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Physical violence by an intimate partner and the inappropriate use of prenatal care services among women in Northeastern Brazil

Violência física pelo parceiro íntimo e uso inadequado do pré-natal entre mulheres do Nordeste do Brasil

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ABSTRACT: ***Objective:*** To analyze the association between physical violence by an intimate partner (PVIP) and the inappropriate use of prenatal care services. ***Methods:*** A nested cross-sectional study was conducted with 1,026 women, based on data from a prospective cohort study designed to investigate intimate partner violence among pregnant women enrolled in the Family Health Program (PSF) in Recife, Northeastern Brazil. The use of prenatal care services was assessed with basis on the guidelines from the Program for Humanization of Prenatal Care and Childbirth (Brazilian Ministry of Health) and considered the time of the first prenatal care visit and the total number of visits during the pregnancy. Data were collected through two face-to-face interviews (one in the last pregnancy trimester and the other in the postpartum period), using standardized questionnaires and data on Pregnancy Card records. An unconditional logistic regression was performed to estimate the odds ratio (OR) and the 95% confidence intervals to measure the association between an PVIP and the inappropriate use of prenatal care services, using the stepwise method. ***Results:*** The prevalence of the inappropriate use of prenatal care services was 44.1% and of an PVIP, 25.6%. In the logistic regression analysis, an intimatePVIP was associated with inappropriate prenatal care (OR = 1.37; 95%CI 1.01 – 1.85; p = 0.04) after adjustment by variables confirmed as confounders (parity, alcohol use in pregnancy, and education level). ***Conclusion:*** Women who are victims of an PVIP have more chance of receiving inappropriate prenatal care due to late onset of prenatal care, fewer prenatal care visits, or both.

Keywords: Violence against women. Spousal abuse. Prenatal care. Pregnancy. Risk factors. Cross-sectional studies.

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RESUMO: ***Objetivo:*** Analisar a associação entre violência física pelo parceiro íntimo e uso inadequado da atenção pré-natal. ***Métodos:*** Estudo transversal realizado com 1.026 mulheres participantes de estudo de coorte prospectivo delineado para investigar violência na gravidez entre mulheres cadastradas no Programa Saúde da Família (PSF) do Recife. O uso do pré-natal foi avaliado utilizando a norma do Programa de Humanização do Pré-natal e Nascimento (PHPN), do Ministério da Saúde (MS), considerando a época de início do pré-natal e o total de consultas durante a gravidez. Os dados foram coletados por meio de duas entrevistas presenciais (uma no último trimestre da gravidez, outra no pós-parto) para aplicação de questionário estruturado e a partir dos registros do cartão da gestante. Regressão logística não condicional foi realizada para estimar odds ratio (OR) e valores de intervalo de confiança de 95% (IC95%), a fim de medir a associação entre violência física pelo parceiro íntimo e uso inadequado de cuidados pré-natais, utilizando-se o método *stepwise*. ***Resultados:*** A prevalência de uso inadequado do pré-natal foi de 44,1%, e da violência física pelo parceiro íntimo, de 25,6%. Na análise de regressão logística, a violência física pelo parceiro íntimo apresentou-se associada à realização de pré-natal inadequado (OR = 1,37; IC95% 1,01 – 1,85; p = 0,04), após ajuste pelas variáveis confirmadas como confundidoras (paridade, uso de álcool na gravidez e nível de escolaridade). ***Conclusão:*** Mulheres vítimas de violência física pelo parceiro íntimo têm maior chance de realizar um pré-natal inadequado, seja pelo início tardio, pela realização de menor número de consultas ou mesmo pelas duas condições juntas.

Palavras-chave: Violência contra a mulher. Maus-tratos conjugais. Cuidado pré-natal. Gravidez. Fatores de risco. Estudos transversais.

