

## Factors associated with violence against women by an intimate partner in Northeast Brazil

De Araújo Lima, Larissa Alves; De Souza Monteiro, Claudete Ferreira; Nunes, Benevina Maria Vilar Texeira; Da Silva Júnior, Fernando José Guedes; Fernandes, Márcia Astrês; Zafar, Shazia; Dos Santos, Manoel Antônio; Wagstaff, Christopher; Diehl, Alessandra; Pillon, Sandra Cristina

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## **Factors associated with violence against women by an intimate partner in Northeast Brazil**

### **Abstract**

This study examined the prevalence, and associated factors, of violence against women by an intimate partner amongst 369 women who attended nursing consultations at primary care centres in Northeast Brazil. Socio-demographic variables, substance use, mental health and the forms of violence were analysed. IPV was a reality for 65.4% of the women of reproductive age seen in the centres. IPV, including psychological violence, is associated with age, education and religion, particularly amongst female cannabis users whose partners were also substance users. Primary care providers are in a position to detect, screen, counsel and treat women who experience IPV.

**Keywords:** Intimate partner violence, Mental Health, Substance use, Primary Care, Women

## Introduction

Violence against women has been described by The Declaration on the Elimination of Violence against Women at the United Nations General Assembly in 1993 as: *“any act of gender-based violence that results in or is likely to result in, physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life”* (United Nations General Assembly, 1993).

Intimate partner violence (IPV) is a form of violence against women (gender-based), also a serious violation of human rights and disrespect for women's dignity, which limits their participation in society; a complex, multidimensional and multi-causal phenomenon. IPV is a public health problem with social, historical and cultural dynamics that is of increasing concern globally due to high impact on victim's mental, reproductive and physical health; but also contributes to poverty and perpetuation of gender inequities around the world (World Health Organization [WHO], 2019a; Chhabra et al., 2020).

Increasing attention has also been drawn to childhood witnesses of IPV in families and its disruptive impacts on lifelong health, learning, and behaviour. This highlights the importance of attending to the varied problems uncovered in children's and teenagers' responses to IPV exposure. It has become evident that differential effects of IPV exposure on psychopathology symptoms of victimised children who are close to the violence will experience severe post-traumatic stress disorder (PTSD).

Health professionals, especially nurses, midwives and community health agents in primary health care are usually the victims' first contacts; therefore they play an essential role in preventing IPV through early identification in providing quality and respectful care to the victims (Mantler, Jackson and Walsh, 2020; WHO, 2019a,b). Globally, nurses in primary care have a chance to mitigate against IPV, as long as they have had sufficient training to respond and thus fewer

misunderstandings about IPV. With educational training in IPV, nurses can gain sufficient understanding of its causes (such as gender power relations) associated factors (such as alcohol and other substance use) and recognise psychological violence and its consequences, as well as, physical and sexual violence (Ally et al., 2016; Arboit, Padoin and Vieira, 2020; Jiménez-Rodríguez et al., 2020; WHO, 2019a,b).

IPV creates a huge burden for public finances due to the high social, security and health costs that it entails (BRASIL, 2019; WHO, 2019a), yet remains invisible and underreported in many countries (WHO, 2016, 2021). Epidemiological data fails to capture the full extent of IPV against women, due to underreporting, diversity of research methods and sampling techniques utilised. In addition to this mix is the lack of reporting of the cultural contexts of acceptability, social tolerance and the meanings attributed to violence. Thus, the official record of reported cases in health units and police stations is lower than expected when compared to self-reporting and experiences of victims, thus, demonstrating the precarious and insufficient research data on the subject (WHO, 2021a).

IPV is a global phenomenon demonstrated by studies at a national (Marabotti et al., 2018; Mascarenhas et al., 2020) and international level (Bott et al., 2019; WHO, 2021a,b). It is estimated that about a third of women in the world have suffered some form of IPV. Data from the Violence Against Women Prevalence Estimates from WHO described that globally, 27% of ever-married/partnered women aged 15–49 years have been subjected to physical and/or sexual IPV at least once in their lifetime. Recent estimates of IPV cases show that Sub-Saharan Africa (20%) and Southern Asia (19%) have the highest prevalence rates of the past 12 months, followed by Northern Africa (15%) and Western Asia (13%). In Latin America and the Caribbean, 8% of ever-married/partnered women aged 15–49 have experienced intimate partner violence at least once in the year preceding the research (WHO, 2021a). In the United States (US), the National Intimate Partner and

Sexual Violence Survey State Report estimated that the lifetime prevalence of any IPV experienced by women varies from 27.8% in South Dakota to 45.3% in Kentucky (Willie and Kershaw, 2019).

