

The Effects of Intimate Partner Violence Exposure on the Maternal Bond and PTSD Symptoms of Children

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Abstract

The quality of the maternal bond can be disrupted in women exposed to intimate partner violence (IPV), causing them to be less available to their children. The aim of this study was to examine difficulties in emotional regulation in women exposed to IPV and the impact of IPV on both the maternal bond and posttraumatic symptoms among children. A cross-sectional study was carried out with two groups: IPV dyads ($n = 36$) comprising mothers who had been exposed to IPV and their children, and control dyads ($n = 27$) comprising non-abused mothers and their children. Information was obtained via structured interviews including scales regarding IPV, posttraumatic stress disorder (PTSD) symptoms, maternal bond, and difficulties in emotional regulation. Correlation analyses showed a positive association between the severity of IPV, PTSD symptom severity in children, and difficulties of emotional regulation in mothers. They also showed a negative association between IPV and the quality of the maternal

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bond. Regression models demonstrated that exposure to sexual IPV, maternal difficulties in emotion regulation, and younger age of the mother are important predictors of lower quality of the maternal bond. Difficulties in emotional regulation and sexual IPV disrupted the quality of the maternal bond among women and their children. In addition, lower quality of maternal bond was associated with higher PTSD symptoms among children.

Keywords

attachment, domestic violence, PTSD, violence exposure

Introduction

Intimate partner violence (IPV) occurs in all societies, irrespective of cultural, economic, religious, or cultural aspects (Krug et al., 2002; Straus, 2006). In a population-based survey carried out in 48 countries, between 10% and 69% of women stated that they had been physically battered by an intimate male partner at some point in their life (Krug et al., 2002). In a sample of 19,568 partnered women, a population-based study (Ellsberg, Jansen, Heise, Watts, & García-Moreno, 2008) found that 17% to 71% reported experiences of physical and/or sexual IPV. The Brazilian reality demonstrates the severity of this issue: Of 2,365 women interviewed, 40% reported having suffered some kind of violence from their partners, control and physical violence being the forms most detected, followed by psychological and sexual violence (Fundação Perseu Abramo, 2010). Internationally, Brazil is listed seventh in terms of the murder of women, and the number of women's deaths tripled from 1980 to 2010, reaching a figure of 92,000 of which 43,500 were in the last decade alone (Waiselfisz, 2012).

The deleterious impacts of IPV are well known in the scientific field and are considered an alarming global public health problem. The general health consequences of IPV are diverse, and the mental health impact commonly includes difficulties in emotional dysregulation (Carpenter & Stacks, 2009; Samuelson, Krueger, & Wilson, 2012), as well as various psychopathologies such as depression and posttraumatic stress disorder (PTSD; Basile, Arias, Desai, & Thompson, 2004; Krause, Kaltman, Goodman, & Dutton, 2008; La Flair, Bradshaw, & Campbell, 2012; Stuart, Moore, Gordon, Ramsey, & Kahler, 2006). IPV also affects the children who witness it (Carpenter & Stacks, 2009); they are called "silent witnesses" and "hidden victims" (Graham-Bermann & Hughes, 2003). Children raised in homes affected by IPV are at risk of adjustment problems (Samuelson et al., 2012), internalizing and externalizing problems (MacDonell, 2012), and psychopathologies

throughout childhood (Graham-Bermann, Castor, Miller, & Howell, 2012; Graham-Bermann, Gruber, Howell, & Girz, 2009).

In the long term, the consequences have repercussions for mother–child relations. The ways in which parenting is generally conducted in such homes, particularly the way relations are established, is often influenced by the violence that occurs between the adults (Heru, Stuart, Rainey, Eyre, & Recupero, 2006). Emotional availability is affected by the occurrence of IPV; after a heated discussion, both fathers and mothers tend to be less supportive of their children (Kitzmann, 2000). In this environment, parents may be emotionally confused, less open to dialogue, and, consequently, less available to their children. A mother’s and father’s warmth is an important factor in modulating the developmental adjustment of children who have been exposed to IPV (McDonald, Jouriles, Rosenfield, & Leahy, 2012; Timmer, Thompson, Culver, Urquiza, & Alenhofen, 2012).

Considering the mother–child relationship, it is important to take into account certain differences between maternal attachment and the maternal bond. In the present article, we consider the concerns of John Bowlby, one of the most important theorists in this area; he defines attachment as the affectionate relationship between the child and the mother (or caregiver) throughout the child’s first years. Bowlby (1969, 1997, 2009) highlights the experience of attachment in the early years of life as the primary source of the child’s biological and mental development and argues that this has the function of protection for survival. The bonding process refers to a relational construct and occurs throughout the life span, not exclusively during the first years of life (Spinner, 1978; Sroufe, 1997). The maternal bond is also related to the mother’s capacity to provide a secure base for the child’s development; the child responds to this, and thus, the bonding relationship is established (Bowlby, 1969). This process is not experienced as a unilateral course, as the child plays a very important role, and his or her behaviors have a powerful influence on maternal emotions and vice versa (Crittenden & Dallos, 2009; Sroufe, 1997).

