-effects models and standard regression models typically used in prior research. In random-effects models, unobserved (i.e., uncontrolled) variables are regarded as random variables which are not correlated with the observed variables. We suspect that may not be the case in the present analysis as we just explained above. Fixed effects models are useful to eliminate unmeasured time-invariant differences between those who are involved in relationship aggression and those who are not, such as parents' and children's sociodemographic and personality characteristics, although they do not control for unobserved time-varying factors and do not establish a causal direction (Allison, 2009). Fixed effects models require longitudinal data to examine how difference scores in relationship aggression correspond to difference scores in parenting stress and practices over two or more assessment periods. Much of the prior research has relied on cross-sectional data. Even recent studies that used longitudinal data did not control for parenting stress or practices in an earlier time period (Gewirtz, DeGarmo, & Medhanie, 2011; Gustafsson & Cox 2012; Huang, Wang, & Warrener, 2010; Postmus, Huang, & Mathisen-Stylianous, 2012). For example, Huang, Wang, and Warrener (2010), using FFCWS, examined relationship aggression at Wave 2 and parenting practice at Wave 3. Postmus and colleagues (2012) examined the associations between changes in IPV from Wave 2 to Wave 3 and parenting stress and practices in Wave 4, not changes in parenting stress and practices. These research designs do not address potential selection processes. To eliminate possible selection biases, the present analysis used fixed effects models.

Second, recent studies have largely focused on the association between fathers' relationship aggression and mothers' parenting stress and practices (Gustafsson & Cox, 2012; Huang et al., 2010; Postmus et al., 2012; Taylor, Guterman, Lee, & Rathouz, 2009). Three other possible combinations of the association—i.e., mothers' aggression and fathers' parenting, mothers' aggression and mothers' parenting, and fathers' aggression and fathers' parenting—have been rarely examined. Given that women are as likely as men to use verbal and physical aggression toward their intimate partner (Johnson et al., 2015) and fathers' parenting is related to child outcomes (Pleck & Masciadrelli, 2004), it is important to examine how mothers' aggression relates to fathers' parenting. In addition, although prior work largely focused on victims' parenting, it is possible that aggressive mood and behavior of perpetrators may "spill over" into perpetrators' own parenting stress and practices. Some earlier studies did examine both mothers' and fathers' perpetration of relationship aggression and its link to mothers' as well as fathers' parenting. For example, Holden and Ritchie (1991) found that fathers' relationship aggression was positively related to their irritability toward their children. Fathers' irritability toward children was, however, measured using the mothers' report, instead of the fathers' own reports. The current study examined how mothers' and fathers' relationship aggression are related to their own as well as their partner's parenting stress and practices. Furthermore, using data from the National Survey of Adolescent Health (Add Health), Renner and Whitney (2010) found that about half of those reporting relationship aggression involved mutual aggression. Thus, in addition

to the frequency of mothers' and fathers' perpetration of aggression, we also used a four-category measure of perpetration-victimization type—no aggression, mutual aggression, mother-only perpetration, father-only perpetration—to better understand the role of relationship aggression perpetration and victimization in shaping parenting stress and practices.

Third, related to the second limitation, gender differences in the consequences of relationship aggression for parenting are unclear (Anderson, 2002). Prior research provides two contrasting predictions. One is the *gendered parenting* perspective. Research has shown that mothers often play the primary role in parenting, whereas fathers tend to be "mothers' helpers" (Fox, 2009). Thus, fathers' participation in parenting tends to be affected by mothers' encouragement or "gatekeeping" (Fagan & Barnett, 2003). This idea suggests that men's parenting is more vulnerable to relationship aggression enacted by the mother of their children (Erel & Burman, 1995). In contrast, the *gendered intimate relationship* perspective contends that women are more likely than men to pay attention to the well-being of their romantic relationship and are more likely to be distressed by poor relationship quality (Kessler & McLeod, 1984). This idea suggests that mothers' parenting may be more affected than fathers' parenting by relationship aggression. Empirical findings, mostly from earlier studies, are inconsistent. Erel and Burman's meta-analysis (1995) reported that there was little gender difference in the magnitude of the association between relationship quality and parenting. In contrast, Krishnakumar and Buehler (2000), also based on a meta-analysis, reported that fathers' parenting is more strongly influenced by mother-father relationship quality than mothers' parenting. Past research is limited in that most studies relied on one person's report, usually the mother's. The present analysis examines gender differences in the link between relationship aggression and parenting stress and practices using reports from both parents.

THE PRESENT STUDY

Using a sample of married or cohabiting couples drawn from the FFCWS, this study examined how mothers' and fathers' relationship aggression was related to their own and their partner's parenting. Of the various aspects of parenting, we focused on parenting stress, frequency of engagement in activities with children, and frequency of spanking children, indicators that were commonly used in prior research (Gustafsson & Cox, 2012; Huang et al., 2010; Postmus et al., 2012; Taylor et al., 2009). We examined parenting stress and parenting practices as separate outcomes, because some research has shown that parenting stress has a direct effect on children's behaviors (Huth-Bocks & Hughes, 2008; Levendosky & Graham-Bermann, 2000; Taylor et al., 2009), although others suggest that parenting stress could be a mediator (Postmus et al., 2012).

