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Incidence and risk factors for intimate partner violence during the postpartum period

ABSTRACT

OBJECTIVE: To estimate the incidence and identify risk factors for intimate partner violence during postpartum.

METHODS: This prospective cohort study was conducted with women, aged between 18-49 years, enrolled in the Brazilian Family Health Strategy in Recife, Northeastern Brazil, between 2005 and 2006. Of the 1.057 women interviewed during pregnancy and postpartum, 539 women, who did not report violence before or during pregnancy, were evaluated. A theoretical-conceptual framework was built with three levels of factors hierarchically ordered: women's and partners' sociodemographic and behavioral characteristics, and relationship dynamics. Incidence and risk factors of intimate partner violence were estimated by Poisson Regression.

RESULTS: The incidence of violence during postpartum was 9.3% (95%CI 7.0;12.0). Isolated psychological violence was the most common (4.3%; 95%CI 2.8;6.4). The overlapping of psychological with physical violence occurred at 3.3% (95%CI 2.0;5.3) and with physical and/or sexual in almost 2.0% (95%CI 0.8;3.0) of cases. The risk of partner violence during postpartum was increased for women with a low level of education (RR = 2.6; 95%CI 1.3;5.4), without own income (RR = 1.7; 95%CI 1.0;2.9) and those who perpetrated physical violence against their partner without being assaulted first (RR = 2.0; 95%CI 1.2;3.4), had a very controlling partner (RR = 2.5; 95%CI 1.1;5.8), and had frequent fights with their partner (RR = 1.7; 95%CI 1.0;2.9).

CONCLUSIONS: The high incidence of intimate partner violence during postpartum and its association with aspects of the relationship's quality between the couple, demonstrated the need for public policies that promote conflict mediation and enable forms of empowerment for women to address the cycle of violence.

DESCRIPTORS: Violence Against Women. Spouse Abuse. Battered Women. Pregnant Women. Postpartum Period. Cohort Studies.

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INTRODUCTION

Many studies on violence committed against women have identified the victim's intimate partner as the most common aggressor.^{5,9,19} These studies have also estimated its magnitude⁷ and the factors associated with intimate partner violence (IPV) before and during pregnancy¹⁹ as well as evaluated its impact on the physical and mental health of women^{2,16} and their children.⁶ However, postpartum IPV has been studied by few researchers.^{4,8-12,17,18,23}

Postpartum IPV prevalence varies from 8.3% in China¹⁰ to 24.2% in Sweden.¹¹ The incidence of any type of postpartum IPV (psychological, physical and sexual) found in a population-based study by Guo et al¹⁰ (2004), in China, was around 2.5%. Whereas Hedin¹¹ (2000) observed an incidence of 69.0% in a sample of 132 women attended, eight weeks after childbirth, in three prenatal clinics in Sweden. The incidence of physical violence was found in less than 1.0% of women in the United States¹⁸ in a population-based study, and at 11.0%,⁹ in a sample of 175 women receiving care at a prenatal clinic at a university hospital. These differences may have been influenced by the different methodologies, instruments, sample compositions and the postpartum period in which the interview was conducted, which compromised the comparability, especially with respect to the types of violence studied.

Intimate partner violence against women of reproductive age constitutes a public health problem and has attracted interest from scientific and political fields. Nevertheless, no articles on the incidence and risk factors for postpartum IPV in Brazil were found up to the conclusion of this study.

The risk factors for IPV during pregnancy and postpartum are similar to those found in other periods of life: younger women,^{9,18} with no partner,⁴ lower education⁸ and precarious socioeconomic conditions,²² use of alcohol and illicit drugs by the woman and her partner,⁴ partner's aggressive behavior outside the home,^{1,22} length of the relationship,²² difficult communication with the partner,¹⁶ fights between the couple,¹⁹ partner suspicion of infidelity,¹² physical violence by the woman against her partner without being assaulted first²⁴ and controlling behavior by a partner.^{7,22} Another IPV risk factor is the experience of woman or partner, in childhood or adolescence, with IPV against their mother or personal experience (direct) of violence perpetrated by a relative during childhood or adolescence, indicating another serious problem – the transgenerational transmission of violence.^{5,6}

The aim of this study was to evaluate the incidence of intimate partner violence during postpartum and identify its risk factors.

