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Predictors of Domestically Violent Men's Aggression toward Children: A Prospective Study

Renee McDonald, Ernest N. Jouriles, David Rosenfield, and Deborah Corbitt-Shindler
Southern Methodist University

Abstract

This research examines predictors of domestically violent men's aggression toward children after the children and their mothers sought help at an emergency shelter for domestic violence victims. Participants were 62 women who had sought refuge at a domestic violence shelter and who had at least one child between 4 and 9 years old. During their shelter stay, women provided data on partner-child aggression that occurred prior to shelter entry. After leaving the shelter, they also provided data on post-shelter partner-mother intimate partner violence (IPV), children's post-shelter contacts with their mothers' partners, and post-shelter partner-child aggression on 5 occasions following their shelter departure (4, 8, 12, 16, and 20-months post-shelter). Consistent with our hypotheses, the level of partner-child aggression before the family entered the shelter, the level of partner-mother IPV following shelter departure, and the frequency of children's contacts with the partners following shelter departure each predicted post-shelter partner-child aggression. Clinical and policy implications are discussed.

Keywords

Intimate Partner Violence; Family Violence; Parent-Child Aggression; Domestic Violence

Each day in the U.S., over 32,000 women and children are temporarily housed in domestic violence shelters (National Network to End Domestic Violence, 2009). The children often have witnessed frequent and extreme acts of violence toward their mothers, and many have been targets of their parents' aggression themselves (Appel & Holden, 1998; Jouriles, McDonald, Smith Slep, Heyman, & Garrido, 2008). In shelter samples, the frequency of men's violence toward women correlates positively with the frequency of men's aggression toward children (Jouriles & Norwood, 1995), and this aggression is associated with child adjustment problems, even after accounting for other forms of family violence (McDonald, Jouriles, Tart, & Minze, 2009). Thus, in families marked by frequent and extreme acts of

Correspondence concerning this article should be addressed to Renee McDonald, Department of Psychology, Southern Methodist University, P.O. Box 750442, Dallas, TX 75275-0442. rmcdonal@smu.edu.

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violence toward women, such as those in which the women and children have sought refuge at a domestic violence shelter, men's aggression toward children is a significant concern.

In shelter-seeking families, research on men's aggression toward children has focused almost exclusively on aggression occurring *before* shelter entry. It is clear that the children in these families often were targets of the men's aggression; in fact, it is fear of harm to the children that sometimes prompts women to seek shelter (Moe, 2009; Zink, Elder, & Jacobson, 2003). However, family circumstances can change dramatically following shelter departure (e.g., couples separate), and it is not clear whether children who are brought to domestic violence shelters are at continued risk for men's aggression following shelter departure. To our knowledge, only one study has examined partner-child aggression before and after a family's stay at a domestic violence shelter (Giles-Sims, 1985). In that study, 27 women with children were followed for six months after departing the shelter. Rates of partners' aggression toward children were high at both the pre-shelter and 6-month follow-up assessments, but the rates of partner-child aggression appeared to decline over time. Unfortunately, information on the *predictors* of partner-child aggression was not provided; thus, it was not clear if men's pre-shelter aggression toward children predicted men's post-shelter aggression toward children.

Theoretical work by Smith Slep & O'Leary (2001; 2009) suggests that the risk for men's continued aggression toward children following a shelter stay is high. Specifically, many of the risk factors that predispose men toward both intimate partner violence (IPV) and aggression toward children, such as antisocial personality characteristics or acceptance of violence as a legitimate method for solving problems, are not likely to be mitigated by changes in the couple relationship, such as the woman seeking shelter or separating from the man. In other words, many of the risk factors for men's aggression toward children pre-shelter will still be present after a family's (women and children) departure from a domestic violence shelter. Thus, based on the theoretical work of Slep and O'Leary, it is hypothesized that men's aggression toward children pre-shelter will predict their aggression toward children post-shelter.

Processes associated specifically with IPV have also been theorized to influence risk for men's aggression toward children. In particular, the negative affect associated with IPV has been theorized to spill over into the parent-child relationship, increasing the risk that a domestically violent man will also be aggressive toward the children (Cox, Paley, & Harter, 2001). Men's IPV often continues following a woman's departure from a domestic violence shelter (Fleury, Sullivan, & D. I. Bybee, 2000). In addition, women report worrying about the threat of IPV during separation, because they cannot sever all ties with the father of their children (Belamaric, 2003; Shalansky, Erickson, & Henderson, 1999). In short, there are theoretical and empirical reasons to expect: 1) men's IPV to persist, in at least some families, after shelter departure, and 2) the continuation of IPV to relate positively to men's aggression toward children after shelter departure.