A violent context is often a risk factor for the development of low levels of maternal bonding (Levendosky, Lannert, & Yalch, 2012; Wong, Mangelsdorf, Brown, Neff, & Schoppe-Sullivan, 2009). In families affected by IPV, important deficits exist when it comes to the ability to interpret children’s needs properly, and, consequently, the chance of children developing insecure attachments is significant (Belsky et al., 2007). Although studies of IPV have frequently concentrated on its impact on women, little is known specifically about the quality of the maternal bond in this situation. As already remarked, IPV can greatly affect the quality of parental care (Levendosky et al., 2012; Timmer et al., 2012), and thus, it is important to study the maternal bond to enable the design of early psychosocial interventions for families affected by IPV.

The aim of the present article is to examine the impact that IPV and difficulties in emotional regulation have on the quality of the maternal bond among women victims of IPV and PTSD symptoms of their children. Greater understanding of these variables will improve our grasp of the repercussions of IPV beyond the impact on the women themselves, including the effect on maternal care, and will encourage further research on this important theme.

Method

This was a cross-sectional controlled study designed to compare a group of Brazilian mothers and their children who had been affected by IPV, and a group of mothers and their children who had not been affected by IPV and who showed no signs of PTSD symptoms.

Participants

IPV mothers and their children. A total of 36 mothers, all victims of IPV, were recruited through centers for helping female victims of IPV. In addition, 36 biological children of those mothers, aged between 6 and 12 years, were assessed. One child of each mother was selected to participate in the study; if the mother had more than one child in this age range, she was able to select the child who would participate. The inclusion criterion was the occurrence of IPV in the last year, as reported by the mother. IPV was identified using the Revised Conflict Tactics Scales (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996) discussed in greater detail below. Participants were excluded if the mothers presented neurological disorders, a psychiatric disorder with psychotic symptoms, severe medical illness, severe cognitive impairment, substance dependence or abuse in the past 10 days, or illiteracy. Initially, 45 women and their children were invited to participate; however, 2 of them reported substance abuse in the past 10 days, 2 presented depression with psychotic symptoms, 3 chose not to participate, and 2 did not come to the interview on the scheduled day and hour. According to Brazilian parameters, all participants reported low incomes, which are defined as lower than US\$450 per capita per month (Social quotas law n° 12.711, August 29, 2012).

Control mothers and their children. A total of 27 mothers not exposed to IPV and their 27 biological children were recruited through children's schools, women's clubs, and community associations. The selection of the children was the same as described above (the IPV children). Participants were excluded if the mothers presented neurological disorders, psychiatric disorders with psychotic symptoms, symptoms of clinical depression, symptoms

of clinical PTSD, severe medical illness, severe cognitive impairment, substance dependence or abuse in the past 10 days, illiteracy, or IPV (according to CTS2). Initially, 45 women and their children were invited to participate; however, 9 mothers reported psychological IPV, 8 presented clinical depression, and 1 did not come to the interview on the scheduled day and hour.

The Pontifical Catholic University of Rio Grande do Sul (Brazil) research ethics committee approved the study (PUCRS nº. 10/05302), and written informed consent was obtained after the study was described to all participants.

Assessment Interviews

The study consisted of a structured interview in which trained researchers asked mothers and children about the topics described in this article. Each dyad (mother–child) was interviewed separately in a 2-hr session: While one interviewer was with the child, another was with the mother in a separate room. A comprehensive questionnaire was designed for the face-to-face interviews. The questions were designed to obtain objective factual reports. The same instruments were used with the IPV dyads and the control dyads. The questionnaires and scales are described below.

Sociodemographic characteristics—mother and child. Information concerning the age, level of education of the mother and child, the marital status, and number of children per mother was obtained during the clinical interview.