METHODS

This cohort study was performed at the *Distrito Sanitário II* (one of the six health areas) in a poor region of the city of Recife, PE, in the Northeastern region of Brazil.

All pregnant women (n = 1,133), aged from 18 to 49 years old, who were enrolled in the Brazilian Family Health Strategy of the district were considered eligible. Twelve of these women did not complete the questionnaire: five were homeless, three moved away from the study area and four could not be found by the interviewers despite several visits. Once the losses were accounted for, 1,121 (98.9%) pregnant women were interviewed. 1,057 of these women were interviewed again during postpartum. Sixty-four women dropped out between pregnancy and postpartum, two of these for being unable to attend the second interview, three deaths, 37 who changed their address, four who ended up living on the street, 13 who moved to areas controlled by drug dealers and five who refused to participate. The 64 women who were not interviewed during postpartum had lower education (p = 0.001), but no statistically significant difference was observed regarding the frequency of violence during pregnancy, or with any other socioeconomic and demographic variables.

The first contact with the pregnant women was made during their prenatal consultation. The pregnant women were identified from the prenatal care records of 42 Family Health Strategy teams. Records from community health agents were also evaluated so as to include women not receiving antenatal care at the family health strategy units. The preferred option was for the prenatal interview to take place at the health unit, but some women were interviewed at home, when requested.

The women, during their postpartum period, were contacted during childcare consultations or at home, following the same pattern that was established for interviews during pregnancy. Most of the interviews were held at the interviewees' homes between May and December 2006.

The 518 women who reported IPV before and during pregnancy were excluded to estimate the incidence, leaving 539 women who were reinterviewed up to 12 months after childbirth.

Two questionnaires were applied: one during pregnancy and the other during the postpartum period. Data were collected between July 2005 and December 2006 by female interviewers.

Confidentiality and privacy for those interviewed were guaranteed. Regardless of whether or not the

women had experienced IPV, all received specific information on social services, health, legal and law enforcement, which were made available in the study area. Services that provide assistance to female victims of violence were solicited to provide help to any women interviewed who was suffering from domestic violence.

The IPV-related questions were prepared referring to the questionnaire of the World Health Organization Multi-country Study on Women’s Health and Domestic violence against women, which has already been validated in Brazil.²⁰

The intimate partner was defined as a partner or former partner whom the woman is living or used to live with, regardless of any formal union and whom the woman was having or had had sexual relations with.¹⁶

Questions to identify physical violence were characterized as physical aggression or use of weapons or objects to cause injury; psychological violence as threatening behavior, humiliation or insult; and sexual violence as sexual relations imposed by physical force or threats and any imposed acts that were considered humiliating. Women who answered “Yes” to at least one of the questions that referred to each type of violence were considered a positive case. The time of every report of violence was explored

about its occurrence before and during pregnancy and postpartum. Additional information about the study methods are reported in other publications.^{7,16}

The analysis was guided by a theoretical and conceptual model (Figure 1), which describes the hierarchical relationships between postpartum IPV risk factors, divided into three levels of determinants (proximal, intermediate and distal).²⁵

Level 1 (distal) included sociodemographic characteristics of the woman and her partner: age (< 20 years; ≥ 20 years), race/skin color (white; non-white), years in education (< 9 years; ≥ 9 years) and employment status (inactive; active). The following variables were also taken into account for the woman: currently living with partner (yes; no), housing status (owner; not owner) and own income (yes; no).

Level 2 (intermediate) included behavioral variables, with answers (yes; no) about the women: tobacco use, alcohol abuse and illicit drug use; and answers (yes; no) about the partner: alcohol abuse, illicit drug use and aggressive behavior outside the home.

