

# Intimate Partner Violence, Maternal Stress, Nativity, and Risk for Maternal Maltreatment of Young Children

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Nearly 900 000 cases of child maltreatment were substantiated in the United States in 2005; 63% of these children were reported to be victims of neglect and 17% were reported to be victims of physical abuse.<sup>1</sup> Children 3 years and younger have the highest rate of victimization (16.5 per 1000).<sup>1</sup> Child maltreatment jeopardizes the physical, mental, social, and behavioral health of children in both the short and long terms,<sup>2–25</sup> and when considered cumulatively with other adverse childhood experiences, child maltreatment raises the risk of health problems such as alcoholism, drug abuse, smoking, sexually transmitted disease, obesity, and heart disease.<sup>26–29</sup>

A majority of parents in the United States report using corporal punishment, such as spanking, with their children<sup>30–32</sup>; past-year prevalence rates seem to peak when the child is aged 3 or 4 years.<sup>32</sup> Corporal punishment is an important risk factor for physical child maltreatment,<sup>33</sup> increases risk for psychiatric morbidity as an adolescent or adult,<sup>34</sup> and is banned in the home in 23 countries.<sup>35</sup> A meta-analysis found that corporal punishment was associated with decreased moral internalization and mental health for the child, decreased quality of the parent–child relationship, and increased childhood and adulthood aggressive, delinquent, criminal, and antisocial behavior.<sup>33</sup>

Most child maltreatment victims (83%) are abused by a parent.<sup>1</sup> In the plurality of cases, the mother is acting alone (40%). She is acting with the father 17% of the time and with someone else 6% of the time; fathers act alone in roughly 18% of cases.<sup>1</sup> This high prevalence of maternal child maltreatment is primarily because of exposure opportunity (i.e., mothers generally spend more time with their children than does any other person). However, fathers and father surrogates who perpetrate intimate partner violence (IPV) may play an important role in raising the risk for child maltreatment. Maternal stress,<sup>36–38</sup> maternal depression,<sup>39,40</sup> and unwanted or

**Objectives.** We examined the associations of intimate partner violence (IPV) and maternal risk factors with maternal child maltreatment risk within a diverse sample of mothers.

**Methods.** We derived the study sample (N=2508) from the Fragile Families and Child Well-Being Study. We conducted regression analyses to examine associations between IPV, parenting stress, major depression, key covariates, and 4 proxy variables for maternal child maltreatment.

**Results.** Mothers reported an average of 25 acts of psychological aggression and 17 acts of physical aggression against their 3-year-old children in the year before the study, 11% reported some act of neglect toward their children during the same period, and 55% had spanked their children during the previous month. About 40% of mothers had experienced IPV by their current partner. IPV and maternal parenting stress were both consistent risk factors for all 4 maltreatment proxy variables. Although foreign-born mothers reported fewer incidents of child maltreatment, the IPV relative risk for child maltreatment was greater for foreign-born than for US-born mothers.

**Conclusions.** Further integration of IPV and child maltreatment prevention and intervention efforts is warranted; such efforts must carefully balance the needs of adult and child victims. (*Am J Public Health.* 2009;99:175–183. doi:10.2105/AJPH.2007.126722)

unintended pregnancy<sup>41,42</sup> are all associated with both child maltreatment and IPV victimization.<sup>43</sup> Increased child maltreatment risk among mothers who are IPV victims may be explained by increased stress, depression, or unintended pregnancy resulting from IPV.

Physical and psychological IPV co-occur in homes with identified child maltreatment at a median rate of about 40%.<sup>44</sup> Among a nationally representative sample of investigated child maltreatment cases, the past-year prevalence of IPV was 29% and the lifetime prevalence was 45%.<sup>40</sup> A longitudinal study found that the presence of IPV raised the odds of subsequent child maltreatment by 2 to 3 times; however, the study examined a specialized sample of mothers who were participants in a child abuse prevention program, examined few covariates, and was unable to separate out the effects of some possible confounders such as parenting stress and depression.<sup>45</sup>

Ethnic variations in rates<sup>1,46</sup> and consequences of child maltreatment<sup>47</sup> and IPV<sup>48,49</sup> suggest a need to continue to assess the nature of

such differences (e.g., the rate of child maltreatment victimization is nearly twice as high among Black children as it is among Hispanic or White children).<sup>1</sup> This variation may arise from socio-cultural factors such as social norms regarding the acceptance or use of violence, socioeconomic factors such as income or educational level, or other factors related to ethnicity.<sup>50</sup> Examination of ethnic and nativity differences in maltreatment may help to identify those who are most vulnerable and, in time, to develop a better understanding of the roots of these patterns.

Our primary aim was to assess the unique contribution of maternal IPV victimization to maternal child maltreatment risk in a diverse, population-based sample by asking (1) is maternal IPV victimization associated with risk for maternal child maltreatment even after control for potentially confounding maternal risk factors such as parenting stress, depression, and consideration of abortion; (2) are these maternal risk factors associated with maternal child maltreatment even after control for IPV; and (3) is ethnicity or nativity associated with maternal

child maltreatment after control for other relevant covariates, such as income and education?

## METHODS

### Study Sample

The Fragile Families and Child Well-Being Study (FFCWS) is a national longitudinal cohort study that has collected data in 20 large US cities since 1998. For each family, baseline data were collected at or near the time of an index child's ( $n=4898$ ) birth, and since then additional waves of data have been collected. The survey oversampled nonmarital births. The interview was available in English and Spanish. A complete description of the FFCWS sampling strategy and design is documented elsewhere.<sup>51</sup>

Our study sample included only those mothers who completed interviews from FFCWS wave 3 and the In-Home Longitudinal Study of Pre-School Aged Children, an add-on module conducted among a subsample of FFCWS mothers. Both interviews were conducted from 2001 to 2004, when the index children were aged 3 years. A majority (79%) of wave 3 participants agreed to participate in the in-home module. Of this sample, only those mothers who reported having a current partner at wave 3 (75%) were included ( $n=2523$ ). In most cases (76%), the mother's partner was the child's biological father. Primary data analyzed were based on mothers' self-reports at year 3; however, we assessed some covariates and consideration of abortion at baseline. In addition, we dropped those participants for whom all IPV items were missing ( $n=15$ ), for a final sample size of 2508.