The intimate partner violence—mother. The Brazilian Portuguese version of CTS2 (Moraes, Hasselmann, & Reichenheim, 2002; Straus et al., 1996) was used to assess the ways in which the couple engaged in psychological and physical attacks on each other and, also, their use of reasoning or negotiation to deal with conflict throughout the lifetime of the relationship. This scale is widely used to evaluate IPV. CTS2 items are asked in the form of pairs of 39 questions (78 items) related to what the participant did and what the partner did. Consequently, it obtains data on the behavior of both partners, even when only one of the partners is tested; thus, the mothers who participated in this study reported on both: their own and their partner's behavior. The 78 items relate to subscales measuring rates of physical violence (e.g., slapping, pushing/shoving, kicking, or beating), psychological violence (e.g., yelling/screaming, insults or name calling, threatening), sexual violence (e.g., coercing or forcing a partner to have sex), injury (e.g., bruises, scrapes, broken bones, or needing a doctor as a result of a fight), and nonviolent negotiation behaviors (e.g., expressing opinions, supporting partner's view). All violence subscales were used in the present study. This scale was also used to differentiate the

IPV dyads from the control dyads. Because we want to identify severe violence exposure, we considered a positive history of IPV when any positive answer was given in at least one of the subscales: physical, sexual, and injury. Thus, the acknowledgment of any of the aforementioned acts of physical violence, sexual violence, or injury (or the lack thereof) was used as a criterion for designating IPV dyads or control dyads in this study. The Cronbach's coefficient alpha in the present study was .90 for Total CTS2.

PTSD assessment—mother and child. Symptoms of PTSD were assessed in the mothers and the children who participated in this study. The presence and severity of symptoms of current PTSD were assessed using the PTSD Symptom Scale (PSS; Foa, Riggs, Dancu, & Rothbaum, 1993) for the mothers and the Child PTSD Symptom Scale (CPSS; Foa, Johnson, Treadwell, & Kimberli, 2001) for the children. Both PTSD scales are administered through structured interviews that were developed based on the criteria of the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM-IV*; American Psychiatric Association [APA], 1994). For this study, PTSD scales were translated into Brazilian Portuguese, a process that was carried out in five steps: translation, back translation, correction and semantic adaptation, content validation by experts, and a final critical assessment by the target population (Cohen's kappa of .75). Cronbach's coefficient alphas were .95 for Total PSS and .88 for Total CPSS.

Emotional regulation—mother. The Difficulties in Emotional Regulation Scale (DERS; Gratz & Roemer, 2004) is a 36-item self-report measure developed to examine difficulties in the ability to regulate emotions. Participants rate how often statements apply to them on a 5-point Likert-type scale. Subscales assess six dimensions of difficulties (nonacceptance of emotional responses, difficulties engaging in goal-directed behavior, impulse control difficulties, lack of emotional awareness, limited access to emotional regulation strategies, and limited access to emotional regulation strategies; see Table 1). The Portuguese version used was adapted by Coutinho, Ribeiro, Ferreirinha, and Dias (2010) to Portugal Portuguese, and therefore, we had to amend the language to Brazilian Portuguese. This process was carried out in three steps: correction and semantic adaptation, content validation by experts, and a final critical assessment by the target population (Cohen's kappa of .75). Cronbach's coefficient alpha in the present study was .95 for Total DERS.

Maternal emotional bond—mother. The Maternal Bond Inventory (Boeckel et al., 2011) is a 26-item self-report measure developed to assess the maternal

Table 1. Characteristics of Control and IPV Participants.

Variables	Control Dyads	IPV Dyads	Statistics	p
	n = 27	n = 36		
Age of mother (M, SD)	36.04 (8.31)	34.47 (6.28)	U = 450.00	.616
Age of child (M, SD)	8.93 (1.61)	8.81 (2.02)	U = 486.00	1.000
Female child	55.6	47.2	$\chi^2(1) = 0.43$.613
Mother's education (years of study; M, SD)	8.88 (3.03)	7.4 (3.65)	t(61) = 1.77	.083
Child's education (years of study; M, SD)	3.37 (1.62)	3.17 (1.75)	t(61) = 0.472	.639
Family income			$\chi^2(1) = 3.06$.155
Lower than US\$300	85.2	97.2		
Higher than US\$300 and lower than US\$450	14.8	2.8		
Mother's marital status			$\chi^2(2) = 9.60$.008
Married	55.6	19.4		
Single living with partner	44.4	75		
Divorced	0	5.6		
Mother's PTSD total score (M, SD)	2.37 (2.6)	19.39 (11.52)	U = 51.50	<.001
Clinical cut-off (%)	0	61.1	—	—
Child's PTSD total score (M, SD)	3.18 (5.5)	14.25 (9.79)	U = 159.50	<.001
Clinical cut-off (%)	14.8	66.7	$\chi^2(1) = 16.80$	<.001
Intimate partner violence toward women				
Severe psychological	0	91.7	—	—
Severe physical	0	97.2	—	—
Severe injury	0	19.4	—	—
Severe sexual	0	36.1	—	—
Parental violence toward children	0	38.9	—	—
Mother's DERS total score (M, SD)	0.91 (0.64)	1.65 (0.67)	t(60) = -4.35	<.001
DERS subscales (M, SD)				
Limited access to emotion regulation strategies	0.69 (0.66)	1.48 (1.48)	t(59) = -3.80	<.001
Nonacceptance of emotional responses	1.09 (0.98)	1.90 (1.04)	t(60) = -3.11	.003
Lack of emotional awareness	0.86 (0.74)	1.50 (0.73)	t(60) = -3.44	<.001
Impulse control difficulties	0.79 (0.76)	1.39 (1.04)	t(60) = -2.60	.012
Difficulties engaging in goal-directed behavior	1.31 (0.94)	2.02 (1.06)	t(60) = -2.74	.008
Lack of emotional clarity	0.73 (0.68)	1.57 (0.73)	t(60) = -4.60	<.001
Maternal bond total score (M, SD)	66.18 (9.07)	60.00 (11.11)	t(61) = 2.36	.021
Maternal bond subscales (M, SD)				
Factor 1. Interaction and affect toward children	52.89 (7.44)	47.42 (10.00)	t(61) = 2.39	.020
Factor 2. Perception toward children	16.11 (2.08)	15.42 (2.09)	t(61) = 1.30	.196

