Prevalence and factors associated with intimate partner violence among women in Recife/Pernambuco, Brazil

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> Abstract Intimate partner violence is an important cause of morbidity and mortality among women. Although there are no official statistics, data reveal a high prevalence worldwide. This study aimed to estimate the prevalence and factors associated with intimate partner violence among women in a community in Recife, Pernambuco. A cross-sectional cohort study was conducted with 245 women in the 15 to 49-year age bracket. A questionnaire with sociodemographic variables was used, together with the WHO Violence Against Women (VAW) study tools and the Self-Reporting Questionnaire (SRQ-20). The participants all signed an informed consent form. The prevalence of intimate partner violence was classified by type of violence: emotional - 52.7%; physical - 46.1 %; and sexual - 13.6%. Bivariate analysis revealed an association between experiencing violence with not having a partner (p =0.001) and drug use ($p \le 0.001$). In multivariate analysis, the variables were strongly associated with the outcome: sexual intercourse for fear (OR 5.58); depressive-anxious mood (OR 2.69); drug use (OR 2.57). A high prevalence of intimate partner violence in the community, especially emotional violence, emerges as an important finding, indicating the need for care in prevention and the overall health of this population.

> **Key words** Violence against women, Domestic violence, Cross-sectional studies

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Introduction

Gender-based violence is an important cause of illness and death in women all over the world1. It occurs very frequently in the domestic environment, with the male partner as the aggressor, and is referred to as Intimate Partner Violence (IPV)²⁻⁵. Although there are no official statistics that reveal the real magnitude of the problem, data presented by the World Health Organization (WHO) show high prevalence – reporting 36% of all women in the Americas having suffered some type of IPV⁶.

In Brazil, over the three-year period 2009-11, the Mortality Information System (SIM) reported 13,071 homicides of women, referred to as femicides. It is estimated that in this period there were 16,993 femicides, equivalent to an annual mortality rate of 5.82/100,000 women⁶. In Brazil the Northeastern Region showed the highest rate in 2013, of 6.90/100,000, followed by the Center-West and North Regions. Among the Federal Units of Brazil (26 States and the Federal District), Pernambuco was in fifth position, with a rate higher than the national average: 7.81 homicides6.

However, the rate of femicides only portrays the extreme of physical violence. A larger number of women are exposed daily to other forms of violence that are socially more hidden, with episodes that can be serious and repetitive, having significant repercussions on physical and mental health7.

Women in a situation of IPV have a higher risk for: common mental disorders ('CMDs'); post-traumatic stress disorder; chronic pain syndrome; socialization difficulties; abuse of alcohol and other drugs; reproductive health problems; sexually transmitted diseases; and suicidal ideation, among other co-morbidities⁷⁻¹⁰.

Considering the damages to the woman's health and consequent repercussions on her capacity in the workplace, and in the family and social relationship, prevention and combating of IPV calls for articulation of various sectors, such as the courts, public safety, health and education - among others⁵.

In spite of the incentives and support for research on this subject, it is found that few surveys have been made in Brazil's Northeast Region. It is known that the cultural context exercises an influence on violence, and regional variations have been observed¹¹. With this in mind, the objective of the present study was to investigate the prevalence of IPV, and associated factors, in women of a community in the city of Recife, in the state of Pernambuco, in the Northeast of Brazil.

Method

This is a cross-sectional study, structured on the basis of a non-probabilistic sample, comprising women aged 15 to 49, over the period February to April 2014.

The community where the study was made, in which one of the 61 Zones of Special Social Interest (Zonas Especiais de Interesse Social – ZEISs) of the city of Recife is located, has an urbanized area with a high percentage of people living in flooding areas, in shantytowns, and in homes built over water on precarious stakes¹². It has a population of 7,636 (2010 demographic census), of which 53.36% are women. The average number of residents per household (per domicile population) is 3.6, and the average nominal monthly family income is R\$ 898.41. The proportion of women responsible for a household is 53.63% of the population¹². The community has been classified in the statement as having low quality of life, and has an accumulated mortality coefficient (MC) per homicide of 259.7 in a census-based ecological exploratory group study carried out in the city13. The MC was calculated from the number of homicides taking place over three years. Dividing by the number of residents of the location in the period, in this study Recife presented an MC of 203.3/100,000 inhabitants¹³.

