

Epidemiologic Profile and Underreporting Patterns of Intimate Partner Violence in

Maringá, Brazil

by

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Thesis submitted in partial fulfillment of
the requirements for the degree of
Master of Science in the Duke Global Health Institute
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2015

ABSTRACT

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Abstract

Background: Intimate partner violence is a global burden that disproportionately affects women and has more severe outcomes in women as well. Our objective was to explore the epidemiologic profile for intimate partner violence and preliminary patterns in the underreporting of this burden in Maringá, Brazil. Methods: A community-based cross-sectional study was conducted in Maringá. A convenience sampling method was utilized to recruit participants. 435 women at least 18 years of age who either currently had or had previously had an intimate partner were interviewed about their experiences with IPV. Sociodemographic characteristics were collected at the time of the interview to estimate associations with IPV using univariable and multivariable logistic regression models. Positive IPV cases identified from the community survey were compared with positive IPV cases identified from the Maringá city violence registry using sociodemographic variables and location variables in both datasets to explore patterns of underreporting. Results: Lifetime prevalence of IPV was 53.79%. Significant bivariate associations found between the SES indicator occupation and psychological violence ($\chi^2 = 8.688$, $p < 0.05$) and overall IPV ($\chi^2 = 12.441$, $p < 0.01$) showed differences in distribution of IPV among the different levels of occupation. Significant bivariate associations found between the SES indicator number of children and physical violence ($\chi^2 = 6.963$, $p < 0.05$) and sexual violence ($\chi^2 = 8.969$, $p < 0.05$) also showed differences in distribution of IPV

among the different levels of number of children. Women who had no paid work outside the home seemed to experience all 3 types of violence as well as overall IPV significantly less than women who had paid work outside the home ($p < 0.05$). Having 4 or more children was noted to significantly increase women's experience with physical and sexual violence ($p < 0.01$). Patterns of underreporting noted were associated with older age, women racially self-identifying as brown, and women being either illiterate, or completing higher education. Geospatially, IPV cases found through the community survey were ill-represented in the violence registry. Conclusion: IPV is a significant burden in Maringá and some underreporting patterns were noted through this study. These findings highlight the need for further research into conditional and precipitation risk factors of IPV and further exploring the burden and reasons for underreporting of IPV. Care settings can be potential sites for screening communities for IPV and exploring patterns in reporting of IPV.

Dedication

This thesis is dedicated to the women in Maringá who opened their homes and offered their stories for the sake of scholarly pursuits, and to all the women whose voices are yet to be heard with respect to the burden of intimate partner violence.

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1. Introduction

Violence against women is a serious problem which arose due to the social construction of gender that led to femininity and masculinity being defined by the domination of women by men (da Fonseca, Egry, Guedes, Gutierrez, & Tezzei, 2011). When trying to analyze this phenomenon of violence against women, research has shown that women are more likely to encounter violence at the hands of their intimate partners than any other type of perpetrator (Garcia-Moreno, Jansen, Ellsberg, Heise, & Watts, 2006). For the purposes of this study, the 2005 WHO definition of intimate partner violence (IPV) was adopted which encompasses physical, sexual and emotional/psychological violence experienced by women at the hands of their intimate partners (see Appendix A). Due to this domination dynamic, IPV has become an issue that affects 15% - 71% of all women worldwide at some point in their lifetime (Trevillion, Oram, Feder, & Howard, 2012), and has serious social, medical and economic consequences (James, Brody, & Hamilton, 2013; Moreira Sda, Galvao, Melo, & de Azevedo, 2008). Although not exclusive, studies have shown that not only is IPV a burden that disproportionately affects women, but it has more severe outcomes in women as well (Burkert et al., 2013; Zaleski, Pinsky, Laranjeira, Ramisetty-Mikler, & Caetano, 2010b). Women with a history of physical and/or sexual violence, for example, were reported to experience recurring physical problems such as coronary heart disease, stomach ulcers and arthritis, poor self-rated health, high emotional distress and suicidal

tendencies (Ellsberg, Jansen, Heise, Watts, & Garcia-Moreno, 2008; Kiss et al., 2012) while women with a history of IPV were found to be at a higher risk for unintended pregnancies and unintended abortions (Pallitto et al., 2013). The IPV cases against women analyzed in Itapevi, São Paulo also showed that 49% of them resulted in malicious physical injuries that span from head wounds, injuries of the extremities and thorax or cervical spine injuries (da Fonseca et al., 2011; Moraes & Reichenheim, 2002; Moraes et al., 2011; E. P. Silva, Ludermir, Araujo, & Valongueiro, 2011).

Brazil has not been immune to this 'epidemic of violence' as evidenced by the 27.5% prevalence of IPV in Brazil as per reported cases, while household surveys show even higher estimates between 33.5% and 58.6% (Fonseca, Galduroz, Tondowski, & Noto, 2009; Garcia-Moreno et al., 2006; Moura, Gandolfi, Vasconcelos, & Pratesi, 2009). Despite the *Maria da Penha* law that came into effect in 2006 to protect women against violence, the discrepancy in IPV estimates based on data collection methods suggests that, there is still underreporting of IPV in Brazil. This is particularly concerning because underreporting does not just result in the underestimation of the burden of IPV; it makes the violence invisible and ignorable, and invisibility of the problem makes devising interventions even more difficult. Consequently, it is necessary to further explore the implications of this underreporting phenomenon and the characteristics of underreported cases.

While violence is not limited to people of low social class, the highest rates have commonly been seen among people of low social status (da Fonseca et al., 2011). Indicators of social status such as educational level and socioeconomic status have been studied and found to have varied associations with IPV incidence (da Fonseca et al., 2011; Kiss et al., 2012; Moraes et al., 2011; Moreira Sda et al., 2008). These indicators are of particular importance as they also present opportunities for devising interventions that can reduce the experience and consequences of IPV.

1.1 Intimate Partner Violence in Brazil

The literature available on IPV in Brazil shows national prevalence to vary between 27.5% and 58.6% depending on the method of data collection (Garcia-Moreno et al., 2006; Moura et al., 2009). Methods that estimate IPV prevalence based on victims self-reporting IPV cases show the lower estimates while more aggressive methods of data collection such as community surveys that entail asking women about IPV experiences show higher estimates of prevalence. An analysis of the ages of IPV victims shows that it greatly affects women of reproductive age (E. P. Silva et al., 2011). An example is the national estimate of IPV for women between the ages 25 and 34 which is as high as 45% (Moura et al., 2009). These prevalence estimates are accompanied with huge medical and economic implications for individuals, families and the nation as a whole as these women are part of the working force of families and the country. The women who do report IPV cases show a significant interest in getting help. This shows

that there is a desire to break the cycle of violence and the need to establish effective interventions (Silva Rde, Araujo, Valongueiro, & Ludermitr, 2012).

Through their research da Fonseca et al. identified a sense of naturalization and acceptance of the domination of women by men as the standard gender identity in Brazil (da Fonseca et al., 2011). The leniency shown towards what was called a “crime of passion” throughout the 20th century which excused men for beating and killing their wives for committing adultery as a “legitimate defense of their honor” (*legitima defesa da honra*) persisted until 1991. IPV only became part of Brazil’s federal criminal code in 2006 through the law, *Lei Maria da Penha* (Moura et al., 2009). In the wake of these events, it is imperative to explore the burden of IPV in order to identify whether gender constructs are changing and/or will change. This is particularly important for the State of Paraná due to the limited literature available on IPV. Much of the literature available on IPV in Brazil is from São Paulo, Rio de Janeiro and Itapevi with some preliminary data from other northern cities such as Recife and Natal (Kiss et al., 2012; Moraes & Reichenheim, 2002; Moreira Sda et al., 2008; M. A. Silva, Falbo Neto, Figueiroa, & Cabral Filho, 2010). This literature gap combined with the physical, psychological and social implications of IPV found in Brazilian studies (Schraiber, Latorre Mdo, Franca, Segri, & D'Oliveira, 2010) such as psychiatric disorders, conduct disorders, depression, low self-esteem and transgressive behavior, mortality, and morbidity of the victim or her unborn

child if she is pregnant (Reichenheim et al., 2011) greatly informed the basis of this study.

1.2 Risk factors of IPV

Determining the risk factors for IPV is complex because violence is a phenomenon with multiple and varied determinants. As a result, the occurrence of an IPV incident is often not due to a singular cause but rather an amalgamation of behavioral, contextual, and/or situational factors among others. However, the identified risk factors for IPV can generally be categorized into either conditional factors or precipitation factors. Conditional factors include economic unbalance, machismo and institutionalized degradation of women while precipitation factors arise from emotional uninhibitedness due to alcohol abuse, use of drugs or stress among other instigators (Moreira Sda et al., 2008). For this research study, attention was paid to conditional factors, specifically socioeconomic status (SES), and educational level, whose associations with IPV have been somewhat analyzed in some parts of Brazil but no data is available for Paraná. These factors are important because they are indicators of social disadvantage which is an important contextual stressor that greatly influences individual behavior especially in places where gender has been strictly defined. This strict definition of gender often adheres to a traditional view of masculinity that is associated with a high premium on success and achievement, sexual infidelity, exhibiting controlling behaviors in relationships, anti-femininity behavior and

psychological, physical and/or sexual violence against intimate partners (Mankowski & Maton, 2010). In these environments, if poverty is a factor, it may induce stress and a sense of social powerlessness which may result in violence against female partners becoming a method to reinforce male dominance and identity (Kiss et al., 2012; Straus, Gelles, & Steinmetz, 1982). Consequently, the lack of economic stability and opportunity may increase the vulnerability and experience of women with violence by intimate partners (Moura et al., 2009).

1.3 Education level and SES as risk factors for IPV

Of the factors of interest, SES has been analyzed most and appears to have the most conflicting data in Brazil. Kiss et al. report that in São Paulo, although the risk of IPV is not influenced by SES, women in the middle SES range are significantly more likely to report experiencing IPV (Kiss et al., 2012). However, other researchers report low SES to be a reliable predictor and risk factor for IPV in Rio de Janeiro, Natal, Brasilia, and Recife (Moraes & Reichenheim, 2002; Moraes et al., 2011; Moura et al., 2009; Reichenheim et al., 2011; E. P. Silva et al., 2011; Zaleski, Pinsky, Laranjeira, Ramisetty-Mikler, & Caetano, 2010a). Health professionals in Natal also identified poor economic conditions to be a factor that influences IPV occurrence (Moreira Sda et al., 2008). Vieira goes further to show that a specific indicator of SES such as not owning a home and living in rental housing significantly increases the likelihood of experiencing IPV (Vieira,

Perdona Gda, & Santos, 2011). This data, accompanied by the lack of literature on SES effects on IPV in Paraná made this an interesting factor to consider for this study.

Level of education, which is closely related to SES and also an indicator of social status, has also been studied as a potential risk factor for violence. Zaleski, Silva and Moraes all show low level of schooling of victims to be a significant risk factor for IPV (Moraes et al., 2011; M. A. Silva et al., 2010; Zaleski et al., 2010b). This is a significant observation as places with less empowered women are also associated with higher rates of IPV compared with places with more empowered women (Moura et al., 2009). Again, data for Paraná is limited.

