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Physical intimate partner violence during gestation as a risk factor for low quality of prenatal care

ABSTRACT

OBJECTIVE: To evaluate physical intimate partner violence during gestation as an independent risk factor for low quality of prenatal care.

METHODS: A cross-sectional study was carried out at three public maternity wards of the municipality of Rio de Janeiro (Southeastern Brazil). The 528 puerperal women included in the study were selected by simple random sampling from all babies born at term in 2000. Prenatal care information was collected through the pregnant woman's card and face-to-face interviews. The Kotelchuck index was employed to assess the quality of prenatal care. In order to identify violence situations, the Brazilian version of the instrument Revised Conflict Tactics Scales was used. Non-conditional logistic regression was used to assess the effect of exposure, after controlling for confounding variables.

RESULTS: Even after adjustment for socioeconomic, demographic, reproductive, and couple's lifestyle variables, physical intimate partner violence during gestation remained associated with low quality of prenatal care. Women exposed to physical violence during gestation had 2.2 times more chance of presenting inadequate prenatal care compared to those without history of physical violence.

CONCLUSIONS: These findings point to the need of identifying family conflict situations since the beginning of prenatal care in order to address the issue and enable higher adherence to follow-up among victimized pregnant women.

DESCRIPTORS: Pregnancy. Battered Women. Spouse Abuse. Violence Against Women. Prenatal Care. Domestic Violence.

INTRODUCTION

The healthcare services prioritize maternal and child care, mainly care provided during gestation. During prenatal care, it is possible to conduct health promotion and prevention actions, besides monitoring and treating conditions that may lead to adverse outcomes to the pregnant woman and the fetus. Therefore, monitoring the quality of prenatal care is fundamental to situational diagnosis and health policies planning.[a]

In Brazil, research indicates that the quality of prenatal care has wide variations across the country's regions.[20] This variation is explained by the different quality levels of the services and also by the heterogeneity of the indicators used in the

[a] Ministério da Saúde. Pré-natal e puerpério: atenção qualificada e humanizada: manual técnico. 2.ed. Brasília: Secretaria de Atenção à Saúde; 2005.

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Received: 5/18/2009
Approved: 2/8/2010

Article available from: www.scielo.br/rsp

assessment. Although services coverage has improved in the last years, achieving 99% in some municipalities, and the average number of medical visits has increased in many cities, many pregnant women begin to attend prenatal visits after the first trimester of gestation, attend less prenatal visits than recommended and their routine complementary exams are not guaranteed.[3,28] Aiming at the improvement in prenatal care quality, studies have attempted to identify factors associated with the quality of the provided assistance. However, the majority of them are limited to the exploration of the role of the pregnant women's socioeconomic and demographic profile and/or of the healthcare services' characteristics. Such studies have suggested that the quality of prenatal care is poorer among pregnant women who are single, adolescent, have a higher number of children, low schooling, lower income, and belong to ethnic minorities.[7,18] Care fragmentation, that is, medical consultations performed by different professionals, has also been associated with low quality of prenatal care.[14]

The pregnant woman's psychosocial aspects are little approached in the investigation of the determinants in prenatal care. Just recently, international surveys have extended the models for the understanding of factors related to the access and quality of women's adherence to the services, including hostile family environment as a potential obstacle to care provided during gestation; some of them have suggested that women who were victims of family violence used less the healthcare services and delayed prenatal care.[1,8,15,25]

Nevertheless, this gap in the knowledge of the process remains, considering that the existing research is predominantly conducted in developed countries and explores the theme in an insufficient way. Most studies use inadequate methods to identify violence during gestation and do not appraise the effect of intimate partner violence conditioned to the possible confounding factors.

Considering the many dimensions involved in prenatal care quality, the current study aimed to evaluate physical intimate partner violence during gestation (PIPVG) as an independent risk factor for low quality of prenatal care.