Note. IPV = intimate partner violence; PTSD = posttraumatic stress disorder; DERS = Difficulties in Emotion Regulation Scale.

bond between mothers and children. This instrument was built based on the Maternal Attachment Inventory (MAI; Muller, 1994) to be used regarding maternal bond with children who are between 6 and 13 years old. Two factors were identified (Boeckel et al., 2011): (a) interaction and affection of the mother toward her child (direct interaction, care, affective connection) and (b) the mother's perception regarding her bond toward her child (e.g., *I know that I am important to my son/daughter, I know the way my son/daughter is*). The Maternal Bond Inventory uses a 5-point Likert-type scale, where higher scores indicate a stronger maternal bond with the child. The Cronbach's coefficient alpha in the present study was .93 for Total Maternal Bond Inventory.

Statistical Analysis

When distributional criteria were met, parametric statistics (t tests with Levene's tests for equality of variance) were used; when data had nonparametric distributions, the Mann-Whitney U test for two group comparisons were carried out. Pearson's chi-squared tests were used to assess the associations between categorical variables and the two groups of participants (control and IPV). To correlate different variables, the Pearson or Spearman correlation tests were used according to the distribution of variables. Based on significant correlations ($p < .05$) and to test the hypothesis that IPV and emotional regulation could affect the maternal bond, a hierarchical multiple regression was conducted. To do so, we used the Durbin-Watson statistic to detect autocorrelation and ensure residuals did not affect serial correlation. The maternal bond (Maternal Bond Inventory total score) was entered as the dependent variable, and sexual violence, difficulties in emotional regulation (DERS total score), and mother's age were entered as the independent variables. Sexual violence was entered on the first step, difficulties in emotional regulation variable was entered on the second, and mother's age was entered on the third. A significance level of .05 was established for all analyses. Statistical analyses were performed using the SPSS Version 22.0 (SPSS Inc., Chicago, Illinois, the United States).

Results

Participants Characteristics

All means and standard deviations are listed in Table 1. Differences between control and IPV participants were found with regard to marital status, mothers' and children's PTSD symptoms, all subscales of the mother's DERS, maternal bond total score, and Maternal Bond Factor 1.

Table 2. Correlation Analyses.

Variables	Maternal Bond Total Score (Total Sample, $n = 63$)	
	r	p
Mother's age	.36 ^a	.004
PTSD women total score	-.26 ^a	.067
PTSD children total score	-.35 ^a	.004
DERS total score	-.40 ^b	.001
Psychological violence	-.37 ^b	.003
Physical violence	-.30 ^b	.017
Injury	-.19 ^b	.130
Sexual violence	-.50 ^b	<.001

Note. PTSD = posttraumatic stress disorder; DERS = Difficulties in Emotion Regulation Scale.

^aSpearman.

^bPearson.

Correlation Between Emotional Dysregulation and the Quality of the Maternal Bond

Significant negative correlations between diverse variables and the maternal bond total score were found among the total sample. From the demographic variables, the age of mothers was positively correlated with maternal bond. However, children PTSD symptoms, DERS, and the total scores for psychological, physical, and sexual violence were negatively associated with maternal bond. These results demonstrate that there is higher quality of maternal bonding in older women ($r = .36, p < .001$). There is lower quality of maternal bonding when there are higher PTSD symptoms among children ($r = -.35, p < .05$), higher difficulties in emotional regulation among mothers ($r = -.35, p < .05$), and a higher exposure to psychological ($r = -.35, p < .05$), physical ($r = -.31, p < .001$), and sexual ($r = -.43, p < .05$) IPV (see Table 2).