This project was accomplished by analyzing two sets of data: a structured community survey administered in Maringá and the violence registry obtained through the office of the Secretary of Health in Maringá with data from 2010 to 2014. The study paid attention to the two potential risk factors aforementioned, educational level and socioeconomic status using the following SES indicators: income, occupation and number of children, and assessed the associations between them and experiencing IPV in Paraná, Brazil, specifically in Maringá in order to start formulating an epidemiologic profile of women who experience IPV. The hypothesis was that a positive association would be identified between low educational level and IPV experience, as well as between low SES and IPV experience. Furthermore, the study compared positive IPV cases found in the violence registry with those found in the community survey to

explore reporting patterns. We hypothesized that due to differential access to care, among other reasons, this comparison would reveal differences in reporting patterns between the two data sources.

2. Methods

The study was included two data sources. The first data source was a cross-sectional household survey, which was conducted in Maringá utilizing a structured questionnaire. Through these interviews, information about women's experiences with IPV was collected as well as their sociodemographic information. Information collected at this level was used to explore the associations between IPV experience and educational level as well as SES. The second data source was a violence registry which was obtained from the office of the Secretary of Health in Maringá. Information from the violence registry was specifically utilized to explore reporting patterns of IPV by comparing positive IPV cases identified in the violence registry with positive IPV cases identified through the community survey aforementioned.

2.1 Setting

Maringá, Paraná: This project was conducted in Maringá city which is the third largest city in the state of Paraná found in the south region of Brazil. Maringá is highly urbanized with a 487.9km² area and 391,698 inhabitants according to the 2014 census.

2.2 Participants

Community Survey: The area from which data was collected is divided into five microareas, 1-5. A convenience sampling method was utilized based on the availability of women at the time that research assistants approached their households in all five microareas. In each household women at least 18 years of age who expressed that they

currently had or had ever had an intimate partner were approached to participate in the study. In households that contained more than one woman meeting these inclusion criteria, all respondents willing to participate were interviewed. Thus the inclusion criteria adopted were women aged at least 18 years of age who resided in the selected area who currently or previously had an intimate partner. Participants out of this age range or who had never had an intimate partner were excluded from the study. A total of 435 respondents who were found to be eligible agreed to participate in the study.

2.3 Procedures

Community Survey: Eight trained research assistants conducted the interviews with women living in the designated area for the study. The survey included a total of 38 questions (see Appendix C) and took approximately 10 minutes. The survey was piloted in a neighborhood called Mandacaru within the target community in October 2014. A sample of 20 women was used for the pilot and feedback from this pilot was utilized to ensure appropriate translation, comprehension of questions and data manageability.

A convenience sampling method was utilized through which research assistants approached homes door-to-door and invited women to participate in the study. Research assistants were accompanied by Community Health Agents from the local UBS unit when interviewing women in their homes. Interviewer-administered structured interviews in the form of paper surveys were utilized for data collection. Interviews

were conducted face-to-face, in private and in Portuguese. Research assistants explained the nature of the research study to potential participants as well as their ability to decline or terminate their participation at any time during the study after which they obtained verbal informed consent from women who decided to participate. The questionnaire collected demographic information such as participants' date of birth, educational level reached, occupation, monthly family income based on the Brazil's minimum wage and address where participants lived. Participants were then asked about communication patterns with their partners, current or previous, partner controlling behaviors and their experience with various forms of violence based on the WHO instrument.

Before the interview started, respondents were informed to use a code phrase at any time during the interview if they felt unsafe because of the arrival of any other person. If this happened, research assistants would switch questionnaires and use a decoy questionnaire that pertained to general demographic information and other health questions. This procedure was included in the research protocol to ensure the safety of the respondents and uphold the confidential and voluntary nature of participating in this study.

Violence Registry: Retrospective data collected by the office of the Secretary of Health between 2010 and 2014 was obtained for secondary data analysis. The violence registry came into effect in 2010 as a tool to collect information on violence incidents that

occur in Maringá through a violence form that is completed by health professionals in care settings when a patient receives care that can be attributed to violence. This registry therefore contains self-reported cases of IPV, which means 1) a woman has to present to a care setting for a violence-related reason and admit that it was due to violence by a current or previous intimate partner either voluntarily or after being asked by health care professional and 2) the health care professional giving care has to report it in the registry through the health form. This study provided an initial opportunity to explore the data which had information that includes date of birth, educational level reached by the patient, location variables such as street and neighborhood name of where violence occurred, the type of violence endured by the patient and the relationship between the patient and the aggressor. Location variables in the data were geographically mapped using GIS to analyze spatial distribution. Points were overlapped with mapped cases from the community survey to compare reporting and identify which strata of violence risk they fell into.

Approval for the study was obtained from the Faculdade Ingá Institutional Review Board in Maringá, Paraná in April 2014, and the Duke University Institutional Review Board in Durham, North Carolina in May 2014. Collaborations were fostered in Maringá between Faculdade Ingá and the office of the Secretary of Health in order to have access to the violence registry data collected between 2010 and 2014, as well as

between Faculdade Ingá and the *Unidade Básica de Saúde*/Basic Health Unit (UBS) in the community where the community survey was conducted.

2.4 Measures

2.4.1 Intimate Partner Violence (IPV)

Community Survey: For this project, the WHO definition of IPV was adopted which includes psychological/emotional abuse, physical violence and sexual violence (see Appendix A). All questions were adapted from the “WHO instrument on violence against women”, Section 7 (see Appendix B) and the English version of the questionnaire used can be found in Appendix C. Participants were asked a total of thirteen questions pertaining to the occurrence of three forms of IPV, psychological, physical and sexual violence either within the past 12 months or more than 12 months ago. Psychological violence included the participant being insulted or made to feel bad about herself, being humiliated or belittled, being scared or intimidated on purpose or threatening to hurt the participant or someone she cares about. Physical violence included the participant being slapped or having something thrown at her, being pushed or shoved or having her hair pulled out, being punched or hit with an object that could hurt her, being choked or burnt, or being threatened with or had a weapon used against her such as a gun or knife. Sexual violence included the respondent being physically forced to have sexual intercourse, having sexual intercourse because of fear of what her partner might do or being forced to do a humiliating or degrading sexual act.

Participants were asked specifically whether their current or previous intimate partner had perpetrated these acts against them, and frequency of IPV experiences was also assessed as having occurred either once, a few times or many times.

Violence registry data: For the violence registry data IPV cases were identified using the variable “perpetrator relation” and positive cases included those that identified spouse, ex-spouse, boyfriend or ex-boyfriend as the violence perpetrator.

2.4.2 Sociodemographic variables

Community Survey

Age: For each participant, age was self-identified at time of interview or calculated from their date of birth then categorized into five groups (18-29, 30-39, 40-49, 50-59 and 60 and above).

Income: Income was collected as a multiple of the minimum monthly family wages in the following three categories (up to 1, 1 to 3 and 3 or more). Minimum monthly family wage, as of 2014, is 724 reais which is approximately \$310USD.

Occupation: Participant’s occupation was recorded and categorized in three groups (Paid work outside the home, no paid work outside the home and other). The category “other” otherwise known as *bicos* in Brazil, encompasses women who work nonregistered, irregular jobs or who receive government subsidies.

Educational level: Participants were asked what grade/series of study they reached and this variable was used to categorize respondents into either three categories

(pre-high school, high school completed and post-high school completed) or five categories based on completion (Illiterate, fundamental education, middle education, high school and higher education).

Race/Color: Participants self-identified into one of six racial categories based on their skin color (white, black, brown, yellow, indigenous and unknown). White identifies individuals of European or Levantine descent, black identifies individuals of African descent, brown identifies individuals of mixed races, primarily a mix of black and any of the other races, yellow identifies individuals of Asian descent, indigenous largely identifies individuals of Amerindian descent, and unknown entails individuals who could not self-identify into a specific racial category.

Microarea: Research assistants recorded microareas where they had interviews as designated by the City of Maringa (microareas 1-5).

Number of children: Participants were asked how many children they had and these were categorized into three groups (0 or 1, 2 or 3, and 4 or more).

Address: Research assistants noted the street names where participants of study lived.

Violence Registry data

Age: For each identified positive case, age was calculated from the variables “date of birth” and “notification date” then age was categorized into five groups (18-29, 30-39, 40-49, 50-59 and 60 and above).

Educational level: The highest education level reached by each positive case was identified using the variable “education” in the dataset. Options for this variable in the dataset were: illiterate, 1a to 4a fundamental levels incomplete, 1a to 4a fundamental levels complete, 5a to 8a fundamental levels incomplete, 5a to 8a fundamental levels complete, high school incomplete, high school complete, higher education incomplete, higher education complete, not applicable and unknown. These education levels were compressed into three categories (pre-high school, high school completed and post high school completed) or five categories based on completion (Illiterate, fundamental education, middle education, high school and higher education). Positive cases marked as unknown or not applicable were coded as missing variables.

Race/Color: Six racial options were available and classification was based on what each person identified as their skin color (white, black, brown, yellow, indigenous and unknown).

2.5 Analysis

2.5.1 IPV Prevalence and association with educational level and SES

Community Survey: Research assistants entered all data from the questionnaires onto a secure Google Spreadsheet shared only with the primary investigators. Lifetime IPV prevalence estimates were calculated and χ^2 distribution tests were employed in order to assess bivariate associations between IPV and the specified sociodemographic variables, educational level and SES. SES was based on three variables, income,

occupation and number of children. Univariable and multivariable logistic regression models were used to identify associations with IPV. In this analysis the dependent variable, which is IPV, was coded as a dichotomous variable (IPV = 1 if any incident of any act of violence was reported and IPV = 0 if no act of violence was reported). All analyses were conducted using the statistical software Stata/SE version 13.1. An affirmative response to any of the specified acts of violence was coded as IPV = 1 and counted as a positive case of IPV. A negative response to all types of specified violence was coded as IPV = 0 and counted as no IPV. Violence prevalence was analyzed as either violence within the past year or longer and then combined to give lifetime prevalence, and as psychological, physical and sexual violence and overall IPV.

2.5.2 Comparison of community survey and violence registry

In order to compare reporting patterns of IPV, positive cases of IPV were isolated from the community survey dataset as shown in Figure 1 and then compared with positive IPV cases found in the violence registry data based on the following variables found in both datasets: age as a continuous variable, race and educational level completed. A Kruskal-Wallis test was used to estimate whether these data followed the same distribution based on age as a continuous variable. Fisher's exact tests were utilized for race and educational level completed to assess differences in distribution patterns between the two datasets. The same steps of analysis were repeated comparing the violence registry and positive cases found in the community that were specifically

sexual and/or physical violence cases. This was done based under the assumption that it would be less likely to observe cases of psychological violence in the violence registry.

Geographic information system (GIS) was utilized to geographically specify locations of identified IPV cases from the violence registry dataset and the community survey in order to identify distribution patterns visually. A Kernel Density Estimator was applied to the IPV cases from the community survey for the location of hotspots of violence which were classified as either low, medium or high based on the density of occurrences. Spatial distribution of both datasets allowed them to be overlapped to compare distributions. All spatial analyses were conducted with the GIS software QGIS 2.6 (open source).