INTRODUCTION

Violence against women during pregnancy is a major public health issue due to the high risk of maternal and neonatal morbidity and mortality[1]. A study by the World Health Organization (WHO) showed that the prevalence of intimate partner violence during pregnancy can vary from 1 to 28% among countries[2]. This study in Brazil indicated that 8% of women in the city of São Paulo and 11% of women in rural Pernambuco reported having experienced some kind of violence during gestation[2].

Prenatal care can prevent maternal mortality as it modifies the course and the prognosis of pregnancy complications[3] and prevents adverse outcomes, such as perinatal and neonatal mortality, congenital syphilis, and low birth weight[4].

In Brazil, the levels of maternal and perinatal morbidity and mortality remain high, which is incompatible with the current level of economic and social growth in the country[5].

In 2000, the Ministry of Health (MS – Ordinance No. 569/GM, Minister's Office, from December 1st 2000) established the Program for Humanization of Prenatal Care and Childbirth (PHPN) to reduce maternal and child morbidity and mortality by improving access to as well as coverage and quality of care in prenatal, childbirth, and puerperium periods[6].

Some factors are described as associated with no prenatal care, which include belonging to social segments with lower income, having less formal education, belonging to the black race, being over 35 years old, being multiparous, having depressive symptoms during pregnancy, making abusive use of alcohol and/or illicit drugs, having unstable marital status, unintended pregnancy history, partner's dissatisfaction with pregnancy, and partner's violence[7-14].

Women who are victims of physical violence by an intimate partner (PVIP) find it more difficult to attend prenatal appointments[13] and are more likely to start them late[15]. Furthermore, they may present risk behaviors during the pregnancy, such as the use of alcohol[13], tobacco[16], and illicit drugs[17] more frequently.

In 2010, the MS proposed that the presence of family conflicts should be investigated in the determination of gestational risk factors, to identify situations of violence during pregnancy[5]. Services that provide prenatal care may represent a space for the identification of cases of violence because there is the presumption of greater bonding between health professionals and the women as well as the possibility of addressing the issue of violence with pregnant women through educational activities[18].

There are few Brazilian studies that addressed the effect of intimate partner violence on the adhesion to prenatal care[9]. This study aimed at investigating the connection between physical violence inflicted by an intimate partner before and/or during pregnancy and the inappropriate use of prenatal care among women enrolled in the Family Health Program (PSF) in Recife.

METHODS

This is a cross-sectional study conducted with women participating in a prospective cohort study designed to investigate violence during pregnancy, its determinants and consequences for women's health, and the perinatal outcomes from July 2005 to December 2006. The study population consisted exclusively pregnant women aged 18 or over, enrolled in the PSF of Sanitary District 2 in Recife. From the 1,133 eligible women, 1,121 (98.9%) were interviewed at the baseline of the cohort and 1,056 women were re-interviewed in the postpartum period. For this analysis, we excluded 30 women due to lack of records on prenatal care, totaling 1,026 women (90.6% of the total eligible). More detailed information on the cohort study is available in a previous publication[19].

The studied women were identified from prenatal care records from 42 PSF teams and records of community health workers, to include those who did not undergo prenatal care in PSF units.

As the research addresses sensitive topics and issues for women, face-to-face interviews were conducted by female interviewers (all properly trained and with higher education).

The data included in this analysis are from two interviews conducted in the original research (one in the last pregnancy trimester and the other in the postpartum period), using standardized and pre-coded questionnaires. The interviews were conducted in a private room at the Family Health Unit (USF), the interviewee's home or a more convenient place for the woman. Most of the interviews were conducted at different USF. To administer the second questionnaire, the women were contacted in the postpartum period according to the scheduling for pediatrics appointments or at their homes, following the same standard set for the interviews led during the pregnancy. At this stage, most interviews happened at the women's residences.

Data on the use of prenatal care were obtained in the interview conducted in the postpartum period by referring to the Pregnancy Cards (33.4%) and, in the absence of such document, by requesting information directly from the woman. The appropriate use of prenatal care was determined when the woman had started her appointments in the first pregnancy trimester and had made six or more visits, considering the PHPN standards as a reference. The inappropriate use of prenatal care was established when it was initiated after the first trimester and/or less than six appointments were attended or simply when the woman did not have prenatal care.