To calculate the sample size, the public-domain program OpenEpi, version 3.01, was used14. The calculation was based on a prevalence of 27% for violence against women (VAW) who were users of the Single Health System (Sistema Único de Saúde) in the region¹⁵. Taking into account that 70% of the cases of VAW are perpetrated by a personal partner¹⁶, IPV was estimated at 20% for the study. Considering a population of 2,672 women, an alpha error of 0.05 and a beta error of 0.15 (IC = 95%), a sample of 226 women was found. To account for possible losses, the final size of the sample was decided at 245.

The study included women aged 15 to 49, resident in the district referred to. The cutoff point of age was established based on an instrument specified by the WHO for estimating prevalence of IPV and used in this study17. The criterion for exclusion was any reduction in capacity for understanding that might make it impossible to comprehend the Free Consent Form and the items of the questionnaire.

The principal investigator and five academics from the Psychology course, previously trained for this purpose, took part in the collection of data. Taking into account the risk of working in certain areas, it was decided that the questionnaires, with an average duration of 15 minutes, would be applied in the Basic Health Unit (UBS) of the district and in households where this was possible. The investigators attended the community from Monday to Friday and accompanied the visits of Community Health Agents (ACSs). Confidentiality and secrecy of information was guaranteed. The data were collected individually, without the presence of the ACSs.

The instrument used to collect the data was a questionnaire with structured questions, including aspects of socioeconomic situation, relationship and behavior. The independent variables analyzed were: Socioeconomic (age, skin color, number of years' schooling, number of children, and whether employed); relationship (whether having a partner or not; partner in the last 12 months; cohabiting with partner); and behavioral (religious practice, and its frequency; use of alcohol, and its frequency; use of other drugs).

The questionnaire was augmented by two instruments: The WHO VAW Study (WVS)¹⁷. This was developed by the OMS and, validated in Brazil, is recommended for estimating prevalence of IPV of the types: emotional, physical, and sexual. For tracking of signs of Common Mental Disorders ('CMDs'), the SRQ-20 Self-Reporting Questionnaire¹⁸, prepared by the WHO and validated transculturally, recommended for studies in communities, was used. The groups of symptoms investigated in the SRQ-20 refer to a mood of depressive-anxious mood, reduction of vital energy, somatic symptoms and depressive thoughts^{18,19}.

All the women of adult age who agreed to participate signed the Free and Informed Consent Form (*Termo de Consentimento Livre e Esclarecido*, or TCLE). The adolescents signed the Free and Informed Assent Form (*Termo de Assentimento Livre e Esclarecido*, or TALE), after permission from their legal representative through signature on the appropriate TCLE. When a woman reported violence, she was supported and oriented about her rights, receiving information and referral for help from a VAW referral service.

The study met the ethical criteria of Resolution 466/2012²⁰ of the National Health Council, had the consent of the Health Department of the Prefecture of the City of Recife, and was approved by the Research Ethics Committee of the

Professor Fernando Figueira Integrative Medicine Institute (IMIP).

The data were double-entered digitally and validated through the *EpiInfo 3.5.3* program²¹. The Stata²² software was used in the statistical treatment. Initially, frequency distribution tables21 were obtained for the category variables, and measures of central tendency and dispersion were calculated for the numeric variables. The basal characteristics of each group were compared using the Chi-squared association test (Pearson). For determination of the strength of association between dependent variable and independent variables, the Odds Ratio (OR) was calculated as an estimate of relative risk with its confidence interval (CI 95%)22. To compose the model, the variables that obtained significance < 0.20 in the bivariate analysis were considered; the logistic progression model was carried out by the Backward LR method.

Results

The frequencies found in this study for IPV, by type of violence suffered, were: 52.7%, emotional; 46.1% physical; 13.6% sexual. The prevalence of IPV at least one time in life was 33.3%.

As to the individual characteristics, the majority of women were in the age group 25 to 49 (75.7%). They reported themselves as being black or mixed-race (79.8%), having less than eight years' schooling (66.4%), not being in work (58.4%), having a partner at the time of the study (77.0%), or in the last 12 months (93.0%), having children (85.5%), or following a religious practice (72.4%). The use of alcohol and one or more unlawful drugs, such as marijuana, crack or cocaine was reported by 31.3% of the women (Table 1).

The results of the SRQ-20 showed the following frequencies of signs of CMDs, in the four groups of symptoms: 78.6% depressive-anxious mood; 77.8% somatic symptoms; 73.7% reduction in vital energy; and 51.0% depressive thoughts (Table 2).