### Variables

We assessed all child maltreatment and child-related variables with regard to each mother's 3-year-old index child.

**Child maltreatment.** We assessed mothers' self-reported acts of psychological aggression, physical aggression, neglect, and spanking toward their children as proxy variables of risk for maternal child maltreatment. The first 3 variables were assessed with 15 items (5 items each) from the parent-child conflict tactics scale.<sup>52</sup> Psychological aggression was assessed with these 5 items: shouted, yelled, screamed; swore or cursed; said you'd send child away or kick out; threatened to spank; and called dumb,

or something similar ( $\alpha=0.57$ ). The 5 physical aggression items included the following: shook, hit on the bottom with object, spanked, slapped, and pinched ( $\alpha=0.62$ ). The 5 neglect items included the following: had to leave child alone, too caught up to tell child you loved him or her, unable to feed, unable to get child medical care when needed, and too drunk or high to care for child ( $\alpha=0.61$ ).

For each item, the mother was asked to indicate how frequently she had done the act to the index child in the past year on a 7-point ordinal scale: never (0) to more than 20 times (6).<sup>6</sup> Psychological and physical aggression were analyzed as continuous summary scores (range 0–125), which were calculated as recommended by the scale's author.<sup>53</sup> Neglect was highly skewed and was divided into 3 categories for analysis: none (0), 1 to 3 times in the past year (1), or more than 3 times in the past year (2). Spanking also was assessed with a separate question that asked the mother if she had spanked the child in the past month for misbehaving or acting up and, if yes, how often. We coded spanking as none (0), once or twice in the past month (1), or more than 2 times in the past month (2).

**Intimate partner violence.** The main explanatory variable of interest was IPV committed against the mother by her current partner. We assessed mothers' IPV victimization (but not perpetration) during wave 3 with 7 items. Three items were adapted from the conflict tactics scale for adults<sup>54</sup>: slaps or kicks you, hits you with a fist or an object that could hurt you, and tries to make you have sexual intercourse or do sexual things you don't want to do. Four items that assessed psychological abuse were adapted from the spouse observation checklist<sup>55</sup> and studies by Lloyd<sup>56</sup>: insults or criticizes you, tries to keep you from seeing or talking with your friends or family, tries to prevent you from going to work or school, and withholds money, makes you ask for money, or takes your money.

Response options for each item were never, sometimes, or often. The summed score of IPV was highly skewed, and a binary IPV variable was created: never for all 7 items (0) and sometimes or often for any item (1). Multiple forms of this variable were assessed, including continuous summation, ordinal, and split physical versus psychological; study findings were qualitatively the same.

**Other maternal risk factors.** We also examined 3 other explanatory variables—maternal parenting stress, major depression, and having considered an abortion—because of their potential for confounding associations between IPV and child maltreatment.<sup>43</sup> Parenting stress was assessed during the in-home interview using 11 items from the parenting stress index ( $\alpha=0.86$ ).<sup>57</sup> This index was rated on a 5-point Likert-type scale: strongly disagree (0) to strongly agree (4). This continuous variable was a summation of the 11 items with scores ranging from 0 to 44. We assessed major depression at wave 3 with the Composite International Diagnostic Interview—Short Form (CIDI-SF) Section A.<sup>58</sup> We based scoring methods, described in detail elsewhere,<sup>59</sup> on criteria for major depression from the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*.<sup>60</sup> We coded this variable as no (0) or yes (1). Having considered abortion was the best proxy variable in this data set for “unwantedness” of the pregnancy. At baseline, the mother was asked, “When you found out you were pregnant, did you think about having an abortion?” We coded this variable as no (0) or yes (1).

**Covariates.** We chose maternal, partner, and household demographic characteristics for inclusion in these analyses based on previous empirical evidence that suggested an association between these variables and child maltreatment and based on their availability in the FFCWS data set. Table 1 contains the complete list.

### Statistical Analyses

We assessed bivariate associations between IPV and all other variables with the  $t$  test and  $\chi^2$  test as appropriate (Table 1). We assessed bivariate associations between each of the maltreatment and maternal risk variables with the Spearman rank correlation, the Kruskal-Wallis test of medians, the  $\chi^2$  test, ordinal logistic regression, and the  $t$  test, as appropriate (Table 2). We ran multivariate regression models for each of the 4 maltreatment proxy variables to test for associations with multiple explanatory variables and covariates. For the physical and psychological aggression outcomes, we used negative binomial regression models, which are appropriate for count data that are overdispersed relative to the Poisson distribution (Table 3). Ordinal logistic

**TABLE 1—Descriptive and Bivariate Statistics of Child Maltreatment, Maternal Risk Factors, and Demographic Characteristics, by Intimate Partner Aggression and Violence: Fragile Families and Child Well-Being Study, 2001–2004**

	Total (N = 2508)	No IPV (n = 1510)	IPV (n = 998)
<b>Child maltreatment proxy variables</b>			
Psychological aggression,*** past year frequency (SD)	25 (19.6)	24 (19.0)	28 (20.1)
Physical aggression,** past year frequency (SD)	17 (18.2)	16 (18.3)	18 (18.1)
Spanking,*** past month, %			
None	45	50	39
1 or 2 times	28	26	31
>2 times	27	24	30
Neglect, past year,*** %			
None	88	91	85
1-3 times	6	4	7
>3 times	5	3	7
<b>Maternal risk factors</b>			
Parenting stress,*** parenting stress index score (SD)	12 (7.8)	11 (7.5)	14 (8.1)
Major depression,*** %	20	15	26
Considered abortion, %	26	25	27
<b>Maternal characteristics</b>			
Mother's age,*** y	28	27.5	28.6
Mother's education,* %			
Less than high school	33	33	32
Completed high school	29	30	27
Some college	25	25	26
Completed college	13	12	15
Mother's ethnicity,*** %			
Black	44	47	39
Hispanic	28	26	30
White	25	24	25
Foreign born,*** %	17	13	21
<b>Partner characteristics</b>			
Partner's age,*** y	31	30.4	31.8
Partner's education,*** %			
Less than high school	21	20	23
Completed high school	38	41	34
Some college	23	23	24
Completed college	13	13	13
<b>Household characteristics</b>			
Mother-partner relationship status,*** %			
Married	45	43	48
Cohabiting	37	36	38
Visiting	19	22	14
Income, natural log of annual household,** \$	10.1	10.0	10.2
No. of adults in household	2.3	2.3	2.4
No. of children in household	1.3	1.3	1.3

Note. IPV = intimate partner violence. Bivariate statistical tests on the basis of a *t* or  $\chi^2$  test as appropriate. All variables had 1% or less missing data, except for partner's education, for which 4.6% was missing.