It also seems reasonable to expect domestically violent men's post-shelter contact with children to predict men's post-shelter aggression toward the children. A simple and obvious explanation for this hypothesis is that more frequent contact affords more opportunities for

partner-child aggression to occur. Knowledge about the association between men's contact with the children and continued partner-child aggression has considerable clinical and policy implications. For example, such knowledge could help inform decisions regarding visitation (nature, frequency, and context), conditions of protective orders, and child custody matters. These decisions have enormous implications for children's well-being, and for the parents as well.

Even modest levels of aggression toward children (i.e., aggression encompassing acts of psychological aggression and corporal punishment) are associated with child adjustment problems (Gershoff, 2002). Knowledge about the predictors of such aggression in domestically violent families is thus important for theory and intervention development, and a more complete understanding of the risks faced by children after they leave a shelter could inform service planning and the development of public policy for domestic violence victims. Furthermore, protecting children from physical harm is an important public health goal. Thus, in addition to examining aggression toward children broadly, it is also important to examine a child's risk for experiencing *severe* physical aggression from a domestically violent man. Presently, it is not clear whether predictors of men's aggression toward children in general (i.e., psychological aggression, minor physical aggression, and severe physical aggression together) are also predictive of men's severe physical aggression toward children. For example, severe partner-child aggression after a family's departure from a shelter may only occur in families marked by a history of such extreme behavior.

Longitudinal data on families departing from domestic violence shelters are scarce. One study, a clinical trial of an intervention for families seeking refuge from domestic violence shelters, followed families for 20 months after their shelter departure (Jouriles et al., 2009). The dataset from this study was used for the present research. We hypothesized that 1) pre-shelter partner-child aggression, post-shelter partner-mother IPV, and post-shelter partner-child contact would each predict partners' aggression toward children (defined broadly to include psychological aggression, corporal punishment, and severe aggression) after shelter departure, and 2) pre-shelter *severe* partner-child physical aggression, post-shelter partner-mother IPV, and post-shelter partner-child contact would predict partners' *severe* physical aggression toward children after shelter departure. Because women's IPV, women's aggression toward their children, and child conduct problems have also been found to be associated with men's aggression toward children (McDonald, Jouriles, Tart, & Minze, 2009), we evaluated the need to control for these variables in the analyses. We also considered the influence of partners' biological relationship to the child and other demographic variables.

Method

Sample and Procedures

Background—This is a secondary analysis of data from a randomized clinical trial evaluating Project Support, an intervention for women and children exiting domestic violence shelters (Jouriles et al., 2009). Project Support was designed to reduce child conduct problems by improving mothers' parenting skills, and results of the trial indicated that it accomplished both of those goals. Specifically, Project Support had positive effects on

mothers' parenting (e.g., reducing mother-child aggression) and on child conduct problems. Participants in the trial were 66 children between 4 and 9 years old, and their mothers. In each family, the mother had 1) sought refuge at a domestic violence shelter and reported at least one act of physical IPV from a male partner during the year before shelter entry; 2) at least one 4- to 9-year-old child in the family met DSM-IV (American Psychiatric Association, 1994) diagnostic criteria for oppositional defiant disorder or conduct disorder; and 3) the mother and children moved to a residence independent of the abusive partner after leaving the shelter.

Families were screened for eligibility during their shelter stay. After shelter departure, a baseline assessment was conducted and families were randomized to the intervention or control condition. Families in the intervention condition received Project Support services (an in-home behavioral parenting skills intervention) for 8 months, and were then contacted monthly (to track the sample) throughout the remainder of the 20-month follow-up period. Families in the comparison condition were contacted monthly throughout their 20 months of participation, and were given referrals and encouraged to seek services from community service providers to help meet their needs. Five follow-up assessments were conducted—one every 4 months for the 20 months following shelter departure (baseline, 4, 8, 12, 16, and 20 months).

The current study—Of the 66 families in the evaluation study, four were excluded from this study because of missing data at the screening assessment or failure to participate in any follow-up assessments. The 62 remaining mothers reported experiencing an average of over 40 acts of physical IPV during the 12 months before shelter entry; 16.4% reported having been “beaten” during that time. Sample demographics are summarized in Table 1. Additional details about the sample, procedures, and assessments can be found in Jouriles et al. (2009).

