Physical violence in pregnancy: a cross-sectional study with women in puerperium attended in a public service of reference, São Paulo, Brazil

Violência física na gravidez: um estudo transversal com mulheres em puerpério atendidas em um serviço público de referência, São Paulo, Brasil

DOI: 10.46814/lajdv4n6-015

Recebimento dos originais: 04/11/2022
Aceitação para publicação: 05/12/2022

Fernanda Diniz e Silva
Lato sensu specialization in Gynecology and Obstetrics
Institution: Santa Casa de Misericórdia de São Paulo
Address: Rua Dr. Cesario Mota Junior, 112
E-mail: fernanda.dinizs@hotmail.com

Mariana Pércia Namé de Souza Franco
Lato sensu Specialization in Gynecology and Obstetrics
Institution: Universidade Federal de São Paulo (UNIFESP)
Address: Rua Bartolomeu Zunega, 44, Pinheiros São Paulo - SP, CEP: 05426-020
E-mail: marianapercia@gmail.com

Ana Luiza de Oliveira Assis
Obstetrics and Gynecology Resident
Institution: Conjunto Hospitalar do Mandaqui
Address: Rua Voluntários da Patria, 4301, Mandaqui, São Paulo - SP
E-mail: analuizaassis1@gmail.com

Heloisa Fracalossi Frigini
Obstetrics and Gynecology Resident
Institution: Conjunto Hospitalar do Mandaqui
Address: Rua Voluntários da Patria, 4301
E-mail: heloisarigin@gmail.com

Maria Aparecida dos Santos Traverzim
PhD in Biophotonics Applied to Health Sciences from Universidade Nove de Julho
Institution: Complexo Hospital Mandaqui - Universidade Nove de Julho
Address: Rua Voluntários da Pátria, 4301
E-mail: mtraverzim@gmail.com

Jefferson Ferreira Drezett
PhD in Health Sciences by Centro Universitário Faculdade de Medicina do ABC
Institution: Faculdade de Saúde Pública - Universidade de São Paulo (USP)
Address: Av. Dr. Arnaldo, 715, Cerqueira César - São Paulo
E-mail: drezett@usp.br
ABSTRACT
Introduction: Violence against women during pregnancy is recognized as a violation of human rights and reproductive rights, and a serious public health problem. Its prevalence is variable and has a multifactorial cause, requiring permanent monitoring. Method: Cross-sectional study conducted at the Hospital of Mandaqui, São Paulo, Brazil. The Abuse Assessment Screen (AAS) was applied to 350 puerperium women, with the outcome of suffering or not physical violence during pregnancy, between September and December 2021. Sociodemographic and reproductive data were considered. We used urn technique, with data were pre-coded, and EpiInfo® analysis by Pearson chi-square and Mann Whitney, adopting p<0.05 and 95% CI value. Research approved by the Research Ethics Committee, CAAE no. 50580421.5.0000.5551. Results: We found 13 cases of physical violence (3.7%) and sample loss of 18.9%. Women with physical violence during pregnancy showed lower mean age (27.7±8.24 x 37.3±6.28); less work (15.4% x 45.1%. p=0.034, OR/CI 0.98:0.98-20.70); less income (84.6% x 51.1%. p=0.017, OR/CI 0.18:0.04-0.86); higher occurrence of prematurity (30.8% x 9.5%. p=0.001, OR/CI 0.18: 0.05-0.59); and higher tobacco/alcohol use (38.5% x 10.4%. p=0.013, OR/CI 0.23:0.06-0.80). We found higher reports of violence before the age of 15 (53.8% x 18.7%, p<0.001, OR/CI 0.19: 0.06-0.60); physical violence in the last 12 months (84.6% x 1.8%. p<0.001); with a history of physical or emotional violence by the partner (76.9% x 29.4%. p<0.001, OR/CI 0.12:0.03-0.46); and fear of the intimate partner (46.2% x 2.4%. p<0.001, OR/CI 0.02:0.00-0.10). There was no difference for low schooling, race/color, union, pregnancy planning and high-risk pregnancy. Conclusion: The prevalence of physical violence during pregnancy was lower than in other studies in Brazil and other countries. The results suggest that gender violence is present throughout the life of women who suffer physical violence during pregnancy, reflecting in unfavorable reproductive outcomes. The high history of violence and fear of the partner may have contributed to eventual underestimation.