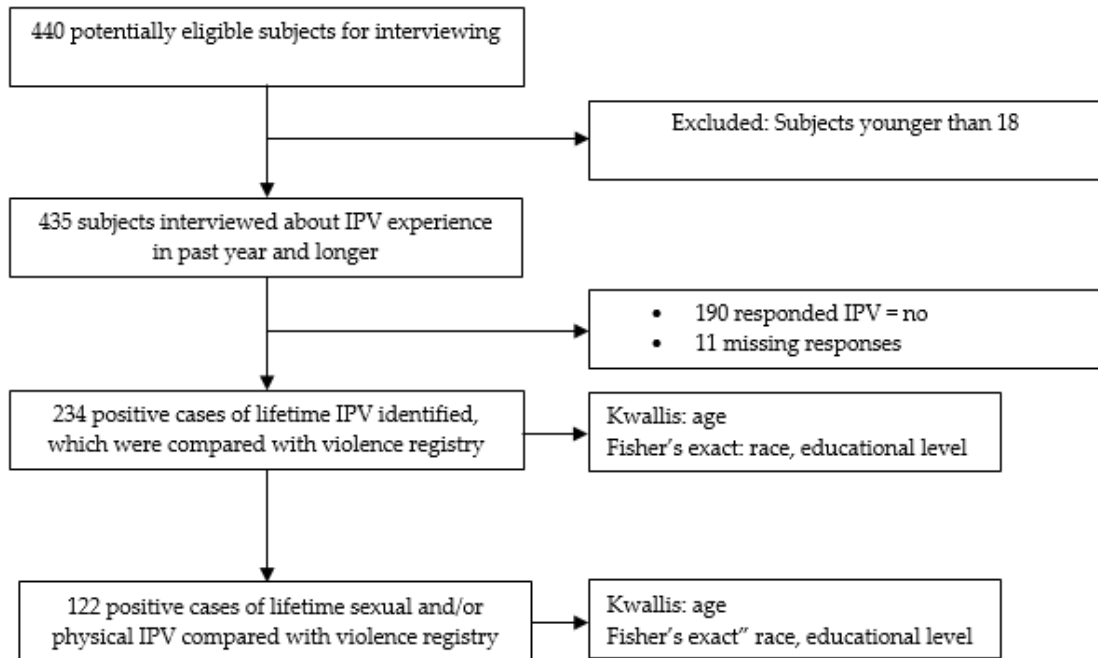


Figure 1: Comparison protocol for community survey and violence registry to explore underreporting patterns, Maringá 2014

3. Results

3.1 Descriptive Information

Community Survey: The sociodemographic information of the women interviewed in the community survey is shown in Table 1 and includes an age range between 18 and 88 years with a mean of 50.92 years (SD=15.93 years). 23.90% of the women interviewed were below 40 years of age while 30.80% were 60 or above. 74.48% of these women stated that they lived with an intimate partner, 94.71% reported having at least one child, and 22.99% had at least 4 children. The majority of the women, 54.02%, reported not having paid work outside the home while 62.99% of them self-identified as being in the 1-3 minimum wage monthly family income range. Analysis of the educational level completed by the women interviewed showed that 66.90% of them had not completed high school and only 5.75% had completed higher education.

Violence Registry data: The sociodemographic information of the positive cases identified in the violence registry data is shown in Table 2. The age range is between 18 and 82 years with a mean of 36.52 years (SD=11.94 years). Analysis showed 68.84% of the cases being between the 18 and 39 year age range with the majority (57.67%) reporting being married or in some form of consensual union. Analysis of the educational level completed by positive IPV cases identified showed that 58.14% had not completed a high school education and only 1 case had completed higher education. However, a 20% missing value rate was associated with the education variable.

Table 1: Sociodemographic characteristics of women interviewed. Maringá, Paraná 2014 (n=435)

Variable	n (%)	Missing
Age		
Mean (SD)	50.92 (15.93)	
18-29	54 (12.41%)	
30-39	50 (11.49%)	
40-49	102 (23.45%)	
50-59	95 (21.84%)	
60 and above	134 (30.80%)	
Microarea		
1	109 (25.06%)	
2	92 (21.15%)	
3	75 (17.24%)	
4	84 (19.31%)	
5	75 (17.24%)	
Race		
White	223 (51.26%)	
Black	39 (8.97%)	
Brown	138 (31.72%)	
Yellow	11 (2.53%)	
Indigenous	2 (0.46%)	
Unknown	22 (5.06%)	
Education Level Completed		10 (2.30%)
Pre-high school	287 (66.89%)	
High school completed	109 (25.06%)	
Post high school completed	25 (5.75%)	
Monthly Family Income in Minimum Wages		12 (2.76%)
Up to 1	77 (17.70%)	
1 to 3	274 (62.99%)	
More than 3	72 (16.55%)	
Occupation		
Paid work outside of home	145 (33.34%)	
No paid work outside of home	235 (54.02%)	
Other	55 (12.64%)	
Living Situation		

Live with a partner	324 (74.48%)
Do not live with a partner	111 (25.52%)
Number of children	16 (3.68%)
0 to 1	84 (19.31%)
2 to 3	235 (54.02%)
4 or more	100 (22.99%)

Table 2: Sociodemographic characteristics of positive cases of IPV identified from the violence registry. Maringá, Paraná 2010-2014 (n=215)

Variable	n (%)	Missing
Age		
Mean (SD)	34.46 (11.99)	
18-29	86 (40.00%)	
30-39	62 (28.84%)	
40-49	38 (17.67%)	
50-59	14 (6.51%)	
60 and above	15 (6.98%)	
Race/Color		2 (0.93%)
White	147 (68.37%)	
Black	10 (4.65%)	
Brown	48 (22.83%)	
Yellow	2 (0.93%)	
Indigenous	0 (0%)	
Unknown	6 (2.79%)	
Education level		43 (20.00%)
Pre-high school	125 (58.14%)	
High school completed	46 (21.40%)	
Post high school completed	1 (0.47%)	
Marital Status		8 (3.72%)
Single	52 (24.19%)	
Married/Consensual Union	124 (57.67%)	
Widowed	2 (0.93%)	
Separated	28 (13.02%)	
Unknown	1 (0.47%)	

3.2 IPV Prevalence and associations with educational level and SES

3.2.1 IPV Prevalence

This section primarily focused on the community survey data. The prevalence of IPV was found to be 53.79% (n=234). Broken down by specific type of violence, lifetime psychological violence prevalence was 52.18% (n=227), physical violence prevalence was 21.15% (n=92) and sexual violence prevalence was 13.33% (n=58). The prevalences of combinations of all three of these forms of violence are represented in Figure 2 below which shows that 6.44% (n=28) of the respondents from this area reported suffering all three kinds of violence at least once in their lifetime and 19.31% (n=84) reported suffering a combination of both psychological and physical violence. The prevalence of experiencing both lifetime sexual and psychological violence had a prevalence of 11.04% (n=48). The prevalence of physical and/or sexual violence was 28.05% (n=122).

Prevalence was also analyzed by specific type of violence as illustrated in Table 3 and reported as the weighted prevalence and unweighted n. Analysis showed that the most prevalent type of psychological violence among the women interviewed was being insulted or made to feel bad about oneself which had a 35.86% prevalence (n=156). Scaring or intimidating on purpose was also highly prevalent, 29.20% (n=127) as were publicly humiliating or depreciating and threatening subject or someone she cares about, 22.53% (n=98) and 15.63% (n=68) respectively.

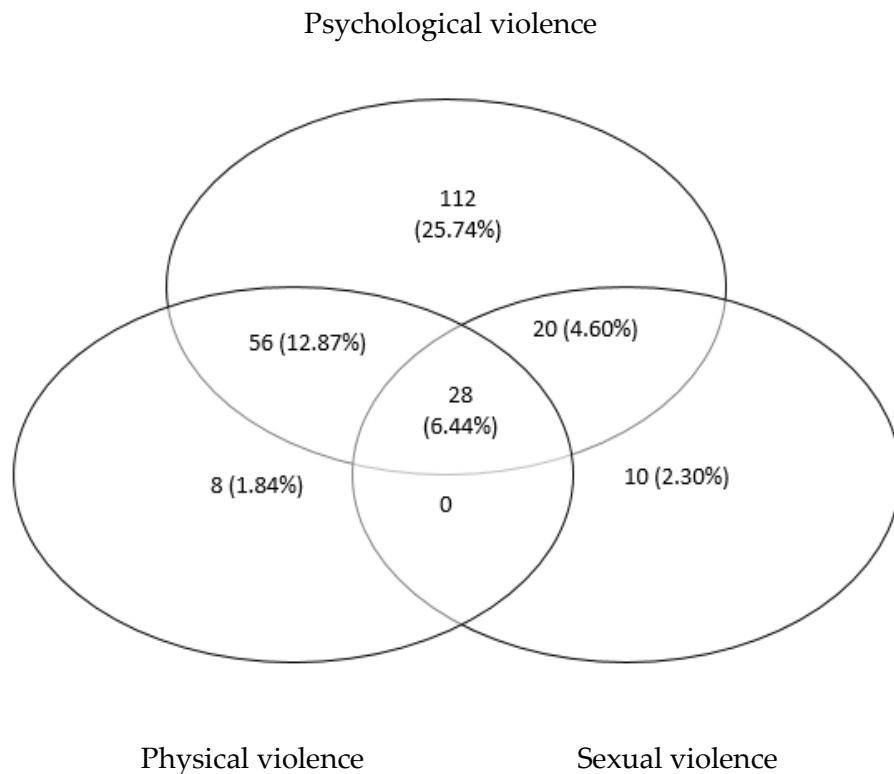


Figure 2: Prevalence of combinations of cases of lifetime psychological, physical and sexual violence. Maringá, 2014

The most prevalent form of physical violence reported in this study was pushing/ shoving/ pulling hair out which had a prevalence of 15.63% (n=68) followed closely by slapping or throwing an object at subject which had a prevalence of 15.40% (n=67) and punching or hurting subject with an object, 9.20% (n=40). The most prevalent form of sexual violence was forced sexual intercourse which was 11.03% (n=48).

In general, higher prevalences were noted with repeat encounters with violence compared to one time occurrences. Sexual intercourse due to fear more than 12 months ago, for example, had a 0.23% (n=1) prevalence for once, 2.76% (n=12) prevalence for a

few times and 4.14% (n=18) prevalence for many times. This trend was noted with 10 of the 13 violence variables in Table 3.

3.2.2 Associations between educational level & SES markers and IPV

Univariable and multivariable logistic regression models for lifetime psychological violence, physical violence, sexual violence and overall IPV were developed for the following variables: age as a continuous variable, educational level and 3 socioeconomic status markers: income, occupation and number of children. χ^2 tests were also employed to assess the bivariate association between the 3 forms of lifetime violence, psychological, physical and sexual, as well as the overall IPV and the specified sociodemographic variables. The following tables summarize the estimates obtained from these models.

As shown in Tables 4 and 7, significant bivariate associations were observed between the SES marker occupation and both psychological violence ($\chi^2 = 8.688$, $p < 0.05$) and overall IPV ($\chi^2 = 12.441$, $p < 0.01$). Significant bivariate associations were also found between the SES marker number of children and physical and sexual violence as shown in Tables 5 and 6 ($\chi^2 = 6.963$, $p < 0.05$ and $\chi^2 = 8.969$, $p < 0.05$ respectively).