In the current study, data from the in-shelter screening assessment and the 5 follow-up assessments (4, 8, 12, 16, and 20 months) were used. All follow-up assessments were conducted in the families' homes. Research on the assessment of victimization experiences (Jouriles, McDonald, Garrido, Rosenfield, & Brown, 2005) suggest that serial assessments of victimization, with each assessment asking about victimization experiences over a relatively short period of time (e.g., 4 months), provide a more sensitive and valid measure of victimization than a one-time, retrospective assessment of victimization experiences covering a longer period of time (e.g., 20 months). Of the 62 families, 42 completed all of the post-shelter follow-up assessments, 9 completed four, 5 completed three, 4 completed two, and 2 completed one. The primary reasons for missing data at any given assessment point (listed in descending order of occurrence) is that the family could not be located for a particular assessment, they moved too far away for the assessments to be feasible, or they declined to participate in the assessment.

Measures

Pre-shelter and post-shelter partner-child aggression and mother-child aggression—Mothers reported on the frequency of their partners' and their own

aggression toward children using the Psychological Aggression, Minor Assault (Corporal Punishment), Severe Assault, and Very Severe Assault subscales from the Revised Conflict Tactics Scales Parent to Child Version (CTSPC; Straus, Hamby, Boney-McCoy, & Sugarman, 1996). Sample items include: Psychological Aggression (Swore or cursed at child; Called child dumb or lazy or some other name like that); Minor Assault/Corporal Punishment (Hit child on the bottom with something like a belt, hairbrush, stick, or some other hard object; Slapped child on the hand, arm, or leg); Severe Assault (Slapped child on the face, head, or ears; Threw child or knocked child down); Very Severe Assault (Beat child up, that is hit child over and over as hard as he could; Grabbed child around the neck and choked child). To assess the frequency of pre-shelter partner-child aggression, mothers were asked during the shelter screening assessment to report how often the partner committed each act of aggression toward the child during the 12-month period before shelter entry. To assess post-shelter aggression, mothers were asked at each follow-up assessment how often they and their partner committed each act of aggression toward the child during the previous 4 months. For both pre-shelter and post-shelter aggression, responses were made on a 7-point scale that ranged from *Never* = 0 to *More than 20 times* = 6. Scores on the 18 items were averaged to derive an overall index of the frequency of aggression, as is typical with the CTS. In addition, we created a dichotomous variable indicating whether severe partner-child aggression was reported at the in-shelter assessment and at each of the follow-up assessments. Specifically, severe partner-child aggression was coded as present if any items on the severe assault or very severe assault scales were reported; if no severe or very severe assault items were reported, severe partner-child aggression was coded as absent. For partner-child aggression at the in-shelter screen, coefficient alpha was .82; it averaged .81 for partner-child aggression and .64 for mother-child aggression across the 5 follow-up assessments.

Validity of mothers' reports of partner-child aggression—A key concern for this study is whether mothers can provide valid data on partner-child aggression. We examined this in two ways. First, in a separate domestic violence shelter sample ($n = 28$), we assessed whether mother reports and partner reports of pre-shelter partner-child aggression were correlated. Mothers and partners both reported on partner-child aggression over the 12-month pre-shelter period, using the 18-item CTSPC as described above. Mother and partner reports of partner-child aggression were strongly correlated, $r = .62, p < .001$. In this same sample, we also examined whether mother reports of partner-child aggression were correlated with partner reports of child externalizing problems, which is theoretically and empirically linked to partner-child aggression (Gershoff, 2002; Loeber & Farrington, 2000; Patterson, 1982). Partners reported on children's externalizing problems on the Child Behavior Checklist (Achenbach, 1991). We found mother reports of partner-child aggression to correlate with partner reports of child externalizing problems, $r = .53, p < .005$.

Second, in the present sample we examined the correlation between mothers' reports on the 18-item partner-child aggression measure and observational data that was collected on children's conduct problems at the 8- and 16-month post-shelter assessments (described in Jouriles et al., 2009). Mother reports of partner-child aggression over the previous 4 months

were related to observed child conduct problems at both time points, $r = .42, p < .005$ at 8 months, and $r = .37, p < .05$ at 16 months. When considered together with other data on the validity of reports about parent-child aggression (Jouriles, Mehta, McDonald, & Francis, 1997) and convergence across informants on reports of IPV (Armstrong, Wernke, Medina, & Schafer, 2002) and other family problems (e.g., Achenbach, McConaughy, & Howell, 1987), these data suggest that mothers can indeed provide valid data on partner-child aggression.