\**P* < .05; \*\**P* < .01; \*\*\**P* < .001.

regressions were used for the neglect and spanking outcomes (Table 4).

We ran 4 regression models for each maltreatment proxy variable. In model 1, we entered only IPV. In subsequent models, other variables were added to examine the following: (1) whether IPV remained significant after adjusting for parenting stress (model 2), depression (model 3), and covariates (model 4); (2) the level of association of parenting stress (models 2 and 4) and depression (models 3 and 4) with child maltreatment after accounting for IPV and other covariates; and (3) whether ethnicity and nativity were associated with child maltreatment after adjusting for other relevant covariates (model 4). A Bonferroni correction was made to account for all covariates in model 4; findings that remained statistically significant after this correction were significant at *P* < .004 (Tables 3 and 4).

## RESULTS

Table 1 shows descriptive statistics for the entire sample and compares statistics for mothers who experienced IPV (40%) versus those who did not (60%). Mothers reported an average of 25 acts of psychological aggression and 17 acts of physical aggression toward their index children in the previous year. Just over half of the mothers spanked their children at least once in the previous month, and 11% reported at least 1 act of neglect in the past year.

Mothers who experienced IPV compared with those who did not used psychological and physical aggression against their children more frequently and had higher odds of spanking their children (61% vs 50%, respectively) and of reporting at least 1 instance of neglect toward their children (14% vs 7%, respectively). Women who experienced IPV compared with those who did not reported higher levels of parenting stress (14 vs 11, parenting stress index scores) and had higher odds of having major depression (26% vs 15%). The odds of reporting IPV (vs not reporting IPV) were lower for mothers who were Black and greater for mothers who were foreign born. Of the 17% who were foreign born, most were born in Mexico (48%), elsewhere in Latin America (18%), or in Asia (16%). The average annual household income for this sample was approximately \$40 000.

**TABLE 2—Matrix of Bivariate Statistics of Co-occurrence of Child Maltreatment Proxy Variables and Maternal Risk Factors: Fragile Families and Child Well-Being Study, 2001–2004**

	Psychological Aggression (Mean Score = 25)	Physical Aggression (Mean Score = 17)	Spanking			Neglect			Parenting Stress (Mean Score = 12)	Major Depression (20% of Respondents)	Considered Abortion
			None (45% of Respondents)	1–2 Times (28% of Respondents)	> 2 Times (27% of Respondents)	None (88% of Respondents)	1–3 Times (6% of Respondents)	> 3 Times (5% of Respondents)			
<b>Child maltreatment</b>											
Psychological Aggression	...	...	...	...	...	...	...	...	...	...	...
Physical aggression, $\rho^a$	0.642	...	...	...	...	...	...	...	...	...	...
Spanking, mean score											
None	18.8	8.4	...	...	...	...	...	...	...	...	...
1–2 times	26.5	17.3	...	...	...	...	...	...	...	...	...
> 2 times	35.0	31.0	...	...	...	...	...	...	...	...	...
Neglect, mean score or %											
None	24.4	16.3	46%	28%	26%	...	...	...	...	...	...
1–3 times	29.7	20.4	34%	33%	33%	...	...	...	...	...	...
> 3 times	35.8	24.6	36%	26%	38%	...	...	...	...	...	...
<b>Maternal risk factors</b>											
Parenting stress, $\rho^a$ or OR <sup>b</sup> (95% CI)	0.265	0.201	1.04 (1.03, 1.05)			1.13 (1.11, 1.15)			...	...	...
Major Depression, mean score or %											
No	23.8	15.7	48%	28%	24%	92%	4%	4%	11.1	...	...
Yes	31.5	22.1	36%	27%	37%	81%	11%	8%	16.3	...	...
Considered abortion, mean score or %											
No	23.7	15.6	47%	28%	25%	91%	5%	4%	11.5	17%	...
Yes	29.7	20.6	40%	29%	31%	86%	7%	8%	14.1	26%	...

Note. All bivariate associations were statistically significant at  $P < .001$ , except neglect and spanking at  $P < .01$  and considered abortion and spanking at  $P < .01$ . The  $t$  test was used when comparing major depression and considered abortion to psychological aggression, physical aggression, and parental stress. The  $\chi^2$  test was used for all other associations, except where noted. All variables had 1% or less missing data.

<sup>a</sup>Obtained with the Spearman rank correlation.

<sup>b</sup>Obtained with ordinal logistic regression.

Table 2 shows bivariate statistics for the 4 child maltreatment proxy variables and the 3 measured maternal risk factors. All these variables were positively associated with one another.

Tables 3 and 4 show regression results. In unadjusted models (model 1) and models adjusted only for stress or depression (models 2 and 3, respectively), IPV was associated statistically with psychological aggression, spanking, and neglect but not with physical aggression. In models adjusted only for IPV, parenting stress and depression (models 2 and 3, respectively) were associated with increased risk for all 4 maltreatment proxy variables. (We did not test consideration of abortion separately, because it was not associated with IPV in this sample.) In the fully

adjusted models (model 4), IPV and parenting stress were associated statistically with all 4 outcomes, but depression remained associated statistically with spanking only.

Maternal ethnicity and nativity were important covariates. Among ethnic groups, Hispanic mothers reported the lowest levels of aggression toward their children. Foreign-born mothers reported fewer acts of aggression than did US-born mothers. The interaction between IPV and foreign-born status was significant for the 3 aggression outcomes and borderline significant for neglect ( $P = .065$ ). The IPV relative risk was greater for foreign-born than for US-born mothers for perpetrating psychological aggression (1.56 vs 1.12;  $P < .001$ ), physical aggression (1.76 vs 1.07;  $P < .001$ ), and

spanking (2.19 vs 1.39;  $P < .001$ ); however, it was less for neglect (0.79 vs 1.67;  $P = .065$ ).