The questions about violence from the Questionnaire for Women of the WHO Multi-Country Study on Women's Health and Domestic Violence against Women Questionário,[2] already validated in Brazil[20], referred to pregnancy (Chart 1). Physical violence examined the aggression and the use of objects or weapons to cause physical injury. To identify it, the full relationship period with the current or most recent partner, before and/or during the current pregnancy, was considered, when a woman responded positively to one or more questions related to physical violence. An intimate partner was defined as the husband, partner, or current or most recent boyfriend, regardless of formal marriage, cohabitation, and of him being the father of the expected child.

The following covariables were also analyzed: age (≤ 24/25 – 29/≥ 30 years old); race/color (white/nonwhite); years of schooling (≥ 9/< 9 years); number of durable goods (≥ 5/≤ 4), a proxy for socioeconomic status; having their own income (yes/no); marital status at the time of the interview (married or living together as a couple/having a partner, but not living together as a couple/no partner); self-reported health problems and hospitalization during pregnancy (yes/no); tobacco smoking (yes/no), use of alcohol (yes/no) and illicit drugs during pregnancy (yes/no); parity (no children/one or two children/three or more children); pregnancy intention for current child (yes/no); onset of prenatal care (early/late); number of prenatal appointments attended (≥ 6/< 6); partner's attitude toward prenatal care (encouraged it/did not show any interest in it/tried to stop it/stopped it); and the existence of common mental disorders (CMD) during pregnancy.

CMD include depressive and anxiety symptoms and were assessed using the Self-Report Questionnaire (SRQ-20)[21], which is validated in Brazil[22]. It comprises 20 questions, four

Chart 1. Questions about physical violence that were used in the interview.

Physical violence
During this pregnancy, has your current husband/partner/boyfriend ever treated you in any of the following ways:
Has he slapped or thrown something at you that could hurt you?
Has he pushed, shoved, or shaken you?
Has he hurt you with a punch or with any other object?
Has he kicked, dragged, or beaten you?
Has he tried to strangle you or has he burned you on purpose?
Has he threatened to use or actually used a firearm, knife, or other weapon against you?

about physical symptoms and 16 about psycho-emotional disorders; one point is attributed to each positive answer and no points are attributed to negative answers. The cut-off was set at eight points to establish the presence of CMD during pregnancy.

Unintended pregnancy was determined with basis on the following question: "Before you knew you were pregnant,": (a) "you were trying to get pregnant"; (b) "you wanted to get pregnant"; (c) "you wanted to get pregnant later in life"; (d) "you did not want to get pregnant"; or (e) "it did not make any difference." Responses that classified the pregnancy as unwanted were alternatives "c" and "d." The first two options established an intended pregnancy.

Interviews were led without the partner's presence or of any other person over the age of two. The Informed Consent Form was introduced to all the women and information confidentiality was guaranteed. Interviewees received a form with the name and address of the health care, social, legal, and police services specialized in assisting women in situations of violence available in Recife. The research protocol was approved by the Research Ethics Committee of the Health Sciences Center of the Federal University of Pernambuco (UFPE).

Data analysis included sample description and bivariate analysis to identify potential associations of the studied covariables with exposure — PVIP — and the main outcome (inappropriateness of prenatal care). The estimated association measure was the odds ratio (OR). Statistical significance was assessed from the Mantel–Haenszel χ^2, with the corresponding $p \leq 0.05$ value and its 95% confidence interval values (95%CI). At the final stage, an unconditional logistic regression was performed to measure the association between PVIP and the appropriateness of prenatal care, regardless of the effect of the other covariables. The modeling process included the following covariables: education level, ownership of durable goods, tobacco smoking, alcohol consumption, use of illicit drugs during pregnancy, pregnancy intention, CMD, and intimate partner's attitude toward prenatal care; these are established as potential confounders due to their association with PVIP and the inappropriate use of prenatal care. Variables that adjusted the crude OR by 10% or more for the main association were kept in the final model. We used the stepwise method; the significance level that was reached in the bivariate analysis was established as a criterion for the input of variables on the model, in the *p*-value ascending order. To assess statistical significance, we used the likelihood ratio and the p value of ≤ 0.05. For data analysis, we used the Statistical Package for the Social Sciences (SPSS) software, version 17.0.

