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

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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)

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.[1] Children 3 years and younger have the highest rate of victimization (16.5 per 1000).[1] Child maltreatment jeopardizes the physical, mental, social, and behavioral health of children in both the short and long terms,[2–25] 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.[26–29]

A majority of parents in the United States report using corporal punishment, such as spanking, with their children[30–32]; past-year prevalence rates seem to peak when the child is aged 3 or 4 years.[32] Corporal punishment is an important risk factor for physical child maltreatment,[33] increases risk for psychiatric morbidity as an adolescent or adult,[34] and is banned in the home in 23 countries.[35] 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.[33]

Most child maltreatment victims (83%) are abused by a parent.[1] 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.[1] 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,[36–38] maternal depression,[39,40] and unwanted or unintended pregnancy[41,42] are all associated with both child maltreatment and IPV victimization.[43] 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%.[44] Among a nationally representative sample of investigated child maltreatment cases, the past-year prevalence of IPV was 29% and the lifetime prevalence was 45%.[40] 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.[45]

Ethnic variations in rates[1,46] and consequences of child maltreatment[47] and IPV[48,49] 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).[1] This variation may arise from sociocultural 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.[50] 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.[51]

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.[52] 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, lazy, or something similar (α=0.57). The 5 physical aggression items included the following: shook, hit on the bottom with object, spanked, slapped, and pinched (α=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 (α=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).[6] Psychological and physical aggression were analyzed as continuous summary scores (range 0–125), which were calculated as recommended by the scale's author.[53] 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[54]: 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[55] and studies by Lloyd[56]: 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.[43] Parenting stress was assessed during the in-home interview using 11 items from the parenting stress index (α=0.86).[57] 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.[58] We based scoring methods, described in detail elsewhere,[59] on criteria for major depression from the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition.*[60] 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 χ^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 χ^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)
Child maltreatment proxy variables			
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
Maternal risk factors			
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
Maternal characteristics			
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
Partner characteristics			
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
Household characteristics			
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 χ^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)			
Child maltreatment											
Psychological Aggression	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Physical aggression, ρ[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%	. . .	. . .	. . .	. . .	. . .	. . .
Maternal risk factors											
Parenting stress, ρ[a] or OR[b] (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 χ^2 test was used for all other associations, except where noted. All variables had 1% or less missing data.
[a]Obtained with the Spearman rank correlation.
[b]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, 129)	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)
				Maternal characteristics				
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)
				Partner characteristics				
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 χ^2 test was used to test for any 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[61] may be limited when frequent IPV is present.[62]

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.[63–65] 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.[66]

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.[46] 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.[67] 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[68,69] 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[a]				Neglect[b]			
	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)
Maternal characteristics								
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 χ^2 test was used to test for any differences in outcome because of ethnicity, education, or relationship status.

[a]During the past month. Coded as 0 (none), 1 (1–2 times), or 2 (>2 times).

[b]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,[70] 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.[71] 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.[72,73]

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.[74–76] Nevertheless, both reciprocal IPV and male-perpetrated IPV increase the risk of partner injury[73]; also, IPV is associated with adverse health consequences for both male and female victims.[77,78])

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[52] 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.[79]

Third, IPV can include a wider range of physical, sexual, and psychological aggression behaviors than assessed in this study.[80] 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[71,81]; these children are at particularly high risk for experiencing adverse social, behavioral, and health outcomes well into adulthood.[82] 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.[83] The need to better integrate IPV and child maltreatment services and prevention has long been recognized[84–86]; 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.[87]

There is a need to expand efforts already underway to integrate IPV concerns into child welfare agency services[88,89] and to develop curriculums designed to strengthen child welfare and domestic violence agency collaborations.[90] 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,[62] 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,[91,92] 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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Human Participant Protection

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

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