## DISCUSSION

We found that mothers who experience IPV are at greater risk for maltreating their children than are mothers who do not. This finding remained even after we controlled for 2 potential confounders of this association—mother's parenting stress and major depression—as well as nearly a dozen covariates associated with IPV and child maltreatment in this or previous studies. These findings suggest that the presence of IPV in families confers a unique burden of maltreatment risk to children that is independent of the impact of IPV on the mental health of

**TABLE 3—Incident Rate Ratios (IRRs) From Negative Binomial Regressions Predicting Past Year Maternal Psychological and Physical Aggression: Fragile Families and Child Well-Being Study, 2001–2004**

	Psychological Aggression				Physical Aggression			
	Model 1 (n = 2483), IRR (95% CI)	Model 2 (n = 2478), IRR (95% CI)	Model 3 (n = 2481), IRR (95% CI)	Model 4 (n = 2415), IRR (95% CI)	Model 1 (n = 2482), IRR (95% CI)	Model 2 (n = 2477), IRR (95% CI)	Model 3 (n = 2480), IRR (95% CI)	Model 4 (n = 2414), IRR (95% CI)
IPV	1.19† (1.10, 1.29)	1.12** (1.03, 1.21)	1.16† (1.07, 1.26)	1.18† (1.09, 1.28)	1.12 (1.01, 1.25)	1.05 (0.94, 1.17)	1.08 (0.97, 1.20)	1.16** (1.04, 1.29)
Parenting stress		1.03† (1.02, 1.03)		1.02† (1.02, 1.03)		1.03† (1.02, 1.03)		1.02† (1.02, 1.03)
Major depression			1.30† (1.18, 1.43)	1.13 (1.03, 1.25)			1.39† (1.22, 1.59)	1.18 (1.03, 1.34)
<b>Maternal characteristics</b>								
Age				0.99 (0.98, 1.00)				0.98† (0.97, 0.99)
Ethnicity†								
Black (Ref)				1.00				1.00
Hispanic				0.81 (0.73, 0.90)				0.61 (0.53, 0.70)
White				0.92 (0.82, 1.03)				0.77 (0.67, 0.89)
Other				1.06 (0.85, 1.31)				0.97 (0.73, 1.30)
Foreign born				0.71† (0.62, 0.81)				0.65† (0.55, 0.77)
<b>Partner characteristics</b>								
Education								
Less than high school (Ref)				1.00				1.00
Completed high school				0.88 (0.79, 0.99)				1.00 (0.86, 1.16)
Some college				0.90 (0.79, 1.02)				0.98 (0.83, 1.16)
Completed college				0.80 (0.68, 0.95)				0.73** (0.58, 0.91)

Note. IPV = intimate partner violence. Model 4 included all risk and demographic variables listed in Table 1 along with 2 additional variables: birth city and marital status at birth. However, only those maternal, partner, and household characteristics that were statistically significant at  $P \leq .01$  for at least 1 of the 2 child maltreatment variables in this table are presented. The omnibus  $\chi^2$  test was used to test for differences in outcome because of ethnicity, education, or relationship status. \*\* $P \leq .01$ ; † $P < .004$ .

victims. This has important implications for child maltreatment prevention efforts that aim to improve maternal mental health and support but that do not directly address existing IPV within families. Indeed, the effectiveness of home visitation programs recommended for the prevention of maltreatment<sup>61</sup> may be limited when frequent IPV is present.<sup>62</sup>

Consistent with previous studies, we found that higher levels of maternal parenting stress were associated with increased risk for perpetrating all 4 types of measured maltreatment proxy variables. This risk remained even after accounting for the presence of potential confounders such as IPV, maternal depression, and multiple covariates. These findings suggest that IPV and maternal stress are consistent risk factors for child maltreatment and that the presence of 1 risk does not fully explain the contribution of the other. However, maternal major depression conferred essentially no independent risk for

child maltreatment (except for spanking) after we controlled for all these factors.

Many previous studies have linked maternal depression with child maltreatment, but most have not also measured both IPV and parenting stress along with multiple associated covariates.<sup>63–65</sup> One comparable study found IPV (husband to wife) and maternal depression, but not perceived maternal stress, to be associated with child abuse; however, different measures of stress (i.e., the perceived stress scale, which is not specific to parenting) and depression (i.e., items not specific to a diagnosis of major depression) were used, which may account for the variation in findings.<sup>66</sup>

Our findings regarding foreign-born status may be unique. We have been unable to identify comparable findings, and most other available national data on child maltreatment do not appear to include information about nativity. Hussey et al. found that foreign-born

status increased the risk for supervision neglect; yet, it was not associated with other maltreatment outcomes, including physical neglect, physical abuse, and sexual abuse, in adjusted analyses.<sup>46</sup> Consistent with our findings, Molnar et al. found that immigrant concentration, measured at the neighborhood level in Chicago, was associated with less parent-to-child physical aggression.<sup>67</sup> We found that foreign-born mothers reported fewer acts of aggression against their children than did US-born mothers; nevertheless, IPV conferred greater relative risk on foreign-born mothers than it did on US-born mothers for perpetrating aggressive child maltreatment.

Our bivariate findings (Table 1) and findings from other studies<sup>68,69</sup> suggest that immigrant status may increase women's vulnerability to IPV and create additional barriers to seeking and accessing resources. Given the systemic stressors, discrimination, and cultural barriers that many

**TABLE 4—Odds Ratios (ORs) From Ordinal Logistic Regressions Predicting Maternal Spanking and Neglect: Fragile Families and Child Well-Being Study, 2001–2004**