RESULTS

Most women were under 25 years of age (51.7%); they also declared being *pardas* (mixed-race — 61%) and having less than nine years of schooling (62%). A little over half of the women had less than five durable goods (56%), did not have their own income (53.8%) and lived with a partner (54%). About 13.5% stated they smoked tobacco, 17.7% consumed alcohol, and 2% used illicit drugs during the current pregnancy.

Most women reported that the pregnancies were unintended (64.2%); approximately half (48.5%) was in the second or third pregnancy. About a third of them (25.7%) mentioned

some health problems during the pregnancy, and 11.3% reported having needed hospitalization. Of the total, 42.8% were classified as CMD cases during pregnancy.

PVIP occurred with 25.4% of women. Among these, approximately half (49.8%) mentioned PVIP only before pregnancy, 20.1% (53) exclusively during pregnancy, and 30.1% (79) before and during pregnancy.

Prenatal care was classified as inappropriate in 44% of cases. Among the respondents, almost every one (99.5%) reported having had prenatal care. The majority (75.4%) made more than six visits, and 64% started prenatal care in the first trimester, whereas 35% started it after that period. Approximately 18% of the women's partners did not show any interest in it, and four (0.4%) tried to stop or stopped the woman from having prenatal care.

Women with less schooling, those having less than five durable goods, and those not living with a partner showed higher prevalence of inappropriate use of prenatal care services. Moreover, the habit of smoking, consuming alcohol and/or using illicit drugs during pregnancy, having an unintended pregnancy, having greater parity, having had CMD during the pregnancy, and the negative partner's attitude toward prenatal care increased the chance of inappropriate use of prenatal care services. Health problems and hospitalization during pregnancy (self-reported) were established as protective factors of the outcome. Tobacco smoking, alcohol consumption, and the use of illicit drugs, especially if throughout the pregnancy, were associated with PVIP (Table 1).

Table 1. Association between the inappropriate use of prenatal care services, socioeconomic and demographic characteristics, risk behaviors in the current pregnancy, and the women's reproductive history. Recife, Brazil, 2005–2006.

Variables	Appropriateness of prenatal care		OR_{crude} (95%CI)
	Inappropriate	Appropriate	
	n (%)	n (%)	
Age (in full years)			
≤ 24	248 (46.8)	282 (53.2)	1.35 (1.01 – 1.80)
25 – 29	113 (39.5)	173 (60.5)	1
≥ 30	92 (43.8)	118 (56.2)	1.19 (0.83 – 1.71)
Race/color			
White	83 (41.1)	119 (58.9)	1
Nonwhite	370 (44.9)	454 (55.1)	1.17 (0.85 – 1.62)
Education (in years of schooling)			
Nine or more	123 (31.9)	263 (68.1)	1
Less than nine	330 (51.6)	310 (48.4)	2.28 (1.73 – 2.99)
Number of durable goods			
Five or more	175 (39.1)	273 (60.9)	1
Four or less	278 (48.1)	300 (51.9)	1.45 (1.12 – 1.87)

Continue...

Table 1. Continuation.