On the basis of the selection perspective, we expected that the association between relationship aggression and parenting stress and practices observed in prior research—mostly focused on fathers' aggression and mothers' parenting—were in part due to background characteristics that were related to both relationship aggression and parenting stress and practices; and thus the association would be less pronounced or would not be found in the fixed effects models. Alternatively, on the basis of the spillover perspective, we

expected that relationship aggression was positively related to parenting stress, negatively related to engagement with children, and positively related to spanking frequency for both mothers and fathers and for both perpetrators and victims, even after controlling for background characteristics. To explore possible differences between perpetration and victimization in its link to parenting, we used a measure of perpetration-victimization type in addition to a measure of frequency of relationship aggression. We did not state particular hypotheses regarding differences across mutual, perpetration-only, and victimization-only aggression in its association with parenting stress and practices. With regard to gender differences, we discussed two contrasting hypotheses. First, on the basis of the gendered parenting perspective, we expected that the association between relationship aggression and parenting would be stronger for fathers than mothers. Second, on the basis of the gendered intimate relationship perspective, we expected that the association would be stronger for mothers than fathers.

Multivariate analyses controlled for fathers' and mothers' time-varying characteristics that prior research has suggested are related to parenting and parenting stress as well as relationship aggression. These included employment characteristics such as mothers' or fathers' unemployment, work hours, nonstandard work schedules, and multiple jobs (e.g., Conger et al., 1994; Nomaguchi & Johnson, 2014), fathers' incarceration history (Turney & Wildeman, 2013), family characteristics such as the number of children, marital versus cohabitation status, family income, and child health (Brown, 2004; Johnson et al., 2015; Nomaguchi & Brown, 2011; Postmus et al., 2012).

METHOD

Data

Data for the present analysis were drawn from Waves 3 and 4 of the FFCWS (http://www.fragilefamilies.princeton.edu/). The FFCWS is a stratified, multistage, probability sample of children born between 1998 and 2000 in U.S. cities with populations of at least 200,000 (Reichman, Teitler, Garfinkel, & McLanahan, 2001). The baseline interviews were conducted in the hospital soon after the child's birth (W1). Wave 2 (W2), Wave 3 (W3), Wave 4 (W4), and Wave 5 (W5) interviews were conducted by telephone when the child was one, three, five, and nine years old respectively. We focused on data from W3 and W4, because W1 did not include any questions on relationship aggression, W2 did not include questions asking fathers about mothers' physical aggression, and W5 did not ask all parents about parenting stress and had different question items from previous waves to measure parental engagement with children. We used national weights, which made the data collected from the 16 randomly selected cities representative of births that occurred in the 77 U.S. cities with populations over 200,000 in 1994 (Fragile Families & Child Wellbeing Study, 2008; e.g., Lundberg, McLanahan, & Rose, 2007). For the present analysis, we first selected cases where the focal child's mother and father both participated in W3 and W4 interviews (n = 1,782). Then we limited the sample to those coresiding (cohabiting or married) in both waves (N = 973). The W3 and W4 data were pooled into one data set (N = 1,946 observations). Missing cases were imputed using multiple imputations in SAS with five iterations (Allison, 2001).

The average age at the birth of the focal child for fathers in the sample was 31.3 years (Appendix Table 1). Racial-ethnic compositions were 47.0% White, 14.6% Black, 30.7% Hispanic, and 7.7% other race. About 9.1% of couples were interracial or interethnic. Seventeen percent of fathers did not complete a high school degree, 19.2% had a high school diploma, 34.1% had some college education, and 29.4% had a Bachelor's degree or more. We compared means for demographic and SES variables between those who were retained in the sample and those who were dropped. White mothers and fathers were more likely to be retained at W3, as were those with higher education, and those who reported being married at W1. We also compared mean scores of relationship aggression at W2 between those who were included in the analytical sample and those who were dropped. The mean scores were slightly higher for those who dropped out of the sample. Thus, mothers and fathers in the analytical sample were more advantaged in sociodemographic characteristics and less likely to be involved in relationship aggression than those in urban areas in the general population.

Measures

Three aspects of parenting were examined. *Fathers' and mothers' parenting stress* was measured as the average of four questions (α = .63 in W3 and .66 in W4 for fathers; α =.67 in both W3 and W4 for mothers), (a) "Being a parent is harder than I thought it would be"; (b) "I feel trapped by my responsibilities as a parent"; (c) "I find that taking care of my child(ren) is much more work than pleasure"; (d) "I often feel tired, worn out, exhausted from raising a family" (1 = *strongly disagree*, 2 = *disagree*, 3 = *agree*, 4 = *strongly agree*). These four items were derived from the JOBS Child Outcome Survey conducted by Child Trends and Abidin's Parent Stress Inventory (Abidin, 1995; Hofferth, Davis-Kean, Davis, & Finkelstein, 1997). Our alpha reliability coefficients were comparable to those obtained by Abidin (1995) and Hofferth et al. (1997).