	Spanking <sup>a</sup>				Neglect <sup>b</sup>			
	Model 1 (n = 2502), OR (95% CI)	Model 2 (n = 2474), OR (95% CI)	Model 3 (n = 2500), OR (95% CI)	Model 4 (n = 2411), OR (95% CI)	Model 1 (n = 2480), OR (95% CI)	Model 2 (n = 2475), OR (95% CI)	Model 3 (n = 2478), OR (95% CI)	Model 4 (n = 2412), OR (95% CI)
IPV	1.46† (1.25, 1.69)	1.33† (1.14, 1.54)	1.38† (1.19, 1.61)	1.49† (1.26, 1.75)	1.96† (1.52, 2.54)	1.53† (1.17, 2.01)	1.80† (1.38, 2.33)	1.51** (1.13, 2.02)
Parenting stress		1.03† (1.02, 1.04)		1.03† (1.02, 1.04)		1.12† (1.10, 1.14)		1.12† (1.10, 1.14)
Major depression			1.66† (1.38, 2.00)	1.35† (1.10, 1.65)			2.32† (1.76, 3.07)	1.33 (0.97, 1.83)
No. of children in household				0.91** (0.85, 0.97)				1.03 (0.92, 1.15)
<b>Maternal characteristics</b>								
Age				0.96† (0.94, 0.98)				0.98 (0.95, 1.02)
Ethnicity								
Black (Ref)				1.00				1.00
Hispanic				0.63† (0.50, 0.78)				1.33 (0.91, 1.94)
White				0.87 (0.70, 1.09)				0.90 (0.58, 1.39)
Other				0.84 (0.53, 1.31)				1.26 (0.61, 2.63)
Foreign born				0.57† (0.43, 0.74)				0.79 (0.49, 1.28)

Note. IPV = intimate partner violence. Model 4 included all risk and demographic variables listed in Table 1 along with 2 additional variables: birth city and marital status at birth. However, only those maternal, partner, and household characteristics that were statistically significant at  $P \leq .01$  for at least 1 of the 2 child maltreatment variables in this table are presented. The omnibus  $\chi^2$  test was used to test for any differences in outcome because of ethnicity, education, or relationship status.

<sup>a</sup>During the past month. Coded as 0 (none), 1 (1–2 times), or 2 (>2 times).

<sup>b</sup>During the past year. Coded as 0 (none), 1 (1–3 times), or 2 (>3 times).

\*\* $P \leq .01$ ; † $P < .004$ .

US immigrants and Hispanics already face,<sup>70</sup> it is essential that culturally appropriate resources and well-informed service professionals be available for immigrant families—adults and children—burdened by IPV.

Our findings do not support a simple model linking maternal IPV victimization with maternal child maltreatment because of increased maternal stress and depression; instead, the associations between IPV and child maltreatment are likely to be more complex. Slep and O'Leary conducted a population-based study that examined multiple patterns of IPV and child maltreatment within families with young children.<sup>71</sup> Among families that reported both child maltreatment and IPV, about 70% included maternal aggression against the children and IPV against the mother. However, in a majority of those cases, both parents were aggressors toward the children and the IPV was reciprocal. Other population-based studies have found about half of all reported IPV to be reciprocal.<sup>72,73</sup>

Based on these previous studies, it is likely that a good portion of the child maltreatment reported in our study was committed by both

parents and also that a good portion of the IPV was reciprocal. (Reciprocal IPV means that both partners are involved as assailants; but, it does not necessarily mean that the impact on each partner is equal. Controversy exists over the gendered nature of IPV.<sup>74–76</sup> Nevertheless, both reciprocal IPV and male-perpetrated IPV increase the risk of partner injury<sup>73</sup>; also, IPV is associated with adverse health consequences for both male and female victims.<sup>77,78</sup>)

### Limitations

Our study has some important limitations. First, as just discussed, it does not address the potential presence of reciprocal IPV or of child maltreatment by the mother's partner. Current analyses focused on maternal interviews, and mothers were not asked about the occurrence of reciprocal or mother-to-partner IPV. Second, because all data are based on mothers' self-reports, multiple forms of measurement bias may be present, such as social desirability bias or recall bias, particularly for the child maltreatment proxy variables. However, the self-report measure that was used<sup>52</sup> has been validated and

recommended as a measure of child maltreatment risk, particularly in population-based studies that aim to inform prevention programming and policy.<sup>79</sup>

Third, IPV can include a wider range of physical, sexual, and psychological aggression behaviors than assessed in this study.<sup>80</sup> Thus, our assessment of IPV victimization against the mother was limited by the items included in the FFCWS study. Fourth, the exclusion of unmeasured confounders, such as history of violence in the mother's family of origin, might lead to biased regression estimates. Finally, it is important to keep in mind that this study sample included only those mothers who reported having a current partner at the time of the wave-3 interview and focused only on IPV with the current partner. Importantly, mothers' reports of IPV at wave 1 were not associated with mothers' current partner status at wave 3.

### Implications for Prevention and Intervention

Our findings regarding the co-occurrence of child maltreatment, IPV, and maternal stress

add to the growing body of evidence that children who face violence in the home are at increased risk of experiencing multiple types of violence and adversity in childhood<sup>71,81</sup>; these children are at particularly high risk for experiencing adverse social, behavioral, and health outcomes well into adulthood.<sup>82</sup> High rates of overlap between child maltreatment and IPV suggest that systematically addressing these issues as independent public health problems is not the most effective or efficient use of resources. Given the increased risk that IPV imposes on children, intervention on behalf of children exposed to IPV is warranted. There are high levels of public support for such intervention, particularly in cases in which the risk of injury is high.<sup>83</sup> The need to better integrate IPV and child maltreatment services and prevention has long been recognized<sup>84–86</sup>; such efforts must carefully balance the needs of both adult and child victims and do so in a way that does not overwhelm child welfare services.<sup>87</sup>

There is a need to expand efforts already underway to integrate IPV concerns into child welfare agency services<sup>88,89</sup> and to develop curriculums designed to strengthen child welfare and domestic violence agency collaborations.<sup>90</sup> Parallel educational training programs are also needed for medical professionals, police, teachers, and other frontline family violence responders. Furthermore, primary prevention strategies aimed at co-occurring family violence are needed. Given that the most successful child maltreatment prevention programs to date have limited effects in the presence of frequent IPV,<sup>62</sup> enhanced home visitation programs are needed to address child maltreatment risk along with co-occurring IPV. Initiatives aimed at the primary prevention of IPV, especially those that target adolescent girls and boys,<sup>91,92</sup> are crucial complements to direct child maltreatment prevention efforts and ought to have a significant indirect impact on the reduction of child maltreatment. ■

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### Contributors

C.A. Taylor conceptualized this study, completed analyses, and led the writing. N.B. Guterman and S.J. Lee assisted with the study. P.J. Rathouz reviewed statistical analyses. All authors helped to interpret findings and review drafts of the article.

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This secondary data analysis study was considered exempt by the Tulane University Health Sciences Center institutional review board.