Globally, Brazil has the 11<sup>th</sup> highest rate of IPV, making IPV an important and urgent public health priority. Globally, 38% of all murders of women were committed by their intimate partners. Brazilian data on mortality from the Ministry of Health shows that female homicide has increased throughout Brazil with more than 90,000 women murdered over the past 30 years. A study carried out by the Institute for Economic and Applied Research (IPEA) and the Brazilian Forum on Public Security reveals that in 2017 the overall homicide rate in Brazil was 4.2%, however, an increase in the rate grew to 5.4%. This increase corresponds to 4.7 cases of deaths among women for each group of 100,000 inhabitants (Atlas of Violence, 2019).

In Brazil, 30% to 60% of women have been victims of violence and about a third of this violence was committed by their intimate partner (BRASIL, 2019). The rates of IPV vary across the country; there is an increasing trend in the Northeast of Brazil, where there is low (0.631-0.673) to medium (0.684-0.730) Human Development Index (HDI) (United Nations Development Programme [UNDP], 2013; Leite et al., 2017).

Associated with high prevalence rates, factors have been identified as possible causal pathways between exposure to different forms of violence and different outcomes. These factors are beginning to be documented and better understood; these pathways are often complex and influenced by social, physiological and behavioural factors that influence the likelihood of disease/health outcomes (WHO, 2021). Evidence shows that factors associated with higher rates of IPV include the non-acceptance of children from previous relationships, not reporting aggression to authorities, educational levels, unemployment, low income and the influence of alcohol and/or psychoactive substances used by both women and their partners, as well as depression and anxiety disorders (Sanz-Barbero et al., 2019; WHO, 2019a; 2021).

There is a scarcity of studies looking at IPV in primary health care services, which are "the gateway" to health services in Brazil and where health professionals face the various health conditions of women suffering from IPV (Arboit, Padoin and Vieira, 2020; Jiménez-Rodríguez et al., 2020). Since 1988, Brazil has been building the national health system, seeking to meet universal health needs, having created the Family Health Strategy (ESF) in primary care. ESF is the major provider of universal and free health care and contributes to improving public access to health services through interdisciplinary primary care teams. Despite some notable achievements in primary health care, such as when women are treated for IPV, both in public and private services, authorities must be notified as per Law 10.778 of the Brazilian legal system. However, there are still challenges, including the expansion of access to primary care and quality improvement. Concerning IPV, health professionals are not adequately prepared to care for women who have survived or are suffering from domestic violence situations. Furthermore, health professionals need training around IPV, such as the impacts on health. (Blasco et al., 2018). Training of primary health care professionals will ensure better development of evidence-based health practices for female IPV victims (Arboit, Padoin and Vieira, 2020; Jiménez-Rodríguez et al., 2020).

Based on the literature presented, a study examining IPV amongst women in Brazil was required. Therefore, this study examined women receiving care within primary care settings in Northern Brazil to assess the prevalence and associated factors of violence against women perpetrated by an intimate partner.

## **Methods**

### **Ethical issues**

Ethical approval was obtained from the Local Research Ethics Committee (protocol number 985391). The study follows ethical assumptions as recommended by Resolution 466/2012 of the National Health Council. All participants signed the Free and Informed Consent Form and had a right to withdraw from the study at any time. The participants recruited for this research did not receive any refunds or compensation for participating in this study.

### **Design, study location and period**

The study was of cross-sectional design and was conducted between August 2015 to March 2016 in Basic Health Units (BHU) of five health macro-regions in the state of Piauí, Brazil: Teresina, Parnaíba, Picos, Floriano and Bom Jesus. The HDI of Piauí state is 0.646 which is considered to be of low level (UNDP, 2013). The Reporting of Observational Studies in Epidemiology (STROBE) for cross-sectional studies was adopted for the methods and results (Von Elm et al., 2008). The HDI is a means by which the average achievement in key dimensions of human development can be measured with an assumption that people should live a long and healthy life, being knowledgeable and have a decent standard of living (IBGE, 2010; UNDP, 2013).