Keywords: violence against woman, pregnant women, crime victims, intimate partner violence.

RESUMO
Introdução: A violência contra a mulher durante a gravidez é reconhecida como uma violação dos direitos humanos e reprodutivos, e um grave problema de saúde pública. Sua prevalência é variável e tem uma causa multifatorial, exigindo um monitoramento permanente. Método: Estudo transversal realizado no Hospital de Mandaqui, São Paulo, Brasil. A Tela de Avaliação de Abuso (AAS) foi aplicada a 350 mulheres puerperas, com o resultado de sofrer ou não violência física durante a gravidez, entre setembro e dezembro de 2021. Foram considerados os dados sociodemográficos e reprodutivos. Utilizamos a técnica da urna, com dados pré-codificados, e a análise EpiInfo® por Pearson chi-square e Mann Whitney, adotando o valor p<0,05 e 95% CI. Pesquisa aprovada pelo Comitê de Ética em Pesquisa, CAAE no. 50580421.5.0000.5551. Resultados: Encontramos 13 casos de violência física (3,7%) e perda de amostra de 18,9%. Mulheres com violência física durante a gravidez apresentaram menor média de idade (27,7±8,24 x 37,3±6,28); menos trabalho (15,4% x 45,1%. p=0,034, OR/CI 0,98:0,98-20,70); menos renda (84,6% x 51,1%. p= 0,017, OR/CI 0,18:0,04-0,86); maior ocorrência de prematuridade (30,8% x 9,5%. p=0,001, OR/CI 0,18: 0,05-0,59); e maior consumo de tabaco/álcool (38,5% x 10,4%. p=0,013, OR/CI 0,23:0,06-0,80). Encontramos maiores relatos de violência antes dos 15 anos de idade (53,8% x 18,7%. p<0,001, OR/CI 0,19: 0,06-0,60); violência física nos últimos 12 meses (84,6% x 1,8%. p<0,001); com histórico de violência física ou emocional pelo parceiro (76,9% x 29,4%. p<0,001, OR/CI 0,12:0,03-0,46); e medo do parceiro íntimo (46,2% x 2,4%. p<0,001, OR/CI 0,02:0,00-0,10). Não houve diferença para baixa escolaridade, raça/cor, união, planejamento da gravidez e gravidez de alto risco. Conclusão: A prevalência de violência física durante a gravidez foi menor do que em outros estudos no Brasil e em outros países. Os resultados sugerem que a violência de gênero está presente durante toda a vida das mulheres que sofrem violência física durante a gravidez, refletindo em resultados reprodutivos desfavoráveis. O alto histórico de violência e medo do parceiro pode ter contribuído para uma eventual subestimação.
1 INTRODUCTION

Violence against women is recognized as a serious public health problem and a violation of human rights. The United Nations defines violence against women as any gender-based act that results in death or physical, sexual, or psychological suffering that occurs in any public or private space. In 2013, the World Health Organization (WHO) estimated the global prevalence of physical and sexual violence against women at 30.0% by intimate partners and 7.2% by non-partner perpetrators. Intimate partner violence showed values of 24.6% in the Western Pacific, 25.4% in Europe, 29.2% in the Americas, 36.6% in Africa, and 37.7% in Southeast Asia.

In Brazil, data collected by WHO pointed to a 34% prevalence of physical violence and a 14% prevalence of sexual violence against women, both practiced throughout life by their intimate partners. As a result, in 2017 the National Council of Justice processed 1.4 million cases of domestic violence and registered 230,000 requests for protective measures.