Contributory Factors for the Quality of the Maternal Bond

As Table 3 shows, of all the variables, sexual violence, DERS, and the age of mother—adjusted $R^2 = .33, F(1, 59) = 11.29, p = .036$ —are entered in the hierarchical regression model. The first step of the model shows that sexual violence accounts for 24.7% of the variance, higher levels of sexual violence being associated with lower levels of maternal bond quality. In Step 2, the difficulties in emotional regulation of mothers account for 6.8% of the variance, higher levels of DERS being correlated with lower levels of maternal

Table 3. Linear Regression Model With Sexual Violence, DERS, and Mother's Age Total Scores as Independent Variables, and Maternal Bond as the Dependent Variable.

	<i>R</i>	<i>R</i> ²	<i>B</i>	<i>SE</i>	<i>R</i> ² Change	<i>t</i>	<i>p</i>
Step 1	.50 ^a	.25			.247		
Sexual IPV			-0.50	0.21		-4.48	<.001
Step 2	.56 ^b	.31			.068		
Sexual IPV				0.21		-3.75	<.001
DERS						-2.43	.018
Step 3	.60 ^c	.36			.050		
Sexual IPV			-0.75	0.21		-3.60	<.001
DERS			-3.55	1.57		-2.26	.027
Mother's age			0.34	0.16		2.15	.036

Note. Predicting maternal bond ($n = 63$). DERS = Difficulties in Emotion Regulation Scale; IPV = intimate partner violence.

^aPredictors: (constant), sexual IPV.

^bPredictors: (constant), sexual IPV, DERS.

^cPredictors: (constant), sexual IPV, DERS, mother's age.

bond quality. Finally, Step 3 shows that the age of mothers accounts for 5% of the variance, as older mothers predicted higher maternal bond quality.

Discussion

The present study aimed to evaluate the impact of IPV exposure and difficulties in emotional regulation of mothers in the quality of maternal bond with their children. We found that intimate partner sexual violence, difficulties in emotional regulation of mothers, and younger age of mother constitute important predictors of lower maternal bond quality.

First, it is important to note certain results concerning the characteristics of the sample. As is well known, mothers who are victims of IPV demonstrate significant levels of mental health symptoms (Dillon, Hussain, Loxton, & Rahman, 2013; Graham-Bermann et al., 2012; Krause et al., 2008). Corroborating with that, our study showed greater difficulty in emotional regulation among those mothers who were victims of IPV when compared with the control group (Gross, 2008; Samuelson et al., 2012). However, these impacts are not restricted to the adults directly involved in IPV, because their children who witnessed their violence also suffer. Our results demonstrate higher levels of PTSD among children from IPV families when compared with those in the control group. Despite such effect, we cannot conclude that IPV directly affects these children because since pregnancy, they are exposed

to other variables associated with a relative lack of care. Women involved in IPV tend to avoid antenatal care (Hatcher et al., 2013) and those reporting a lifetime experience of physical or sexual IPV are more likely to be related with child malnutrition (Ziaei, Naved, & Ekström, 2012). In violent homes, parents tend to be less supportive of their children (Kitzmann, 2000), and, consequently, the children tend to feel more insecure and unprotected, leading to higher vulnerability to posttraumatic symptoms among their children (Lilly & Graham-Bermann, 2010; Levendosky, Bogat, & Martinez-Torteya, 2013).

Our correlation results reveal that older mothers reported better quality of the maternal bond. This suggests that older mothers are perhaps more mature and available to interact and respond affectively with their children, as well as to know how important they are to their children. Also, important associations can be seen between lower quality of maternal bonding and higher levels of child PTSD symptoms, maternal difficulties in emotional regulation, and severity of psychological, physical, and sexual IPV. The maternal bond and, more generally, maternal care are impaired by the IPV context. The difficulties in emotional regulation of mothers also influence their availability, undermining their capacity to respond sensitively to their children; as a result, this can lead to children experiencing difficulty in affective regulation (Levendosky et al., 2012). It is imperative to document this association because maternal care is so relevant to human health development and strongly affects the developmental adjustment and, ultimately, the children's mental health (Sroufe, 1997).

Levendosky et al. (2012) propose a theoretical model to understand the variables involved in IPV homes that may affect mother-child attachment and the intergenerational transmission of IPV. The authors state that IPV involves betrayal within an intimate relationship. This betrayal affects negatively the self-representation of the victim. When the victim has a child, this negative impact modifies the way in which she mothers and bonds with her child. Such effect can pass through generations, negatively influencing the social and emotional functioning of women and children (Levendosky et al., 2012). For this reason, it is important to consider representations of romantic relationships and the naturalization of dysfunctional intimate interactions. Children who live in IPV exposed homes are at risk of trivializing violent relations.