Post-shelter partner-mother and mother-partner IPV—Mothers reported how often they and their partner had engaged in each of 12 acts of physical IPV during the 4 months preceding each of the follow-up assessments on the Revised Conflict Tactics Scales (Straus et al., 1996). Frequency was indicated on a 7-point scale (0 - *none* to 6 - *more than 20 times*). The CTS2 is widely used in research on IPV and has well-documented psychometric properties. Coefficient alpha in this sample averaged .95 for partner-mother IPV and .80 for mother-partner IPV across the post-shelter assessments.

Post-shelter partner contact with children—At each follow-up assessment, mothers reported how often the partner had in-person contact with the target child during the previous 4 months. Responses were made on a 9-point scale. Examples of response categories include: *Never* = 0; *Monthly* = 2, *Weekly* = 4, *Daily* = 7, and *Partner lived with family* = 8.

Child Conduct Problems—At each follow-up assessment, mothers completed the externalizing scale of the Child Behavior Checklist (CBCL; Achenbach, 1991) rating how true each statement (about a child problem) was for their child on a 3-point scale: 0-Not at all true; 1-Somewhat or sometimes true; 2-Very true or often true. The CBCL is widely used and has excellent psychometric properties (Achenbach, 1991). Mothers were asked to report on their child's behavior for the 4-month period preceding each assessment.

Results

To simplify communication, we use the term “partner-child aggression” (PCA) to refer to a continuous score reflecting the mean frequency of all acts of partner-child aggression (i.e., it includes all of the CTSPC psychological and physical aggression subscales). We use the term “severe partner-child aggression” (SPCA) to refer to the dichotomous variable marking the presence or absence of any acts of aggression from the CTSPC Severe or Very Severe assault subscales. We use the prefixes “pre” and “post” to indicate pre-shelter and post-shelter variables, respectively. “Post-IPV” refers to the level of partners’ post-shelter physical aggression toward the mother, and “post-Contact” refers to the level of partners’ post-shelter contact with the child.

Descriptive data on partner-child aggression, IPV, and contacts

At least one act of pre-PCA was reported in 89% ($n = 56$) of families; pre-SPCA was reported in 29% ($n = 18$) of families. During the 20-month follow-up period, post-PCA was reported in 42% ($n = 26$) of families, post-SPCA was reported in 8% ($n = 5$) of the families. Additionally, pre-PCA correlated with pre-SPCA, $r = .44, p < .001$, and post-PCA correlated

with post-SPCA, $r = .48, p < .001$. Post-IPV was reported to have occurred in 24% ($n = 15$) of families, and 79% ($n = 50$) of partners had at least one contact with the child during the follow-up period. The prevalence of post-IPV is comparable to that found in other research examining post-shelter IPV (e.g., 3 years after departing shelter, [Bybee & Sullivan, 2005] found that 19% of women experienced a recurrence of IPV by the ex-partner). Means and standard deviations for the study variables at each assessment are presented in Table 2. Table 3 summarizes the prevalence of post-PCA and post-SPCA, according to whether or not pre-PCA, pre-SPCA, and post-IPV were present. It also includes the prevalence of post-PCA and post-SPCA for those families in which post-Contact occurred.

The sensitivity and specificity of the predictor variables are also reported in Table 3. In this instance, sensitivity is the extent to which a predictor correctly predicts those for whom post-shelter partner-child aggression is *present*. Specificity refers to the extent to which a predictor correctly predicts those for whom such aggression is *absent*. The presence of pre-PCA was a strong predictor of the presence of post-PCA (sensitivity = .96 and 1.00 for post-PCA and post-SPCA, respectively), but not of its absence (specificity = .17 and .12 for post-PCA and post-SPCA, respectively). The presence of pre-SPCA and post-IPV were only modestly accurate predictors of the presence of any post-PCA (sensitivity = .62 and .50 for post-PCA and post-IPV, respectively), but were highly accurate predictors of its absence (specificity = .78 and .94, for post-PCA and post-IPV, respectively). The presence of both pre-SPCA and post-IPV were reasonably accurate predictors of the presence of post-SPCA (sensitivity for both pre-SPCA and post-IPV = .80), as well as its absence (specificity = .75 and .81, for post-PCA and post-IPV, respectively).