Fathers' and mothers' engagement with children (W3 & W4) was measured as the average of four questions (α = .84 in both W3 and W4 for fathers; and α = .74 in W3 and .73 in W4 for mothers) that asked fathers and mothers how many days a week they would (a) "sing songs or nursery rhymes"; (b) "read stories"; (c) "tell stories"; or (d) "play inside with the child." Responses ranged from 0 to 7 days per week. Fathers and mothers who did not see the child in the past month were coded 0s. This measure has been used in other studies (Carlson, McLanahan, & Brooks-Gunn, 2008; Ryan, Kalil, & Ziol-Guest, 2008).

Fathers' and mothers' frequency of spanking was measured based on two questions. Fathers and mothers were asked whether they spanked their child in the previous month because their child was misbehaving or acting up. If they answered "yes", they were asked how often they spanked their child. A measure of frequency of spanking was created for fathers and mothers respectively where 0 = *none*, 1 = *only once or twice*, 2 = *a few times in this past month*, 3 = *a few times a week*, 4 = *every day or nearly every day*. Because very few parents reported "every day," we combined them with "a few times a week," resulting in a scale that ranged from 0 to 3.

Relationship aggression was assessed by two measures: frequency and perpetration-victimization type. *Fathers' and mothers' frequency of relationship aggression scale* (W3 &

W4) was measured as a mean scale of seven questions that were reported by the other parent (α = .64 in W3 and .66 in W4 for fathers; α = .69 in W3 and .71 in W4 for mothers): (a) "S/He insults or criticizes you or your ideas"; (b) "S/He tries to keep you from seeing or talking with your friends or family"; (c) "S/He tries to prevent you from going to work or school"; (d) "S/He withholds money, makes you ask for money, or takes your money"; (e) "S/He slaps or kicks you"; (f) "S/He hits you with a fist or an object that could hurt you"; and (g) "S/He tries to make you have sex or do sexual things you don't want to do" (1 = *never*, 2 = *sometimes, 3 = often*). Past research has used the same items in FFCWS to measure relationship aggression or IPV (e.g., Postmus et al., 2012; Taylor et al., 2009; 2010). *Perpetration-victimization type* was measured as four dummy variables created by using fathers' and mothers' frequency of relationship aggression scales: *no aggression* (couples in which both the father's and the mother's frequency of relationship aggression scales were 1s), *father-only aggression* (couples in which the father's frequency of relationship aggression scale was greater than 1 and the mother's frequency of relationship aggression scale was 1), *mother-only aggression* (couples in which the father's frequency of relationship aggression scale was 1 and the mother's frequency of relationship aggression scale was greater than 1), and *mutual aggression* (couples where the father's and the mother's frequency of relationship aggression scales were greater than 1s). In supplemental analyses, we examined measures of relationship aggression excluding physical aggression as well as those including physical aggression only (i.e., questions e, f, g in the above list) to assess whether the association between relationship aggression and parenting stress and practices varied by intensity of relationship aggression. The patterns of the findings were substantively similar to those using the measures that included all items.

Several control variables, all of which were measured as time-varying variables, were included. *Fathers' and mothers' employment status* (W3 & W4) was measured as dummy variables, including not employed, employed part-time (< 35 hours per week), and employed full-time (35 hours per week and more) (reference). *Fathers' and mothers' non-standard work schedule* (W3 & W4) was a dichotomous variable where parents who reported being employed were asked whether they worked evenings, nights, rotating shifts, or weekends (1 = *yes*, 0 = *no*). *Fathers' and mothers' multiple job holding* (W3 & W4) was a dichotomous variable where parents who reported working more than one job at a time during the past 12 months were coded as 1 and 0 otherwise. *Income-to-poverty ratio* (W3 & W4) was a FFCWS constructed variable based on the father's report. *Father's incarceration history* (W3 & W4) was a dichotomous variable in which couples where the father had been incarcerated were assigned 1s and others were assigned 0s. *Cohabitation* (W3 & W4) was a dummy variable in which couples who were cohabiting were assigned 1s and those who were married were assigned 0s. *The number of children* under age 18 in the household (W3 & W4) was measured based on the mother's report as a continuous variable. *Child's health* (W3 & W4) was an ordered variable ranging from 1 = *poor* to 5 = *excellent* as reported by mothers.

Analytical plan

To examine the association between relationship aggression and parenting stress and practices, we used the pooled data set to estimate fixed effects regression models (Allison,

2009; Johnson, 1995). A random-effects model, which is a standard regression model typically used in prior research, examines variations across individuals in the sample. In contrast, a fixed effects model focuses on the within-person variation while controlling for time-invariant unmeasured characteristics—i.e., selection factors—that are related to both relationship aggression and parenting outcomes (Allison, 2009). We tested serial correlation of errors for the same case across different times, a necessary condition for fixed effects models (Wooldridge, 2002). The correlations were significant at $p < .001$ levels for all models (data not shown). This means that there were unobserved differences that distinguished between those who were involved in relationship aggression and those who were not. Additionally, we used Hausman tests to determine whether the estimates for all combinations of the association between mothers' and fathers' relationship aggression and mothers' and fathers' parenting stress or practices in random- versus fixed effects were significantly different (Allison, 2009). The Hausman tests of differences in the coefficients between random-effects and fixed effects models were significant for all models (data not shown). Collectively, these results support the selection hypothesis and the need for fixed effects models (Allison, 2009).