### References

1. US Department of Health and Human Services. *Child Maltreatment 2005*. Washington, DC: US Government Printing Office; 2007.
2. Hillis SD, Anda RF, Dube SR, Felitti VJ, Marchbanks PA, Marks JS. The association between adverse childhood experiences and adolescent pregnancy, long-term psychosocial consequences, and fetal death. *Pediatrics*. 2004;113:320–327.
3. Thompson MP, Kingree JB, Desai S. Gender differences in long-term health consequences of physical abuse of children: data from a nationally representative survey. *Am J Public Health*. 2004;94:599–604.
4. Maxfield MG, Widom CS. The cycle of violence—revisited 6 years later. *Arch Pediatr Adolesc Med*. 1996;150:390–395.
5. Silverman AB, Reinherz HZ, Giaconia RM. The long-term sequelae of child and adolescent abuse: a longitudinal community study. *Child Abuse Negl*. 1996;20:709–723.
6. Osofsky J. The impact of violence on children. *Future Child*. 1999;9(3):33–49.
7. Kurtz PD, Gaudin JM, Howing PT, Wodarski JS. The consequences of physical abuse and neglect on the school age child—mediating factors. *Child Youth Serv Rev*. 1993;15:85–104.
8. Azar ST, Barnes KT, Twentymen CT. Developmental outcomes in abused children: consequences of parental abuse or a more general breakdown in caregiver behavior? *Behav Therapist*. 1988;11:27–32.
9. Bonnier C, Nassogne MC, Evrard P. Outcome and prognosis of whiplash shaken infant syndrome; late

consequences after a symptom-free interval. *Dev Med Child Neurol*. 1995;37:943–956.

10. Hillis SD, Anda RF, Felitti VJ, Marchbanks PA. Adverse childhood experiences and sexual risk behaviors in women: a retrospective cohort study. *Fam Plann Perspect*. 2001;33:206–211.
11. Whitfield CL, Anda RF, Dube SR, Felitti VJ. Violent childhood experiences and the risk of intimate partner violence in adults—assessment in a large health maintenance organization. *J Interpers Violence*. 2003;18:166–185.
12. Chapman DP, Whitfield CL, Felitti VJ, Dube SR, Edwards VJ, Anda RF. Adverse childhood experiences and the risk of depressive disorders in adulthood. *J Affect Disord*. 2004;82:217–225.
13. Drotar D. Prevention of neglect and nonorganic failure to thrive. In: Willis DJ, Holden EW, Rosenberg MS, eds. *Prevention of Child Maltreatment: Developmental and Ecological Perspectives*. New York, NY: Wiley; 1992:115–149.
14. Perry BD, Pollard RA, Blakley TL, Baker WL, Vigilante D. Childhood trauma, the neurobiology of adaptation, and “use-dependent” development of the brain: how “states” become “traits”. *Infant Ment Health J*. 1995;16(4):271–291.
15. Lewis DO. From abuse to violence—psychophysiological consequences of maltreatment. *J Am Acad Child Adolesc Psychiatry*. 1992;31:383–391.
16. Carlson V, Cicchetti D, Barnett D, Braunwald K. Disorganized disoriented attachment relationships in maltreated infants. *Dev Psychol*. 1989;25:525–531.
17. Egeland B, Sroufe LA. Attachment and early maltreatment. *Child Dev*. 1981;52:44–52.
18. Dodge KA, Pettit GS, Bates JE. Effects of physical maltreatment on the development of peer relations. *Dev Psychopathol*. 1994;6:43–55.
19. Aber JL, Allen JP, Carlson V, Cicchetti D. The effects of maltreatment on development during early childhood: recent studies and their theoretical, clinical and policy implications. In: Cicchetti D, Carlson V, eds. *Child Maltreatment: Theory and Research on Causes and Consequences*. New York, NY: Cambridge University Press; 1990:579–619.
20. Kolko DJ. Characteristics of child victims of physical violence—research findings and clinical implications. *J Interpers Violence*. 1992;7:244–276.
21. Allen R, Wasserman GA. Origins of language delay in abused infants. *Child Abuse Negl*. 1985;9:335–340.
22. Brown J, Cohen P, Johnson JG, Smailes EM. Child abuse and neglect: specificity of effects on adolescent and young adult depression and suicidality. *J Am Acad Child Adolesc Psychiatry*. 1999;38:1490–1496.
23. Widom CS, DuMont K, Czaja SJ. A prospective investigation of major depressive disorder and comorbidity in abused and neglected children grown up. *Arch Gen Psychiatry*. 2007;64:49–56.
24. Bensley L, Van Eenwyk J, Wynkoop Simmons K. Childhood family violence history and women's risk for intimate partner violence and poor health. *Am J Prev Med*. 2003;25(1):38–44.
25. Arias I. The legacy of child maltreatment: long-term health consequences for women. *J Womens Health*. 2004;13:468–473.
26. Anda R, Felitti V, Bremner J, et al. The enduring effects of abuse and related adverse experiences in childhood: a convergence of evidence from neurobiology