Several factors have been strongly related to the high prevalence of gender-based violence, such as a low socioeconomic status, low education of the woman or her partner, little social support, and financial dependence. Consequently, developing countries that present strong social inequalities, public health difficulties, and greater gender asymmetry show the highest prevalence.

Obstetric complications may occur in 37% of pregnant women, with a higher risk of miscarriage, fetal death, prematurity, low birth weight, premature rupture of membranes, and neonatal death. It is also a significant cause of suicide and maternal mortality. Moreover, women who suffer violence during pregnancy are more likely to initiate prenatal care later on, are more likely to have inadequate follow-up care, and are more likely to stop breastfeeding earlier.

Violence during pregnancy is defined as the threat or action of physical, sexual or psychological violence against the pregnant woman. Pregnancy may be a stage in life in which violence against women takes on new contours. While some studies report more psychological violence and less physical and sexual violence during this stage, others observe an increase in the frequency and severity of aggression. In addition, many women simultaneously face situations of psychological, sexual, or property violence during pregnancy.

It is estimated that physical violence during pregnancy (PVP) occurs for 4% to 34% of women, and that sexual violence during pregnancy is faced by 2.1% to 28.0%. In Brazil, there are no population-based surveys or a nationally representative sample on physical, emotional, or sexual violence.
violence during pregnancy, with most studies involving pregnant or postpartum women seen in public maternity hospitals. Furthermore, the social and multifactorial phenomenon of gender-based violence requires permanent monitoring. Hence, the aim of this study is to identify the prevalence of PVP and its sociodemographic and reproductive characteristics among women assisted in a referral hospital.

2 METHOD

2.1 STUDY DESIGN

Cross-sectional epidemiological study conducted at the Department of Obstetrics and Gynecology of Hospital of Mandaqui, a reference hospital for prenatal and childbirth care for women living in the northern region of the municipality of São Paulo, Brazil. The hospital is managed by the São Paulo State Health Secretariat and financed exclusively by the Unified Health System, with teaching and professional training activities. The hospital is free of charge to the population and is responsible for 150 to 200 deliveries per month.

2.2 STUDY POPULATION

The study population was composed of women aged 18 years or older who were within 72 hours of puerperium, with newborns weighing more than 500 grams. We excluded adolescents under 18, women with intellectual disabilities who were unable to answer the questions, and women who had had an abortion.

2.3 STUDY VARIABLES AND OUTCOMES

The outcome was whether women declared they had experienced physical violence during pregnancy (PVP), being allocated into two groups. We analyzed the sociodemographic variables of age, education, race/color, relationship status, and work or occupation. Education, race/color, and relationship status were categorized according to the recommendation of the Brazilian Institute of Geography and Statistics. The analysis of education considered women with low education, with up to nine complete years of schooling. The race/color variable analyzed black women, the sum of brown and dark-skinned women, against non-black women. The marital status grouped the women as in a relationship or not in a relationship.

Reproductive aspects included pregnancy planning, prematurity, risk pregnancy, and use of alcohol or tobacco during pregnancy. The history of experienced violence considered the reported cases of violence before the age of 15, physical or emotional violence by an intimate partner or
acquaintance, the occurrence of physical violence in the last 12 months, and the reported fear of the intimate partner.

2.4 DATA COLLECTION INSTRUMENTS AND PROCEDURES

We adopted the validated Portuguese version of the Abuse Assessment Screen (AAS), a specific instrument for screening violence against women during pregnancy.28 The puerperal women answered the AAS and the sociodemographic and reproductive questions manually, in a printed form without identification, deposited in a sealed urn. This step was conducted in closed and private rooms from September to December 2021. A researcher was available to help upon request, without interfering or accessing the participants' answers. The urn was opened and the forms were accessed after the sample was completed. Due to the possibility of adverse emotional events caused by the remembrance of violence, psychological and social care was ensured for the women who requested it.

2.5 SAMPLE SIZE CALCULATION

The calculation of the sample size adopted the average prevalence of 20% of violence against women during pregnancy, estimated in 2005 by the World Health Organization3, with an absolute error of 5%, a significance level of 5%, and statistical power of 80%, resulting in a robust sample of 350 women.