Level 3 (proximal) included the dynamics of the relationship: relationship duration (≤ 1 year; > 1 year), fights between the couple (≥ 1 time/month; < 1 time/month), physical violence committed by the

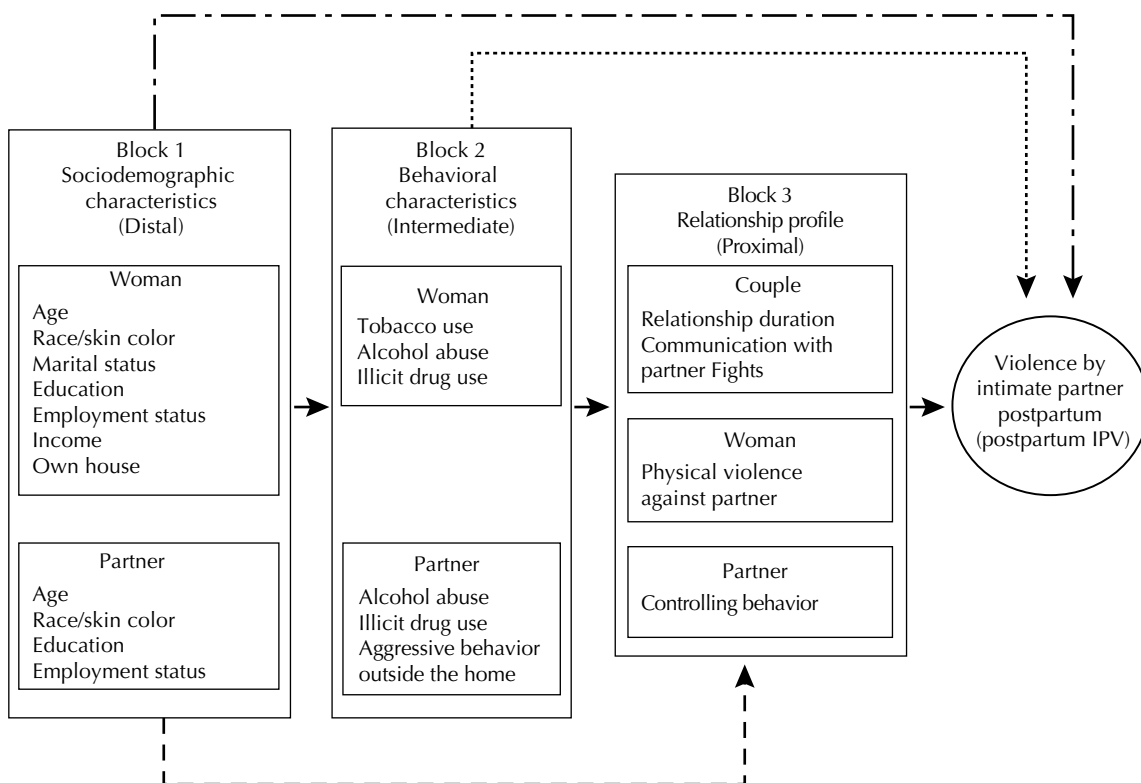


Figure 1. Theoretical-conceptual hierarchical model of risk factors for incidence of intimate partner violence postpartum.

women against her partner without being assaulted first (yes; no), communication with the partner (good; difficult), and controlling behavior by the partner (none; moderate; high). More detailed descriptions of these last two variables can be found in published literature.¹⁶ Analysis was performed using Stata, version 10.1 software. Poisson regression was used to estimate crude and adjusted relative risk (RR), and the 95% confidence interval of the association between postpartum IPV and the explanatory variables.

The analysis strategy for the hierarchical model of determination, following the distal-proximal order, which made it possible to evaluate whether the effect of risk factors on postpartum IPV, was direct or mediated by other factors.^{5,25} Model 1 included variables from levels 1, 2 and 3, which were adjusted by the variables at the same level. In model 2, variables from level 2 were adjusted for the variables from the same level and for those that remained in model 1. In model 3, variables from level 3 were adjusted for those that remained in models 1 and 2.

The statistically significant variables ($p \leq 0.05$) in model 1 were kept in the subsequent models. The previously tested block, which lost its significance when included in a new block, remained in the model.