### **Population and sample**

The data was collected from the population of the Brazilian municipalities with a total of 347,414 women aged between 20 and 59 years; 260,613 in Teresina, 41,820 in Parnaíba, 22,157 in Picos and 16,836 in Floriano (IBGE, 2010). Proportional stratification of the sample was then performed according to the population of each municipality. To establish the sample size, a calculation was used with a proposed formula for social research in infinite populations (above 100,000 habitants) (Gil, 2008). In total 369 women were interviewed in the study. In the municipality of Teresina 232 women (62.9%) were

interviewed; 36 women (9.8%) in Parnaíba, 46 (12.5%) in Picos, 38 (10.3%) in Floriano and 17 (4.6%) in Bom Jesus city.

Subsequently, within the municipalities, the second process of stratified sampling technique concerning the BHUs was applied to the cohort sample. A prevalence rate of 39% violence against women by their intimate partner (Albuquerque et al., 2013) was used to estimate the sample size. During recruitment, a total of 467 women met the eligibility criteria and were invited, however, 68 women (14.5%) refused to participate in the research, citing lack of time.

Eligibility criteria for the study were that women were required to be accompanied by a nurse in the BHU from one of the municipalities in previously scheduled appointments in the Family Health Program. Women who were unable to comprehend information that was given to them at the recruitment stage of the study were excluded from the study. Eligibility criteria for the study included: being female, aged between 20 to 59 years old; **women who had never been in a relationship (loving/marital)** and were attending the Family Health Program in primary health care services.

An intimate partner is a partner, or a former partner, with whom the woman resides and is in a maintained intimate relationship, regardless of formal union either with current or previous boyfriends (Straus and Douglas, 2004; United Nations General Assembly, 1993). In the training workshops, the staff were briefed on the terminology used in the field of alcohol and drugs, how to use the screening instruments to be used, the signs and symptoms related to problematic substance use, possible treatment pathways. The workshops were a total of twelve hours, divided into four classes of three hours each. who would be collecting the data were held before any data collection. The aim was to standardise the completion of the questionnaires and thus, reduce the possibilities of errors.

To prevent possible bias in the research data, the women were anonymised and interviews were omitted where the participant felt frightened or insecure. During the data collection, interviewers sought



to be empathetic and welcoming by creating a safe environment and reinforcing the anonymity of any identifiable information in the study.

## **Instruments**

**(a) Socio-demographic information:** age, marital status, religion, educational level, self-reported race, occupation, family income (salary or Federal Family Grant program/other benefits) were recorded. The Federal Family Grant program (Bolsa Família Program) is a federal government cash transfer program established in 2003. It was considered as one of the main programs to combat poverty and consists of financial assistance to extremely poor families, including pregnant women and children or adolescents. A requirement being that the children of beneficiary families must remain in school and keep up to date with vaccinations (BRASIL, 2004).

**(b) Revised Conflict Tactic Scale (CTS2)** is a widely used scale for measuring IPV (Straus and Douglas, 2004). CTS2 assesses conflict resolution strategies between couples defined as people who are in any type of intimate relationship during the previous three months (Moraes, Hasselmann and Reichenheim, 2002). The study used the CTS2 version translated and validated to Brazilian Portuguese by Moraes, Hasselmann and Reichenheim. CTS2 consists of 78 items widely used to measure IPV in five subscales: (i) negotiation, (ii) psychological aggression, (iii) physical aggression, (iv) injuries and (v) sexual coercion (Moraes, Hasselmann and Reichenheim, 2002).

**(c) Reproductive history, sexual orientation and health service utilisation data:** these are questions related to any history of abortions or miscarriages, number of births and pregnancies (recent), frequency of health services utilisation and frequency of condom use. Sexual orientation was ascertained by direct questions asked with homosexual, heterosexual and bisexual options.

**(d) Alcohol Use Identification Test version Consumption (AUDIT-C).** An abbreviated version of AUDIT was developed by WHO in 1982 to be applied in different settings, but mainly in primary health care as a simple way to screen and identify people who are at risk of developing alcohol problems. It is three self-applicable items with scores from zero to 12. Cut-off point equal to or greater than four for

women indicates possible problems with alcohol. The AUDIT-C focuses on identifying hazardous drinkers or those with alcohol use disorders. It is available in Brazilian Portuguese. The effectiveness of the AUDIT-C as a screening test for alcohol was also evaluated among primary care patients (de Meneses-Gaya et al., 2009). Test-retest reliability has been assessed via the intra-class correlation coefficient for the total AUDIT-C scale and was 0.93. The area under ROC was 0.79 for a cut-off of four (sensitivity 0.69; specificity 0.89) (de Meneses-Gaya et al., 2009).

**e) Binge drinking:** is defined as the consumption of large amounts of alcohol within a short time. In research, this means the equivalent of five units (the equivalent of approximately 10 grams of pure alcohol) for men and four units for women in a period of two hours (National Institute of Alcohol Abuse and Alcoholism [NIAAA], 2004).