Variables	Appropriateness of prenatal care		OR $_{crude}$ (95%CI)
	Inappropriate	Appropriate	
	n (%)	n (%)	
Marital status (at the time of the interview)			
Married/living together as a couple	278 (38.1)	451 (61.9)	1
Have a partner, but do not live together as a couple	95 (56.9)	72 (43.1)	2.14 (1.50 – 3.05)
No partner	80 (61.5)	50 (38.5)	2.60 (1.74 – 3.80)
Tobacco smoking during pregnancy			
No	369 (41.6)	518 (58.4)	1
Yes	84 (60.4)	55 (39.6)	2.14 (1.49 – 3.09)
Use of alcohol during pregnancy			
No	340 (40.3)	504 (59.7)	1
Yes	113 (62.1)	69 (37.9)	2.43 (1.75 – 3.38)
Use of illicit drugs during pregnancy			
No	439 (43.6)	568 (56.4)	1
Yes	14 (73.7)	5 (26.3)	3.62 (1.29 – 10.13)
Pregnancy intention			
Yes	121 (33.0)	246 (67.0)	1
No	332 (50.4)	327 (49.6)	2.06 (1.57 – 2.72)
Parity			
No children	111 (31.0)	247 (69.0)	1
One or two children	242 (48.6)	256 (51.4)	2.10 (1.57 – 2.83)
Three or more children	100 (58.8)	70 (41.2)	3.18 (2.14 – 4.73)
Common mental disorders			
Non-case	241 (41.1)	346 (58.9)	1
Case	212 (48.3)	227 (51.7)	1.34 (1.04 – 1.72)
Partner's attitude toward prenatal care			
Encouraged it	347 (41.5)	489 (58.5)	1
Did not show any interest in it/tried to stop it /stopped it*	106 (55.8)	84 (44.2)	1.78 (1.28 – 2.47)
Health problems during pregnancy (self-reported)			
No	350 (45.9)	412 (54.1)	1
Yes	103 (39.0)	161 (61.0)	0.75 (0.57 – 1.00)
Hospitalization during pregnancy (self-reported)			
No	415 (45.6)	495 (54.4)	1
Yes	38 (32.8)	78 (67.2)	0.58 (0.38 – 0.89)

*Four women reported that their partners tried to stop it or actually stopped it. OR: odds ratio; 95%CI: 95% confidence interval.

A PVIP report by women had no statistically significant association with not having prenatal care. However, women who are victims of PVIP started prenatal care later, made less than six visits, were more likely to undergo inappropriate prenatal care (Table 2).

At the multivariate stage (Table 3), although the OR was slightly decreased, the association remained statistically significant after the adjustment by variables confirmed as confounders: parity, use of alcohol during pregnancy, and educational level (OR = 1.37; 95%CI 1.01 – 1.85; p = 0.040).

Table 2. Association of physical violence by an intimate partner, the inappropriate use of prenatal care services, and risk behaviors during pregnancy. Recife, Brazil, 2005–2006.

Variables	PVIP		OR_{crude} (95%CI)
	Yes	No	
	n (%)	n (%)	
Prenatal care			
No	2 (0.76)	3 (0.39)	1.94 (0.23 – 14.3)
Yes	261 (99.2)	760 (99.6)	1
Onset of prenatal care[a]			
Late	112 (42.9)	250 (32.9)	1.53 (1.14 – 2.06)
Early	149 (57.1)	510 (67.1)	1
Number of visits[a]			
< 6	78 (29.9)	149 (19.6)	1.75 (1.25 – 2.44)
≥ 6	183 (70.1)	611 (80.4)	1
Appropriateness of prenatal care[b]			
Inappropriate	145 (55.1)	308 (40.4)	1.82 (1.36 – 2.43)
Appropriate	118 (44.8)	455 (59.6)	1
Partner's attitude toward prenatal care			
Did not show any interest in it/tried to stop it/stopped it	75 (28.5)	115 (15.1)	2.25 (1.59 – 3.18)
Encouraged it	188 (71.5)	648 (84.9)	1
Tobacco smoking during pregnancy			
No	198 (75.3)	689 (90.3)	1
Yes	65 (24.7)	74 (9.69)	3.06 (2.08 – 4.49)
Duration of tobacco smoking			
Did not smoke tobacco	198 (75.3)	689 (90.3)	1
Smoked tobacco at some point	13 (4.9)	22 (2.8)	2.06 (0.96 – 4.36)
Smoked tobacco throughout the pregnancy	52 (19.7)	52 (6.8)	3.48 (2.25 – 5.38)
Linear trend	–	–	–

Continue...

