



## Homicides and preliminary violence against women: cross-sectional study

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### ABSTRACT

**Aim:** To characterize the homicides of women with previous records of violence based on the relationship of health databases. **Method:** This is a cross-sectional study, with data from the Mortality Information System (SIM, acronym in Portuguese) and the Notification Disease Information System (SINAN, acronym in Portuguese). The ReLink III will be used for the probabilistic relationship in order to identify in SIM and SINAN the women victims of homicide with prior record of violence. The descriptive statistical analysis of deaths and prior violence will occur through the program R 3.4.1 for Windows. **Expected results:** The results of this study could contribute to the expansion of knowledge about violence against women and the planning of actions of the intersectoral network that acts in the prevention of violence.

**Descriptors:** Homicide; Mortality Registries; Violence against Women; Information Systems; Vital Statistics.

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## **PROBLEM SITUATION AND ITS SIGNIFICANCE**

Violence against women is a growing worldwide problem and has the most extreme homicide result<sup>(1)</sup>. Often, female homicides are preceded by aggressions, which were recorded in the health services, sometime before death<sup>(2)</sup>.

In Brazil, between the years 2011 and 2015, 567,456 women victims of various types of violence and 23,278 female deaths were reported in the health services due to aggression<sup>(3)</sup>. The records of the Mortality Information System (SIM) and the Notification Disease Information System (SINAN) can be used to complement information of interest to health surveillance<sup>(3)</sup>.

The database or linkage relationship is a technique for linking different databases and has proved to be a useful tool for retrieving information and improving data completeness, including studies on violence against women<sup>(3)</sup>.

The linkage between the SIM and SINAN will allow knowing events prior to homicide, allowing a better understanding of the circumstances and causes and the planning of measures to prevent risk factors.

## **RESEARCH QUESTION**

What are the characteristics of the homicides of women with previous records of violence, based on the relationship of the health databases?

## **AIM**

To characterize the homicides of women with previous records of violence, based on the relationship of health databases.

## **METHOD**

The study area will be the state of Pernambuco, which has 184 municipalities and one district, Fernando de Noronha. It is divided into five mesoregions and 12 health regions. This is a cross-sectional study with a quantitative approach.

The study population will consist of women, residents of the state, from the age of 10, victims of homicides between 2012 and 2016. Deaths coded in the SIM as an external cause of morbidity and mortality (codes X85 to Y09 - Aggressions), according to Chapter XX of the International Statistical Classification of Diseases and Related Health Problems 10 (ICD-10), shall be included, and for whose victims there is some notification of violence registered in SINAN between 2011 and 2016. As sources of population data will be used the intercensal projections estimated by the Brazilian Institute of Geography and Statistics (IBGE, acronym in Portuguese) for the years 2012 to 2016.

The data of the female homicides will be extracted from the SIM, whose instrument of collection is the Declaration of Death (DO, acronym in Portuguese), which has 59 variables; and data on violence against women will be obtained from SINAN. The instrument for collecting this system is the individual report and investigation report of interpersonal and self-inflicted violence, which has 69 variables, and is filled by health services that provided assistance to women in situations of violence.

Since SIM and SINAN do not have a unique identifier field, the method of probabilistic relationship of registers will be applied. The name, mother's name and date of birth of the

victim are considered as pairing variables. The ReLink III program will be used for the application of the linkage, which is executed in steps that begin by cleaning the databases. In the following step the variables name, age, date of birth, address, neighborhood of residence, and municipality will be standardized, followed by subdivision of fields and creation of phonetic fields. Next, the calculation of scores will be performed for the definition of classification thresholds of pairs of related records in true pairs, non-pairs, and doubtful pairs.

The next step will be the blocking of records, which subdivides the files according to the index key, formed from the pairing variables. The comparisons of records are restricted to the agreement of the value of the keys. Doubtful pairs will be reviewed manually. The linkage will make it possible to identify among the homicides those that have previous records of violence in SINAN.

The analysis of deaths and previous violence will occur through the program R 3.4.1 for Windows, through descriptive statistics. The Pearson chi-square test will verify the associations between the variables. Homicide rates will be calculated for women with and without prior violence. The study was approved by the Research Ethics Committee involving Human Subjects of the Federal University of Pernambuco (CAAE 91858618.9.0000.5208).

### EXPECTED RESULTS

The results of this study could contribute to the expansion of knowledge on violence against women and the planning of actions of the intersectoral network that acts in the prevention of violence.

### REFERENCES

1. Fernbrant C, Essén B, Esscher A. et al. Increased Risk of Mortality Due to Interpersonal Violence in Foreign-Born Women of Reproductive Age: A Swedish Register-Based Study. *Violence Against Women* [online]. 2016 [cited 2018 June 30]; 22(11): 1287 – 1304. Available from: <http://journals.sagepub.com/doi/abs/10.1177/1077801215623380?journalCode=vawa>
2. Mamo C, Bianco S, Dalmaso M, Giroto M, Mondo L, Penasso M. Are Emergency Department Admissions in the Past Two Years Predictors of Femicide? Results from a Case-control Study in Italy. *J. Fam. Viol* [online]. 2015 [cited 2018 June 25]; 30(7):853–858. Available from: <https://link.springer.com/article/10.1007/s10896-015-9726-6>
3. Barufaldi LA, Souto RMCV, Correia RSB, Montenegro MMS, Pinto IV, Silva MMA, et al. Gender violence: a comparison of mortality from aggression against women who have and have not previously reported violence. *Ciênc. saúde coletiva* [online]. 2017 [cited 2018 June 23]; 22(9):2929-2938. Available from: [http://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S1413-81232017002902929](http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1413-81232017002902929)

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