The prevalence of IPV was shown to be higher among younger women (37.3%), black or mixed-race women (33.5%), those with eight or more years' schooling (40.0%),those without a partner at the time of the data collection (51.8%) and in the last 12 months (47.1%), without children (40.0%), without work (36.6%) and who declared they did not follow a religious practice (35.8%).Half of these women (50.7%) stated that they had made use of drugs at least once,

Table 1. Absolute and percentage frequency of the individual and relationship, and association with Intimate Partner Violence in women of a community of Recife, Pernambuco State, Brazil. February-April, 2014.

| | Violence by intimate partner (IPV) | | | | | | | |
|-----------------------------------|------------------------------------|------|-----|------|-------|------|-------|--|
| Characteristics | Yes | | No | | | | | |
| | n | % | n | % | Total | % | P | |
| Age (years completed) | | | | | | | 0.561 | |
| 15-24 | 22 | 37.3 | 37 | 62.7 | 59 | 24.3 | | |
| 25-49 | 59 | 32.1 | 125 | 67.9 | 184 | 75.7 | | |
| Color | | | | | | | 1.000 | |
| White | 16 | 32.7 | 33 | 67.3 | 49 | 20.2 | | |
| Non-white | 65 | 33.5 | 129 | 66.5 | 194 | 79.8 | | |
| Years' schooling (years complete) | | | | | | | 0.181 | |
| <8 | 32 | 40.0 | 48 | 60.0 | 80 | 33.6 | | |
| ≥ 8 | 48 | 30.4 | 110 | 69.6 | 158 | 66.4 | | |
| Has a partner | | | | | | | 0.001 | |
| Yes | 52 | 27.8 | 135 | 72.2 | 187 | 77.0 | | |
| No | 29 | 51.8 | 27 | 48.2 | 56 | 23.0 | | |
| Partner in last 12 months | | | | | | | 0.335 | |
| Yes | 73 | 32.4 | 152 | 67.6 | 225 | 93.0 | | |
| No | 8 | 47.1 | 9 | 52.9 | 17 | 7.0 | | |
| Cohabitation | | | | | | | 0.704 | |
| Yes | 61 | 32.4 | 127 | 67.6 | 188 | 77.4 | | |
| No | 20 | 36.4 | 35 | 63.6 | 55 | 22.6 | | |
| Children | | | | | | | 0.489 | |
| Yes | 67 | 32.4 | 140 | 67.6 | 207 | 85.5 | | |
| No | 14 | 40.0 | 21 | 60.0 | 35 | 14.5 | | |
| Number of children | | | | | | | 0.331 | |
| < 4 | 69 | 32.1 | 146 | 67.9 | 215 | 89.6 | | |
| ≥ 4 | 11 | 44.0 | 14 | 56.0 | 25 | 10.4 | | |
| Is in work | | | | | | | 0.250 | |
| Yes | 29 | 28.7 | 72 | 71.3 | 101 | 41.6 | | |
| No | 52 | 36.6 | 90 | 63.4 | 142 | 58.4 | | |
| Religious practice | | | | | | | 0.722 | |
| Yes | 57 | 32.4 | 119 | 67.6 | 176 | 72.4 | | |
| No | 24 | 35.8 | 43 | 64.2 | 67 | 27.6 | | |

n: sample; %: proportion; p: p-value. Chi-squared test Source: Community of Recife, Pernambuco.

and more than one-third (36.8%) reported use of alcohol (Table 3).

The frequency of signals of CMD among the women who reported IPV were: 38.2% depressive-anxious mood; 36.0% somatic symptoms; 36.3% reduction of vital energy, and 41.1% depressive thoughts.

When association of all the variables, categorized in binaries, was investigated, the results of the bivariate analysis showed associations of the variable having suffered some type of violence with the variables not having a partner (p = 0.001) and use of drugs (p < 0.001). In the association with the groups of symptoms of the SRQ-20

there were significant associations between IPV and depressive-anxious mood (p = 0.003), and depressive thoughts (0.013). The individual and relationship variables: age, skin color, schooling, partner in the last 12 months, cohabitation, children, number of children, work, and religious practice did not show significant association with the outcome.

The results of the Multivariate Logistic Regression showed that: *use of drugs, having had sexual relations due to fear*, and *depressive thoughts* were factors that remained associated with the outcome, with respective p-values of: 0.002; 0.001 and 0.020 (Table 4).