- and epidemiology. *Eur Arch Psychiatry Clin Neurosci*. 2006;256:174–186.
27. Dube SR, Felitti VJ, Dong M, Giles WH, Anda RF. The impact of adverse childhood experiences on health problems: evidence from four birth cohorts dating back to 1900. *Prev Med*. 2003;37:268–277.
  28. Dong M, Giles WH, Felitti VJ, et al. Insights into causal pathways for ischemic heart disease: adverse childhood experiences study. *Circulation*. 2004;110:1761–1766.
  29. Felitti VJ, Anda RF, Nordenberg D, et al. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: the adverse childhood experiences (ACE) study. *Am J Prev Med*. 1998;14:245–258.
  30. Daro D. *Public Opinion and Behaviors Regarding Child Abuse Prevention: 1999 Survey*. Chicago, IL: Prevent Child Abuse America, National Center on Child Abuse Prevention Research; 1999.
  31. Regalado M, Sareen H, Inkelas M, Wissow LS, Halfon N. Parents' discipline of young children: results from the National Survey of Early Childhood Health. *Pediatrics*. 2004;113(6 suppl, pt 2):1952–1958.
  32. Straus MA, Stewart JH. Corporal punishment by American parents: national data on prevalence, chronicity, severity, and duration, in relation to child and family characteristics. *Clin Child Fam Psychol Rev*. 1999;2:55–70.
  33. Gershoff ET. Corporal punishment by parents and associated child behaviors and experiences: a meta-analytic and theoretical review. *Psychol Bull*. 2002;128:539–579.
  34. MacMillan HL, Boyle MH, Wong MY-Y, Duku EK, Fleming JE, Walsh CA. Slapping and spanking in childhood and its association with lifetime prevalence of psychiatric disorders in a general population sample. *CMAJ*. 1999;161:805–809.
  35. Global Initiative to End All Corporal Punishment of Children. Available at: <http://www.endcorporalpunishment.org/index.html>. Accessed October 1, 2007.
  36. Cadzow SP, Armstrong KL, Fraser JA. Stressed parents with infants: reassessing physical abuse risk factors. *Child Abuse Negl*. 1999;23:845–853.
  37. Crouch JL, Behl LE. Relationships among parental beliefs in corporal punishment, reported stress, and physical child abuse potential. *Child Abuse Negl*. 2001;25:413–419.
  38. Margolin G, Gordis EB. Co-occurrence between marital aggression and parents' child abuse potential: the impact of cumulative stress. *Violence Vict*. 2003;18:243–258.
  39. Zuravin S. Severity of maternal depression and three types of mother-to-child aggression. *Am J Orthopsychiatry*. 1989;59:377–389.
  40. Hazen AL, Connelly CD, Kelleher K, Landsverk J, Barth R. Intimate partner violence among female caregivers of children reported for child maltreatment. *Child Abuse Negl*. 2004;28:301–319.
  41. Altmeier WA, O'Connor S, Vietze P, Sandler H, Sherrod K. Prediction of child abuse: a prospective study of feasibility. *Child Abuse Negl*. 1984;8:393–400.
  42. Pallitto CC, Campbell JC, O'Campo P. Is intimate partner violence associated with unintended pregnancy? A review of the literature. *Trauma Violence Abuse*. 2005;6(3):217–235.
  43. Wilson LM, Reid AJ, Midmer DK, Biringier A, Carroll JC, Stewart DE. Antenatal psychosocial risk factors associated with adverse postpartum family outcomes. *CMAJ*. 1996;154:785–799.
  44. Appel AE, Holden GW. The co-occurrence of spouse and physical child abuse: a review and appraisal. *J Fam Psychol*. 1998;12:578–599.
  45. McGuigan WM, Pratt CC. The predictive impact of domestic violence on three types of child maltreatment. *Child Abuse Negl*. 2001;25:869–883.
  46. Hussey JM, Chang JJ, Kotch JB. Child maltreatment in the United States: prevalence, risk factors, and adolescent health consequences. *Pediatrics*. 2006;118(3):933–942.
  47. Lansford JE, Dodge KA, Pettit GS, Bates JE, Crozier J, Kaplow J. A 12-year prospective study of the long-term effects of early child physical maltreatment on psychological, behavioral, and academic problems in adolescence. *Arch Pediatr Adolesc Med*. 2002;156:824–830.
  48. Caetano R, Cunradi CB, Schafer J, Clark CL. Intimate partner violence and drinking patterns among White, Black, and Hispanic couples in the US. *J Subst Abuse*. 2000;11:123–138.
  49. Tjaden P, Thoennes N. *Full Report of the Prevalence, Incidence, and Consequences of Violence Against Women: Findings From the National Violence Against Women Survey*. Washington, DC: National Institute of Justice, US Dept of Justice; 2000. Publication NCJ 183781.
  50. Garbarino J, Ebata A. The significance of ethnic and cultural differences in child maltreatment. *J Marriage Fam*. 1983;45:773–783.
  51. Reichman NE, Teitler JO, Garfinkel I, McLanahan SS. Fragile families: sample and design. *Child Youth Serv Rev*. 2001;23(4/5):303–326.
  52. Straus MA, Hamby SL, Finkelhor D, Moore DW, Runyan D. Identification of child maltreatment with the parent-child conflict tactics scales: development and psychometric data for a national sample of American parents. *Child Abuse Negl*. 1998;22:249–270.
  53. Straus MA. Scoring and norms for the CTS2 and CTSPC. Available at: <http://pubpages.unh.edu/~mas2/CTS28.pdf>. Accessed August 3, 2007.
  54. Straus M, Hamby S, Boney-McCoy S, Sugarman D. The Revised Conflict Tactics Scale (CTS2): development and preliminary psychometric data. *J Fam Issues*. 1996;17:283–316.
  55. Weiss RL, Margolin G. Assessment of marital conflict and accord. In: Ciminero AR, Calhoun KD, Adams HE, eds. *Handbook of Behavioral Assessment*. New York, NY: John Wiley; 1977:555–602.
  56. Lloyd SA. Physical aggression, distress, and everyday marital interactions. In: Cahn DD, Lloyd SA, eds. *Family Violence From a Communication Perspective*. Thousand Oaks, CA: Sage Publications, Inc; 1996:177–198.
  57. Abidin RR. *Parenting Stress Index*. 3rd ed. Odessa, FL: Psychological Assessment Resources, Inc; 1995.
  58. Kessler R. The World Health Organization Composite International Diagnostic Interview Short-Form (CIDI-SF). *Int J Methods Psychiatr Res*. 1998;7:171–185.
  59. Fragile families: scales documentation and question sources for three-year questionnaires, version 4/26/06 (Scoring procedures for depression, pp. 5–8). Available at: [http://www.fragilefamilies.princeton.edu/documentation/core/scales/ff\\_3yr\\_scales.pdf](http://www.fragilefamilies.princeton.edu/documentation/core/scales/ff_3yr_scales.pdf). Accessed February 26, 2008.
  60. *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*. Washington, DC: American Psychiatric Association; 1994.
  61. Hahn RA, Bilukha OO, Crosby A, et al. First reports evaluating the effectiveness of strategies for preventing violence: early childhood home visitation and firearms laws. Findings from the Task Force on Community Preventive Services. *MMWR Morb Mortal Wkly Rep*. 2003;52(RR-14):1–20.
  62. Eckenrode J, Ganzel B, Henderson CR, et al. Preventing child abuse and neglect with a program of nurse home visitation: the limiting effects of domestic violence. *JAMA*. 2000;284:1385–1391.
  63. Chung EK, McCollum KF, Elo IT, Lee HJ, Culhane JF. Maternal depressive symptoms and infant health practices among low-income women. *Pediatrics*. 2004;113(6):e523–e529.
  64. Kotch JB, Browne DC, Dufort V, Winsor J, Catellier D. Predicting child maltreatment in the first 4 years of life from characteristics assessed in the neonatal period. *Child Abuse Negl*. 1999;23:305–319.
  65. Windham AM, Rosenberg L, Fuddy L, McFarlane E, Sia C, Duggan AK. Risk of mother-reported child abuse in the first 3 years of life. *Child Abuse Negl*. 2004;28:647–669.
  66. Berger LM. Income, family characteristics, and physical violence toward children. *Child Abuse Negl*. 2005;29:107–133.
  67. Molnar BE, Buka SL, Brennan RT, Holton JK, Earls F. A multilevel study of neighborhoods and parent-to-child physical aggression: results from the project on human development in Chicago neighborhoods. *Child Maltreat*. 2003;8(2):84.
  68. Frye V, Hosein V, Waltermaurer E, Blaney S, Wilt S. Femicide in New York City: 1990 to 1999. *Homicide Stud*. 2005;9:204–228.
  69. Raj A, Silverman J. Violence against immigrant women: the roles of culture, context, and legal immigrant status on intimate partner violence. *Violence Against Women*. 2002;8:367–398.
  70. Fontes LA. Child discipline and physical abuse in immigrant Latino families: reducing violence and misunderstandings. *J Couns Dev*. 2002;80:31–38.
  71. Slep AMS, O'Leary SG. Parent and partner violence in families with young children: rates, patterns, and connections. *J Consult Clin Psychol*. 2005;73:435.
  72. Straus MA, Gelles RJ. Societal change and change in family violence from 1975 to 1985 as revealed by two national surveys. *J Marriage Fam*. 1986;48:465–479.
  73. Whitaker DJ, Haileyesus T, Swahn M, Saltzman LS. Differences in frequency of violence and reported injury between relationships with reciprocal and nonreciprocal intimate partner violence. *Am J Public Health*. 2007;97:941–947.
  74. Reed E. Intimate partner violence: a gender-based issue? *Am J Public Health*. 2008;98:197–198.
  75. Whitaker DJ, Swahn M, Hall DM, Haileyesus T, Whitaker et al. respond. *Am J Public Health*. 2008;98:198–199.
  76. Straus MA. The controversy over domestic violence by women: a methodological, theoretical, and sociology of science analysis. In: Arriaga XB, Oskamp S, eds. *Violence in Intimate Relationships*. Thousand Oaks, CA: Sage Publications, Inc; 1999:17–44.