2.6 STATISTICAL ANALYSIS

The interviews were pre-coded and formatted into Excel®, version 2010, and the data were analyzed in EpiInfo®, version 7.2.3.1. We built frequency tables relating suffering or not suffering physical violence during pregnancy and the study variables. We applied the Pearson's chi-square test for contingency and association tables, and the Mann Whitney test for independent samples. We set the value of p<0.05 and Confidence Interval (CI) of 95%.

2.7 ETHICAL ASPECTS

We followed the resolutions no. 196/1996 and no. 466/12 of the National Health Council on the ethical aspects of research with human beings. No patient was identified in any way. The information was processed confidentially in a computer with password and access restricted to the researchers. The participants signed an informed consent form and received written information about protection and treatment services for women in situations of violence. The study was submitted to the Research Ethics Committee of Hospital of Mandaqui, with approval CAAE no. 50580421.5.0000.5551.
3 RESULTS

We approached 432 women in puerperium; 82 women (18.9%) refused to participate, and thus 350 women were included in the study. We found 13 cases of PVP, a prevalence of 3.7%. Women who did not experience PVP ranged from 18 to 46 years, mean 37.3 ± 6.28 years, median 26 years. Those who underwent PVP were younger, ranging from 19 to 41 years, mean 27.7 ± 8.24 years, median 23 years.

In the sociodemographic variables, there was significant difference regarding work and income, lower in women who suffered PVP, but no difference was observed regarding low education, race/color and relationship status. As for reproductive aspects, prematurity and the use of tobacco or alcohol were more frequent in women who suffered PVP. Most women stated that the pregnancy was unplanned and that it was not high-risk, with no difference between the groups (Table 1). About the history of violence, there was significant difference for all variables analyzed, with higher reports among women who suffered PVP (Table 2).

4 DISCUSSION

The prevalence of PVP in this study (3.7%) was notably lower than was reported by Audi et al. (2008)\(^{14}\), with 6.5% in Campinas; by Santos et al. (2010)\(^{10}\), with 9.5% in Rio de Janeiro; by Menezes et al. (2003)\(^{25}\), with 13.1% in Recife; by Durand and Schraiber (2007)\(^{5}\), with 13.5% in São Paulo; by Ferri et al. (2007)\(^{29}\), with 14.6% in São Paulo; by Moraes and Reichenheim (2002)\(^{26}\), with 33.8% in Rio de Janeiro; and by Okada et al. (2002)\(^{16}\), with 34.6% in São Paulo.

Higher values have also been reported in other countries, with 4.3% in China (Leung et al., 1999)\(^{23}\); 4.8% in Iran (Naghizadeh et al., 2021)\(^{30}\); 8.4% in Turkey (Gürkan et al., 2020)\(^{21}\); 10.2% in Rwanda (Rurangirwa et al., 2017)\(^{31}\); 13.4% in Nicaragua (Valladares et al., 2005)\(^{22}\); 14.0% in Malawi (Chasweka et al., 2018)\(^{24}\); 17.0% in the UK (Johnson et al., 2003)\(^{32}\); and 27.7% in Uganda (Kaye et al., 2006)\(^{7}\). Other indicators may be considered. In Italy, BO et al. (2020)\(^{20}\) found that PVP was the reason for emergency medical care for 86.7% of 113 pregnant women, with physical injuries in 47.8% of the examinations. In 84.4% of cases the perpetrator of the violence was the partner, with an increase in assaults during pregnancy in 17.7% of cases.\(^{20}\)

Confidentiality and privacy in research procedures are fundamental to minimize women's embarrassment or reduce their fear of disclosing violence. By adopting the urn and conducting the activities in a private room, we aimed to avoid underreporting as much as possible. Considering the low prevalence of PVP in our results, we recognize this possibility due to some women's perception of insufficient care, sociocultural limitations in recognizing violence suffered, or the information and memory bias induced by data collection in the puerperium.
The mean age of the women found who suffered PVP (27.7±8.24 years) was lower than in women did not suffer any violence (37.3±6.28), consistent with evidence that being underage or being younger is relevant to experiencing violence in pregnancy. Adolescents in particular may experience violence after disclosing the pregnancy, either by the family or by the partner. Studies by Moraes and Reichenheim (2002), Moraes et al. (2010), and Rurangirwa et al. (2017) also associated woman's younger age with violence in pregnancy, while Bessa (2014) found no difference between adolescents and adults. However, by not including adolescents under 18 years of age, the comparison with other studies was impaired.