The most intriguing findings are the severe impacts of sexual IPV on the quality of maternal bond. Usually, sexual violence acts are restricted to occur in the couple private space; however, our results demonstrate that its effects spill over into their children. Therefore, we objectively demonstrated that intimate partner sexual violence does not respect walls and family relationship boundaries, negatively affecting children living in contexts where these are occurring.

The fact that 68.8% of the femicide rate in Brazil stems from IPV and that this violence occurs in the home context (Waiselfisz, 2012) raises questions about the number of children who are “silent witnesses” or “hidden victims,” as they are described by Graham-Bermann and Hughes (2003). McDonald, Jouriles, Ramisetty-Mikler, Caetano, and Green (2006) found that 15.5 million American children lived in a household in which IPV had occurred within the past year and approximately 7 million lived in homes in which severe IPV had occurred. It is likely that a higher number of these children also experienced lower levels of maternal bonding. As described above, in IPV contexts, maternal warmth is affected (Carpenter & Stacks, 2009; Graham-Bermann & Perkins, 2010; Kitzmann, 2000) mainly because IPV-related couples reveal lower support/engagement in relation to their children (Kitzmann, 2000). However, Timmer et al. (2012) found that mothers who were victims of IPV tended to be over-responsive and over-involved with their children in the form of caregiving control, which is typically seen in children with disorganized attachment style. Previous studies have also illustrated the repercussions of sexual IPV and its association with lower levels of child care (Ziaei et al., 2012).

However, our results should be considered in light of some limitations: (a) The cross-sectional retrospective design limited the investigation over time; therefore, we cannot rule out the possibility of PTSD remission symptoms during adolescence; (b) the relative small size and representativeness of the sample (Brazilian low income sample) might have impacted the generalizability of the outcomes and did not allow us to fully test all differences between the samples (e.g., marital status, family income, etc.); however, it is important to highlight the uniqueness of the topic and the importance of looking at consequences within family dyads; (c) the maternal bond was measured only through the self-reports of mothers, though it is known to be a bidirectional process (Noriuchi, Kikuchi, & Senoo, 2008; Sroufe, 1997); and (d) because we asked mothers to choose one child to participate if there was more than one, selection bias could be an issue.

In sum, we conclude that difficulties in emotional regulation and sexual violence affect the quality of the maternal bond among mothers who are victims of IPV. The results of this study highlight the impact of violence beyond the repercussions for the woman, emphasizing the damage to the mother–child relationship and the occurrence of posttraumatic symptoms among their children. These outcomes underline the gravity of this theme for the entire family. This study is particularly significant in Brazil because violence is a serious problem in this country, occurring at a worrying rate in communities and homes. International data reveal that Brazil is among the top 10 countries with the highest levels of murder of women victims of IPV (Waiselfisz,

2012). In addition, we propose that early interventions with couples—especially conflict resolution interventions—might be important in preventing IPV and the many harmful consequences for family relations. Strategies that support a family relational approach to prevent violence may reduce the risk of repeating this inadequate pattern of conflict resolution in other social contexts, as well as the psychological morbidity among children.

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References

- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Basile, K. C., Arias, I., Desai, S., & Thompson, M. P. (2004). The differential association of intimate partner physical, sexual, psychological, and stalking violence and posttraumatic stress symptoms in a nationally representative sample of women. *Journal of Traumatic Stress, 17*, 413-421. doi:10.1023/B:JOTS.0000048954.50232.d8
- Belsky, J., Vandell, D. L., Burchinal, M., Clarke-Stewart, K. A., McCartney, K., & M. T., Owen. (2007). Are there long-term effects of early child care? *Child Development, 78*, 681-701. doi:10.1111/j.1467-8624.2007.01021.x
- Boeckel, M. G., Wagner, A., Sohne, F., Schein, S., & Grassi-Oliveira, R. (2011). Análise Fatorial do Inventário de Percepção de Vinculação Materna. *Interamerican Journal of Psychology, 45*, 439-448.
- Bowlby, J. (1969). *Attachment: Attachment and loss*. London, England: Hogarth.
- Bowlby, J. (1997). *Formação e rompimento dos laços afetivos*. São Paulo: Martins Fontes.
- Bowlby, J. (2009). *Apego – A Natureza do Vínculo. Vol. I*. São Paulo: Martins Fontes.
- Carpenter, G. L., & Stacks, A. M. (2009). Developmental effects of exposure to intimate partner violence in early childhood: A review of the literature. *Children and Youth Services Review, 31*, 831-839. doi:10.1016/j.childyouth.2009.03.005
- Coutinho, J., Ribeiro, E., Ferreira, R., & Dias, P. (2010). Versão portuguesa da Escala de Dificuldades de Regulação Emocional e sua relação com sintomas psicopatológicos psychopathological symptoms [The Portuguese version of the Difficulties in Emotion Regulation Scale and its relationship with psychopathological symptoms]. *Revista de Psiquiatria Clínica, 37*, 145-151.