**d) Substance use:** i) tobacco, marijuana and tranquillisers use in the last 12 months was investigated in the women. ii) Alcohol, marijuana and tranquilliser use by their partners in the last 12 months was established through self-report by the women.

**e) Self-Reporting Questionnaire (SRQ-20):** is a psychiatric screening tool originally composed of 30 items. It includes binary (yes/no) questions only, with codes “1” which represents the presence of a symptom and “0” if the symptom is absent. The questions in SRQ-20 reflect the common mental disorder (CMD). In this study, we used two domains relating to depressive thoughts and anxiety/depression symptoms. The Brazilian version of SRQ-20 included 20 items for screening non-psychotic mental disorders. Overall and standardised internal consistency coefficient was 0.80 in a Brazilian sample (Santos et al., 2009). The validity, reliability and cut-off of the SRQ-20 vary in different settings across a variety of populations (with different cultures, languages, settings and gender) (Mari and Williams, 1986). Many developing countries have validated and have been using the SRQ-20 in many community-based screening programs including in Brazil by Mari and Williams (1986). In the Brazilian version, sensitivity was 83% and specificity 80% and the questionnaire was a good indicator of morbidity. A correlation was found between questionnaire total scores and independent clinical judgment ( $r = +0.70$ ).

## Data analysis

The socio-demographic variables; lifestyle habits, health conditions and the forms of violence were analysed through descriptive statistics such as frequency (n) and percentage (%). The quantitative variables were analysed using central trend measurements (mean) and dispersion measures (standard deviation SD). A normality test was performed in the group of numerical variables to confirm the distribution pattern through the categorical variables; bivariate analysis was used to compare the qualitative variables utilising the Chi-square and Exact *Fisher* Test. The independent variable was IPV (CTS2). The variables that presented a  $p\text{-value} \leq 0.05$  (age group, schooling, religion, substance use – in women and partners, and mental health) and other co-variable of interest (race) were considered for multivariate analysis in logistic regression, using the adjusted Odds Ratio (Von Elm et al., 2008). Variables such as abortion and tranquilliser use by partners were not included in the multivariate analysis, because of lack of collinearity between two (or more) independent variables. Finally, a logistic regression model was performed with a smaller number of explanatory variables (Von Elm et al., 2008). A significance level of 5% was used for all statistical tests.

## Results

In the total sample (n= 369), women were young adults with a mean age of 33 years (Standard Deviation [SD] 9.9 years) ranging from 20 to 59 years. They self-described as non-white 297 (80.5%), in a married or stable union 265 (71.8%), Catholic 168 (60.9%), heterosexual 364 (98.6%), had children 261 (70.7%), attended school (>8 years) 273 (73.9%) and more than half the participants were unemployed 192 (52.0%). Most of the women worked but had a low personal income 191 (51.7%) ( $\leq 1$  Minimum Wage [MW]) and a family income of 230 (62.3%) ( $\leq 2$  MW). A quarter of women participated in the Federal Family Grant program 74 (39.1%) (Data not available in the table).

In the study, the results showed that highest level of IPV against women was associated with age (72.6% [20 -29 years old],  $p = 0.03$ ), education (66.7% [9-11 years of education],  $p = 0.03$ ) and religion (77.1% other religion and 68.7% Catholic,  $p < 0.001$ ). In the multivariate analysis, IPV was double amongst the younger participants and almost triple amongst the more educated women (9-11 years of study). Religion was also strongly associated with IPV; among Catholic women (OR 2.9 CI 95% 1.7; 5.3) and other (OR = 4.7 CI 95% 1.8; 12.3) religious affiliation having a higher likelihood of reporting IPV, compared to Evangelical. There were also potentially raised rates of IPV amongst the white participants (OR = 5.6 CI 95% 1.2; 26.1) (see Table 1).

[Insert table 1]

Table 2 displays data on reproductive history, sexual orientation and health service utilisation. Note that in most of the highlighted variables there were no differences between women who had experienced IPV, or not. Nonetheless, all women with a history of having an abortion ( $n=8$ ) had at some point in their life experienced IPV ( $p = 0.03$ ). In bivariate analyses without statistical significance, we also observed the low rate of condom use amongst the sample (Table 2).