When the three hierarchical levels are considered, the model presents: a) estimates for the effects of sociodemographic characteristics of the woman and her partner on postpartum IPV, not mediated by variables from the intermediate and proximal levels (dashed and dotted arrows in Figure 1); b) estimates for the effects of sociodemographic characteristics of the woman and her partner on the relationship dynamics, not mediated by the intermediate level (dashed arrow); c) estimates for the effects of the behavior of the woman and her partner on postpartum IPV, adjusted for variables from the distal level and not mediated by variables from the proximal level (dotted arrow); and d) estimates for the effects of the variables of the relationship dynamics on the postpartum IPV, adjusted for variables from the distal and intermediate levels.

This research was approved by the Ethics Committee at the Federal Universidade Federal de Pernambuco (Protocol 303/2004). All participants signed an informed consent term.

RESULTS

The incidence of some kind of postpartum IPV (Figure 2) was 9.3% (95%CI 7.0;12.0), with isolated psychological violence being more common (4.3%; 95%CI 2.8;6.4) than overlapping psychological and physical violence (3.3%; 95%CI 2.0;5.3) and psychological and/or physical and/or sexual violence

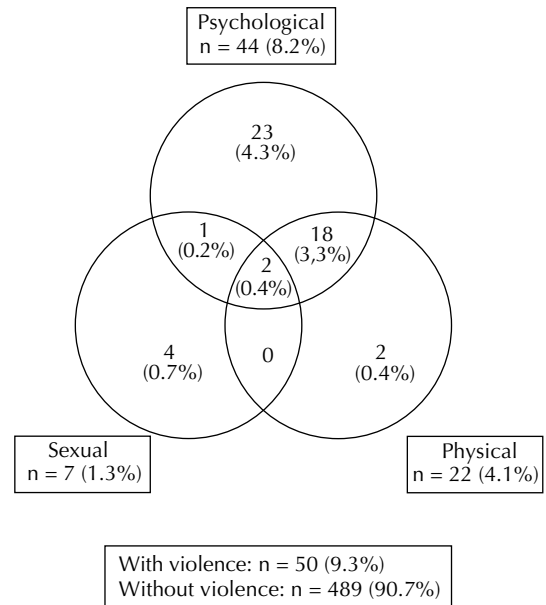


Figure 2. Incidence of psychological, physical and sexual violence by intimate partner postpartum. Recife, PE, Northeastern Brazil, 2005-2006.

(1.7%; 95%CI 0.8;3.0). Sexual violence was the least frequent and all the cases occurred in the first 40 days of postpartum.

The risk of postpartum IPV was most common among women without own income, those who had less than nine years of education, who were not living with their intimate partner when the interview was held or whose partners abused alcohol and used illicit drugs (Table 1). Postpartum IPV was also more common in women, who had been in their relationship for less than one year, those with a very controlling partner, those who reported having frequent fights with their partner or who had committed physical assaults against their partner without being assaulted first (Table 1).

Table 2 shows the results of the hierarchical analysis. The risk of postpartum IPV was higher for women with low education (RR = 2.6; 95%CI 1.3;5.4) with no personal income (RR = 1.7; 95%CI 1.0;2.9), which physically attacked the partner without being assaulted first (RR = 2.0; 95%CI 1.2;3.4), had a very controlling partner (RR = 2.5; 95%CI 1.1;5.8) and had frequent fights with their partner (RR = 1.7; 95%CI 1.0;2.9).

The association between alcohol abuse by the partner and postpartum IPV lost statistical significance when adjusted for factors related to sociodemographic conditions.

DISCUSSION

This is the first known Brazilian cohort study to estimate the incidence and risk factors for postpartum IPV. The

Table 1. Association of sociodemographic, behavioral characteristics and the relationship profile with incidence of violence by intimate partner postpartum. Recife, PE, Northeastern Brazil, 2005-2006.