Mixed-Effects Models Predicting the Frequency of Post-PCA and the Occurrence of Post-SPCA

To examine how post-PCA and post-SPCA were related to the continuous measures of the hypothesized predictor variables over time, we used mixed-effects regression models (MRMs). These models appropriately accommodate nested data (such as our repeated measures across time), allow the examination of the effect of each predictor while controlling for the effects of the other predictors, and can calculate the relation between the predictors and outcome within families over time, while retaining all families in the analysis, even if they missed some assessments. We conducted two sets of analyses: one predicting post-PCA and the other predicting post-SPCA. For each of these two dependent variables, analyses were conducted in two steps. The first included the pre-shelter form of partner-child aggression that corresponded to the dependent variable (i.e., pre-PCA in the model predicting post-PCA; pre-SPCA in the model predicting post-SPCA), post-IPV, and post-Contact as predictor variables. In addition, to assess whether the relation of contact to the dependent variable varied across the 5 assessments, we also included time and the Contact $\times$ Time interaction.¹ In the second step, the alternative form of pre-shelter partner-child aggression was added to the model (for example, the second model predicting post-PCA included pre-SPCA as well as pre-PCA as predictors) to determine if each of the forms of pre-shelter aggression contributed uniquely to each form of post-shelter aggression. Since the post-PCA and post-IPV distributions were highly skewed (skewness = 2.6 and 7.2, respectively), they were log-transformed for the analyses.

Before conducting the analyses, we examined the need to control for other potential explanatory variables. Thus, we added post-shelter mother-child aggression, post-shelter mother-partner IPV, and post-shelter child conduct problems, as well as the socio-demographic variables (see Table 1) as predictors in the initial models. In addition, because the data for this study were derived from an intervention study with two experimental conditions, we included experimental condition as a level-2 predictor to ensure that our results were not attributable to treatment condition differences. In these analyses, each of the potential control variables was added, one at a time, to the MRM model to conservatively test whether they were related to post-PCA or post-SPCA; none were. Thus, none of these variables were included in the final models.

The Frequency of Post-PCA—The dependent variable in the first analysis was the frequency of post-PCA. Results indicated that, as hypothesized, pre-PCA, $b = .003$, $t(60) = 2.05$, $p < .05$, post-IPV, $b = 1.20$, $t(61) = 3.22$, $p < .05$; and post-Contact, $b = .27$, $t(61) = 6.93$, $p < .001$, each predicted post-PCA. In addition, time was related to post-PCA, $b = -.10$, $t(61) = -2.56$, $p = .01$, as was the Time $\times$ Post-Contact interaction, $b = -.03$, $t(241) = -2.16$, $p < .05$.² Specifically, post-PCA decreased over the follow-up period, and the association between post-Contact and post-PCA decreased over time as well. However, this association did not disappear; the two were associated even at the final assessment point, $b = .87$, $t(61) = 6.25$, $p < .001$. When pre-SPCA was added to the model in the second step, it did not contribute to the prediction of post-PCA, $b = .07$, $t(59) = 1.59$, $p = .12$, over and above the contribution of pre-PCA or the other variables in the model.

The Occurrence of Post-SPCA—We repeated the analysis using post-SPCA (0 = absent, 1 = present) as the dependent measure, employing the logit-linking function in a generalized linear mixed-model analysis. In the first step, the frequency of pre-SPCA, $b = 1.70$, odds ratio (OR) = 5.45, $t(258) = 11.04$, $p < .001$, post-IPV, $b = 2.97$, OR = 19.4, $t(258) = 19.47$, $p < .001$, and post-Contact, $b = .56$, OR = 1.74, $t(258) = 15.10$, $p < .001$, each predicted post-SPCA. In addition, post-SPCA decreased over time, $b = -.43$, OR = .65, $t(258) = -6.14$, $p < .001$. Finally, the Time $\times$ Post-Contact interaction, $b = -.10$, OR = .91, $t(258) = 4.40$, $p < .001$, indicated that the relation between contact and post-SPCA

¹The level-1 equation for the MRM model was:

$$PCA_{ij} = b_{0i} + b_{1i} * \text{Pre-shelter} + b_{2i} * \text{Contact}_{ij} + b_{3i} * \text{IPV}_{ij} + b_{4i} * \text{Time}_{ij} + b_{5i} * \text{Contact}_{ij} * \text{Time}_{ij} + \varepsilon_{ij}$$

where: PCA_{ij} = pre-PCA for family i at assessment j ,

Contact_{ij} , IPV_{ij} = amount of contact (or IPV) reported by family i at assessment j ,

Time_{ij} = 0–4 (for assessments 1–5) for family i at assessment j .