RESULTS

Table 1 presents descriptive statistics for variables in the analyses. The mean for frequency of relationship aggression was 1.13 for mothers and 1.10 for fathers. Thirty-two percent of the couples reported no relationship aggression, whereas 27% reported mutual aggression, 26% reported mother-only aggression, and 15% reported father-only aggression. Consistent with findings of studies using survey-based studies (e.g., Renner & Whitney, 2010), mothers were as likely as fathers, or even more likely than fathers, to be perpetrators of relationship aggression.

The first aspect of parenting we examined was parenting stress. Table 2 shows the results from fixed effects models for the associations between fathers' or mothers' relationship aggression and mothers' or fathers' parenting stress respectively. We examined mothers' parenting stress first. Models 1 and 2 used fathers' and mothers' frequency of relationship aggression. The correlation between fathers' and mothers' relationship aggression was modest ($r = .229$, $p < .001$). Thus, we included fathers' and mothers' relationship aggression in the same models. Model 1 included fathers' and mothers' relationship aggression frequency only, whereas Model 2 included the control variables (i.e., time-varying demographic, SES, and child characteristics). We found that fathers' frequency of relationship aggression was not related to mothers' parenting stress with or without control variables in the model. Mothers' frequency of relationship aggression was also not related to mothers' parenting stress with or without control variables. Models 3 and 4 examined whether the four types of relationship aggression—i.e., mutual, father-only, mother-only, and no aggression—were related to mothers' parenting stress without or with control variables respectively. Controlling for background characteristics (Model 4), father-only aggression and mutual aggression, but not mother-only aggression, were positively related to mothers' parenting stress. We tested differences in the coefficient across the four types of relationship aggression by running the same models but switching the reference group (data not shown). Differences in coefficients between mutual and father-only aggression were not

significant, whereas differences in coefficients between mutual and mother-only aggression, as well as those between father-only and mother-only aggression were significant. Altogether, these results suggest that presence of fathers' aggression, either father-only or mutual aggression, was positively related to mothers' parenting stress, whereas mother-only aggression did not seem to be related to mothers' parenting stress.

Turning to fathers' parenting stress, fathers' frequency of relationship aggression was positively related to fathers' parenting stress, albeit only when demographic and SES characteristics were controlled for (Model 2, in Table 2). A supplemental analysis (data not shown) indicated that fathers' and mothers' employment status suppressed the association between fathers' aggression and fathers' parenting stress (e.g., mothers' part-time job was positively related to fathers' aggression but negatively related to fathers' parenting stress). Models 3 and 4 show that the presence of father-only aggression was positively related to fathers' parenting stress, whereas mutual aggression was not related. Interestingly the presence of mother-only aggression was also positively related to fathers' parenting stress. Differences in coefficients across mother-only, father-only, and mutual aggression were not statistically significant.

The second aspect of parenting that was examined in the present analysis was mothers' and fathers' engagement with children (Table 3). Again, we examined mothers' engagement first. Neither fathers' nor mothers' frequency of aggression were related to mothers' engagement with or without control variables (Models 1 and 2). Yet, when we used the four perpetration-victimization types, we found that mother-only aggression was negatively related to mothers' engagement with children, whereas mutual or father-only aggression was not related after controlling for background characteristics (Model 4). Differences in coefficients across the three groups were not significant, however. Turning to fathers' engagement with children, fathers' relationship aggression was negatively related to their own engagement with children without control variables in the model (Model 1). Yet, when demographic and SES characteristics were controlled for, the association was no longer significant (Model 2). This was because fathers' and mothers' employment status explained the association between fathers' aggression and fathers' engagement with children (e.g., mothers' part-time job was positively related to fathers' aggression and negatively related to fathers' engagement with children; fathers' unemployment was negatively related to fathers' aggression, and positively related to fathers' engagement). Similar patterns were found for mothers' aggression, which was negatively related to fathers' engagement with their children without control variables (Model 1), but the association disappeared when control variables were included in the models (Model 2). When we used the four perpetration-victimization types, we found that, after controlling for demographic and SES variables (Model 4), father-only or mutual aggression was negatively related to fathers' engagement with children compared to no aggression present. Differences in coefficients between mutual and father-only aggression were not significant, whereas those between mutual or father-only aggression and mother-only aggression were significant.

The third aspect of parenting that the present analysis examined was frequency of spanking (Table 4). Fathers' frequency of relationship aggression was not related to mothers' spanking frequency (Models 1 and 2). This was inconsistent with findings in prior research (e.g.,

Huang et al., 2010; Postmus et al., 2012). Unexpectedly, mothers' frequency of relationship aggression was negatively related to frequency of spanking with or without control variables. Note that the association was positive in zero-order correlations ($r = .06$, $p < .01$). Because fixed effects models are equivalent to first-differences models when there are two waves as in our case (Allison, 2009), coefficients in fixed effects models indicate changes in frequency of spanking. Analyses using the four perpetration-victimization types showed that mutual or mother-only aggression was negatively related to mothers' spanking, whereas father-only aggression was not related, when control variables were included in the model (Model 4). Differences in coefficients between mutual and father-only aggression were statistically significant. These results suggest that mothers' relationship aggression perpetration, either mother-only or mutual, was negatively related to their own spanking frequency. The negative association between mothers' aggression—mutual or alone—and mothers' spanking was inconsistent with the spillover hypothesis. Turning to fathers' spanking frequency, neither fathers' relationship aggression nor mothers' relationship aggression were related to fathers' spanking frequency. When we used the four types of relationship aggression, we found that mother-only aggression was positively related to fathers' spanking frequency whether or not background characteristics were controlled for (Model 4). Differences in coefficients across mutual, mother-only, and father-only aggression were not significant, however.