Variable	n = 539	%	Cases (n = 50)	%	RR	95%CI
Sociodemographic characteristic						
Age (years)						
≥ 20	469	87.01	41	8.74	1.0	–
< 20	70	12.99	9	12.86	1.5	0.7;2.9
Race/skin color						
White	112	20.78	11	9.82	1.0	–
Non-white	427	79.22	39	9.13	0.9	0.5;1.8
Education of the women (years of study)						
≥ 9	221	41.00	9	4.07	1.0	–
< 9	318	59.00	41	12.89	3.2	1,6;6,4 ^a
Marital status						
With partner	477	88.50	40	8.39	1.0	–
Without partner	62	11.50	10	16.13	1.9	1.0;3.6 ^b
Employment status						
Other	148	27.46	9	6.08	1.0	–
Unemployed	391	72.54	41	10.49	1.7	0.8;3.5
Own income						
Yes	316	58.63	23	7.28	1.0	–
No	223	41.37	27	12.11	1.6	0.9;2.8
Own house						
Yes	363	67.35	32	8.82	1.0	–
No	176	32.65	18	10.23	1.2	0.7;2.0
Behavioral characteristic						
Tobacco use						
No	482	89.42	42	8.71	1.0	–
Yes	57	10.58	8	14.04	1.6	0.8;3.2
Alcohol abuse						
No	461	85.53	39	8.46	1.0	–
Yes	78	14.47	11	14.10	1.7	0.9;3.1
Illicit drug use						
No	535	99.26	49	9.16	1.0	–
Yes	4	0.74	1	25.00	2.7	0.5;15.2
Alcohol abuse by partner						
No	347	64.38	25	7.20	1.0	–
Yes	192	35.62	25	13.02	1.8	1.1;3.0 ^b
Illicit drug use by partner						
No	498	92.39	43	8.63	1.0	–
Yes	41	7.61	7	17.07	1.9	0.9;4.1
Aggressive behavior by the partner outside the home						
No	496	92.02	45	9.07	1.0	–
Yes	43	7.98	5	11.63	1.3	0.5;3.0

Continue

Continuation						
Related to the couple						
Relationship length (years)						
> 1	406	75.32	32	7.88	1.0	–
≤ 1	133	24.68	18	13.53	1.7	1.0;2.9 ^b
Communication with partner						
Good	494	91.65	43	8.70	1.0	–
Difficult	45	8.35	7	15.56	1.9	0.8;3.7
Fights (twice a month)						
< 1	401	74.40	21	7.23	1.0	–
≥ 1	138	25.60	29	15.22	2.1	1.2;3.6 ^b
Related to the woman						
Physical violence committed by the women against the partner without being assaulted first						
No	436	80.89	31	7.11	1.0	–
Yes	103	19.11	19	18.45	2.6	1.5;4.4 ^a
Related to the partner						
Controlling behavior						
None	220	40.82	11	5.00	1.0	–
Moderate	276	51.21	31	11.23	2.2	1.2;4.4 ^b
High	43	7.98	8	18.60	3.7	1.6;8.7 ^b

^a $p < 0.001$.

^b $p \leq 0.05$.

data show a high incidence of postpartum IPV associated with gender inequality in the relationship.

The incidence of postpartum IPV was higher than that found by Guo et al¹⁰ (2004) and by Martin et al¹⁸ (2001), who evaluated postpartum physical violence. However, it was lower than the incidence of physical violence found by Gielen et al⁹ (1994) and the three types of violence cited by Hedin (2000).¹¹

As in other studies the overlapping of different types of violence was frequent.¹⁰ The highest incidence of psychological violence alone or overlapping with other types had been reported in some studies,^{4,17} but differs from a study performed in China,¹⁰ that found psychological violence to be less common than sexual or physical violence. The low percentage of psychological violence reported in some studies may reflect cultural influences and structured relationships in gender inequality, which make it difficult for women to recognize situations that are considered psychological abuse. According to Charles and Perreira⁴ (2007), the high percentage of psychological violence during postpartum can be due to high levels of stress and discord, which are associated with the significant life changes that occur for a woman or a couple when a new child is born.