METHODS

This is a cross-sectional study that used only the controls of a case-control study about the role of family violence during gestation in the occurrence of newborn's prematurity.[b] Thus, the profile of the sample is similar to that of the population of pregnant women assisted in the public healthcare services of the city of Rio de Janeiro (Southeastern Brazil). The studied population was constituted by simple random sampling out of the puerperal women who gave birth to babies born at term in three public maternity wards of Rio de Janeiro in 2000 and who reported having had an affective relationship that lasted one month or more during gestation. The following women were excluded from the study: those suffering from gestational diabetes and pregnancy-specific hypertensive disease, those who had a multiple gestation, and those who gave birth to children with malformations and congenital infections.

The study is based on a theoretical-conceptual model composed of some of the most frequently investigated dimensions in research into family violence during gestation and its consequences for maternal and child health (Figure). According to the proposed model, a possible manner of association between exposure and outcome would be the adoption, by the pregnant woman and her partner, of life habits that negatively affect a healthy pregnancy, like inadequate consumption of alcohol, smoking, and use of illicit drugs. Another possibility would be that the hostile and stressful family environment generated by violence would make the woman leave gestation and care for her own health in the background. Or, that a reduced social support – common among violence victims – could hinder her access to prenatal services, as the pregnant woman would not have anybody to look after her other children, nor to talk to or to provide information about the importance of prenatal care. Finally, it is possible to postulate that the experience of violent intimate relationships can influence the reproductive profile, increasing the number of live children and reducing the time of interdelivery interval, thus hindering even more the pregnant women's adherence to healthcare services. The associations between PIPVG and the variables that make up the dimensions lifestyle and demographic, reproductive and nutritional characteristics do not seem to be unidirectional. Therefore, it is important to consider them as potential confounders in the process.

Prenatal care data were collected from the pregnant woman's prenatal card and through a questionnaire administered to the puerperal woman in the first 48 hours after delivery, before hospital discharge, by a previously trained team, in face-to-face interviews, at a private venue, without the presence of the partner.

Quality of prenatal care was assessed by means of the Kotelchuck index,[6] also called Adequacy of Prenatal Care Utilization (APNCU) Index, adapted for use in Brazil.[7] This index considers the moment of the beginning of follow-up and the number of attended visits. These two dimensions were analyzed independently: they inform about the degrees of adequacy of the moment of the beginning of the received care and

[b] Moraes CL. Aspectos metodológicos relacionados a um estudo sobre a violência familiar durante a gestação como fator de propensão da prematuridade do recém-nascido [doctoral thesis]. Rio de Janeiro: Escola Nacional de Saúde Pública da Fiocruz; 2001.

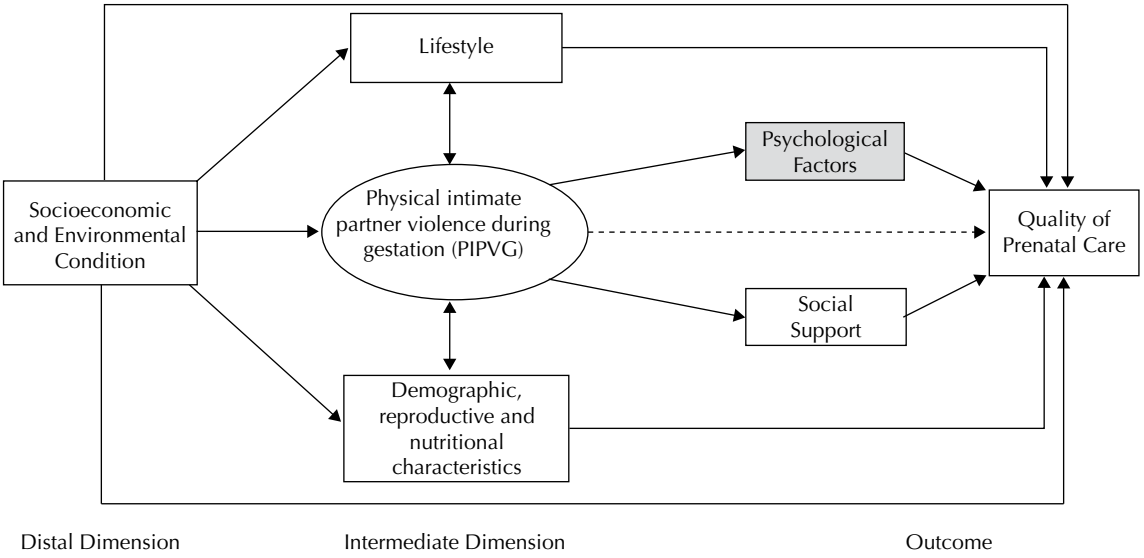

Figure. Theoretical-conceptual model of the possible relationships between physical intimate partner violence during gestation and quality of prenatal assistance. Municipality of Rio de Janeiro, Southeastern Brazil, 2000.