Table 3: Prevalence of various forms of IPV within the last 12 months and longer

Violence act (n=435)	Lifetime Prevalence n (%)	Within last 12 months n (%)				More than 12 months ago n (%)				Missing
		Once	Few times	Many times	Total	Once	Few times	Many times	Total	
Psychological violence										
Insult/Make her feel bad about herself	156 (35.86%)	5 (1.15%)	13 (2.99%)	13 (2.99%)	31 (7.13%)	19 (4.37%)	48 (11.03%)	58 (13.33%)	125 (28.74%)	11 (2.53%)
Publicly Humiliate/Belittle her	98 (22.53%)	5 (1.15%)	8 (1.84%)	3 (0.69%)	16 (3.68%)	7 (1.61%)	30 (6.90%)	45 (10.34%)	82 (18.85%)	11 (2.53%)
Scare/Intimidate her on purpose	127 (29.20%)	5 (1.15%)	7 (1.61%)	10 (2.30%)	22 (5.06%)	14 (3.22%)	42 (9.66%)	49 (11.26%)	105 (24.14%)	11 (2.53%)
Threaten to hurt her or someone she cares about	68 (15.63%)	5 (1.15%)	1 (0.23%)	5 (1.15%)	11 (2.53%)	9 (2.07%)	12 (2.76%)	36 (8.28%)	57 (13.10%)	12 (2.76%)
Physical Violence										
Slap/Throw object that could hurt her	67 (15.40%)	3 (0.69%)	1 (0.23%)	3 (0.69%)	7 (1.61%)	20 (4.60%)	16 (3.68%)	24 (5.52%)	60 (13.79%)	11 (2.53%)
Push/Shove her/Pulled her hair out	68 (15.63%)	2 (0.46%)	1 (0.23%)	4 (0.92%)	7 (1.61%)	15 (3.45%)	22 (5.06%)	24 (5.52%)	61 (14.02%)	12 (2.76%)
Punch her/Hurt her with object	40 (9.20%)	1 (0.23%)	1 (0.23%)	3 (0.69%)	5 (1.15%)	9 (2.07%)	9 (2.07%)	17 (3.91%)	35 (8.05%)	11 (2.53%)
Kick/Drag her	28 (6.44%)	1 (0.23%)	0	3 (0.69%)	4 (0.92%)	2 (0.46%)	9 (2.07%)	13 (2.99%)	24 (5.52%)	11 (2.53%)
Choke/Burn her on purpose	17 (3.91%)	1 (0.23%)	0	2 (0.46%)	3 (0.69%)	4 (0.92%)	5 (1.15%)	5 (1.15%)	14 (3.22%)	12 (2.76%)
Threaten to/Actually use gun, knife or other weapon on her	26 (5.98%)	0	0	3 (0.69%)	3 (0.69%)	4 (0.92%)	6 (1.38%)	13 (2.99%)	23 (5.29%)	11 (2.53%)
Sexual Violence										
Forced sexual intercourse	48 (11.03%)	0	6 (1.38%)	0	6 (1.38%)	2 (0.46%)	18 (4.14%)	22 (5.06%)	42 (9.66%)	16 (3.68%)
Had sexual intercourse due to fear	34 (7.82%)	0	3 (0.69%)	0	3 (0.69%)	1 (0.23%)	12 (2.76%)	18 (4.14%)	31 (7.13%)	15 (3.45%)
Forced to do humiliating/degrading sexual acts	19 (4.37%)	0	0	1 (0.23%)	1 (0.23%)	2 (0.46%)	5 (1.15%)	11 (2.53%)	18 (4.14%)	15 (3.45%)

Table 4: Univariable and multivariable estimated lifetime odds ratios for psychological violence in Maringá. Survey data 2014 (OR and 95%CI) and χ^2 distribution test (n=435)

Logistic regression model	IPV		Univariable model		Multivariable model			
	Yes	No	OR (95%CI)	p-value	OR (95%CI)	p-value	χ^2 (p-value)	
Age	Mean (SD)	51.45 (16.06)	50.34 (15.80)	1.00 (0.99, 1.02)	0.467	1.02 (1.00, 1.03)	0.103	--
Educational level	Pre-high school	151	140	1	--	1	--	2.831 (0.243)
	High school complete	63	46	1.27 (0.81, 1.98)	0.292	1.63 (0.94, 2.81)	0.078	
	Post-high school complete	10	15	0.62 (0.17, 1.42)	0.257	0.71 (0.28, 1.80)	0.468	
	Missing	3	7	--	--	--	--	
Income	Up to 1	41	36	1	--	1	--	1.552 (0.460)
	1-3	148	126	1.03 (0.62, 1.71)	0.905	0.88 (0.50, 1.55)	0.651	
	3+	33	39	0.74 (0.29, 1.42)	0.366	0.61 (0.29, 1.26)	0.180	
	Missing	5	7	--	--	--	--	
Occupation	Paid work outside home	89	56	1	--	1	--	8.688 (0.013)
	No paid work outside home	108	127	0.54 (0.35, 0.82)	0.004	0.44 (0.28, 0.71)	0.001	
	Other	30	25	0.76 (0.40, 1.41)	0.380	0.62 (0.30, 1.28)	0.380	
Number of children	0-1	41	43	1	--	1	--	0.9727 (0.615)
	2-3	122	113	1.13 (0.69, 1.86)	0.625	1.20 (0.69, 2.08)	0.521	
	4+	56	44	1.33 (0.74, 2.39)	0.331	1.32 (0.63, 2.79)	0.460	
	Missing	8	8	--	--	--	--	

The univariable logistic regression on psychological violence and the stated variables revealed that the odds of experiencing psychological violence for women who had no paid work outside the home were 46% lower compared to the odds of women who had paid work outside the home (OR = 0.54, 95%CI: 0.35, 0.82, $p < 0.01$). The multivariable regression results show that when the model controlled for the effects of age, educational level, income and number of children, the odds were 56% lower compared to the odds of women who work outside the home (OR = 0.44, 95%CI: 0.28, 0.71, $p < 0.01$). The variable educational level, income and number of children were also analyzed as shown in Table 4. However, the relationships found between these variables and IPV experience were not statistically significant.

Not having paid work outside the home also significantly lowered the odds of experiencing physical violence to 0.57 times the odds of women who had paid work outside the home as shown in Table 5 below (OR = 0.57, 95%CI: 0.35, 0.94, $p < 0.05$). When controlled for the effects of the other variables in the multivariable model, this odds ratio went down to 0.44. Table 5 also shows that having 4 or more children is a significant risk factor for experiencing physical violence for the women interviewed with a 2.25 odds ratio compared to having 0 or 1 child (OR = 2.25, 95%CI: 1.10, 4.58, $p < 0.05$). The multivariable model showed the odds to be 2.65 times higher for women with 4 or more children to experience physical violence compared to women with 0 or 1 child.

However, the associations with educational level and income were statistically insignificant.

Analysis of sexual violence as an outcome shows age to be a significant risk factor of sexual violence (OR = 1.04, 95%CI: 1.20, 1.06, $p < 0.001$) and this association remains significant in the multivariable model as shown in Table 6. Having 4 or more children also increases the odds of experiencing sexual violence 3.67 times compared to having 0 or 1 child (OR = 3.67, 95%CI: 1.41, 9.54, $p < 0.01$). However, this association becomes insignificant in the multivariable model. When run in the multivariable regression, not having paid work outside the home significantly lowers the odds of experiencing sexual violence to 0.48 the odds of women with paid work outside the home (OR = 0.48, 95%CI: 0.23, 0.97, $p < 0.05$). Associations between sexual violence and income or educational level did not have statistical significance.

Table 5: Univariable and multivariable estimated lifetime odds ratios for physical violence in Maringá. Survey data 2014 (OR and 95%CI) and χ^2 distribution test (n=435)

<i>Logistic regression model</i>		<i>IPV</i>		<i>Univariable model</i>		<i>Multivariable model</i>		
		Yes	No	OR (95%CI)	p-value	OR (95%CI)	p-value	χ^2 (p-value)
Age	Mean (SD)	52.73 (15.64)	50.44 (15.99)	1.01 (0.99, 1.02)	0.221	1.00 (0.98, 1.02)	0.807	
Educational level	Pre-high school	64	227	1	--	1	--	1.378
	High school complete	23	86	0.95 (0.55, 1.62)	0.847	1.20 (0.63, 2.28)	0.580	(0.502)
	Post-high school complete	3	22	0.48 (0.14, 1.66)	0.250	0.62 (0.16, 2.29)	0.468	
	Missing	2	8	--	--	--	--	
Income	Up to 1	20	57	1	--	1	--	1.172
	1-3	57	217	0.75 (0.42, 1.35)	0.334	0.73 (0.38, 1.40)	0.342	(0.557)
	3+	14	58	0.69 (0.32, 1.49)	0.344	0.72 (0.31, 1.71)	0.462	
	Missing	1	11	--	--	--	--	
Occupation	Paid work outside home	39	106	1	--	1	--	4.818
	No paid work outside home	41	194	0.57 (0.35, 0.94)	0.029	0.44 (0.25, 0.78)	0.005	(0.090)
	Other	12	43	0.76 (0.36, 1.57)	0.463	0.64 (0.28, 1.50)	0.308	
Number of children	0-1	14	70	1	--	1	--	6.963
	2-3	46	189	1.21 (0.63, 2.35)	0.559	1.54 (0.75, 3.19)	0.238	(0.031)
	4+	31	69	2.25 (1.10, 4.58)	0.026	2.65 (1.39, 8.82)	0.008	
	Missing	1	15	--	--	--	--	

Univariable logistic model on overall lifetime IPV, results in Table 7, showed that the odds of women who had no paid work outside the home experiencing IPV were more than half those of women who have paid work outside the home (OR = 0.47, 95%CI: 0.31, 0.72, $p < 0.01$). When the model was controlled for confounding introduced by the other variables in the multivariable model, the odds were 0.39 times those of women who have paid work outside the home (OR = 0.39, 95%CI: 0.24, 0.62, $p < 0.001$). However, as shown in Table 7, educational level, income and number of children did not have significant association with overall lifetime IPV.