Pre-PCA has only one value per family; the other variables were assessed at each time point for each family. We centered contact at 3 (less than weekly, but greater than monthly—which was the median of those who had contact), and centered post-IPV and pre-PCA at their means. Time was coded 0–4. We had a maximum of 4 level-1 random effects: post-Contact, post-IPV, time, and the intercept were specified as random effects (each had variance > 0). After computing the model, pre-SPCA was added and the model recomputed. A similar approach was taken predicting post-SPCA.

Using the program Power in Two-Level Models (Snijders & Bosker, 1993), analyses revealed power .80 to detect an effect $d = .30$, between a small ($d = .20$) and medium ($d = .50$) effect.

²Reductions in PCA over time do not appear to be due to attrition by the most severe cases: We coded a dummy variable (1 = assessment data missing at time 4 and/or 5, 0 = otherwise) (see Hedeker & Gibbons, 2006), adding it to our model as a level-2 predictor. It was not related to PCA, nor did it predict relations between any of the predictors and the dependent variable. Thus, decreased aggression over time does not appear to be due to dropouts.

diminished over time, but the two remained associated even at the final assessment point, $b = .36$, $OR = 1.33$, $t(258) = 11.12$, $p < .001$. When pre-PCA was added to the model in the second step, it did not predict post-SPCA, $b = .00$, $OR = 1.0$, $t(257) = .57$, $p = .56$, over and above the other variables in the model.

Exploring the Cessation of Men's Post-Shelter Aggression and Severe Aggression Toward Children—Our earlier analyses examining the prevalence of pre-PCA and pre-SPCA in relation to the prevalence of post-PCA and post-SPCA (see Table 3) indicated that many men who engaged in pre-PCA or pre-SPCA did not engage in either form of post-shelter aggression toward children. Specifically, 55% of men who engaged in pre-PCA did not engage in post-PCA, and 78% of men who engaged in pre-SPCA did not engage in post-SPCA. We conducted exploratory analyses to examine whether the likelihood of engaging in post-PCA or post-SPCA among men who had engaged in it pre-shelter was associated with any of the measured sample demographic variables (marital status, biological relation to the child, ethnicity, and child sex). Results indicated that marital status was the only predictor of post-PCA; 29% of unmarried men who engaged in pre-PCA also engaged in post-PCA, whereas 58% of married men did, $\chi^2(1) = 4.56$, $p < .05$. None of the demographic variables were associated with risk for post-SPCA. One potential explanation for higher rates of post-PCA among married men is that they had more contact with the children than did the unmarried men. A follow-up analysis confirmed this: Unmarried men had less contact with the children ($M = 6.0$, $SD = 6.42$) than married men ($M = 14.9$, $SD = 12.80$), $t(60) = 3.31$, $p < .005$.

Discussion

This study examined predictors of domestically violent men's aggression toward children after the children and their mothers departed from a domestic violence shelter. The results of our MLM models indicated that pre-shelter PCA and pre-shelter SPCA each predicted their post-shelter counterpart. These findings are consistent with the theoretical work of Slep and O'Leary (2001; 2009). Post-shelter IPV was also positively associated with both forms of partner-child aggression within subjects over time. Moreover, post-shelter IPV was a much stronger predictor of post-shelter SPCA than was pre-shelter SPCA. These findings are consistent with the notion that the heightened negative affect that violent men experience during couple conflict may spill over to the partner-child relationship (Cox et al., 2001), and with theory suggesting that certain risk factors for men's IPV and partner-child aggression may not be altered by the women and children seeking refuge at a domestic violence shelter.

Post-shelter contact was also positively associated with post-shelter PCA and post-shelter SPCA, albeit less strongly than the pre-shelter measures of the partners' aggression toward children or post-shelter IPV. The findings pertaining to post-shelter contact could be interpreted to imply that limiting children's post-shelter contact with domestically violent men would reduce the risk of future partner-child aggression and thus be beneficial to the children. However, this interpretation is premature and goes beyond what the data in this study would support. For example, our findings suggest that some men (e.g., those who displayed no pre-shelter PCA) are unlikely to be aggressive toward children following shelter departure, regardless of the amount of contact they have. Factors other than partner-

child aggression should also be considered when thinking about limiting a parent's contact with a child. That is, attention needs to be given to the balance between benefits of continued contact with a less-than-perfect father or father figure versus the risks posed by continued partner-child aggression. Although limiting contact with domestically violent men may be necessary in some circumstances to increase children's safety, especially when there is elevated risk of severe physical aggression toward children, a blanket application of such a solution broadly is neither desirable nor practically or legally feasible. Considerably more needs to be known before drawing conclusions about the effects of varying levels of partner-child contact on children.