Table 2. Continuation.

Variables	PVIP		OR_{crude} (95%CI)
	Yes	No	
	n (%)	n (%)	
Use of alcohol during pregnancy			
No	182 (69.2)	662 (86.8)	1
Yes	81 (30.8)	101 (13.2)	2.92 (2.06 – 4.14)
Duration of alcohol use			
Did not drink	182 (69.2)	662 (86.7)	1
Drank at some point	46 (17.5)	67 (8.8)	2.50 (1.62 – 384)
Drank throughout the pregnancy	35 (13.3)	34 (4.45)	3.74 (2.21 – 6.35)
Linear trend	–	–	–
Use of illicit drugs during pregnancy			
No	252 (95.8)	755 (98.9)	1
Yes	11 (4.2)	8 (1.1)	4.12 (1.52 – 11.35)

[a]Five women did not have prenatal care, and three of them reported physical violence by their intimate partners; [b]the five women who did not have prenatal care were categorized as those using prenatal care services inappropriately. PVIP: physical violence by an intimate partner; OR: odds ratio; 95%CI: 95% confidence interval.

Table 3. Final model for the association between physical violence by an intimate partner and the inappropriate use of prenatal care services, crude and adjusted odds ratios, and the 95% confidence interval. Recife, Brazil, 2005–2006.

PVIP	OR_{crude} (95% CI)	p value	$OR^{*}_{adjusted}$ (95% CI)	p value
No	1		1	
Yes	1.82 (1.36 – 2.43)	0.001	1.37 (1.01 – 1.85)	0.040

*Adjusted by women's parity, use of alcohol during pregnancy, and education level. PVIP: physical violence by an intimate partner; OR: odds ratio; 95%CI: 95% confidence interval.

DISCUSSION

This study aimed at addressing the association between PVIP and the inappropriate use of prenatal care. Although some studies have addressed the impact of intimate partner violence on prenatal care,[9-14] only one study was conducted in Brazil.[9]

Results reveal high PVIP rates before and/or during pregnancy among the women enrolled in the PSF in a state capital in northeastern Brazil. In addition, they showed that women who experienced or had experienced a situation of physical violence inflicted by an intimate partner started prenatal care late, made fewer visits than what is recommended by the MS, and were more likely to undergo inappropriate prenatal care.

This study has some limitations. One is the fact that information about the start time and the number of appointments for prenatal care having been reported by women and only

one-third of them had the Pregnancy Card at the time of the interview, thus, being subject to information biases, even if the pregnancies were recent. Studies conducted in Brazil documented reduced agreement levels between self-reported data on prenatal care and the Pregnancy Card records. The information collected from the women's accounts reported a higher number of appointments and earlier onset of prenatal care than what is registered on their respective Pregnancy Cards[23,24]. Differences may result both from women's overestimation and the sub-record on the Card[24]. Consequently, classification errors may have occurred. However, it can be assumed that the assessment error on the number of appointments and the onset time for prenatal care was random. Regarding the association measures, the non-differential error tends to underestimate them[25]. Nevertheless, some women may have omitted PVIP because of embarrassment or fear of retaliation by the perpetrator[26]. Therefore, it is possible that the prevalence of PVIP as well as the association with the inappropriate use of prenatal care have been underestimated. It is possible that these factors have contributed to the threshold value found for the estimated confidence interval for the association between PVIP and the inappropriate use of prenatal care.

Another limitation is inherent to cross-sectional studies, which hinders the establishment of a clear temporal precedence for part of the studied factors, compromising the evidence of a causal relationship. However, physical violence in the relationship with a partner was investigated before and during pregnancy as the recurrent nature of intimate partner violence was recognized; in truth, women who were abused during the pregnancy have, more frequently, suffered abuse before[27]. Notwithstanding, even when violence ceases, its effects can be cumulative and persist for a long period[28].