- Crittenden, P. M., & Dallos, R. (2009). All in the family: Integrating attachment and family systems theories. *Clinical Child Psychology and Psychiatry, 14*, 389-409. doi:10.1177/1359104509104048
- Dillon, G., Hussain, R., Loxton, D., & Rahman, S. (2013). Mental and physical health and intimate partner violence against women: A review of the literature. *International Journal of Family Medicine, 2013*, Article 313909. doi:10.1155/2013/313909
- Ellsberg, M., Jansen, H. A. F. M., Heise, L., Watts, C. H., & García-Moreno, C. (2008). Intimate partner violence and women's physical and mental health in the WHO multi-country study on women's health and domestic violence: An observational study. *The Lancet, 371*, 1165-1172.
- Foa, E. B., Johnson, K. M., Treadwell, N. C. H., & Kimberli, R. F. (2001). The child PTSD Symptom Scale: A preliminary examination of its psychometric properties. *Journal of Clinical Child & Adolescent Psychology, 30*, 376-384.
- Foa, E. B., Riggs, D. S., Dancu, C. V., & Rothbaum, B. O. (1993). Reliability and validity of a brief instrument for assessing post-traumatic stress disorder. *Journal of Traumatic Stress, 6*, 459-473.
- Fundação Perseu Abramo. (2010). *Mulheres brasileiras e gênero nos espaços público e privado*. [Brazilian women and gender in public and private spaces]. Retrieved from <http://www.fpabramo.org.br/sites/default/files/pesquisaintegra.pdf>
- Graham-Bermann, S. A., Castor, L. E., Miller, L. E., & Howell, K. H. (2012). The impact of intimate partner violence and additional traumatic events on trauma symptoms and PTSD in preschool-aged children. *Journal of Traumatic Stress, 25*, 393-400. doi:10.1002/jts
- Graham-Bermann, S. A., Gruber, G., Howell, K. H., & Girz, L. (2009). Factors discriminating among profiles of resilience and psychopathology in children exposed to intimate partner violence (IPV). *Child Abuse & Neglect, 33*, 648-660. doi:10.1016/j.chiabu.2009.01.002
- Graham-Bermann, S. A., & Hughes, H. M. (2003). Intervention for children exposed to interparental violence (IPV): Assessment of needs and research priorities. *Clinical Child and Family Psychology Review, 6*, 189-204.
- Graham-Bermann, S. A., & Perkins, S. (2010). Effects of early exposure and partner violence (IPV) on. *Violence and Victims, 25*, 427-440. doi:10.1891/0886-6708.25.4.427
- Gratz, K. L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in Emotion Regulation Scale. *Journal of Psychopathology and Behavioral Assessment, 26*, 41-54. doi:10.1023/B:JOB.A.0000007455.08539.94
- Gross, J. J. (2008). Emotional regulation. In M. Lewis, J. M. Haviland-Jones, & L. F. Barrett (Eds.), *Handbook of Emotions* (pp. 497-512). New York, NY: The Guilford Press.
- Hatcher, A. M., Romito, P., Odero, M., Bukusi, E. A., Onono, M., & Turan, J. M. (2013). Social context and drivers of intimate partner violence in rural Kenya: Implications for the health of pregnant women. *Culture, Health & Sexuality, 15*, 404-419. doi:10.1080/13691058.2012.760205