[Insert table 2]

In general, the prevalence of IPV was 65.3% ( $n= 241$ ). Regarding the nature of the IPV, the most prevalent form of violence was psychological 225 (93.4%), followed by physical 119 (49.4%), moral 69 (28.6%) and sexual 63 (26.1%) (Data not available in the table). In the overall sample, the prevalence of problematic alcohol use was 78 (21.1%), tobacco 66 (17.9%) and cannabis 18 (4.9%). The bivariate analysis highlighted higher percentages of problematic alcohol use (AUDIT-C) 52 (66.7%), occasionally use 57 (81.4%) and binge drinking 104 (79.4%) which was observed amongst women with a history of IPV. Within the group of women who drank alcohol, 54 (81.8%) were smokers, 16 (88.9%) cannabis and

46 (79.3%) tranquilliser users. Moreover, the rates of binge drinking were double amongst the participants who had experienced IPV (OR 2.1 CI 95% 1.2; 3.8) (see table 3).

[Insert table 3]

Both analyses highlighted that mental health symptoms were associated with IPV. There was a predominance of women who had depressive thoughts 129 (77.7%) and anxiety/depression symptoms 157 (72.7%) amongst those who experienced IPV. In the multivariate analysis, the same group had double the chance of presenting with depressive thoughts (ORA=2.4 (CI 95% 1.5; 3.9) and anxiety and depression (ORA=1.7 (CI 95% 1.0; 2.7) (Table 5).

[Insert table 5]

Regarding substance use by partners, there was a higher level of substance use amongst the partners of women with a history of IPV. **Of these partners, 182 (72.2%) used alcohol, 31 (91.2%) cannabis and all 8 (100%) of the partners who were tranquilliser users were perpetrators of IPV.** It was found that partners who drank alcohol (ORA 2.3 CI 95% 1.4; 3.5) and cannabis (ORA 4.7 CI 95% 1.4; 15.9) increased the likelihood of women experiencing IPV. The findings also showed that in the group of women who were victims of IPV, there were 16 marijuana users, whilst amongst their partners, there is almost twice this number (n = 31). (Data displayed in Table 6)

[Insert table 6]

## Discussion

IPV is a common reality in women of reproductive age who seek assistance in primary health care services (Mantler et al., 2020). The main result of this study indicates that significantly, six out of ten women were inflicted with some type of violence (physical, moral and/or sexual). Our findings corroborate with international literature that IPV is not a single event, where high prevalence rates can be detected (Bott et al., 2019; WHO, 2021a,b; Willie and Kershaw, 2019).

In Brazil, a national survey in two phases (2006 and 2012) showed that the prevalence rates of IPV victimisation decreased significantly, especially amongst women (8.8 to 6.3%). The authors believe that the Maria da Penha Law may have played a role in such a change due to campaigns and advocacy initiatives carried out in Brazil focusing on "violence against women", although disregarding the violence perpetrated by women against their partners (Ally et al., 2016).

Violence against women occurs in several episodes and more often across a length of time. Survivors of the abuse and violence then become in need of specified health care. Thus, to cater for their needs it becomes imperative for health care services to be able to offer the appropriate health care and manage this with an optimised experience (Kalra, Di Tanna and García-Moreno, 2017). Globally, the IPV prevalence against women is estimated at around 30%, however, this prevalence variability is wide, especially in low-development regions with immense damage to the physical, mental, psychological and reproductive health of women (Coll et al., 2020; WHO, 2021). Although IPV affects all populations, regardless of race, education and income, there are significant variations among these groups (US, 2018). Therefore, IPV is an important international health and social issue, recognised as a serious violation of women's human rights (Chhabra et al., 2020; WHO, 2019).

### **Socio-demographic data**

In this study, the findings showed that younger women (20 to 29 years old) had double the risk of experiencing IPV, which also corroborates the international literature evidencing that younger women of reproductive age, who are at the height of their vitality and productive capacity, are more vulnerable to suffering IPV. The Brazilian national estimate of IPV for women between the ages of 25 and 34 has been estimated as high as 45% (Marabotti et al., 2018; Mascarenha et al., 2021).

Younger age together with social, cultural and economic factors such as social support, financial capacity, autonomy and low empowerment, all contribute to the vulnerability of women in the suffering of IPV in differing ways throughout the stages of their lives (Sanz Barbareo et al., 2019). A population

study showed that younger women had a substantially higher risk of suffering IPV than older women (Weeks et al., 2021). Yet another study has shown that there are variations in IPV prevalence throughout life between 19% and 66% (15 to 24-year-old age group), with the majority of countries having rates above 50% (Marabotti et al., 2018; Mascarenhas et al., 2021; Weeks et al., 2021).