Table 6: Univariable and multivariable estimated lifetime odds ratios for sexual violence in Maringá. Survey data 2014 (OR & 95%CI) and χ^2 distribution test (n=435)

<i>Logistic regression model</i>	<i>IPV</i>		<i>Univariable model</i>		<i>Multivariable model</i>			
Variable	Yes	No	OR (95%CI)	p-value	OR (95%CI)	p-value	χ^2 (p-value)	
Age	Mean (SD)	58.43 (15.27)	49.77 (15.73)	1.04 (1.02, 1.06)	0.000	1.03 (1.00, 1.06)	0.022	
Educational level	Pre-high school	42	249	1	--	1	--	2.391 (0.303)
	High school complete	13	96	0.80 (0.41, 1.56)	0.518	1.77 (0.79, 3.95)	0.164	
	Post-high school complete	1	24	0.25 (0.03, 1.87)	0.176	0.52 (0.06, 4.31)	0.546	
	Missing	2	8	--	--			
Income	Up to 1	15	15	1	--	1	--	4.516 (0.105)
	1-3	33	241	0.56 (0.29, 1.11)	0.096	0.66 (0.31, 1.39)	0.277	
	3+	6	66	0.38 (0.14, 1.03)	0.057	0.44 (0.14, 1.34)	0.151	
	Missing	4	8	--	--	--	--	
Occupation	Paid work outside home	20	125	1	--	1	--	1.554 (0.460)
	No paid work outside home	28	207	0.84 (0.46, 1.56)	0.593	0.48 (0.23, 0.97)	0.040	
	Other	10	45	1.39 (0.60, 3.19)	0.439	0.77 (0.29, 2.04)	0.594	
Number of children	0-1	6	78	1	--	1	--	8.969 (0.011)
	2-3	30	205	1.90 (0.76, 4.75)	0.168	1.97 (0.71, 5.49)	0.194	
	4+	22	78	3.67 (1.41, 9.54)	0.008	2.62 (0.79, 8.74)	0.115	
	Missing	0	16	--	--	--	--	

Table 7: Univariable and multivariable estimated lifetime odds ratios for IPV in Maringá. Survey data 2014 (OR and 95%CI) and χ^2 distribution test (n=435)

<i>Logistic regression model</i>		<i>IPV</i>		<i>Univariable model</i>		<i>Multivariable model</i>	
Variable		Yes	No	OR (95%CI)	p-value	OR (95%CI)	p-value χ^2 (p-value)
Age	Mean (SD)	51.26 (16.17)	50.52 (15.67)	1.00 (0.99, 1.01)	0.632	1.01 (0.99, 1.03)	0.266
Educational level	Pre-high school	155	136	1	--	1	-- 3.427 (0.180)
	High school complete	65	44	1.29 (0.83, 2.02)	0.255	1.55 (0.90, 2.68)	0.116
	Post-high school complete	10	15	0.58 (0.25, 1.34)	0.207	0.59 (0.23, 1.52)	0.276
	Missing	4	6	--	--	--	--
Income	Up to 1	41	36	1	--	1	-- 0.523 (0.770)
	1-3	150	124	1.06 (0.64, 1.76)	0.816	0.90 (0.50, 1.59)	0.711
	3+	36	36	0.87 (0.46, 1.67)	0.692	0.72 (0.35, 1.49)	0.375
	Missing	7	5	--	--	--	--
Occupation	Paid work outside home	94	51	1	--	1	-- 12.441
	No paid work outside home	109	126	0.47 (0.31, 0.72)	0.001	0.39 (0.24, 0.62)	<0.001 (0.002)
	Other	31	24	0.70 (0.37, 1.32)	0.271	0.61 (0.30, 1.26)	0.183
Number of children	0-1	43	41	1	--	1	-- 1.331
	2-3	125	110	1.08 (0.66, 1.78)	0.753	1.18 (0.68, 2.07)	0.543 (0.514)
	4+	59	41	1.37 (0.76, 2.46)	0.289	1.52 (0.72, 3.24)	0.272
	Missing	7	9	--	--	--	--

3.3 Comparison of community survey and violence registry

3.3.1 Comparison by sociodemographic variables

The table below shows a comparison of sociodemographic information found in both the violence registry data and the community survey data. Positive cases in the community survey were compared with the positive cases in the violence registry as all 234 cases of psychological, physical and sexual violence, and as the 122 cases of physical and sexual violence only. The Kruskal-Wallis test for distribution shows that the distributions of age as a continuous variable in the two datasets are significantly different from each other ($p < 0.001$) in both analyses. The mean age for the violence registry cases is significantly younger (mean = 36.52, SD = 11.94) than the mean age of the total positive cases in the community survey (mean = 51.94, SD = 16.08) or the positive sexual and/or physical violence cases in the community survey (mean = 54.31, SD = 16.05). Fisher's exact tests on race showed that the likeliness of being white or brown and being in either the registry or the survey were significantly different ($p < 0.01$ and $p < 0.05$ respectively). For the white race we saw a significantly larger proportion (68.37%) reporting violence in the violence registry compared to in the community survey (54.70%). For the brown race an opposite observation was made with a smaller proportion reporting in the registry (22.33%) compared to the survey (31.20%). The same test was consistent for the white category when comparing the violence registry and the sexual and/or physical violence cases within the community survey ($p < 0.01$) but less

significant for the brown race category. Under educational level, the illiterate and middle education completed groups consistently showed differences in distribution between the violence registry dataset and the community survey dataset for both analyses ($p < 0.01$). The proportion of illiterate women was consistently higher in the survey compared to the registry, while the proportion of women who completed education was consistently lower in the survey compared to the registry in both analyses. A significant difference in distribution was also noted between the violence registry and the total positive cases in the community survey for the category higher education completed ($p < 0.05$) but this statistic became less significant when comparing the violence registry with the sexual and/or physical violence subset of the positive community survey cases. All the results of these estimations can be found in Table 8.

3.3.2 Comparison by spatial analysis

The IPV cases identified through the community survey were geospatially mapped and the results are represented in Figure 3. Also represented in Figure 3 are individual sites of IPV identified through the violence registry. This method made apparent that of the 234 cases of IPV found and the 122 cases of physical and/or sexual violence through the community survey, 6 of them could potentially have been reported through the violence registry. Using the Kernel Density Estimator, the map also made apparent high risk areas/hotspots of IPV that can be visualized as red areas, while the white areas are sites of medium prevalence and blue is low prevalence.

Table 8: Sociodemographic characteristics comparison of IPV cases identified in violence registry and community survey, Maringá 2014

Variable	Positive Registry cases n (%)	Positive Survey cases n (%)	Raw difference n (%)	Kwallis/Fisher's exact p-value	Positive Survey Sexual/Physical cases n (%)	Raw difference n (%)	Kwallis/Fisher's exact p-value
Age							
Mean (SD)	36.52 (11.94)	51.94 (16.08)	15.42	101.84 (<0.001)	54.31 (16.05)	17.79	90.777 (<0.001)
Race							
White	147 (68.37)	128 (54.70)	--	0.002	67 (54.92)	--	0.014
Black	10 (4.65)	18 (7.69)	8 (28.57)	0.241	9 (7.38)	--	0.333
Brown	48 (22.33)	73 (31.20)	25 (20.66)	0.042	38 (31.15)	--	0.091
Yellow	2 (0.93)	5 (2.14)	3 (42.86)	0.453	3 (2.46)	1 (33.33)	0.359
Indigenous	0	2 (0.85)	2 (100)	0.500	2 (1.64)	2 (100)	0.133
Unknown	6 (2.79)	8 (3.42)	--	--	3 (2.46)	--	--
Educational level							
Illiterate	24 (11.16)	61 (26.07)	37 (43.53)	0.003	35 (28.29)	11 (31.43)	0.002
Fundamental education	53 (24.65)	61 (26.07)	8 (7.02)	0.372	36 (29.51)	--	1.000
Middle education	48 (22.33)	33 (14.10)	--	0.001	15 (12.29)	--	0.007
High school	46 (21.40)	65 (27.78)	19 (17.11)	0.822	29 (23.77)	--	0.684
Higher education	1 (0.47)	10 (4.27)	9 (81.82)	0.028	4 (3.28)	--	0.163
Total	215 (100)	234 (100)	--	--	122 (100)	--	--

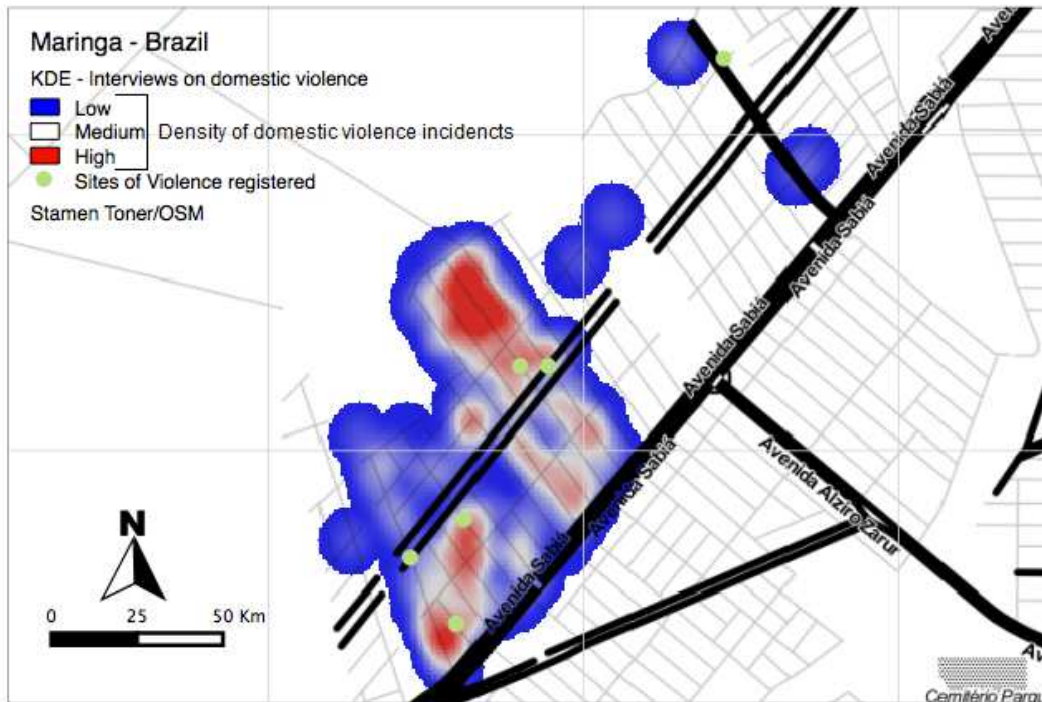


Figure 3: Geospatial map of IPV cases identified through community survey overlapping with IPV cases identified in violence registry, Maringá 2014

This allowed the visualization of where the 6 sites identified through the violence registry lie in relation to the hotspots identified through the community survey. Of the 6 potential cases found in the registry, 3 are located in the high prevalence zones/hotspots, while 1 appears to be in a medium prevalence zone and 2 are in low prevalence zones.

4. Discussion

This was the first cross-sectional study conducted to investigate the burden of IPV and describe the epidemiologic profile of IPV victims in Maringá. This was also the first attempt to analyze the violence registry data put into effect by the city of Maringá in 2010 and investigate underreporting patterns of IPV.

IPV prevalence in Maringá was estimated to be 53.79% which is significantly higher than the national estimate of IPV in Brazil which is approximately 27.5% (Reichenheim et al., 2011; M. A. Silva et al., 2010). This prevalence was also higher than prevalences of IPV also found through community surveys in other states in Brazil such as Brasilia, Recife and Sao Paulo (Garcia-Moreno et al., 2006; Kiss et al., 2012; Reichenheim et al., 2011; E. P. Silva et al., 2011; M. A. Silva et al., 2010). Psychological violence had a prevalence of 52.18% which is lower than the 80.2% prevalence found in Varjão but higher than the prevalences found in Sao Paulo, 41.8% and comparable to the prevalence found in Zona da Mata, 48.9% (Moura et al., 2009; Schraiber et al., 2007). Under physical violence, “Push/Shove/Pull hair out” and “Slap/Throw object” were the most prevalent. Sexual violence prevalence (13.33%) was unusually high in this population as compared to WHO estimates of sexual violence in countries such as Japan, Serbia and Montenegro where sexual violence is approximately 6% or lower (Schraiber et al., 2010). This markedly higher level of reporting of IPV may be due to a higher prevalence in this community or may be due to increased reporting because of national

policies in Brazil that aim to protect women against violence such as the law, *Lei Maria de Penha*, put into effect in 2006. Brazil has had policies in effect for almost 40 years that are designed to combat violence against women which may be positively affecting the self-disclosure of violence incidents. The low prevalence of physical violence in isolation in this study supports findings from other studies that show that physical violence is often accompanied with either psychological and/or sexual violence (WHO, 2005).