Table 5 presents a summary of findings from fixed effects models. In the case of parenting stress, it appears that for mothers, the presence of partners' aggression was related to more parenting stress, whether aggression was mutual or father-only. In contrast, for fathers, relationship aggression was related to more parenting stress if the aggression was not mutual. These results suggest gender differences in the association between relationship aggression and parenting stress. To test whether these gender differences were significant, we did supplemental analyses. For these supplemental analyses, we first transformed the couple level data into individual level data (Details about this procedure are available upon request). To avoid intraclass correlation, we randomly selected one partner per couple. (Note that we repeated the analyses using five different randomly selected one partner per couple and found similar results.) With the individual level data, we conducted fixed effect regression models that were similar to those presented in Tables 2 to 4 except that they included interaction terms between gender and each of the four dummy variables of perpetration-victimization types (gender x no aggression was omitted as the reference group). The results showed that gender differences in the patterns of the association between relationship aggression and parenting stress described above were statistically significant (Appendix Table 2). For engagement with children, mothers and fathers showed similar patterns: their own perpetration—for fathers, including mutual aggression—was negatively related to their own engagement with children. Supplemental analyses, similar to those that were conducted for parenting stress, suggest that gender differences were not statistically significant. For spanking, mothers' aggression was negatively related to mothers' spanking and positively related to fathers' spanking. Gender differences in these patterns were statistically significant.

DISCUSSION

The link between relationship aggression and parenting has long been of interest to family scholars. Findings of the present analyses stimulate future research in this area in several ways. First, we used fixed effects models to eliminate selection factors—the role of preexisting differences between those who are involved in relationship aggression and those who are not in shaping differences in parenting stress and practices between the two groups. Second, in addition to the association between fathers' aggression and mothers' parenting, we examined the association between mothers' aggression and fathers' parenting, a neglected, but important question. We also examined the associations between fathers' and mothers' relationship aggression and their own (i.e. perpetrators') parenting stress and practices, which have been rarely investigated in recent studies. By using a measure of perpetration-victimization type, which distinguishes mutual aggression from mother-only or father-only aggression, in addition to a measure of frequency of aggression, we were able to better illustrate the patterns of association between relationship aggression and parenting. Finally, we found both gender similarities and differences. Below we discuss our key findings in more detail.

With regard to the association between fathers' relationship aggression and mothers' parenting, our findings from fixed effects regression models show that fathers' relationship aggression is related to mothers' parenting stress. These findings support the prior research findings which showed that relationship aggression victimization is related to more parenting stress among mothers (e.g., Murray et al., 2012; Renner, 2009; Taylor et al., 2009). For mothers' parenting practices, however, we found that fathers' aggression was not related to mothers' engagement with their children or their spanking frequency, which is inconsistent with prior research (e.g., Postmus et al., 2012). These findings suggest a possible merit of using fixed effects models to eliminate the influences of background characteristics that are related to both fathers' aggression perpetration and mothers' parenting practices. Researchers have emphasized the co-occurrence of relationship aggression and poorer parenting practices (e.g., Taylor et al., 2009). As Slep and O'Leary (2001) noted, it is critical to identify background characteristics that contribute to both forms of parents' behaviors—i.e., relationship aggression and poor parenting—that may be harmful to their children's well-being.

With regard to mothers' aggression, our findings show that, as found in prior research using survey-based studies, mothers were as likely as, or even more likely than, fathers to be a perpetrator of relationship aggression. We found that mothers' aggression is positively related to fathers' parenting stress and fathers' frequency of spanking when fathers are victims only (i.e., when fathers are not aggressors as well). These patterns of findings support the idea that a partner's relationship aggression is related to the victim's parenting stress and harsh parenting (e.g., Slep & O'Leary, 2001; Taylor et al., 2009). Although prior research tends to focus on mothers, our findings suggest that this idea may apply for fathers as well. Future research is needed to investigate the process through which mothers' relationship aggression is linked to fathers' increased spanking frequency.

Our findings underscore the importance of examining perpetrators' parenting. We found that fathers' aggression is related to fathers' own parenting stress and engagement, although not spanking frequency. It could be that, per the spillover hypothesis, fathers carry over their negative mood toward mothers into their mood in their parenting role and are withdrawn from their interactions with children. Several other explanations are possible. The association could be due to maternal gatekeeping—mothers may try to shield their children from harsh, controlling fathers (Levendoskey et al., 2003), which makes it more difficult for fathers to participate in parenting, a factor that is related to more parenting stress (Nomaguchi & Johnson, 2014). It could be that her partner's increased anger toward her might have led a mother to discourage her children from spending time with him. Alternatively, it is possible that the causal direction is opposite: fathers' parenting stress spills over into their interaction with their spouse. Because our analysis does not allow us to determine the causal direction, we are unable to make a conclusion among these possible interpretations of the finding.