Table 2. Distribution of frequency of symptoms according to the SRQ-20, and association with intimate partner violence in women of a community of Recife/Pernambuco. February-April, 2014.

| Characteristics | Intimate partner violence (IPV) | | | | | | | |
|---------------------------|---------------------------------|------|-----|------|-------|------|-------|--|
| | Yes | | No | | | | | |
| | n | % | n | % | Total | % | P | |
| Depressive-anxious mood | | | | | | | 0.003 | |
| Yes | 73 | 38.2 | 118 | 61.8 | 191 | 78.6 | | |
| No | 8 | 15.4 | 44 | 84.6 | 52 | 21.4 | | |
| Somatic symptoms | | | | | | | 0.141 | |
| Yes | 68 | 36.0 | 121 | 64.0 | 189 | 77.8 | | |
| No | 13 | 24.1 | 41 | 75.9 | 54 | 22.2 | | |
| Reduction in vital energy | | | | | | | 0.135 | |
| Yes | 65 | 36.3 | 114 | 63.7 | 179 | 73.7 | | |
| No | 16 | 25.0 | 48 | 75.0 | 64 | 26.3 | | |
| Depressive thoughts | | | | | | | 0.013 | |
| Yes | 51 | 41.1 | 73 | 58.9 | 124 | 51.0 | | |
| No | 30 | 25.2 | 89 | 74.8 | 119 | 49.0 | | |

n: sample; %: proportion; p: p-value. Chi-squared test Source: Community of Recife, Pernambuco.

Table 3. Frequency distribution of use of lawful or unlawful drugs at least once, and association with intimate partner violence in women of a community of Recife, Pernambuco. February-April 2014.

| | I | | | | |
|-----------------|----|------|----|------|---------|
| Characteristics | 7 | Yes | | No | |
| | n | % | n | % | Total |
| Type of drug | | | | | 05 |
| Alcohol | 35 | 36.8 | 60 | 63.2 | 95 5 |
| Cocaine | 3 | 60.0 | 2 | 40.0 | 23 |
| Marijuana | 15 | 65.2 | 8 | 34.8 | 8 |
| Crack | 7 | 87.5 | 1 | 12.5 | 24 |
| Other drugs | 14 | 58.3 | 10 | 41.7 | 24 |

n: sample; %: proportion; p: p-value. Chi-squared test. Source: Health District - Recife, Pernambuco.

Table 4. Multivariate logistic regression analysis. Characteristics associated with IPV in women of a Health District of Recife, Pernambuco. February-April, 2014.

| Variables | ORa | CI = 95% | p value |
|---------------------|------|--------------|---------|
| Use of drugs | 2.57 | 1.40 -4.72 | 0.002 |
| Had sex due to fear | 5.58 | 2.04 - 15.56 | 0.001 |
| Depressive-anxious | 2.69 | 1.17 - 6.19 | 0.020 |
| mood | | | |

ORa: adjusted odds ratio; CI: confidence interval.

Discussion

The findings of this study identified a high prevalence of IPV in the population studied, showing themselves to be similar to other Brazilian studies and corroborating the pertinent literature on this subject^{17,23-26}. As to the type of violence suffered, emotional violence had the highest frequency, followed by physical, and sexual. For sexual violence, although the frequency is the lowest among the types of violence investigated, it is above the prevalences found in other studies in Brazil^{17,24}. In a study on IPV in the municipality of São Paulo, physical violence was 34.5%, and among users of the primary health network of São Paulo State, emotional violence was similar (53.8%), but there was a lower frequency of physical violence $(32.2\%)^{11,27}$.

Among those interviewed, 33.3% answered yes to the question "have you at some time suffered some type of violence?" However, during the application of the WHO VAW Study, when asked about violence practiced by a partner or former partner, 52.7% responded in the affirmative for emotional violence. This finding could indicate, as described in other studies, that when women are stimulated by reference to different types of aggression, the frequency of violence reported increases⁵, perhaps showing that, in some contexts, it needs to be named to be recognized.

In a survey carried out in the Federal District²⁴, with women of the same age group, the frequency of emotional violence was also high: 80.2%. This type of violence is perhaps more easily reported, due to factors that could involve the fear of more aggressions or the shame of talking about abuses that have taken place in the conjugal relationship²⁶.

As to the individual, relationship and behavior aspects, the majority of the women who reported IPV were young, stated themselves to be mixed-race or black, had eight or more years' study, were without a partner at the time of the data collection, had no children, did not work, did not have a religious practice and had used drugs. These results are similar to those of a study by the WHP of prevalences of IPV, referred to as the WHO Multi-country Study¹⁷, which in Brazil included the city of São Paulo and the Northern Zona da Mata region of Pernambuco State. The individual characteristics considered by the WHO as risk factors for IPV, and cited in the ecological model that is used to understand this form of violence¹, include: youth, being separated/divorced, and abuse of drugs.