services. Concerning the beginning of care, the months were divided into four groups: one and two, three and four, five and six, and seven to nine. Adequacy of the received services was based on the analysis of the number of prenatal visits, according to the American College of Obstetricians and Gynecologists for uncomplicated gestations, adjusted for gestational age at the beginning of care and for gestational age at birth. The measure is a ratio between the number of attended visits and the number of expected visits: when the ratio is <50%, the number of visits is considered inadequate; between 50% and 79%, intermediate; between 80% and 109%, adequate; and ≥110%, very adequate. According to the Kotelchuck index, prenatal care as a whole is considered inadequate when follow-up begins after the fourth month of gestation, or when the number of prenatal visits is inadequate. The national proposal adds one category to the four categories of the original index (inadequate, intermediate, adequate and very adequate) to encompass the pregnant women who did not have prenatal care.

Due to the insufficient number of women in some categories of the original classification proposal, the variable Kotelchuck index was used in a binary form. Women who had been originally classified as adequate or very adequate prenatal care were reclassified as "adequate prenatal care"; and the categories absence of prenatal care, inadequate quality and intermediate quality were grouped into "inadequate prenatal care". In short, for babies who were born at term, this group is formed by women who did not have prenatal care, those who began it after the fourth gestation month, and those who attended less than 6, 7, 8 and 9 visits in 37, 38, 39 and 40 weeks gestations, respectively.

PIPVG was evaluated by using the Revised Conflict Tactics Scale (CTS2),[23] previously adapted and validated for use in Brazil.[10,11,16] We considered victims women who reported having experienced at least one of the 12 acts of the physical violence scale during the period of gestation.

The socioeconomic dimension was expressed by the woman's level of schooling and the family's *per capita* income. The lifestyle dimension was represented by the variables: smoking and alcohol consumption by the woman and use of illicit drugs by the couple. We considered cases of inappropriate use women who had two or more positive responses to the instrument Tolerance–Worry–Eye-opener–Amnesia–Cut-down (TWEAK),[19] previously adapted and validated for use in Brazil.[12] For identification of drug consumption, we used the Non-Student Drug Use Questionnaire (NSDUQ – Portuguese version).[c] Couples who had made use of at least one illicit drug were considered positive.

The pregnant woman's demographic and reproductive dimensions were represented by age, marital status, occupation (paid activity during gestation), self-reported skin color, number of children aged below five years in the household, and previous history of perinatal hazards (previous history of abortion, dead fetus, prematurity or low weight).

[c] Smart RG, Arif A, Hughes P, Medina Mora ME, Navaratnam V, Varma VK, et al. Drug use among non-student youth. *WHO Offset Publ.* 1981;(60):5-58.

According to the literature, black and mixed-ethnicity (black and white) women are more vulnerable to intimate partner violence, probably because in developing countries the variable "skin color" can be understood as proxy for socioeconomic situation. Thus, we tested this variable by placing black and mixed-ethnicity women in one single group and in separate categories. As the variable that considered the black women separately was more efficient to discriminate women who had had adequate and inadequate prenatal care, we chose this form of operationalization of the variable.

The level of social support perceived by the pregnant woman was evaluated by means of the version in the Portuguese language of the instrument developed to the Medical Outcome Study (MOS),[21] composed of five sub-scales: material, affective, emotional, informational and positive social interaction support. The total score was divided into quintiles, grouped into: first to fourth quintile (absent social support) and fifth quintile (present social support). Father's satisfaction with the gestation was evaluated through the question, created specifically for the research: "was your partner pleased when he learnt you were pregnant?".