Similarly, we found that mothers' aggression is negatively related to mothers' engagement and spanking frequencies. Less engagement with children may mean a decline in attention to their children. Research has suggested that women's perpetration of relationship aggression typically reflects their frustrated attempt to control some issues in their marriage or partnership, such as financial strain, infidelity, or arguments over the division of labor (DeMaris, Benson, Fox, Hill, & Van Wyk, 2003). Mothers may be preoccupied with the issues they face in their marriage or partnership, which may distract them from parenting. With regard to fewer spanking frequency, two different interpretations are possible. First, this result could be interpreted as supporting the compensatory hypothesis, which explains that mothers try to seek a warmer, close relationship in their parenting role when they are unable to have it in their marriage or romantic partnership. Alternatively, if spanking is a primary tool of discipline, as shown in prior research (McLoyd & Smith, 2002; Simons et al, 2002), a decline in frequency of spanking could mean an increase in lax parenting. In the present sample, close to half of mothers (46.2%) reported having spanked the focal child at least once during the previous month. Frequency of spanking was positively, not negatively, related to engagement with children for mothers ($r = .076$, $p < .001$ in Pearson's correlation test). These findings may suggest that spanking could be a primary method of discipline among many parents in the present sample. Thus, it may be possible to interpret our findings that mothers provide their children with less discipline when they grow increasingly harsh or more controlling of their partners. More research that examines the association between relationship quality and various aspects of parenting practices is warranted.

We found both similarities and differences between mothers and fathers in the association between relationship aggression and parenting. Mothers and fathers are similar in that their relationship aggression was related to less engagement with children. Mothers and fathers differ in the association between relationship aggression and parenting stress or frequency of spanking. Specifically, mothers' parenting stress is more vulnerable to their partners' aggression, including mutual aggression, whereas fathers' parenting stress is more vulnerable to their own or partners', but not mutual aggression. Mothers' spanking is influenced by their own aggression, whereas fathers' spanking is influenced by their partners' aggression including mutual aggression. Although we considered two alternative

hypotheses, one predicting that mothers' parenting would be more affected than fathers' parenting by relationship aggression and the other predicting that fathers' parenting would be more affected, we find that both mothers' and fathers' parenting is affected but in different ways. Research on gender differences in implications of relationship aggression has been inconclusive, except that many researchers agree that women are more vulnerable to severe forms of IPV including injury (e.g., Warner, 2010). For example, some research has found that consequences of relationship aggression for mental health are greater for women than for men (Anderson, 2002), whereas other research has shown that IPV is related to more depression for both men and women (Johnson, Giordano, Longmore, & Manning, 2014). More research is needed to understand gender differences in the consequences of relationship aggression for various aspects of outcomes.

The present analysis has limitations that future research should address. First, measures of parenting practices are limited. Inconsistency in discipline and monitoring, such as TV or bedtime rules, may be better measures of parenting practices that could be affected by mother-father relationship aggression and have direct influences on child outcomes (Krishnakumar & Buehler, 2000). Second, the reliability of the independent variable, relationship aggression, may be somewhat low, which could have resulted in biased coefficients (Wooldridge, 2002), although it was equivalent to that used in prior research (e.g., Postmus et al., 2012). Third, as mentioned earlier, the present analysis showed associations, but did not permit us to draw conclusions about the causal direction of the association between relationship aggression and parenting. Finally, the FFCWS focused on an urban population and it is possible results could vary across suburban and rural locations. We also focused on married or cohabiting couples who stayed together at least up to when the focal child was five years old. Thus future research using a nationally representative sample of U.S. parents is warranted.

To conclude, the present analysis suggests that future research should make further efforts to eliminate background factors that are compounded in the association between relationship aggression and parenting. In addition, our study suggests the importance of investigating the influences of relationship aggression perpetration on parenting stress and practices for both mothers and fathers, separating mutual aggression from perpetration-only aggression, and looking at perpetrators' as well as victims' parenting. Future research may benefit from couple-level analyses that explore dyadic interactions that can facilitate or buffer the processes in which different perpetration-victimization types lead to mothers' and fathers' parenting stress and practices.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Table 1

Weighted Means (std.) for Variables in the Analyses (N = 973)

Parenting		
Mothers' parenting stress	2.25	(0.64)
Fathers' parenting stress	2.01	(0.70)
Mothers' engagement with children	4.77	(1.74)
Fathers' engagement with children	3.60	(1.89)
Mothers' spanking frequency	0.70	(0.91)
Fathers' spanking frequency	0.61	(0.89)
Relationship aggression		
Frequency of relationship aggression		
Mothers	1.13	(0.18)
Fathers	1.10	(0.16)
Perpetration-victimization types		
Mutual aggression	0.27	
Mother-only aggression	0.26	
Father-only aggression	0.15	
No aggression	0.32	
Controls		
Fathers' employment status		
Non-employed	0.08	
Part-time	0.06	
Full-time	0.86	
Father nonstandard work schedule	0.57	
Father multiple job holding	0.14	
Father ever in jail	0.14	
Income-to-poverty ratio	3.57	(3.99)
Mothers' employment status		
Non-employed	0.43	
Part-time	0.19	
Full-time	0.38	
Mother nonstandard work schedule	0.24	
Mother holding multiple jobs	0.06	
Number of children	2.32	(1.16)
Child health	4.56	(1.25)
Cohabiting	0.13	

Means were weighted using the national weights.