- Heru, A. M., Stuart, G. L., Rainey, S., Eyre, J., & Recupero, P. R. (2006). Prevalence and severity of intimate partner violence and associations with family functioning and alcohol abuse in psychiatric inpatients with suicidal intent. *Journal of Clinical Psychiatry, 67*, 23-29.
- Kitzmann, K. M. (2000). Effects of marital conflict on subsequent triadic family interactions and parenting. *Developmental Psychology, 36*, 3-13.
- Krause, E. D., Kaltman, S., Goodman, L. A., & Dutton, M. A. (2008). Avoidant coping and PTSD symptoms related to domestic violence exposure: A Longitudinal Study. *Journal of Traumatic Stress, 21*, 83-90. doi:10.1002/jts.20288
- Krug, E., Dahlberg, L. L., Mercy, J. A., Zwi, A. B., & Lozano, R. (2002). *World report on violence and health*. Geneva, Switzerland: World Health Organization.
- La Flair, L. N., Bradshaw, C. P., & Campbell, J. C. (2012). Intimate partner violence/abuse and depressive symptoms among female health care workers: Longitudinal findings. *Women's Health Issues, 22*, e53-e59. doi:10.1016/j.whi.2011.07.001
- Levendosky, A. A., Bogat, G. A., & Martinez-Torteya, C. (2013). PTSD symptoms in young children exposed to intimate partner violence. *Violence Against Women, 19*, 187-201. doi:10.1177/1077801213476458
- Levendosky, A. A., Lannert, B., & Yalch, M. (2012). The effects of intimate partner violence on women and child survivors: An attachment perspective. *Psychodynamic Psychiatry, 40*, 397-433. doi:10.1521/pdps.2012.40.3.397
- Lilly, M. M., & Graham-Bermann, S. A. (2010). Intimate partner violence and PTSD: The moderating role of emotion-focused coping. *Violence and Victims, 25*, 604-616. doi:10.1891/0886-6708.25.5.604
- MacDonell, K. W. (2012). The combined and independent impact of witnessed intimate partner violence and child maltreatment. *Partner Abuse, 3*, 358-379.
- McDonald, R., Jouriles, E. N., Ramisetty-Mikler, S., Caetano, R., & Green, C. E. (2006). Estimating the number of American children living in partner-violent families. *Journal of Family Psychology, 20*(1), 137-142. doi:10.1037/0893-3200.20.1.137
- McDonald, R., Jouriles, E. N., Rosenfield, D., & Leahy, M. M. (2012). Children's questions about interparent conflict and violence: What's a mother to say? *Journal of Family Psychology, 26*, 95-104. doi:10.1037/a0026122
- Moraes, C. L., Hasselmann, M. H., & Reichenheim, M. E. (2002). Adaptação transcultural para o português do instrumento "Revised Conflict Tactics" violência entre casais [Portuguese-language cross-cultural adaptation of the Revised Conflict Tactics Scales (CTS2), an instrument used to identify violence in couples.] *Cadernos de Saúde Pública, 18*, 163-176.
- Muller, M. E. (1994). A questionnaire to measure mother to infant attachment. *Journal of Nursing Measurement, 2*, 129-141.
- Noriuchi, M., Kikuchi, Y., & Senoo, A. (2008). The functional neuroanatomy of maternal love: Mother's response to infant's attachment behaviors. *Biological Psychiatry, 63*, 415-423. doi:10.1016/j.biopsych.2007.05.018
- Samuelson, K. W., Krueger, C. E., & Wilson, C. (2012). Relationships between maternal emotion regulation, parenting, and children's executive functioning in

- families exposed to intimate partner violence. *Journal of Interpersonal Violence*, 27, 3532-3550. doi:10.1177/0886260512445385
- Spinner, M. R. (1978). Maternal-want bonding. *Canadian Family Physician*, 24, 1151-1153.
- Sroufe, L. A. (1997). *Emotional development: The organization of emotional life in the early years*. Cambridge, UK: Cambridge University Press.
- Straus, M. A. (2006). Dominance and symmetry in partner violence by male and female university students in 32 nations. *Children and Youth Services Review*, 30, 252-275.
- Straus, M. A., Hamby, S. L., Boney-McCoy, S., & Sugarman, D. B. (1996). The Revised Conflict Tactics Scales (CTS2). *Journal of Family Issues*, 17, 283-316.
- Stuart, G. L., Moore, T. M., Gordon, K. C., Ramsey, S. E., & Kahler, C. W. (2006). Psychopathology in women arrested for domestic violence. *Journal of Interpersonal Violence*, 21, 376-389. doi:10.1177/0886260505282888
- Timmer, S. G., Thompson, D., Culver, M., Urquiza, A. J., & Altenhofen, S. (2012). Mothers' physical abusiveness in a context of violence: Effects on the mother-child relationship. *Development and Psychopathology*, 24, 79-92. doi:10.1017/S0954579411000678
- Waiselfisz, J. J. (2012). *Mapa da Violência 2012*. Rio de Janeiro, Brazil: Centro Brasileiro de Estudos Latino-Americanos.
- Wong, M. S., Mangelsdorf, S. C., Brown, G. L., Neff, C., & Schoppe-Sullivan, S. J. (2009). Parental beliefs, infant temperament, and marital quality: Associations with infant-mother and infant-father attachment. *Journal of Family Psychology*, 23, 828-838. doi:10.1037/a0016491
- Ziaei, S., Naved, R. T., & Ekström, E. C. (2012). Women's exposure to intimate partner violence and child malnutrition: Findings from demographic and health surveys in Bangladesh. *Maternal & Child Nutrition*, 10, 347-359. doi:10.1111/1/j.1740-8709.2012.00432

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