The literature review suggests that there are differences in the prevalence rates of IPV between different ethnic groups (Norris et al., 2021; Weeks et al., 2021) and are particularly critical for understanding and developing effective responses to IPV. Data shows that the low socioeconomic level, contributed by low income, poor education and lack of employment, increase the risk of IPV. Rates of IPV between different ethnic groups in Brazil seem to be related to socio-cultural issues. There have been a higher number of studies that included white female participants, however, studies show that black women are more likely to be victims of IPV (Norris et al., 2021; Weeks et al., 2021). Brazilian studies, in turn, point out that the IPV ethnic group issue is closely linked to the country's social and economic conditions, resulting in brown and black women being the more likely victims (Norris et al., 2021).

Surprisingly, to some extent, women with middle level of education (9-11 years of schooling) presented as a potentially high risk of IPV, which reveals that greater access to formal education (generally protective) does not translate into a factor of protection against IPV (Carmichael, Steward and Velopulos, 2019).

Having higher education can be related to ethical, moral and women's rights knowledge, with greater empowerment of women participating in decision-making, thus allowing women to challenge abusive practices and to make their own decisions (Basar et al., 2019; Namy et al., 2017). Greater empowerment can threaten the superiority of men; who may in turn resort to the use of coercive power to protect their identity (Namy et al., 2017). In general, there is a greater submission of women in their relationships if they are less educated and a lack of education is also a barrier in seeking help. An integrative review between 2001 to 2017 with 38 studies from the US, Brazil, India, Canada amongst others, showed that women with higher levels of education tend to seek help and support from family,

friends, police and health professionals. The review considered education to be a protective factor (Baragatti et al., 2019).

The results also show associations between IPV and religion. Women who described themselves as Catholic, amongst other religions, were more likely to be victims of IPV when compared to participants who were members of the Evangelical faith. Our findings showed that religion is a variable in conjunction with the culture and formal education of the victim, which significantly contributes to violence perpetrated against women (Zavala and Muniz, 2020). These findings can be understood by the values, doctrines, taboos and rigour of the religious norms, which form the beliefs and ideas of female submission and subservience regarding their partner. Religious rationalisations, understandings and symbolisms about violent marital relationships can contribute to a disproportionately low perception of the problem and under-reporting of IPV (Baragatti et al., 2019).

### **Sexual reproductive data**

All eight women who previously had an abortion reported a history of physical or sexual abuse. Although there is a limitation regarding when the abortion took place, it must be considered that among the consequences of physical violence perpetrated by an intimate partner against women is the low adherence of women in prenatal consultations and predisposition to abortion (US, 2018; WHO, 2016).

Data from a multicenter survey conducted in 15 cities in 10 low- and middle-income countries showed associations between IPV and abortion in 12 of the 15 locations studied, including Brazil. The findings of this study showed that a 50% decline in IPV, abortion levels also decreased from 45% to 40% (Pallito et al., 2013). Systematic reviews of longitudinal data find that women who have been physically and/or sexually abused by their partner at some point in their life are twice as likely to have an abortion; they are twice as likely to suffer from depression and in some regions are 1.5 times more likely to acquire HIV compared with women who have not experienced IPV (WHO, 2016).



Women in abusive relationships may be forced to engage in sexual acts with both their partner and others. They are also limited in their ability to negotiate the use of condoms and other safer sex practices due to the threat of violence (Gonzalez-Guarda et al., 2019). Women who experience IPV are more likely to report having sexually transmitted infections (STIs) and high odds of acquiring HIV (Gonzalez-Guarda et al., 2019; WHO, 2016).

In the study, more than half of the pregnant women suffered IPV and it is an important issue, considering the wide negative consequences for both women and babies (Alhusen et al., 2015), such as depression, negative consequences to childbirth, obstetric complications, premature birth, babies with low birth weight and perinatal death (US, 2018). It is estimated that 3% to 9% of pregnant women suffer from IPV during their pregnancy (Alhusen, et al., 2015). Also, many women experience violence in the year before pregnancy (WHO, 2021b; US, 2018). During health care pregnancy appointments as well as prenatal consultations, are some of the most opportune moments to perform screening and identification of IPV. Continued IPV screening during pregnancy results in higher identification rates than in a single assessment at the initial prenatal visit (WHO, 2021a,b; US, 2018).