The four groups of symptoms detected by the SRQ-20 suggest, among women who reported IPV once in their life, signs of physical suffering, and significant suspicion for Common Mental Disorders²⁸. Women in a situation of IPV have an increased risk for various physic morbidities, including dangerous use of drugs (lawful and unlawful), depression, anxiety and phobias²⁹. Post-traumatic stress disorders, food disorders and sleep disorders, damage to self-esteem, self-aggression and sexual risk behavior show themselves to be more frequent in women who have suffered violence from their male partners⁵. Physical and sexual violence increase the chances of suicidal ideation and behavior⁵.

The results of the multivariate logistic regression showed the following factors strongly associated with IPV having similar chances, with increases of more than a factor of 2: having had sex out of fear, increasing the chance of IPV by a factor of more than 5 (OR 5.58); use of drugs (OR 2.57); and depressive-anxious mood (OR 2.69).

Considering that, in some relationships, IPV tends to start from verbal aggression, evolving to other forms of violence, such as physical, and possibly culminating in femicide, it is important to appreciate that there is a need for action to enable health professionals to recognize and talk with women about emotional violence. As well as interrupting a situation that generates intense suffering, and preventing and/or treating the morbidities arising from this type of violence,

early intervention could help to reduce feminine mortality, whether by homicide, suicide, or as a result of other complications of IPV.

The high prevalences of IPV found are possibly compatible with the position of the city of Recife in the Brazilian ranking for violence⁴. In spite of the improvements that have taken place in the last decade with developments such as: the creation of the Department for Women; centers of referral and assistance to women who are victims of violence; and specialized police stations, the findings are an indication of the need for financial investments and development of more efficacious programs.

This investigation has the limitations that are inherent to descriptive observational studies, and other variables could have been included, such as the use of alcohol and other drugs by the partner, which are factors associated with IPV. In methodological terms, determining the prevalence of IPV is a challenge, due to the factors that can contribute to its underestimation, such as: complexity of the subject, emotional condition of the women in situation of violence, skill of the investigator and the instrument used, to which is added the difficulty of researching populations in locations of high vulnerability and high risk for violence in general, such as this present study. However, the identification of high prevalence of IPV in this community, especially emotional violence, associated with tracking of signals of CMDs, stands out as an important finding, indicating this population's pressing need for care in prevention and general health.

The high frequencies of signs of CMDs merit attention, considering that they are little diagnosed and consequently not adequately treated. Studies indicate that CMDs can cause significant mental and bodily suffering, social isolation, reduction in yield from schooling and work, abuse of drugs, aggressive behavior, damage to quality of life and risk of suicide²⁹. The data of this study show that greater investments in the Mental Health of this population are a primordial need.

These findings also indicate the need for further studies, in similar populations, that can deepen the knowledge of these morbidities, because they indicate that vulnerable populations have higher chances of these negative health events, than those that have been found in studies presented in the pertinent literature. It is possible that the collection of data largely in the home, and at the time of the visit of the ACS, has acted to produce better information, because the survey assistants were presented as persons known

personally to the agent – and users of the SUS are accustomed to providing information on their illnesses and difficulties to those agents.

There is a lack of confrontation of IPV, among the various sectors of society, whether public, private, organized civil society or the citizen. Further, prevention needs to go beyond the victims, and be inclusive. It is understood that there is an urgent need for deconstruction of the 'naturalization' of violence, inequality of gender and other inequalities that favor its recrudescence, and for these ideas to be included in school curricula from primary to graduation. Studies have already confirmed a need for greater financial investment, professional training, and other sectors that serve

this population, to give them skills in recognition of signs and symptoms of physic suffering arising from a situation of violence³⁰.

IPV, as a public health problem, has not been reduced, and in spite of being present day-to-day in the routine of the health services, lack of awareness of this problem, and of facing it, on the part of sector professionals contributes to the under-reporting. The information on how to present and confront IPV is still limited. It is possible that, in the actions of prevention and care, there is a need for greater integration of the sectors involved – with the implication that there is a need for inclusive and wide-ranging action to be taken.

Collaborations

EN Barros worked in the design, methodology, data collection, analysis of results and final wording; MA Silva worked in the design, methodology and final wording; GH Falbo Neto worked in the design and final wording; SG Lucena e AP Pimentel worked in data collection; L Ponzo worked in data collection and data analysis.

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