From a more practical perspective, the results of this study suggest that after a family leaves a domestic violence shelter, the recurrence of IPV may signal a need to carefully evaluate the child's contact with the partner, in the interest of protecting the child from the partner's aggression. In addition, screening for severe partner-child aggression during a family's shelter stay may be useful in the prediction of post-shelter SPCA. That is, pre-shelter SPCA was both a sensitive and specific predictor of post-shelter SPCA. Indeed, the odds of experiencing post-shelter SPCA were about 5-1/2 times higher in children who experienced pre-shelter SPCA than in those who had not experienced pre-shelter SPCA. On the other hand, it is not clear how useful it is to screen for partner-child aggression (broadly defined) during a shelter stay for the purposes of predicting children's post-shelter risk for partner-child aggression. The occurrence of pre-shelter PCA was a sensitive predictor of post-shelter PCA, but its specificity was poor: It likely overestimates children's actual risk for post-shelter PCA.

Most men engaged in pre-shelter PCA; however, slightly over half were *not* aggressive toward the children after shelter departure. Similarly, among those who engaged in pre-shelter SPCA, most did not do so after shelter departure. Thus, both types of partner-child aggression declined after the family left the shelter. These findings are consistent with those of Giles-Sims (1985) who also found a decline in partner-child aggression after shelter departure. Our exploratory analyses indicated that married men were much more likely to engage in post-shelter PCA than were unmarried men, which might be explained by the married men's greater contact with their children post-shelter. However, other factors may also contribute to or explain this risk. For example, unmarried men may be less emotionally involved with the family after the shelter stay, thus less likely to visit or be involved with the children.

Co-occurring IPV and partner-child aggression pose serious mental health risks for children. The results from this study show that pre-shelter PCA is extremely common. The likely detrimental effects of that aggression on children may be compounded by the continuation of partner-child aggression after shelter departure. One implication of our findings is that it might be useful to develop and evaluate parenting programs for domestically violent men. Successful programs have been developed for mothers departing domestic violence shelters (Jouriles, McDonald et al., 2009; Jouriles et al., 2001; McDonald, Jouriles, & Skopp, 2006); these might be used as a basis for similar interventions for men. Although there has been some progress in this area (Anderson, Kohler, & Letiecq, 2002), this work is in its infancy, and results of program evaluation research in this area are nonexistent.

A few cautionary notes should be kept in mind when interpreting the results of this study. First, this was a secondary analysis of data from a randomized clinical trial. Because of the selection criteria for the clinical trial (e.g., child meeting diagnostic criteria for oppositional defiant disorder or conduct disorder), this was not a representative sample of shelter families, and it is not clear how, or whether, our findings generalize beyond this sample. Research attempting to replicate our findings in a more representative sample of shelter families would address this limitation. Second, this study focused on four predictor variables (pre-shelter partner-child aggression, narrowly and broadly defined; post-shelter IPV; and post-shelter contact), two of which are potentially malleable through policy or intervention. We measured and ruled out certain potential third variables that might have accounted for our results (e.g., mother-partner IPV, mother-child aggression, child conduct problems, demographics). However, as in all correlational studies, unmeasured variables may explain some of the findings. In addition, the findings might change if additional predictors are considered. Research on predictors of men's IPV and co-occurring IPV and PCA points to additional variables that may help explain the link between post-shelter contact and PCA. For example, individual-level variables associated with men's IPV, such as antisocial personality traits, may help explain the link, as might cognitive variables and processes such as attitudes about the acceptability of IPV and PCA, and problems in emotion regulation (Smith Slep & O'Leary, 2001). Family-level variables, including child characteristics (e.g., oppositionalism) and reinforcing properties of PCA might also contribute to links between men's IPV and PCA (Smith Slep & O'Leary). A third consideration regarding our findings is that our dependent variable was mothers' reports of post-shelter PCA and post-shelter SPCA. When working with shelter families, there are limited options for collecting such data from sources other than mothers; in fact, some have argued that attempting to collect data from the violent partners may place the family at risk of further violence (e.g., Gauthier & Levendosky, 1996). Results of our examination of the validity of the mothers' reports suggest that mothers can provide a valid report of partner-child aggression; however, they cannot attest to the validity of mothers' reports of partner contact. Consequently, the findings would be more compelling if replicated using additional, alternative sources of information on partner-child aggression and partner contact.