Initially, bivariate logistic regressions were carried out aiming to identify interactions between the independent variables and PIPVG. Those which obtained a value of $p \leq 0.25$ were selected for multivariate analysis. The selected variables were gradually tested, based on the theoretical-conceptual model; firstly, those that represented the dimensions that were most distal to the outcome were introduced. Those whose levels of significance were ≤5% were selected, and/or those that modified the odds ratio of the PIPVG exposure by at least 10%.

The study was approved by the Research Ethics Committee of the Municipal Health Department of Rio de Janeiro (Process no. 23412/1999, approved in February 2000). All participants received information on institutions that provide support for families that are victims of violence and were encouraged to look for these institutions if they needed to.

RESULTS

Approximately 20% of the women reported they had been victims of at least one act of physical violence committed by the intimate partner during pregnancy. Almost two thirds of the women (71.3%, n = 352) had prenatal care below the recommendation: 14 (4.0%) did not have prenatal assistance, 39 (11.1%) began to attend prenatal visits after the fourth month of gestation, 240 (68.2%) attended less than 80% of the expected number of visits for the gestational age of end of pregnancy, and 59 (16.7%) delayed to receive prenatal assistance and attended a lower number of visits (Table 1).

As for the sociodemographic characteristics of the studied population, 30% were adolescents, the majority did not report their skin color as black, did not complete elementary school, lived with the newborn's father during the gestation, did not live with other children younger than five years old and did not work during the gestation. The largest part did not mention paternal support to the pregnancy, nor support from a wider social network. Average family income was low, a little above 1 minimum salary at the time the research was conducted (R$238.5; SD=235.2).

PIPVG was associated with quality of prenatal care in the univariate analysis (Table 2). The initial exploratory analysis indicated that some maternal demographic, reproductive, lifestyle and socioeconomic characteristics should be tested as possible confounding factors,

Table 1. Characteristics of the study's population concerning exposure, outcome and sociodemographic aspects. Municipality of Rio de Janeiro, Southeastern Brazil, 2000.

Variable	n	%	CI 95%
Physical intimate partner violence during gestation			
Yes	96	18.2	14.9;21.5
No	431	81.8	78.5;85.1
Inadequate prenatal care			
Yes	352	71.3	67.3;75.3
No	142	28.7	24.7;32.7
Mother's age			
Adolescent	165	31.2	27.3;35.4
Adult	363	68.8	64.6;72.7
Self-reported skin color			
Black	59	11.2	8.7;14.2
Others	467	88.8	85.8;91.4
Pregnant woman's years of schooling			
Up to 7	307	58.1	53.8;62.4
8 or more	221	41.9	37.6;46.2
Lives with the newborn's father			
Yes	406	76.9	73.1;80.4
No	122	23.1	19.6;26.9
No. of children < 5 years in the household			
None	339	64.2	60.1;68.3
One or more	189	35.8	31.7;39.9
Work during gestation			
Yes	226	42.8	38.5;47.1
No	302	57.2	52.9;61.5
Father's satisfaction with the gestation			
Yes	246	46.6	42.3;50.9
No	282	53.4	49.1;57.7
Lack of social support			
Yes	423	80.1	76.7;83.5
No	105	19.9	16.5;23.3

as they proved to be associated with inadequacy of prenatal assistance and related to occurrence of family violence. The variable *per capita* income also showed a statistically significant association with low quality of prenatal assistance (p = 0.007).

No significant interactions were found between the variables of interest and occurrence of physical violence committed by the partner. In the evaluation of the linearity of the ordinal variables, the variable "abuse of alcohol by the pregnant woman" presented a non-linear

Table 2. Univariate analysis between quality of prenatal care and the variables of the theoretical model. Municipality of Rio de Janeiro, Southeastern Brazil, 2000.