77. Centers for Disease Control and Prevention. Adverse health conditions and health risk behaviors associated with intimate partner violence—United States, 2005. *MMWR Morb Mortal Wkly Rep.* 2008;57:113–117.
78. Coker AL, Davis KE, Arias I, et al. Physical and mental health effects of intimate partner violence for men and women. *Am J Prev Med.* 2002;23:260–268.
79. World Health Organization and International Society for Prevention of Child Abuse and Neglect. *Preventing Child Maltreatment: A Guide to Taking Action and Generating Evidence.* Geneva, Switzerland: World Health Organization and International Society for Prevention of Child Abuse and Neglect; 2006.
80. Centers for Disease Control. Intimate partner violence prevention scientific information: definitions. Available at: <http://www.cdc.gov/ncipc/dvp/IPV/ipv-definitions.htm>. Accessed March 6, 2008.
81. Taylor CA, Boris NW, Heller SS, Clum GA, Rice JC, Zeanah CH. Cumulative experiences of violence among high-risk urban youth. *J Interpers Violence.* 2008; 23(11):1618–1635.
82. Middlebrooks JS, Audage NC. *The Effects of Childhood Stress on Health Across the Lifespan.* Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention; 2008.
83. Taylor CA, Sorenson SB. Intervention on behalf of children exposed to intimate partner violence: assessment of support in a diverse community-based sample. *Child Abuse Negl.* 2007;31:1155–1168.
84. Carter J, Schechter S. Child abuse and domestic violence: creating community partnerships for safe families. Available at: <http://www.mincava.umn.edu/link/documents/fvpf1/fvpf1.shtml>. Accessed March 6, 2008.
85. Findlater JE, Kelly S. Child protective services and domestic violence. *Future Child.* 1999;9:84–96.
86. Spears L. Building bridges between domestic violence organizations and child protective services. Available at: <http://www.vaw.umn.edu/documents/dvcpv/dvcpv.pdf>. Accessed March 6, 2008.
87. Edleson JL. Should childhood exposure to adult domestic violence be defined as child maltreatment under the law? In: Jaffe PG, Baker LL, Cunningham A, eds. *Protecting Children From Domestic Violence: Strategies for Community Intervention.* New York, NY: Guilford Press; 2004:8–29.
88. Aron LY, Olson KK. Efforts by child welfare agencies to address domestic violence: the experiences of five communities. Available at: <http://www.urban.org/url.cfm?ID=406798>. Accessed December 28, 2004.
89. Oregon Department of Human Services. Child welfare practices for cases with domestic violence (2005). DHS 9200; Available at: <http://dhsforms.hr.state.or.us/Forms/Served/CE9200.pdf>. Accessed March 6, 2008.
90. Hagemester AK, Nakajima Y, Beeman SK, Edleson JL, Baker P. *Collaborating for Woman and Child Safety: A Training Curriculum for Multidisciplinary Teams to Enhance Practice and Policy When Domestic Violence and Child Maltreatment Co-occur.* St Paul: Minnesota Center Against Violence and Abuse. Available at: <http://www.mincava.umn.edu/rural/documents/cwvcs/cwvcs.html>. Accessed March 7, 2008.
91. National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. *Choose Respect.* Available at: <http://www.chooserespect.org/scripts/index.asp>. Accessed February 20, 2008.
92. Foshee VA, Bauman KE, Ennett ST, Linder GF, Benefield T, Suchindran C. Assessing the long-term effects of the safe dates program and a booster in preventing and reducing adolescent dating violence victimization and perpetration. *Am J Public Health.* 2004;94:619–624.

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