Unlike most studies, we did not find a relationship between low education and higher frequency of PVP, as did Santos et al. (2010), Khosla et al. (2005), and Okada et al. (2015). On the other hand, women who suffered PVP had lower income and less work, consistent with the findings of Leung et al. (1999), Bessa (2014), and Rurangirwa et al. (2017). However, evidence is robust regarding social inequality, poverty, financial dependency, and unemployment as factors associated with PVP. Women's lower income also gives the phenomenon significance for social stratification, while greater economic autonomy may be a protective factor for PVP.

Racial issues also matter for suffering violence while pregnant and are even more unfavorable for black women and racial-ethnic minorities. A study by Garcia and Silva (2014) with Brazilian emergency services found that almost 70% of the cases of violence involved black women. The extreme of this gender violence is the murder of women. Between 2016 and 2018, Monteiro et al. (2021) found that the femicide rate for black Brazilian women, 12.5/100,000, was almost double the rate calculated for white women, 5.9/100,000 regardless of the age group analyzed.

Internationally, WHO estimates that, on average, 38% of femicides are committed by an intimate partner, with higher numbers for countries in Southeast Asia, Africa, and the Americas. Although we recognize the greater vulnerability of black women to experience violence, we did not find a higher frequency of PVP for black women.

Suffering physical violence in the past 12 months was significantly more frequent in women who had suffered PVP (84.6% versus 1.8%). In both groups the intimate partner was the predominant aggressor, with no difference. However, multiple or recurrent assaults were more frequent in women who suffered PVP (45.5% versus 33.4%). Our result was expressively higher than that verified in our setting by Ferri et al. (2007), of 14.6%; by Santos et al. (2010), of 9.4%; by Fiorotti et al. (2018), of 7.6%; by Menezes et al. (2003), of 13.1%; by Durand and Schraiber (2007), of 13.5%; and by Moraes and Reichenheim (2002), of 33.8%.

Evidence is consistent about the role of the intimate partner in violence against women, including during pregnancy. Some studies indicate that women with no partner are more likely to
experience violence while pregnant.\textsuperscript{40-42} In such cases, Finnbogadóttir et al. (2016)\textsuperscript{42} believe that the protective factor of a relationship, based on healthy ways of relating, results from shared values in family formation. In this study we found no relationship between having or not having a formal or consensual union and PVP. Paradoxically, we observed high values of reporting experiencing physical or emotional violence by the intimate partner in both groups, significantly higher in women who suffered PVP (76.9\%) than in women who did not (29.4\%). However, we understand that the statement of not having a relationship may be a subordinate category, with having or not having an intimate partner being more important.

To some extent, this routine of violence is translated into fear of the intimate partner, almost twenty times more frequent in women who suffered PVP (46.2\%) than in women who did not (2.4\%). Our result showed higher values than in the Brazilian studies of Durand and Schraiber (2007)\textsuperscript{5}, of 26.5\%; of Audi et al. (2008)\textsuperscript{14}, of 19.1\%; and of Santos et al. (2010)\textsuperscript{10}, of 5.4\%. It was also higher than the findings in China (3.6\%)\textsuperscript{23}; in Canada (1.5\%)\textsuperscript{43}; in the United Kingdom (27.0\%)\textsuperscript{32}; in Uganda (24.8\%)\textsuperscript{7}; and in Nicaragua (32\%)\textsuperscript{22}. In Rio de Janeiro, the situation was more serious, with 78.3\%.\textsuperscript{26}