Variable	Adequate prenatal care			Inadequate prenatal care			p
	n	%	CI 95%	n	%	CI 95%	
Physical intimate partner violence during gestation							
Yes	14	16.3	8.3;24.2	72	83.7	75.8;91.7	0.00
No	128	31.4	26.9;36.0	279	68.6	64.0;73.1	
Pregnant woman's years of schooling							
Up to 7	69	24.0	19.1;29.0	218	76.0	71.0;80.9	0.01
8 or more	73	35.3	28.7;41.8	134	64.7	58.2;71.3	
Mother's age							
Adolescent	40	26.5	19.4;33.6	111	73.5	66.4;80.6	0.46
Adult	102	29.7	24.9;34.6	241	70.3	65.4;75.1	
Self-reported skin color							
Black	11	20.4	9.3;31.5	43	79.6	68.5;90.7	0.15
Others	131	29.8	25.5;34.1	308	70.2	65.9;74.5	
Lives with the newborn's father							
Yes	120	31.3	26.6;35.9	264	68.7	64.1;73.4	0.02
No	22	20.0	12.4;27.6	88	80.0	72.4;87.6	
No. of children < 5 years in the household							
None	102	31.8	26.7;37.0	219	68.2	63.1;73.3	0.04
One or more	40	23.1	16.8;29.5	133	76.9	70.5;83.2	
Mother's work during gestation							
Yes	68	31.8	25.5;38.1	146	68.2	61.9;74.5	0.19
No	74	26.4	21.2;31.6	206	73.6	68.4;78.8	
Previous history of perinatal problems							
Yes	56	34.4	27.0;41.7	107	65.6	58.3;73.0	0.05
No	86	26.0	21.2;30.7	245	74.0	69.3;78.8	
Mother's smoking during gestation							
Yes	15	15.2	8.0;22.3	842	84.8	77.7;92.0	0.00
No	127	32.2	27.6;36.9	67	67.8	63.1;72.4	
Suspicion of inadequate use of alcohol by the pregnant woman							
TWEAK = 0 / 1	101	28.9	24.1;33.6	249	71.1	66.4;75.9	
TWEAK = 2	16	50.0	31.7;68.3	16	50.0	31.7;68.3	0.01
TWEAK = 3 / 4	17	27.0	15.7;38.3	46	73.0	61.7;84.3	
TWEAK = 5 / 6 / 7	5	13.5	2.0;25.1	32	86.5	74.9;98.0	
Use of illicit drugs by the couple							
Yes	10	17.0	7.1;26.8	49	83.1	73.2;92.9	0.03
No	132	30.3	26.0;34.7	303	69.7	65.3;74.0	
Lack of social support							
Yes	106	27.0	22.6;31.4	287	73.0	68.6;77.4	0.09
No	36	35.6	26.1;45.1	65	64.4	54.9;73.9	
Father's satisfaction with gestation							
Yes	75	32.3	26.3;38.4	157	67.7	61.6;73.7	0.10
No	67	25.6	20.3;30.9	195	74.4	69.1;79.7	

TWEAK: Tolerance–Worry–Eye-opener–Amnesia–Cut-down

relationship to quality of prenatal care. The TWEAK score categories were evaluated separately and it was observed that, the higher the score (grave abuse and dependency), the worse the quality of prenatal care. However, women who make "social use" of alcohol (score of two) had a lower prevalence of inadequate prenatal care than abstainers and/or women who drank alcohol occasionally (score of 0 or 1). The multivariate analysis (Table 3) shows the occurrence of PIPVG as a significant risk factor for inadequate prenatal care, as the women submitted to this form of violence had 2.2 times more chance of presenting inadequate prenatal care than those who were not involved in this type of problem. According to the final model, PIPVG increased the chance of the pregnant women to have prenatal care of low quality, independently of the mother's level of schooling, *per capita income*, marital status, previous history of perinatal hazards, smoking, suspicion of misuse of alcohol during pregnancy, and father's satisfaction with the gestation.

Table 3. Results of the multivariate analysis used to evaluate the role of physical intimate partner violence during gestation as a risk factor for low quality of prenatal care. Municipality of Rio de Janeiro, Southeastern Brazil, 2000.