In sum, this is the first longitudinal study to examine predictors of partner-child aggression after a family leaves a domestic violence shelter. The findings that previous partner-child aggression, post-shelter IPV and post-shelter contact each predict post-shelter partner aggression toward children provide a basis from which additional research could be conducted to help clarify the nature of this risk and to understand factors that may mitigate against it. Two of our predictor variables—post-shelter IPV and post-shelter contact—are potentially malleable; interventions considering the influence of these variables may be helpful in reducing men's post-shelter aggression toward children. This area holds potentially profound practice and policy implications, and given the paucity of data on the topic, it should be an important priority for researchers and clinicians who work with families affected by IPV.

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Table 1

Sample Characteristics

Variable	M (SD)
Child age	5.45 (1.53)
Mother education (years)	11.57 (1.84)
Pre-shelter partner-child aggression	17.93 (13.55)
	%
Child sex (male)	51.6
Mother ethnicity	
Asian or Pacific Islander	1.6
African American	41.9
Hispanic	17.8
White	38.7
Pre-shelter mother-partner relationship status	
Married	56.3
Cohabiting	37.1
Other	6.6
Partner was biological father to the child	56.5

Table 2
Partner-Child Aggression, Partner-Child Severe Aggression, Contact, and IPV at Each Post-Shelter Assessment

Post-shelter variable	Assessment				
	4 Months (n = 58)	8 Months (n = 54)	12 Months (n = 54)	16 Months (n = 50)	20 Months (n = 47)
	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
Partner-child aggression	2.26 (4.63)	2.94 (5.23)	2.43 (5.35)	1.22 (3.79)	1.42 (3.29)
Severe partner-child aggression ^I	3 (5%)	0 (0.0%)	1 (2%)	1 (2%)	0 (0%)
Contact	1.94 (2.28)	2.34 (2.76)	2.55 (2.91)	2.31 (2.94)	2.32 (3.00)
IPV	0.14 (0.51)	0.04 (0.17)	0.03 (0.24)	0.01 (0.05)	0.05 (0.22)

^I Severe partner-child aggression is dichotomous, thus the number of occurrences and the % of occurrences are reported.

Table 3
Pre-Shelter Partner-Child Aggression and Post-Shelter IPV as Predictors of Post-Shelter Partner-Child Aggression

	<i>Post-Shelter Partner-Child Aggression¹</i>			
	<i>Any (PCA)</i>		<i>Severe (SPCA)</i>	
	Absent <i>n</i> (column %)	Present <i>n</i> (column %)	Absent <i>n</i> (column %)	Present <i>n</i> (column %)
<i>Pre-shelter partner-child aggression (PCA)</i>				
Absent	6 (17%)	1 (4%)	7 (12%)	0 (0%)
Present	30 (83%)	25 (96%)	50 (88%)	5 (100%)
Sensitivity and specificity	.17	.96	.12	1.00
<i>Pre-shelter severe partner-child aggression (SPCA)</i>				
Absent	28 (78%)	16 (62%)	43 (75%)	1 (20%)
Present	8 (22%)	10 (38%)	14 (25%)	4 (80%)
Sensitivity and specificity	.78	.62	.75	.80
<i>Post-shelter IPV</i>				
Absent	34 (94%)	13 (50%)	46 (81%)	1 (20%)
Present	2 (6%)	13 (50%)	11 (19%)	4 (80%)
Sensitivity and specificity	.94	.50	.81	.80
<i>Post-shelter contact (present)</i>	16 (38%)	26 (62%)	27 (84%)	5 (16%)

Note: Sensitivity is reported for the "Present" columns and specificity is reported for the "Absent" columns. Data for post-shelter contact (absent) are not reported because there was no partner-child aggression among families in which the partner had no contact with the children.

¹The occurrence of post-PCA was related to the occurrence of post-IPV, Fisher Exact Test $p < .001$. The occurrence of post-SPCA was related to the occurrence of pre-SPCA, Fisher Exact Tests $p = .05$, and to post-IPV, $p < .01$.