Fear is an important aspect of gender-based violence because it limits different spheres of women's lives, hinders their development, or reduces their sexual and reproductive autonomy.\textsuperscript{1} In extreme situations, exposure to fear coupled with traumatic events can lead to stress and isolation, conditions that facilitate depression and suicidal behavior.\textsuperscript{44}

Similarly, we found an important difference regarding suffering violence before the age of 15, almost three times more frequent in women who suffered PVP (53.8\%) than in pregnant women who did not (18.7\%). The data corroborate the evidence of adolescence as a vulnerable stage for suffering violence, often experienced continuously and recurrently throughout life. The situation worsens when sexual violence against young women is analyzed. In 2019, Brazilian public security departments recorded almost 60\% of cases of sexual violence among minors under 13 years of age.\textsuperscript{45}

The high rates of physical violence in the last year (84.6\%), past partner violence (76.9\%), and fear of the intimate partner (46.2\%) contrast with the low prevalence of PVP in this study (3.7\%). We understand it as reasonable to assume a synergistic effect of these factors in inhibiting women to disclose and declare PVP, for fear of retaliation.

Adverse perinatal outcomes, such as prematurity and low birth weight, may relate to neuroendocrine factors, as suggested by Talley et al. (2006)\textsuperscript{46}, who found a significant linear relationship in beta-endorphin and adrenocorticotropic hormone levels among women who suffered PVP. Along with Santos et al. (2010)\textsuperscript{10} and Belay et al. (2019)\textsuperscript{47}, we found a higher frequency of prematurity in women who suffered PVP.
Unplanned pregnancy is identified as a risk factor for experiencing PVP in Okada et al. (2015)\textsuperscript{16}, Santos et al. (2010)\textsuperscript{10}, Leung et al. (1999)\textsuperscript{23}, and Kaye et al. (2006)\textsuperscript{7}. Although the absence of reproductive planning was prevalent (76.9\% with PVP and 64.7\% with no PVP), we found no difference in the two groups. This finding seems to replicate what occurs with most Brazilian women, even with the high prevalence of modern contraceptive methods and decreasing fertility rates.\textsuperscript{48}

As a reproductive aggravating factor, we found that use of alcohol and tobacco was more common in women who suffered PVP (38.5\% versus 10.4\%). Alcohol consumption may be a facilitator of violence as part of a complex association. Women may use alcohol to cope with violent situations with the disapproval of their partners, who employ violence as a form of reprisal. Fetal harm from smoking is also recognized, such as prematurity, intrauterine growth restriction, and low birth weight.\textsuperscript{1} However, we cannot assert that the higher occurrence of prematurity found in women who suffered PVP stems from higher alcohol or tobacco consumption.

Other factors have been associated with PVP, such as the woman's religion\textsuperscript{16,40,49}, having children with another partner\textsuperscript{41}, being married before the age of 18\textsuperscript{50}, living in urban areas\textsuperscript{31}, or experiencing domestic violence before the age of 15\textsuperscript{14,25}. For the intimate partner, alcoholism, low education\textsuperscript{51}, young age\textsuperscript{14}, use of psychoactive substances\textsuperscript{6,14}, infidelity\textsuperscript{50}, or the feeling of possession over the woman and doubt over paternity\textsuperscript{52} were described. Although we have not analyzed these aspects, we recognize their importance for future studies.

Considering the coverage of the Brazilian Unified Health System, prenatal care is a strategic space for identifying situations of violence during pregnancy.\textsuperscript{10} However, women rarely disclose this fact spontaneously, which contributes to reducing the visibility of the phenomenon.\textsuperscript{6} Additionally, violence does not leave evident physical marks that allow us to suspect its occurrence.\textsuperscript{6,10} These limitations require new forms of embracing and recognizing the problem which definitively incorporate gender violence in public health policies.