Variable	OR	CI 95%	p
Physical intimate partner violence during gestation			
No	1		
Yes	2.20	1.10;4.40	0.03
Pregnant woman's years of schooling			
Up to 7	1		0.05
8 or more	0.65	0.42;1.01	
Per capita income	0.99	0.69;2.57	0.14
Lives with the newborn's father			
Yes	1		0.10
No	1.65	0.91;3.00	
Previous history of perinatal problems			
No	1		0.05
Yes	0.64	0.40;1.01	
Smoking during gestation			
No	1		
Yes	2.51	1.29;4.89	0.01
Inadequate use of alcohol by the pregnant woman			
TWEAK = 0 / 1	3.73	1.57;8.86	0.00
TWEAK = 2	13.18	1.16;8.68	-
TWEAK = 3 / 4	7.02	1.83;26.98	0.02
TWEAK = 5 / 6 / 7	1		0.00
Father's satisfaction with gestation			
Yes	1		0.04
No	1.57	1.01;2.45	

TWEAK: Tolerance–Worry–Eye-opener–Amnesia–Cut-down

DISCUSSION

The results of the current study corroborate those of other research carried out in developed countries,[25-27] in which pregnant women who were victims of intimate violence during gestation presented higher chance of having inadequate prenatal care according to the patterns established by the institutions linked with women's and children's health. Having been victim of at least one act of physical violence committed by the partner during gestation more than doubles the chance of having a low quality prenatal care.

These findings strengthen the importance of establishing forms of early inclusion of pregnant women in the prenatal services so that they receive integral and systematic care. Care should not be restricted to procedures and complementary exams that are traditionally associated with pregnancy, because they are diagnostic instruments of typical pathologies of this cycle of life. Assistance should encompass the pregnant woman's health in an integral way, including psychosocial aspects. Health professionals should be able to deal with the occurrence of marital violence and intervene in an appropriate way. The frequent and continuous contact that happens during prenatal care favors the establishment of a relationship of trust and the discussion of matters viewed as embarrassing, like violence.

Considering that violence rarely begins during gestation, as a regular and systematic pattern of the couple's relationship is frequently configured, it is fundamental that the theme be approached since the first visit to the healthcare services, so as to identify the families that experienced marital conflicts, even before the current gestation. In the same way, the identification of violence situations should be part of the routine of hospitalization and healthcare procedures of maternity hospitals, especially regarding the pregnant women who began to receive prenatal care tardily and/or had a reduced number of prenatal visits.

Women who suffer physical abuses during gestation deserve special attention in the healthcare services. Besides their socioeconomic, demographic, reproductive and lifestyle characteristics, which by themselves, increase the risks of complications, they can also present problems deriving from violence, such as depression, low self-esteem, frequent vaginal bleeding, threat of premature labor, among others.

The high prevalence of violence during pregnancy (20%) indicates that the theme must be incorporated into the routine of the healthcare services that assist women.

In relation to the dimensions involved in the relationships between PIPVG and low quality of prenatal care, in a general way, the results corroborate the theoretical-

conceptual model suggested in the Figure. As presented on Table 3, the quality of the care provided for the pregnant woman is influenced by macro-structural factors (family's socioeconomic situation); family factors (marital status and father's satisfaction with the gestation); factors that reflect the pregnant woman's lifestyle (smoking and alcohol consumption during gestation); and factors related to her reproductive health (previous history of perinatal hazards). In this way, the adjustment by these variables was necessary when we estimated the role of PIPVG in the quality of prenatal care.

However, the proposed model is an attempt to represent graphically the possible relationships between the different dimensions. Epidemiological studies that utilize more complex analysis models are needed to elucidate the reciprocal relationships between dimensions, and the role of the intervening variables.

Although it is not the central focus of the paper, we highlight the large amount of women who had inadequate prenatal care (71.3%). In a certain way, the low quality of prenatal care that was found in this study was already expected, as, according to a previous evaluation carried out by Leal et al[7] in Rio de Janeiro between 1999 and 2001, approximately 60% of the interviewed women had not received prenatal care or had had inadequate or intermediate care, according to the same Index. It is possible that the worse situation of the prenatal care observed here is due to the restriction on the investigation's domain, as the studied sample was composed only of women who gave birth in public maternity wards of the municipality, while the study conducted by Leal et al[7] included the public and private networks.