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Table 2

Fixed Effects Regression Models Predicting the Association Between Relationship Aggression and Parenting Stress ($N = 973$)

	Mothers				Fathers			
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 1**	**Model 2**	**Model 3**	**Model 4**
Frequency of aggression								
Fathers	.22	.20			.21	.31**		
	(.12)	(.12)			(.12)	(.12)		
Mothers	.20	.11			.17	.16		
	(.11)	(.11)			(.11)	(.11)		
Perpetration-victimization type[c]								
Mutual aggression			.18***[b]	.14*[b]			.09	.09
			(.05)	(.06)			(.05)	(.05)
Mother-only aggression			.09*[a]	.06[a]			.11***	.11**
			(.04)	(.04)			(.04)	(.04)
Father-only aggression			.19***	.19***[b]			.18**	.18**
			(.05)	(.05)			(.06)	(.05)
Father non-employed[c]		.10		.10		−.01		−.04
		(.07)		(.07)		(.09)		(.09)
Father employed part-time[c]		.18**		.18**		−.16**		−.17**
		(.06)		(.06)		(.06)		(.06)
Father nonstandard work schedule		.01		.01		.11***		.10**
		(.03)		(.03)		(.03)		(.03)
Father multiple job holding		.12*		.14**		−.03		−.01
		(.05)		(.05)		(.04)		(.04)
Father ever in jail		−.08		−.05		−.29		−.27
		(.14)		(.14)		(.15)		(.15)
Income-to-poverty ratio		−.01*		−.01*		.00		.00
		(.01)		(.01)		(.01)		(.01)
Mother non-employed[c]		.17**		.18***		−.09		−.07

	Mothers				Fathers			
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 1**	**Model 2**	**Model 3**	**Model 4**
		(.05)		(.05)		(.07)		(.06)
Mother employed part-time[c]		.11*		.12*		−.18**		−.16**
		(.06)		(.05)		(.06)		(.06)
Mother nonstandard work schedule		.09		.09*		−.20*		−.20**
		(.05)		(.05)		(.07)		(.07)
Mother multiple job holding		−.07		−.06		−.03		−.04
		(.07)		(.07)		(.07)		(.07)
Number of children		.05		.05		.05*		.05*
		(.03)		(.03)		(.02)		(.02)
Child health		−.04		−.03		−.01		−.01
		(.08)		(.08)		(.02)		(.02)
Cohabiting[c]		.24**		.25**		−.18*		−.18*
		(.09)		(.09)		(.08)		(.08)
Wave 4[c]	−.07***	−.06**	−.06***	−.06**	−.13***	−.12***	−.13***	−.12***
	(.02)	(.02)	(.02)	(.02)	(.02)	(.02)	(.02)	(.02)

*$p < .05$

**$p < .01$

***$p < .001$. Unstandardized coefficients are reported, with standard errors in parentheses.

[a]Differences from mutual aggression is significant at $p < .05$ or less.

[b]Differences from mother-only aggression is significant at $p < .05$ or less.

[c]Omitted reference categories include: No aggression, father full-time employed, mother full-time employed, married, and wave 3. All models used the national weights.

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Table 3

Fixed Effects Regression Models Predicting the Association Between Relationship Aggression and Engagement with Children (N = 973)

	Mothers				Fathers			
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 1**	**Model 2**	**Model 3**	**Model 4**
Frequency of aggression								
Fathers	.13	.18			−.90**	−.39		
	(.30)	(.31)			(.35)	(.35)		
Mothers	−.08	.10			−.67*	−.41		
	(.28)	(.28)			(.33)	(.32)		
Perpetration-victimization type[c]								
Mutual aggression			−.28*	−.20			−.71***[b]	−.55**[b]
			(.12)	(.13)			(.16)	(.16)
Mother-only aggression			−.32***	−.25**			−.22[a]	−.14[a]
			(.10)	(.10)			(.11)	(.12)
Father-only aggression			−.13	−.11			−.60***[b]	−.56***[b]
			(.12)	(.12)			(.14)	(.13)
Father non-employed[c]		−.22		−.20		.51*		.46*
		(.18)		(.17)		(.20)		(.19)
Father employed part-time[c]		−.64***		−.58***		−.69***		−.68***
		(.16)		(.16)		(.18)		(.18)
Father nonstandard work schedule		.10		.10		−.03		−.05
		(.08)		(.08)		(.10)		(.09)
Father multiple job holding		−.02		−.01		−.57***		−.63***
		(.13)		(.13)		(.14)		(.14)
Father ever in jail		.57		.49		−.04		−.14
		(.35)		(.35)		(.40)		(.40)
Income-to-poverty ratio		−.01		−.01		.01		.01
		(.01)		(.02)		(.02)		(.02)
Mother non-employed[c]		−.02		−.02		−.07		−.10