### **Binge drinking and other substances use**

Our findings indicate that binge drinking and common mental disorders (depressive thoughts and anxiety/depression) were strongly associated with IPV towards women. Evidence suggests that alcohol use increases the occurrence and severity of domestic violence (WHO, 2021 a,b). Although there are limitations in the literature, previous reviews on the topic have shown positive associations between women's alcohol use and increased likelihood of victimisation (Zaleski et al., 2010; Devris et al., 2014). Women who have been IPV victims are more likely to use or become dependent on substances (a quarter, 26%, amongst those experiencing IPV, compared to 5% in those who did not experience IPV). A range of individual relationships and societal factors can exacerbate the association between alcohol use and violence (WHO, 2016; 2018). In Brazil, a national sample in two phases (2006 and 2012) showed

that alcohol increased the likelihood of both being a victim (odds ratio [OR] = 1.6) and perpetrator (OR = 2.4) of IPV. Psychoactive substance use by a partner increased the likelihood of them being a perpetrator of IPV up to 4.5 times (Ally et al., 2016).

Alcohol use disorder may well mediate the relationship between emotion dysregulation and psychological aggression (Grigorian et al., 2020). Experiencing violence within a relationship can lead to alcohol consumption as a method of coping or self-medicating. Among aggressors, heavier and more frequent consumption increases the risk of violence and problem drinkers are at higher risk of victimisation. Poor mental health was associated with problematic use of alcohol as a risk factor for violent offences and excessive alcohol consumption was related significantly more to severe IPV in men with antisocial personality disorder (WHO, 2019a). Alcohol use can be both a cause and a consequence of violence (Devries et al., 2014). Women may drink alcohol to cope with the traumatic nature of IPV. Conversely, women alcohol users may lead to abuse from their partners; for example, partners perceive those women to have behaved unacceptably or to have transgressed a gender norm, leading to being a more 'deserving' victim because they have been drinking (Devries et al., 2014). Furthermore, the relationship between alcohol and IPV is also likely to be confounded by partner alcohol use, as women and men may drink together and men's alcohol use is strongly linked with IPV. It is also possible that both IPV and alcohol consumption are caused by a third factor, such as previous trauma, partner choice or underlying mental health issues (Devries et al., 2014). Hence, there is a strong need for integrated social support and mental health interventions in primary health care.

An important factor potentially associated with IPV was the victim's partner using cannabis (Flanagan et al., 2020). Substance use by couples is considered a risk factor for IPV against women. There is evidence of associations between alcohol abuse amongst women with a history of IPV and having a partner who uses alcohol, although this has been under-investigated (Devries et al., 2014; Patton and Katafiasz, 2018). A Brazilian sample of 1,445 married or cohabitating partners found a prevalence for male-to-female (10.7%) and female-to-male (14.6%) IPV. Males were drinking in 38.1%

of IPV cases and females in 9.2%. The male partners were drinking in 30.8% and female partners in 44.6% of IPV cases. The younger age for both male and female partners, men with no religious affiliation and women who are homemakers, are significant predictors of violence (Zaleski et al., 2010).

### **Mental Health**

Our findings demonstrate that IPV is associated with mental health, in terms of anxiety/depression symptoms and depressive thoughts. IPV against women has been linked to adverse mental health outcomes in previous studies however this has still been poorly evaluated and treated in primary care (WHO, 2016). For psychological IPV, there is an increase in the probability of poor self-perceived health and poor mental health (Prevalence Ratio (PR) adults: 1.3/2.1; elderly: 1.2/1.7) respectively (Sanz Barbero et al., 2019). In the past year, high levels of emotional IPV and economic IPV were reported by 680 young women; 45.3% reported symptoms of depression and 30.0% reported suicidal ideation in the past four weeks (Gibbs, Dunkle and Jewers, 2018). IPV is associated with increased suicidal ideation and suicide attempts; for example, Bangladeshi women were 2-3 times more likely to report suicidal ideation if they had experienced emotional IPV (McLaughlin, O'Carrol and O'Connor, 2012). In a longitudinal study, the risk of postnatal depression following emotional IPV during pregnancy increased by OR 2.0 independently of physical and sexual IPV (Ludermir et al., 2010). Gibbs and colleagues (2018) identified an association between emotional violence and depressive symptoms and a greater likelihood of reporting suicidal ideation amongst those who suffered physical and sexual IPV. The study emphasised that depressive disorders are commonly observed in female victims of IPV, which in turn are associated with an increase in deaths related to physical injuries, self-mutilation and suicide, occurring in the last year (5.5%). The negative impacts of IPV are widespread for both physical and mental health accompanied by poor treatment adherence and higher HIV acquisition (Gibbs, Dunkle and Jewers, 2018).