The advantages of the study are that it was population-based and comprises a geographically defined area with few losses, which minimizes the possibility of selection bias. Similarly, by including PSF users whose socioeconomic characteristics resemble those of the other five sanitary districts, it is possible to generalize the results for the women assisted by the PSF in Recife.

The prevalence of PVIP was 25.4%; 49.8% of women reported PVIP exclusively before pregnancy, and the others, during pregnancy, with or without physical violence in a previous period. Regardless of being considerably high, the prevalence of PVIP found was lower than the one identified by Gomes[29], of 35.8%, analyzing a sample of 2,156 women enrolled in the PSF in Recife. It is possible that such difference derives from the fact that in this study women were inquired about PVIP with reference to the time interval between the beginning of the relationship with their partners and the moment of the interview, whereas Gomes asked about the PVIP throughout life, including previous partners.

Risk behaviors during pregnancy — tobacco smoking, alcohol consumption, and use of illicit drugs — were reported more frequently by women who mentioned PVIP. In addition, alcohol consumption during pregnancy was associated with the inappropriate use of prenatal care. Pregnant women who consume alcohol are more likely to have inappropriate prenatal care[7], and alcohol consumption during pregnancy may be associated with partner violence[13,17]. Alcohol consumption, tobacco smoking, and the use of illicit drugs lead to

the discrimination of the individual by society, especially when reported by women during pregnancy. Therefore, some women may have omitted such information or minimized the amount and frequency of use, underestimating the association found.

The high prenatal care coverage found was similar to the one estimated for the city of Recife at the time of the study, which was 96.4% in 2005[30]. Despite the reasonable coverage, 35% of women started prenatal care after the first trimester and 22% made less than six visits, a similar situation to the one described in Recife by Carvalho and Araújo[31]. These findings suggest a deficiency in the early attraction of women and that the number of visits still is lower than what is recommended by the PHPN[6] for an expressive contingent.

The proportion between the women who made inappropriate use of prenatal care and those who reported PVIP was 55.1%; thus, an association between PVIP and the inappropriate use of prenatal care was established, with a 37% higher chance for women who mentioned PVIP in comparison to those without a history of violence, even after the adjustment by the covariables identified as confounders. This association was evidenced by similar studies conducted in Brazil[9], India[14], Bangladesh[11], and the United States[12]. In the study conducted in three maternity hospitals in Rio de Janeiro, in 2000, the probability of women undergoing inappropriate prenatal care was twice as high for victims of PVIP during pregnancy than among women who did not report violence[9].

Women in situations of intimate partner violence tend to start prenatal care later and present lower adhesion to the program due to problems resulting from violence, such as depression during pregnancy, low self-esteem, and greater difficulty in caring for their health[32]; that also happens because they have less partner support, including for prenatal care[33], as evidenced in this study, or because it is an unintended pregnancy[8]. Nevertheless, it is possible that the embarrassment of exposing physical marks of violence can contribute to lower adhesion to prenatal care appointments[33].

The findings of this study confirm the importance of raising awareness among the professionals from the Primary Health Care System to identify women in situations of violence, although health professionals have reported difficulties with regard to focusing on violence because they do not recognize it as a health problem, do not feel prepared to deal with the identified cases, or, yet, are victims or perpetrators of violence in marital relations[34].

Because the PSF develops health prevention and promotion actions it is possible to constitute a space to address issues related to violence, attention, and listening[35].

CONCLUSION

The findings of this study indicate that women who do not undergo, who start late, and/or who have lower adhesion to prenatal care may be experiencing intimate partner violence. Prenatal care programs that are able to identify and refer to institutions that offer support services to women in situations of violence are indispensable to promote higher adhesion rates to prenatal care and the reduction of maternal and perinatal mortality.

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