	Mothers				Fathers			
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 1**	**Model 2**	**Model 3**	**Model 4**
		(.19)		(.20)		(.21)		(.21)
Mother employed part-time[c]		−.07		−.06		−.56**		−.52**
		(.16)		(.16)		(.19)		(.19)
Mother nonstandard work schedule		−.03		−.04		.50***		.47**
		(.15)		(.15)		(.15)		(.15)
Mother multiple job holding		.11		.13		−.11		−.14
		(.19)		(.19)		(.23)		(.23)
Number of children		.03		.04		−.04		−.02
		(.06)		(.06)		(.07)		(.07)
Child health		.08		.08		.18		.17
		(.19)		(.18)		(.19)		(.19)
Cohabiting[c]		−.94***		−.95***		−1.16***		−1.19***
		(.22)		(.22)		(.25)		(.25)
Wave 4[c]	−.64***	−.72***	−.66***	−.73***	−.55***	−.63***	−.57***	−.64***
	(.05)	(.05)	(.05)	(.05)	(.06)	(.06)	(.06)	(.06)

* $p < .05$

** $p < .01$

*** $p < .001$. Unstandardized coefficients are reported, with standard errors in parentheses.

[a] Differences from mutual aggression is significant at $p < .05$ or less.

[b] Differences from mother-only aggression is significant at $p < .05$ or less.

[c] Omitted reference categories include: No aggression, father full-time employed, mother full-time employed, married, and wave 3. All models used the national weights.

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Table 4

Fixed Effects Regression Models Predicting the Association Between Relationship Aggression and Spanking Frequency (N = 973)

	Mothers				Fathers			
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 1**	**Model 2**	**Model 3**	**Model 4**
Frequency of aggression								
Fathers	−.02	.05			−.07	.09		
	(.18)	(.19)			(.18)	(.18)		
Mothers	−.34*	−.41*			.28	.26		
	(.17)	(.17)			(.17)	(.16)		
Perpetration-victimization type[c]								
Mutual aggression			−.22**	−.23**			.12	.14
			(.08)	(.08)			(.08)	(.08)
Mother-only aggression			−.15**	−.17**			.19**	.17**
			(.06)	(.06)			(.06)	(.06)
Father-only aggression			−.11[a]	−.10[a]			.08	.11
			(.07)	(.07)			(.09)	(.09)
Father non-employed[c]		.05		.04		−.01		−.03
		(.10)		(.10)		(.12)		(.11)
Father employed part-time[c]		−.17		−.15		.06		.03
		(.11)		(.11)		(.11)		(.11)
Father nonstandard work Schedule		.00		−.01		−.17***		−.17***
		(.05)		(.05)		(.05)		(.05)
Father multiple job Holding		.17*		.15		.11		.12
		(.08)		(.08)		(.09)		(.09)
Father ever in jail		−.60**		−.64**		−.28		−.25
		(.23)		(.22)		(.22)		(.22)
Income-to-poverty ratio		.00		.00		.00		.01
		(.01)		(.01)		(.01)		(.01)
Mother non-employed[c]		−.09		−.09		−.19*		−.19*

	Mothers				Fathers			
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 1**	**Model 2**	**Model 3**	**Model 4**
		(.09)		(.09)		(.09)		(.09)
Mother employed part-time[c]		−.16		−.14		−.49***		−.49***
		(.09)		(.09)		(.09)		(.09)
Mother nonstandard work schedule		−.10		−.11		−.11		−.10
		(.08)		(.08)		(.09)		(.09)
Mother multiple job holding		.26*		.26*		.19		.18
		(.12)		(.12)		(.11)		(.11)
Number of children		−.08*		−.08*		.07*		.07
		(.04)		(.04)		(.04)		(.04)
Child health		−.04		−.05		.05		.05
		(.04)		(.04)		(.06)		(.06)
Cohabiting[c]		.14		.12		−.17		−.17
		(.13)		(.13)		(.13)		(.13)
Wave 4[c]	−.14***	−.09**	−.14***	−.10**	−.26***	−.26***	−.25***	−.25***
	(.03)	(.03)	(.03)	(.03)	(.03)	(.03)	(.03)	(.03)

*$p < .05$

**$p < .01$

***$p < .001$. Unstandardized coefficients are reported, with standard errors in parentheses.

[a]Differences from mutual aggression is significant at $p < .05$ or less.

[b]Differences from mother-only aggression is significant at $p < .05$ or less.

[c]Omitted reference categories include: No aggression, father full-time employed, mother full-time employed, married, and wave 3. All models used the national weights.

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Table 5

Summary of Significant Associations from Fixed Effects Regression Models

	Parenting Stress		Engagement with Children		Frequency of Spanking	
	Mothers	**Fathers**	**Mothers**	**Fathers**	**Mothers**	**Fathers**
Frequency of aggression						
Fathers		+				
Mothers					−	
Perpetration-victimization type						
Mutual aggression	+			−	−	
Mother-only		+	−		−	+
Father-only	+	+		−		
No aggression (reference)						
Which aggression type was related to parenting?	Victimization or mutual	Perpetration or victimization	Perpetration	Perpetration or mutual	Perpetration or mutual	Victimization

“+” indicates a positive association; “−” indicates a negative association.

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