In this study, all episodes of sexual violence reported occurred in the first 40 days after childbirth. Macy et al¹⁷ (2007) found a higher percentage of sexual violence in the first month of postpartum. For Jasinski¹³ (2004), this

may result of less interest of women in sexual activity in the immediate postpartum, which is possibly a result of their special hormonal state following childbirth. In addition, Ansara et al² (2005) showed that women who have recently given birth may experience physical problems, ranging from fatigue to pain in various parts of the body, especially for those who are victims of IPV. Women also face problems of psychosocial adjusting to motherhood and difficulties regarding lack of support and understanding of the dynamics of puerperium, particularly from their partner.

A varied group of potential risk factors for postpartum IPV emerged during the bivariate analysis. However, during the hierarchical analysis, remained associated with the incidence of postpartum IPV women with low education, without own income and those who physically abused their partner without being assaulted first; frequent fights between the couple and controlling behavior by the partner.

The risk of postpartum IPV found in this study was higher for women who had less than nine years of schooling, which suggest the importance of education for empowerment, self-confidence and an active stance in society. Women's higher levels of schooling can also be one of the factors that make them more vulnerable to IPV,⁹ highlighting the gender inequality that permeates violent relationships and the importance of promoting equal access to education for men and women.¹

Table 2. Risk factors for incidence of intimate partner violence postpartum. Recife, PE, Northeastern Brazil, 2005-2006.

Variable	Model 1 ^a		Model 2 ^b		Model 3 ^c	
	RR	95%CI	RR	95%CI	RR	95%CI
Sociodemographic characteristic						
Education of the women (years of study)						
≥ 9	1.0		1.0		1.0	
< 9	3.0	1.5;6.0 ^d	3.0	1.5;6.1 ^d	2.6	1.3;5.4 ^d
Own income						
Yes	1.0		1.0		1.0	
No	1.7	1.0;2.9 ^e	1.7	1.0;2.8 ^e	1.7	1.0;2.9 ^e
Behavioral characteristic						
Alcohol abuse by partner						
No	1.0		1.0		1.0	
Yes	1.7	1.0;2.9 ^e	1.6	0.9;2.7	1.5	0.9;2.7
Relationship profile						
Relationship length (years)						
> 1	1.0				1.0	
≤ 1	1.6	0.9;2.7			1.4	0.8;2.4
Fights (twice a month)						
< 1	1.0				1.0	
≥ 1	1.7	1.0;3.0 ^e			1.7	1.0;2.9 ^e
Physical violence against the partner without being assaulted first						
No	1.0				1.0	
Yes	2.0	1.2;3.5 ^e			2.0	1.2;3.4 ^e
Controlling behavior						
None	1.0				1.0	
Moderate	1.9	0.9;3.7			1.8	0.9;3.4
High	2.6	1.1;6.3 ^e			2.5	1.1;5.8 ^e

^a Blocks 1, 2 and 3 individually adjusted.

^b Block 2 adjusted by block 1.

^c Block 3 adjusted by blocks 1 and 2.

^d $p < 0.01$.

^e $p < 0.05$.

The lack of women's financial autonomy demonstrated by not having own income was associated with incidence of postpartum IPV, probably for making the woman more dependent upon the man, for her own and her children's survival. This vulnerability¹⁴ hinders the possibilities of negotiating changes in the relationship, of separating from the partner or of seeking help when assaulted. In addition, women living in poverty are exposed to more severe and frequent IPV. Financially independent women can become more empowered in certain contexts, but not in those where women's economic activity can be understood as a challenge to male identity of power and control.^{1,14}

Couples who quarreled frequently showed increased risk of postpartum IPV. For Jasinski¹³ (2004), couples with a newborn child often experience sleepless nights, and the changes in family dynamics may cause arguments

between the couple, especially regarding sexual activity, which can lead to increased sexual violence. Other factors, suggested by Stewart²³ (1994), are increasing financial responsibility, women's physical changes and couples adjusting to their new roles of father and mother and other family relationships. This context, which includes interpersonal conflict, dissatisfaction with the relationship, poor communication and difficult for problem solving strengthens the role of the relationship dynamics between the couple regarding the incidence of IPV.³