It seems equally important to identify and hold the perpetrators of violence accountable, a fundamental measure to break the cycle of domestic violence, minimize the aggravations for women, and reduce impunity. Brazilian health professionals have a legal duty with this issue, provided for in Law no. 13,931 of 2019, regarding the ethical-legal principles of secrecy and confidentiality.\textsuperscript{53} At the same time, we understand that public health policies should incorporate and offer programs to prevent gender violence, including during the gestational period.

Finally, it is important to consider that many women in prenatal care have pregnancies resulting from sexual violence that are not identified by health services. In these cases, Brazilian legislation allows abortion to be practiced legally. However, Pedroso et al. (2001) warn that giving up the right to abortion and following pregnancy is more frequent among younger women, without income, with little
education and with a higher gestational age. In addition, known and threatening aggressors, especially the intimate partner, seem to influence women's decision to give up abortion.  

Among the limitations of this study, some variables analyzed are subject to confounding factors, with clinical and sociodemographic aspects that are interrelated with the aggravations of violence. Since this is a multifactorial phenomenon, we must be careful not to generalize the results of this study to other populations, especially those with different cultural, economic, and sociodemographic realities. This study was performed during the COVID-19 pandemic, which may, to some extent, have influenced the results, limiting the comparison with studies conducted outside this scenario.

5 CONCLUSION

The prevalence of PVP was lower than the estimates of other studies in Brazil and other countries. Women who suffered PVP showed some unfavorable social and economic indicators, such as lower income, less work, and lower average age. Concurrently, they revealed a grave scenario of gender violence, with more reporting of violence before age 15, more physical or emotional violence inflicted by the partner in the past, more physical violence in the last year, and more frequent fear of the intimate partner.

The results suggest that gender-based violence is present throughout the lives of women who experience violence during pregnancy, reflecting in unfavorable reproductive outcomes such as higher tobacco and alcohol use and higher occurrence of prematurity. It is possible that high levels of past violence and fear of the partner may have contributed to eventual underreporting of PVP.

FINANCIAL SUPPORT

The author received no financial support for the research, authorship, and/or publication of this article.

CONFLICTS OF INTERESTS

No potential conflict of interest was reported by the author.

AUTHORS CONTRIBUTION

F.D.S., M.P.N.S.F., and J.D., developed the research question. F.D.S., M.P.N.S.F., A.L.O.S., and H.F.F., conducted research. J.D., analyzed data and performed statistical analysis. M.P.N.S.F., F.D.S., J.D., and M.A.S.T., interpreted the results. J.D., provided the tables. M.P.N.S.F., F.D.S., J.D. and
M.A.S.T., drafted the manuscript. J.D., and M.A.S.T., have reviewed the manuscript. All authors read and approved the final manuscript.

AUTHORS INFORMATION

FDS: Resident doctor in Gynecology and Obstetrics of Mandaqui Hospital. MPNSF: Resident doctor in Gynecology and Obstetrics of Mandaqui Hospital. ALOS: Resident doctor in Gynecology and Obstetrics of Mandaqui Hospital. HFF: Resident doctor in Gynecology and Obstetrics of Mandaqui Hospital. MAST: PhD in Health Science. Professor at Nove de Julho University. JD: PhD in Health Science. Professor of School of Public Health, São Paulo University. Professor of ABC Medical School.

ABBREVIATIONS AND SYMBOLS

AAS      Abuse Assessment Screen
CI       Confidence Interval
OR       Odds Ratio
PVVP     Physical violence during pregnancy
WHO      World Health Organization
REFERENCES


## ANNEXES

Table 1 – Sociodemographic and reproductive characteristics of 350 women in puerperium, according to the statement of having or not suffered physical violence during pregnancy, Hospital of Mandaqui, São Paulo, Brazil, 2021