In view of this scenario, we suggest the prioritization of health actions that aim to ensure access and adherence to follow-up in the reorganization of gestation care. In this context, the amplification of primary healthcare, mainly of *Programa Saúde da Família* (Family Health Program), seems to be a good strategy in Rio de Janeiro, since the follow-up of low risk gestations is one of the Program's priorities.

The critical situation regarding prenatal care also occurs in other States. Among the national papers published in the last ten years that analyzed the moment of the beginning of prenatal care and the number of attended medical visits in the evaluation of the provided care, the prevalence of pregnant women whose care was classified as inadequate and intermediate varied between 40% and 87%.[2,3,13,20,22,24]

Among the strengths of this study, we highlight the classification strategy used for assessing key variables of interest, the cautious fieldwork and careful analysis model that was used. The Kotelchuck index, used to assess the quality of prenatal care, is employed in different studies and contexts, which allows comparison with other research studies. The utilization of the modified index[7] in order to include the pregnant women who did not receive prenatal care also seems opportune, as, unfortunately, this is still a reality in Brazil.

The option for an instrument to identify the PIPVG situations that has been widely used and was previously validated in different contexts,[5,23] even in Brazil,[9,10,16] contributed to the identification of many violence situations that could otherwise remain unnoticed.

Another strong point of the study was the fact that the interviews were conducted after the child's birth. Thus, women's reports on the suffered violence could encompass the entire gestation. The utilization of female interviewers only, trained to approach family violence, and the guarantee of privacy during the interview may also have facilitated the disclosure of situations, strengthening the quality of the information.

The option for a multivariate approach in the data analysis process, guided by a theoretical-conceptual model, is another positive point of the current research. The model includes a large part of the dimensions that are supposedly involved in the process and also allows to explore the role of physical violence, taking into account important confounding factors described in the literature.

The study also has limitations. One of them is the relatively small sample size, which did not allow us to use the Kotelchuck index with all its classification forms. As discussed in the section of Methods, the outcome was evaluated in a binary form after the categories were grouped, which leads to a less detailed evaluation, but does not invalidate the findings. Another important point related to the index concerns the information sources that were used for its composition. Some of the interviewed women did not have the prenatal card with them, a situation in which the gestation month of the beginning of prenatal care and the number of attended visits were obtained directly from the mothers. This fact may have reduced the quality of the information, mainly regarding the number of prenatal visits.

Another criticism regards the fact that measures that consider qualitative aspects and pregnant women's satisfaction were not used in the evaluation of prenatal care quality. Despite being widely used, some authors[3,13] criticize the Kotelchuck index due to the fact that its indicators are not able to reveal details of the quality of the provided care. Complementing the evaluation with process indicators would enable a more comprehensive view of the quality of prenatal care.[3,13]

Another question that should be discussed is the possibility of underestimating the associations that were found. Some authors have suggested that PIPVG is associated with prematurity, neonatal mortality

and natimortality, which apparently are also associated with low quality of prenatal care.[4] As the study involved only patients who gave birth to babies that were born at term, it is possible that women with low quality of prenatal care and with history of PIPVG were excluded, which would reduce the strength of the association between exposure and the outcome of interest. Another situation that might have reduced the estimates that were found is the memory bias, deriving from the retrospective evaluation of the exposure to violence during gestation. As pointed by the reference literature,[17] non-differential misclassification of dichotomous exposure tends to underestimate the associations of the study. Thus, it is possible that experiencing violence during gestation plays an even more important role in delaying the search and in the low adherence to prenatal visits than the one that was presented in the current study.

To conclude, the results were consistent with the study's hypothesis and corroborate the findings of previous investigations conducted outside Brazil. Although exploratory, this study is the first that attempted to understand the complex mechanisms that connect intimate partner violence during gestation with low quality of prenatal care. It is fundamental that these associations are investigated in other contexts and domains, and that other aspects involved in the process are approached, such as: characteristics of healthcare services, pregnant women's psychological profile, and level of social support, specifically related to maternal self-care during gestation.

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Paper based on the doctoral thesis by Arana FDN, presented to the Instituto de Medicina Social of Universidade do Estado do Rio de Janeiro, in 2006.
The authors declare that there are no conflicts of interest.