The association of controlling behavior with postpartum IPV, found during this study, was also shown in other studies on IPV.^{1,7,22} Controlling behavior may reflect the increased vulnerability for IPV of women living in social contexts of gender inequality.¹⁴

Physical aggression perpetrated by the woman against her partner was also reported by Swan and Snow²⁴ (2006)

as a strong risk factor for violence against women. These authors consider contextual factors to understand the reasons that lead a woman assaulting her partner. They argue that this action can be an expression of the woman's desire to defend herself and their children from physical harm; but it can also go beyond self-defense and include anger, revenge and the desire to control the partner.

In a study by Guo et al¹⁰ (2004), 44.6% of women responded all suffered aggressions, using active strategies to maximize their security, whereas a study by Silva et al²¹ (2012) shows a higher percentage (85.0%). Some studies that evaluated the bidirectionality of violence between partners found that the frequency of IPV perpetrated by women was higher, but resulting serious injury was more common when the man was the perpetrator.²⁴

Alcohol abuse by the partner was associated with postpartum IPV, but lost statistical significance when adjusted to the socioeconomic conditions. The association between alcohol abuse by the partner and IPV is still controversial. This association depends on the different ways of measuring alcohol use, types of samples and violence, individual partner characteristics, situational variables and relationship factors.^{1,12,14}

This study has several advantages: it is a population-based cohort study on gender violence and complements previous results from prospective studies on postpartum IPV;^{8,10,12,17,18,23} it evaluates three kinds of violence; the questionnaire used is internationally recognized,⁷ it is validated in Brazil²⁰ and gauges violence based on specific acts, which increases the reliability of the results; and it has a theoretical-conceptual hierarchical model that aims to integrate contextual dimensions to understand why violence in intimate relationships exists.³

Some limitations should be considered. Violence perpetrated by an intimate partner is a complex, delicate and intimate topic. Thus, women's psychological resources used to deal with the trauma suffered and their difficulties and obstacles that result from this experience can interfere with their willingness to talk about it. Women may not always recognize their experience of IPV when questioned in some situations, or they can minimize the importance of IPV by considering it to be natural,¹⁵ which may contribute to the seriousness

of these actions being underestimated. In addition to these factors, which are intrinsic to woman, others may cause violence to be underestimated, such as: the non-empathetic interviewer-interviewee relationship, the interview location, the woman's insecurity about interview confidentiality, the current relationship with the partner, the sense of fear regarding the partner-aggressor and the protection that the woman gives the partner based on her desire to maintain the relationship, especially if he is the father of the child; and among many other factors, the stigma and the shame of being assaulted.⁸ With the objective of minimizing those limitations, interviewers selected had experience in dealing with "violence against women" and were properly trained and monitored during the field work.

In Brazil, the social and institutional responses to demands from women's movements have resulted in greater IPV awareness. However, cases reported by women and cases identified and reported by institutions and health professionals still continue to be underestimated.¹⁵ The high observed incidence of VPI during postpartum may still be underestimated and shows that postpartum is a not period of security for either the woman or her child. Women reporting violence is dependent on, as well as various other factors, the socioeconomic conditions of women and their partners. It is also dependent on personal concepts and sociocultural contexts, in which hierarchy is more or less legitimized, which contributes to the increase or decrease in reports of violence.^{4,7,15,18}

This study showed a high incidence of IPV, which involved a complex network of risk factors, with emphasis on the quality of the affective-sexual relationship. In this sense, to reduce the incidence of IPV, in addition to the public policy of protection and assistance to women, preventive measures that foster conflict mediation and seek social and gender equity would be needed. In this context, another important aspect is that, in addition to women, children are also exposed to IPV during their vulnerable and early stage of development. Therefore, childcare consultations are opportunities for the health professional to build a trusting relationship with the mother, which can facilitate strategies for disclosing violence and enable to find ways of empowerment for women to face the cycle of violence.

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