### **Limitations**

This study has some limitations that should be noted. Among them is the nature of the methodology of a cross-section study which does not allow establishing of causality between variables, only statistical associations can be established. Another limitation is that the severity levels of violence were not assessed and more information about the perpetrator should have been collected to expand the IPV profile.

### **Implications for Public Policies**

Evidence shows that violence against women is a multifaceted and recurring phenomenon that affects not only the well-being, quality of life and health of women but also causes serious physical, psychological, sexual, moral and patrimonial damage, to both the women and their families (WHO, 2016, 2021a,b). Indeed, sometimes IPV results in femicide (Oliveira et al., 2019).

In the last decade, Brazil has belatedly started to implement policies to address violence against women. A historical milestone in the fight against IPV came in 2016, with the Maria da Penha Law, an advanced legal apparatus for the protection of women, promoting preventive actions to curb IPV (BRASIL, 2013). Other public services such as the Women's Care Centre – Call 180, has assisted women throughout the country; a service providing periodic balance sheets on the violence suffered by women, through an open channel for complaints, self-reports and search information (Albuquerque et al., 2013). The service, in 2018, received 92,663 reports of rapes. In 2019, in the first six months alone 46,510 complaints were recorded, an increase of 10.9% compared to the same period a year earlier (BRASIL, 2019). Another important public policy advancement has been the move to more comprehensive treatment, especially in health services, which have been called upon to play a greater role in responding to violence against women (WHO, 2016).

There have been cases in which IPV has caused irreversible damage, such as the death of victims. A study conducted with data from the Brazilian Computer Department of Unique Health System (DATASUS), from 2016 to 2017, found 130 homicides and 10 probable homicides amongst women, from 11 years old upwards, who were victims of fatal aggression. The average age of the femicide victims was only 26 years old (with less than seven years of schooling) (Orellana et al., 2019).

It is noticeable how universal all forms of IPV against women are in all Brazilian states and has been so for an extended time. The level of the phenomenon demands the establishment of efficient public policies making it possible to increase the visibility and bring such cases to justice with potentially severe punishment.

### **Implications for practice**

Knowledge about IPV and the factors associated is indispensable in helping professionals working in different areas to support women; helping them not only to overcome violence, but also recover their self-esteem, quality of life and well-being, and components of their mental health. Primary health care professionals are in a prime position to detect abuse and violence (WHO, 2019). In Brazil, the opportunities for the identification and clinical management of IPV become more significant not only because of the high rates present in the country but also because there is a national public policy for comprehensive health care for women that forms part of the primary health care network. The primary health care network facilitates the interventions mainly because nurses and community health agents (who are part of the family health strategy in Brazil) are in frequent contact with potential victims especially during home visits (BRASIL, 2004).

With careful observation, primary health care professionals are in the best position to detect the signs when women are at risk of IPV. The women may seek primary healthcare for other reasons, such as prenatal care, STIs, post-abortion, or family planning (WHO, 2019a, b). There needs to be robust and continued training in mental, sexual and reproductive health for health professionals in Brazil.

This study draws attention to the needs of female victims of IPV, aiming for improvements in nursing care, including the training of professionals in primary health care to meet this demand. Staff need to be confident in identifying the signs/symptoms suggestive of violence against women. Additionally, the development of resources, such as booklets and educational materials that enhance the dissemination of knowledge about prevention which explains how to seek help in health and legal

institutions can contribute to interrupting the cycle of violence that tends to perpetuate itself (WHO, 2019 a,b).

Urgent training needs to be provided for health professionals to be able to identify and efficiently address this problem. The training needs to incorporate recognition by all professionals that when women deny the actual causes for their injuries and illnesses or provide alternative reasons they may well be doing so to protect their partner or save the marriage (WHO, 2019 a,b).

### **Implications for future research**

We suggest the development of further studies which investigate not only these relationships but also include frequency and severity of violence and characteristics of the aggressor. It would also be beneficial if the causal pathways towards IPV were investigated and we additionally propose this for future study.

### **Conclusions**

In this study, the IPV prevalence against women is high, six out of ten women were victims of physical, moral or sexual violence and the violence was associated with substance use (binge drinking was double amongst the participants who had experienced IPV). We observed mental health problems amongst victims of IPV (doubling the chance of presenting with depressive thoughts). Primary care providers are in a privileged position to identify these cases and based on our findings, we strongly recommend that health professionals should be trained to detect, counsel, treat and follow up with continued support to those women who have experienced IPV.

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