Associations between IPV and sociodemographic characteristics such as age, educational level, income and occupation have been studied by several researchers (Kiss et al., 2012; Moraes et al., 2011; Reichenheim et al., 2011; Zaleski et al., 2010b). Bivariate logistic models were utilized in this study to investigate such associations for the population under study where this type of research had not been conducted yet. Occupation had a significant bivariate association with lifetime IPV and further analysis showed that the odds of women who take care of the home experiencing IPV were lower than those of women who have some form of formal or informal work. This was surprising and contrary to the hypothesis of the study as the underlying assumption was that women with more economic autonomy would encounter less IPV (Vieira et al., 2011). However, some literature does indicate that partners of dependent women are capable of imposing dominance in the relationship without having to resort to violence because the women do not question their dominance which may explain this phenomenon (Babu & Kar, 2010; Zaleski et al., 2010b). Also, it has been noted that in

countries with emerging economies, under which Brazil can be classified, women gaining more social empowerment and autonomy are at an increased risk of experiencing IPV (Babu & Kar, 2009; Vieira et al., 2011). A study conducted in Eastern India showed the risk for women who run their own businesses to experience IPV to be significantly higher than those who did not (Babu & Kar, 2010). At the same time, the level of economic dependence and submission and fear of reprisal or rejection by women who have no paid work outside home may also result in women being protective of their partners which would result in underreporting within this subgroup (Miller, Wilsnack, & Cunradi, 2000; Zaleski et al., 2010b). It is also possible that the convenience sampling method utilized in the study may have missed a representative amount of working women as the interviews were conducted between 8am and 5pm which are working hours.

An analysis of individual forms of violence showed that occupation has a significant association with psychological violence and overall lifetime IPV while number of children has a significant association with physical and sexual violence. Consequently, having no paid work outside the home was observed as protective to psychological, physical, sexual and overall lifetime IPV while having 4 or more children was found to be a risk factor for physical and sexual violence. This last finding is consistent with findings from other studies that have identified high fertility as a significant risk factor for IPV (Abramsky et al., 2011). However, this observation has

been made in places where high fertility is associated with low SES. In this setting, high fertility may be increasing stress on parents and causing fatigue which are both precipitation factors for IPV.

All the information used in this study was de-identified for safety reasons and maintaining the confidential nature of the study. However, despite definitive matching of IPV cases in the community survey and the violence registry being impossible, one can see patterns in the reporting of IPV when the violence registry and community survey are compared for Maringá. The registry seems to capture younger victims of IPV who are white and completed middle education at significantly higher rates than those captured by the community survey. On the other hand, the survey reveals an older victim base, women who identify as brown and women who are either illiterate or completed higher education at significantly higher rates than the violence registry reports. While it is not definitive, the geospatial comparison of cases identified in the two datasets shows little representation of cases in the violence registry within the community surveyed. Only 6 cases were found to have occurred in the same community in which 234 cases of IPV were identified, 122 of them being either physical and/or sexual violence, and 55 of them having occurred within the last year. These estimates are indicators of what Gracia calls the “iceberg of domestic violence” and they make apparent the need for interventions that deal not just with how widespread IPV is but how and why it is underreported as well (Gracia, 2004).

The first potential reason for these patterns may be differential access to care. Because the cases found in the violence registry were informed through forms filled in care settings when these women sought care, it may be possible that young, white women have better access to care and are therefore represented more in this dataset. Another potential reasons for these patterns may be that forms of violence with more severe consequences which are more likely to be reported through care seeking than those with consequences that are less apparent are being experienced by young women who are white and have intermediate education. This may mean this demographic of women are being subjected to extreme forms of violence, which is highly concerning. This also poses a reporting problem for forms of violence that are primarily psychological in nature, sexual and physical violence but do not result in injury, all of which are not any less important than IPV incidents with severe consequences but which may not be reported because they do not reach care settings. Another reason for these patterns of underreporting may be that even when IPV victims get care in healthcare settings, professionals either do not recognize the occurrence as an IPV-related incident or choose not to investigate further than giving care (Gracia, 2004).

Other reasons for underreporting may emerge from our findings that suggested less reporting in the violence registry for older women, women who were illiterate and those who completed higher education. Older victims of IPV may be ignorant of the resources available to them or accepting of power imbalances in relationships that

tolerate male dominance and aggression as the norm. They may also be reporting occurrences of violence that happened before IPV was acknowledged as a violation of human rights in Brazil. On the other hand, the recent national policies to combat violence against women may be effectively leading to increased reporting of IPV incidents for the younger populations resulting in the average age of the women reporting in the violence registry being younger. The seemingly conflicting results based on educational level can be explained by ignorance, self-blame, economic dependence and limited autonomy among the illiterate group (Vieira et al., 2011; Zaleski et al., 2010b) while, among the higher education group, shame, embarrassment, increased conflicts about money, shifts in earning capacity and a high premium on family privacy may explain this phenomenon (Gracia, 2004; Vieira et al., 2011). Estimating and tackling IPV underreporting is just as imperative as addressing the burden that we presently know.

4.1 Implications for policy and practice

The findings from this study suggest that while conditions of economic disadvantage such as low education and low socioeconomic status may contribute to the experience of IPV, perhaps focusing primarily on poverty reduction strategies may not address other underlying causes of IPV. As Abramsky et al. note in their research, a one-size-fits-all model of addressing IPV is not recommended in addressing a burden that is already multidimensional (Abramsky et al., 2011). Some of the underlying causes of IPV

may include rigid gender constructs, permeance of a domination matrix within intimate relationships, childhood exposure to IPV or precipitation factors such as substance abuse and stress (Abramsky et al., 2011; Moreira Sda et al., 2008).

The isolation of high fertility as a significant determinant for physical and sexual violence provides an opportunity for health facilities especially at the basic level. The Basic Health Unit, UBS, is the level of health care that most of these women will have frequent access to and where they get family health assistance and care. Thus increasing awareness about family planning as well as about IPV at this level can have positive impact. The UBS can therefore become a multi-purpose space for women's health, and IPV detection, prevention, awareness and counseling (Zaleski et al., 2010a). The capacity to give this type of care beyond just caring for physical manifestations of IPV would need to be increased through appropriate training and increased awareness for care providers. A more comprehensive medical care format that includes psychological support and proper referral will need to be established as many health professionals are said to "close their eyes" to the underlying causes behind IPV-related injuries that they encounter (Garbin, Garbin, Dossi, & Dossi, 2006; Zaleski et al., 2010b), while some health professionals in Brazil have noted that they do not feel qualified to speak to patients about IPV (Moreira Sda et al., 2008). The impact that this type of exposure to violence has on the children in these households is an important factor to consider as Payne and Gainey reflect on the perpetuation of the cycle of violence due to child exposure (Payne

& Gainey, 2014). Counseling services may be necessary at a family level when violence cases are identified.

The underreporting patterns suggested from the findings of this study speaks to the need to increase public awareness about IPV, the need to speak about it and reduce its tolerance. Again, increasing training and awareness of health professionals to detect and report IPV and then give appropriate care or refer victims to the appropriate help needs to be implemented in such communities (Gracia, 2004). Enhancing the purpose of the UBS and other health facilities to not just detecting IPV cases as they happen but expanding to make it a site for constant universal screening for IPV can better inform the violence registry about the true burden of IPV and make it a useful tool to monitor longitudinal changes.

4.2 Implications for further research

This study was the first looking at IPV in Maringá therefore there are numerous opportunities for further research in order to understand and combat violence against women. Further exploration into the impact of parental IPV on children could be a useful avenue to pursue in order to better counsel children in abusive homes and/or break the cycle of IPV. Other research opportunities lie in exploring precipitation factors such as stress, alcohol and drug abuse, and other conditional factors such as perceptions on gender constructs as other risk factors for IPV in this constituency. Through the geospatial mapping of the IPV cases found through the community survey, hotspots of

IPV were identified. Exploring why violence is higher in these areas of the community compared to others is necessary and can be useful for devising context-sensitive interventions.

Furthermore, underreporting of IPV is a multidimensional problem that requires further research, first in investigating an accurate estimate of underreporting, and then exploring the reasons for underreporting. This is necessary on an individual level, that is investigating why IPV victims themselves would not report IPV incidents in legal and health settings, as well as on a societal level to see the social tolerance of IPV in this community which can affect both perpetrator and victim behavior (Gracia, 2004).

Exploring other sources of reporting data from institutions where women can go to report violence, such as legal institutions, may help better understand underreporting and also assess where else women may go to report IPV incidents and why.

Additionally, performing a similar study using a form of multistage cluster sampling procedure may also result in a more representative sample such that results can be extrapolated to the Brazilian population and compared to other studies that utilize the same sampling method (Zaleski et al., 2010a). As aforementioned, IPV is a multidimensional burden that cannot be put in a box. There is, therefore, a need to explore this burden using a qualitative approach, both in understanding its prevalence and risk factors and also in exploring reporting patterns. Including the victims' voices

can provide more contextual detail about why this type of violence occurs and why they may not report it.

4.3 Study strengths and limitations

The community survey had some executional strengths in that it utilized local resources to make contact with potential respondents through the CHAs who accompanied our research assistants. This gave the women a sense of familiarity and safety being with someone they trusted while being interviewed about personal and delicate information. The interviews were also conducted in Portuguese which was easy to understand for participants. The community survey data also had a relatively low missing variables rate.

However, the study did have some limitations. The convenience sampling method used to recruit participants for the community survey may not necessarily have resulted in a sample that is representative of the population. Survey data was collected between the 8am and 5pm to minimize contact with working spouses. However, this also means that perhaps a representative amount of working women were excluded from the study. Because of this design as well, the results found have very limited generalizability. This was also a cross-sectional study, therefore, while associations were noted between IPV prevalence and certain variables this is not sufficient to state causation. The study was also, once again, aimed at the most susceptible victims of IPV who are women who often have limited control in an IPV incident, and left out the

perpetrators' voices. For IPV prevention to be achievable there is need to engage the perpetrators of these violent acts which was omitted from this study for safety reasons. Lastly, due to lack of identifying variables in both the violence registry data and the community survey data, we were unable to positively match cases found in both datasets and report actual estimates of underreporting.

5. Conclusion

A high prevalence of the burden of IPV was found in the community surveyed in Maringá. Not having paid work outside the home was found to be protective to IPV while high fertility appeared to increase the risk of experiencing IPV. Underreporting patterns were observed that require further research to get a better estimate of underreporting and explore reasons for underreporting.