<table>
<thead>
<tr>
<th>PHYSICAL VIOLENCE</th>
<th>PHYSICAL VIOLENCE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO (n=337)</td>
<td>YES (n=13)</td>
<td>(n=350)</td>
</tr>
<tr>
<td><strong>INCOME</strong> ****</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 1</td>
<td>172 (51.1)</td>
<td>11 (84.6)</td>
</tr>
<tr>
<td>1 – 2</td>
<td>138 (40.9)</td>
<td>2 (15.4)</td>
</tr>
<tr>
<td>&gt; 2</td>
<td>27 (8.0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td><strong>POOR EDUCATION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>72 (21.4)</td>
<td>3 (23.1)</td>
</tr>
<tr>
<td>No</td>
<td>265 (78.6)</td>
<td>10 (76.9)</td>
</tr>
<tr>
<td><strong>RACE/COLOR</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>213 (63.2)</td>
<td>6 (46.2)</td>
</tr>
<tr>
<td>Non-black</td>
<td>124 (36.8)</td>
<td>7 (53.8)</td>
</tr>
<tr>
<td><strong>RELATIONSHIP STATUS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>236 (70.0)</td>
<td>6 (46.2)</td>
</tr>
<tr>
<td>No</td>
<td>101 (30.0)</td>
<td>7 (53.8)</td>
</tr>
<tr>
<td><strong>WORK</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>152 (45.1)</td>
<td>2 (15.4)</td>
</tr>
<tr>
<td>No</td>
<td>185 (54.9)</td>
<td>11 (84.6)</td>
</tr>
<tr>
<td><strong>PLANNED PREGNANCY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>119 (35.3)</td>
<td>3 (23.1)</td>
</tr>
<tr>
<td>No</td>
<td>218 (64.7)</td>
<td>10 (76.9)</td>
</tr>
<tr>
<td><strong>RISK PREGNANCY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>109 (32.4)</td>
<td>5 (38.5)</td>
</tr>
<tr>
<td>No</td>
<td>228 (67.6)</td>
<td>8 (61.5)</td>
</tr>
<tr>
<td><strong>USE OF ALCOHOL AND TOBACCO</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>35 (10.4)</td>
<td>5 (38.5)</td>
</tr>
<tr>
<td>No</td>
<td>302 (89.6)</td>
<td>8 (61.5)</td>
</tr>
<tr>
<td><strong>PREMATURITY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>32 (9.5)</td>
<td>4 (30.8)</td>
</tr>
<tr>
<td>No</td>
<td>305 (90.5)</td>
<td>9 (69.2)</td>
</tr>
</tbody>
</table>


Table 2 – History of violence among 350 women in puerperium according to the declaration of having or not suffered physical violence during pregnancy, Hospital of Mandaqui, São Paulo, Brazil, 2021

<table>
<thead>
<tr>
<th>PHYSICAL VIOLENCE</th>
<th>PHYSICAL VIOLENCE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO (n=337)</td>
<td>YES (n=13)</td>
<td>(n=350)</td>
</tr>
<tr>
<td><strong>VIOLENCE BEFORE THE AGE OF 15</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>63 (18.7)</td>
<td>7 (53.8)</td>
</tr>
<tr>
<td>No</td>
<td>274 (81.3)</td>
<td>6 (46.2)</td>
</tr>
<tr>
<td><strong>PHYSICAL OR EMOTIONAL VIOLENCE BY AN INTIMATE PARTNER OR ACQUAINTANCE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>99 (29.4)</td>
<td>12 (76.9)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>238</td>
</tr>
<tr>
<td>--------------------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td><strong>PHYSICAL VIOLENCE IN</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>THE LAST 12 MONTHS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>6</td>
<td>1.8</td>
</tr>
<tr>
<td>No</td>
<td>331</td>
<td>98.2</td>
</tr>
<tr>
<td><strong>Author of violence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intimate partner</td>
<td>6</td>
<td>100.0</td>
</tr>
<tr>
<td>Stranger</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Number of aggressions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One</td>
<td>4</td>
<td>66.6</td>
</tr>
<tr>
<td>Multiple</td>
<td>2</td>
<td>33.4</td>
</tr>
<tr>
<td><strong>FEAR OF THE INTIMATE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PARTNER</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>8</td>
<td>2.4</td>
</tr>
<tr>
<td>No</td>
<td>329</td>
<td>97.6</td>
</tr>
</tbody>
</table>