These findings are a step forward in shedding light about the burden of IPV and beginning to fill the literature gap in Maringá, and Paraná. Consequently, devising appropriate and context-sensitive interventions to lower this burden and reduce the burden of violence against women is the ultimate objective. Opportunities are available to explore IPV more using the UBS units that are located in communities such as the one surveyed for this study. These units where women get care can be useful for more aggressive screening for IPV to better inform reporting mechanisms such as the violence registry in Maringá about the burden of IPV, and explore other factors that contribute to IPV and IPV underreporting.

Appendix A: WHO Definition of Intimate Partner Violence

What do we mean by violence against women?

Violence against women takes many forms, from the overt to the subtle. WHO has adopted the following definitions of physical and sexual violence to aid in research and programming, concentrating on identifiable acts.

Physical violence means a woman has been: slapped, or had something thrown at her; pushed, shoved, or had her hair pulled; hit with a fist or something else that could hurt; choked or burnt; threatened with or had a weapon used against her. *Sexual violence* means a woman has been: physically forced to have sexual intercourse; had sexual intercourse because she was afraid of what her partner might do; or forced to do something sexual she found degrading or humiliating. Though recognized as a serious and pervasive problem, *emotional violence* does not yet have a widely accepted definition, but includes, for example, being humiliated or belittled; being scared or intimidated purposefully. *Intimate-partner violence* (also called “domestic” violence) means a woman has encountered any of the above types of violence, at the hands of an intimate partner or ex-partner; this is one of the most common and universal forms of violence experienced by women

Appendix B: WHO Instrument adopted for Community

Survey questionnaire

SECTION 7 RESPONDENT AND HER PARTNER						
	EVER MARRIED / EVER LIVING WITH A MAN / EVER SEXUAL PARTNER [] ↓	NEVER MARRIED / NEVER LIVED WITH A MAN / NEVER SEXUAL PARTNER [] →			→ S.10	
<p>When two people marry or live together, they usually share both good and bad moments. I would now like to ask you some questions about your current and past relationships and how your husband / partner treats (treated) you. If anyone interrupts us I will change the topic of conversation. I would again like to assure you that your answers will be kept secret, and that you do not have to answer any questions that you do not want to. May I continue?</p>						
703	<p>I am now going to ask you about some situations that are true for many women. Thinking about your (current or most recent) husband / partner, would you say it is generally true that he:</p> <p>a) Tries to keep you from seeing your friends? b) Tries to restrict contact with your family of birth? c) Insists on knowing where you are at all times? d) Ignores you and treats you indifferently? e) Gets angry if you speak with another man? f) Is often suspicious that you are unfaithful? g) Expects you to ask his permission before seeking health care for yourself?</p>			<p>YES NO DK</p> <p>a) SEEING FRIENDS 1 2 8 b) CONTACT FAMILY 1 2 8 c) WANTS TO KNOW 1 2 8 d) IGNORES YOU 1 2 8 e) GETS ANGRY 1 2 8 f) SUSPICIOUS 1 2 8 g) HEALTH CENTRE 1 2 8</p>		
704	<p>The next questions are about things that happen to many women, and that your current partner, or any other partner may have done to you.</p> <p>Has your <u>current</u> husband / partner, or <u>any</u> other <u>partner</u> ever....</p> <p>a) Insulted you or made you feel bad about yourself? b) Belittled or humiliated you in front of other people? c) Done things to scare or intimidate you on purpose (e.g. by the way he looked at you, by yelling and smashing things)? d) Threatened to hurt you or someone you care about?</p>	<p>A) (If YES continue with B. If NO skip to next item)</p> <p>YES NO</p>	<p>B) Has this happened <u>in the past 12 months</u>? (If YES ask C only. If NO ask D only)</p> <p>YES NO</p>	<p>C) <u>In the past 12 months</u> would you say that this has happened once, a few times or many times? (after answering C, go to next item)</p> <p>One Few Many</p>	<p>D) <u>Before the past 12 months</u> would you say that this has happened once, a few times or many times?</p> <p>One Few Many</p>	
		<p>1 2</p> <p>1 2</p> <p>1 2</p> <p>1 2</p>	<p>1 2</p> <p>1 2</p> <p>1 2</p> <p>1 2</p>	<p>1 2 3</p> <p>1 2 3</p> <p>1 2 3</p> <p>1 2 3</p>	<p>1 2 3</p> <p>1 2 3</p> <p>1 2 3</p> <p>1 2 3</p>	

705	<p>Has <u>he or any other partner</u> ever...</p> <p>a) Slapped you or thrown something at you that could hurt you?</p> <p>b) Pushed you or shoved you or pulled your hair?</p> <p>c) Hit you with his fist or with something else that could hurt you?</p> <p>d) Kicked you, dragged you or beat you up?</p> <p>e) Choked or burnt you on purpose?</p> <p>f) Threatened to use or actually used a gun, knife or other weapon against you?</p>	<p>A) (If YES continue with B. If NO skip to next item)</p> <p>YES NO</p>	<p>B) Has this happened <u>in the past 12 months</u>? (If YES ask C only. If NO ask D only)</p> <p>YES NO</p>	<p>C) In the past 12 months would you say that this has happened once, a few times or many times? (after answering C, go to next item)</p> <p>One Few Many</p>	<p>D) Before the past 12 months would you say that this has happened once, a few times or many times?</p> <p>One Few Many</p>
706	<p>a) Did <u>your current husband/partner or any other partner</u> ever physically force you to have sexual intercourse when you did not want to?</p> <p>b) Did you ever have sexual intercourse you did not want to because you were afraid of what your partner or any other partner might do?</p> <p>c) Did your partner or any other partner ever force you to do something sexual that you found degrading or humiliating?</p>	<p>A) (If YES continue with B. If NO skip to next item)</p> <p>YES NO</p>	<p>B) Has this happened <u>in the past 12 months</u>? (If YES ask C only. If NO ask D only)</p> <p>YES NO</p>	<p>C) In the past 12 months would you say that this has happened once, a few times or many times? (after answering C, go to next item)</p> <p>One Few Many</p>	<p>D) Before the past 12 months would you say that this has happened once, a few times or many times?</p> <p>One Few Many</p>

Appendix C: English version of questionnaire used in

Community Survey

Address:	Interview date:
Time of beginning interview:	Time of ending interview:
Initials:	Record No:
Age:	Telephone
Health ESF/UBS:	
Address:	
1. Date of birth	
2. Marital situation 1) live with partner 2) do not live with partner (separated, widowed, single)	
3. How long have you been with this partner? _____years	
4. Series studied until? _____years	
5. Race/Color: 1) white 2) black 3) brown 4) yellow 5) indigenous 6) doesn't know/doesn't say	
6. Religion attended	
7. Occupation 1) Work with formal contract 2) Working without a formal contract 3) at home 4) other	
8. Approximate family income in minimum wages 1) below 1 2) 1 to 3 3) +3SM	
9. Number of children: 1) 1 child 2) 2 to 3 children 3) 4 or more children	
10. Do you smoke? 1) yes 2) no	
11. How many cigarettes per day?	
12. Do you use or have used any drugs? 1) marijuana 2)cocaine 3) crack 4) other	
13. How long did you use drugs?	
14. Can I continue to ask questions about relationship?	
15. Generally you and your current husband / partner talk between you guys , the following subjects	<ul style="list-style-type: none"> a. His day ()yes () no b. Your day () yes () no c. Your worries/preoccupations ()yes ()no d. His worries/preoccupations ()yes ()no
16. In the relationship with her current husband / partner, how often would you say that	1. Rarely 2. Sometimes 3. Often

you guys fight				
<p>17. Now I will ask you a few situations that are true for many women. Thinking about your husband / partner (current or most recent), would you say that usually he</p> <p>A Attempts to prevent you visit / see your friends</p> <p>B Seeks to restrict your contact with your family</p> <p>C Demands to know where you are all the time</p> <p>D Ignores you and treats with indifference</p> <p>E Gets angry if you talk with another man</p> <p>F Suspicious of infidelity</p> <p>G You have to ask permission to visit health system</p>	<p>Yes (1) No (2)</p> <p>a) See friend</p> <p>b) Family contact</p> <p>c) Knowing where you are</p> <p>d) Ignoring</p> <p>e) Gets angry</p> <p>f) Suspects</p> <p>g) Health service</p>			
<p>18. I want you to tell me if ever your current partner, or any other companion, treated you so as follows</p>	<p>A If so, continue to B, If not pass to the next item</p>	<p>B This happened in the last 12 months? If yes continue to C. If no continue to D.</p>	<p>C In the last 12 months, would you say that this happened once, few times or many? After answering C, skip D</p>	<p>D Before the last 12 months, would you say that this happened once, a few or many times?</p>

	Yes No		Yes No		One Few Many			One Few Many		
	1	2	1	2	1	2	3	1	2	3
a. Insult or made you feel bad about yourself										
b. Depreciated or humiliated you in front of others										
c. Did things to scare her or intimidate her on purpose? e.g. how he looks, yelling or breaking things										
d Threatened to hurt her or someone who you care about										
19. Has your current partner , or any other companion, ever treated you as follows:										
a Slapped you or thrown something at you that could hurt you										
b Pushed her or gave a jolt /shake										
c Punched her or hurt her with an object										
d Kicked or dragged you										
e Strangled or burned you on purpose										
f Threatened to use or actually used a gun , knife or other										

weapon against you										
20. Has your current husband / partner, or any other companion ever treated you as follows:										
a Has forced you to have sexual relations physically when you do not want										
b You had sexual relations because I was afraid of what he might do										
c Has forced you to do degrading or humiliating sexual practices										

Appendix D: Health form that informs Violence Registry

República Federativa do Brasil
Ministério da Saúde

SINAN
SISTEMA DE INFORMAÇÃO DE AGRAVOS DE NOTIFICAÇÃO

Nº

FICHA DE NOTIFICAÇÃO / INVESTIGAÇÃO INDIVIDUAL VIOLÊNCIA DOMÉSTICA, SEXUAL E/OU OUTRAS VIOLÊNCIAS

Definição de caso: Suspeita ou confirmação de violência. Considera-se violência como o uso intencional de força física ou do poder, real ou em ameaça, contra si próprio, contra outra pessoa, ou contra um grupo ou uma comunidade que resulte ou tenha possibilidade de resultar em lesão, morte, dano psicológico, deficiência de desenvolvimento ou privação (OMS, 2002).
Atenção: Em casos de suspeita ou confirmação de violência contra crianças e adolescentes, a notificação deve ser obrigatória e dirigida aos Conselhos Tutelares e/ou autoridades competentes (Juizado da Infância e Juventude e/ou Ministério Público da localidade), de acordo com o art. 13 da Lei no 8.069/1990 - Estatuto da Criança e do Adolescente. Também são considerados de notificação compulsória todos os casos de violência contra a mulher (Decreto-Lei no 5.099 de 03/06/2004, Lei no 10.778/2003) e maus tratos contra a pessoa idosa (artigo 19 da Lei no 10.741/2003).

Dados Gerais	1	Tipo de Notificação		2 - Individual			
	2	Agravado/doença		VIOLÊNCIA DOMÉSTICA, SEXUAL E/OU OUTRAS VIOLÊNCIAS		Código (CID10)	3
						Y09	Data da notificação
	4	UF	5		Município de notificação	Código (IBGE)	
Notificação Individual	6	Unidade de Saúde (ou outra fonte notificadora)		Código (CNES)		7	
						Data da ocorrência da violência	
	8	Nome do paciente				9	
						Data de nascimento	
Dados de Residência	10	(ou) Idade	1 - Hora 2 - Dia 3 - Mês 4 - Ano	11	Sexo M - Masculino F - Feminino I - Ignorado	12	Gestante 1-1º Trimestre 2-2º Trimestre 3-3º Trimestre 4- Idade gestacional ignorada 5-Não 6- Não se aplica 9- Ignorado
							13
							Raça/Cor 1-Branca 2-Preta 3-Amarela 4-Parda 5-Indígena 9- Ignorado
	14	Escolaridade 0-Analfabeto 1-1ª a 4ª série incompleta do EF (antigo primário ou 1º grau) 2-4ª série completa do EF (antigo primário ou 1º grau) 3-5ª a 8ª série incompleta do EF (antigo ginásio ou 1º grau) 4-Ensino fundamental completo (antigo ginásio ou 1º grau) 5-Ensino médio incompleto (antigo colegial ou 2º grau) 6-Ensino médio completo (antigo colegial ou 2º grau) 7-Educação superior incompleta 8-Educação superior completa 9- Ignorado 10- Não se aplica					
15	Número do Cartão SUS		16				Nome da mãe
Dados de Residência	17	UF	18		Município de Residência	Código (IBGE)	19
							Distrito
	20	Bairro		21		Logradouro (rua, avenida,...)	Código
	22	Número	23		Complemento (apto., casa, ...)	24	
						Geo campo 1	
25	Geo campo 2		26		Ponto de Referência	27	
						CEP	
28	(DDD) Telefone		29		Zona 1 - Urbana 2 - Rural 3 - Periurbana 9 - Ignorado	30	
						País (se residente fora do Brasil)	

Dados Complementares

Dados da Pessoa Atendida	31 Ocupação							
	32 Situação conjugal / Estado civil		33 Relações sexuais					
	1 - Solteiro 3 - Viúvo 8 - Não se aplica 2 - Casado/união consensual 4 - Separado 9 - Ignorado		1 - Só com homens 3 - Com homens e mulheres 2 - Só com mulheres 8 - Não se aplica 9 - Ignorado					
	34 Possui algum tipo de deficiência/ transtorno?		35 Se sim, qual tipo de deficiência /transtorno?					
1-Sim 2- Não 9- Ignorado		1-Sim 2- Não 8-Não se aplica 9- Ignorado						
		<input type="checkbox"/> Física <input type="checkbox"/> Visual <input type="checkbox"/> Transtorno mental <input type="checkbox"/> Outras deficiências/ Síndromes <input type="checkbox"/> Mental <input type="checkbox"/> Auditiva <input type="checkbox"/> Transtorno de comportamento						
Dados da Ocorrência	36 UF		37 Município de ocorrência		Código (IBGE)		38 Distrito	
	39 Bairro		40 Logradouro (rua, avenida,...)		Código			
	41 Número		42 Complemento (apto., casa, ...)		43 Geo campo 3		44 Geo campo 4	
	45 Ponto de Referência		46 Zona		47 Hora da ocorrência			
			1 - Urbana 2 - Rural <input type="checkbox"/> 3 - Periurbana 9 - Ignorado		(00:00 - 23:59 horas)			
	48 Local de ocorrência		07 - Comércio/serviços		49 Ocorreu outras vezes?			
	01 - Residência 04 - Local de prática esportiva 08 - Indústrias/construção		<input type="checkbox"/>		1 - Sim 2 - Não 9 - Ignorado			
	02 - Habitação coletiva 05 - Bar ou similar 09 - Outro		03 - Escola 06 - Via pública 99 - Ignorado		50 A lesão foi autoprovocada?			
				1 - Sim 2 - Não 9 - Ignorado				

Violência doméstica, sexual e/ou outras violências Sinan NET SVS 10/07/2008

Tipologia da violência	51 Tipo de violência		1- Sim 2- Não 9- Ignorado		52 Meio de agressão		1- Sim 2- Não 9- Ignorado			
	<input type="checkbox"/> Física <input type="checkbox"/> Tráfico de seres humanos <input type="checkbox"/> Psicológica/Moral <input type="checkbox"/> Financeira/Econômica <input type="checkbox"/> Intervenção legal <input type="checkbox"/> Tortura <input type="checkbox"/> Negligência/Abandono <input type="checkbox"/> Outros <input type="checkbox"/> Sexual <input type="checkbox"/> Trabalho infantil				<input type="checkbox"/> Força corporal/ espancamento <input type="checkbox"/> Obj. perfuro-cortante <input type="checkbox"/> Arma de fogo <input type="checkbox"/> Enforcamento <input type="checkbox"/> Substância/ Obj. quente <input type="checkbox"/> Ameaça <input type="checkbox"/> Obj. contundente <input type="checkbox"/> Envenenamento <input type="checkbox"/> Outro					
Violência Sexual	53 Se ocorreu violência sexual, qual o tipo? 1- Sim 2- Não 8- Não se aplica 9- Ignorado				54 Se ocorreu penetração, qual o tipo?					
	<input type="checkbox"/> Assédio sexual <input type="checkbox"/> Atentado violento ao pudor <input type="checkbox"/> Exploração sexual <input type="checkbox"/> Estupro <input type="checkbox"/> Pornografia infantil <input type="checkbox"/> Outros				1- Sim 2- Não 8- Não se aplica 9- Ignorado <input type="checkbox"/> Oral <input type="checkbox"/> Anal <input type="checkbox"/> Vaginal					
Consequências da violência	55 Procedimento realizado				1- Sim 2- Não 8- Não se aplica 9- Ignorado					
	<input type="checkbox"/> Profilaxia DST <input type="checkbox"/> Profilaxia Hepatite B <input type="checkbox"/> Coleta de sêmen <input type="checkbox"/> Contracepção de emergência <input type="checkbox"/> Profilaxia HIV <input type="checkbox"/> Coleta de sangue <input type="checkbox"/> Coleta de secreção vaginal <input type="checkbox"/> Aborto previsto em lei									
Lesão	56 Consequências da ocorrência detectadas no momento da notificação				1- Sim 2- Não 8- Não se aplica 9- Ignorado					
	<input type="checkbox"/> Aborto <input type="checkbox"/> DST <input type="checkbox"/> Transtorno mental <input type="checkbox"/> Estresse pós-traumático <input type="checkbox"/> Gravidez <input type="checkbox"/> Tentativa de suicídio <input type="checkbox"/> Transtorno comportamental <input type="checkbox"/> Outros									
Dados do provável autor da agressão	57 Natureza da lesão (considerar somente o diagnóstico principal)				10 - Queimadura					
	01 - Contusão 04 - Fratura 07 - Traumatismo crânio-encefálico 11 - Outros 02 - Corte/perfuração/laceração 05 - Amputação 08 - Politraumatismo 88 - Não se aplica 03 - Entorse/luxação 06 - Traumatismo dentário 09 - Intoxicação 99 - Ignorado									
Dados do provável autor da agressão	58 Parte do corpo atingida (considerar somente o diagnóstico principal)				10 - Órgãos genitais/ânus					
	01 - Cabeça/face 04 - Coluna/medula 07 - Quadril/pelve 11 - Múltiplos órgãos/regiões 02 - Pescoço 05 - Tórax/dorso 08 - Membros superiores 88 - Não se aplica 03 - Boca/dentes 06 - Abdome 09 - Membros inferiores 99 - Ignorado									
Dados do provável autor da agressão	59 Número de envolvidos		60 Vínculo / grau de parentesco com a pessoa atendida		1- Sim 2- Não 9- Ignorado		61 Sexo do provável autor da agressão		62 Suspeita de uso de álcool	
	1 - Um <input type="checkbox"/> 2 - Dois ou mais 9 - Ignorado		<input type="checkbox"/> Pai <input type="checkbox"/> Ex-Cônjuge <input type="checkbox"/> Amigos/conhecidos <input type="checkbox"/> Policial/agente da lei <input type="checkbox"/> Mãe <input type="checkbox"/> Namorado(a) <input type="checkbox"/> Desconhecido(a) <input type="checkbox"/> Padrasto <input type="checkbox"/> Ex-Namorado(a) <input type="checkbox"/> Cuidador(a) <input type="checkbox"/> Própria pessoa <input type="checkbox"/> Madrasta <input type="checkbox"/> Filho(a) <input type="checkbox"/> Patrão/chefe <input type="checkbox"/> Outros <input type="checkbox"/> Cônjuge <input type="checkbox"/> Irmão(ã) <input type="checkbox"/> Pessoa com relação institucional		1 - Masculino <input type="checkbox"/> 2 - Feminino 3 - Ambos os sexos 9 - Ignorado		1- Sim <input type="checkbox"/> 2 - Não 9- Ignorado			

Evolução e encaminhamento	63 Encaminhamento no setor saúde <input type="checkbox"/> 1 - Encaminhamento ambulatorial 2 - Internação hospitalar 8 - Não se aplica 9 - Ignorado		
	64 Encaminhamento da pessoa atendida para outros setores 1- Sim 2 - Não 9- Ignorado <input type="checkbox"/> Conselho Tutelar (Criança/Adolescente) <input type="checkbox"/> Delegacia de Atendimento à Mulher/DEAM <input type="checkbox"/> Centro de Referência da Mulher <input type="checkbox"/> Vara da Infância / Juventude <input type="checkbox"/> Delegacia de Prot. da Criança e do Adolescente <input type="checkbox"/> Centro de Referência da Assistência Social/CREAS-CRAS <input type="checkbox"/> Casa Abrigo <input type="checkbox"/> Outras delegacias <input type="checkbox"/> Instituto Médico Legal (IML) <input type="checkbox"/> Programa Sentinela <input type="checkbox"/> Ministério Público <input type="checkbox"/> Outros _____		
	65 Violência Relacionada ao Trabalho <input type="checkbox"/> 1 - Sim 2 - Não 9 - Ignorado	66 Se sim, foi emitida a Comunicação de Acidente do Trabalho (CAT) <input type="checkbox"/> 1- Sim 2 - Não 8 - Não se aplica 9- Ignorado	67 Circunstância da lesão CID 10 - Cap XX <input type="text"/>
	68 Classificação final <input type="checkbox"/> 1 - Confirmado 2 - Descartado 3 - Provável 8 - Inconclusivo	69 Evolução do caso <input type="checkbox"/> 1 - Alta 3 - Óbito por Violência 2 - Evasão / Fuga 4 - Óbito por outras causas 9 - Ignorado	70 Se óbito por violência, data <input type="text"/>
Informações complementares e observações			
Nome do acompanhante		Vínculo/grau de parentesco	(DDD) Telefone
Observações Adicionais:			
TELEFONES ÚTEIS			
Disque-Saúde 0800 61 1997	Central de Atendimento à Mulher 180	Disque-Denúncia - Combate ao Abuso e Exploração Sexual de Crianças e Adolescentes 100	
Município/Unidade de Saúde	Cód. da Unid. de Saúde/CNES		
Nome	Função	Assinatura	
Violência doméstica, sexual e/ou outras violências	Sinan NET	SVS 10/07/2008	

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