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Suicide attempt and suicide in individuals with cancer: A cross-sectional study

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ABSTRACT

Objectives: To describe the occurrence of suicide attempts and suicide in individuals with cancer through the relationship between the databases of the registry of cancer, mortality and violence. **Method:** A cross-sectional study to be developed in Recife (PE). A probabilistic linkage of the Population-Based Cancer Registries, from 2002 to 2015, will be carried out with the suicide attempts registered in the Notification and Diseases Information System in the period from 2007 to 2017 and in the Mortality Information System from 2002 to 2017. For data analysis, Epi Info version 7.2.3.1 will be used. Pearson's chi-square for proportional differences and Fisher's exact test will be used for analyses, when necessary with the adoption of a statistical significance of 5%. **Expected result:** It is expected to identify the sociodemographic factors, the type of cancer and the chance that an individual with cancer will attempt or commit suicide.

Keywords: Cancer; Suicide; Health Information System, Vital Statistics, Coordinated Medical Record.

INTRODUCTION

The diagnosis of cancer is a difficult experience for the patients and can lead to psychic implications that increase the risk of suicide in the affected individuals⁽¹⁾. It is estimated that, after confirming the cancer diagnosis, the risk of attempting or consummating suicide is up to twice as high when compared to the general population⁽²⁾.

Suicide rates vary between countries and regions with influences of an economic nature, cultural and moral beliefs⁽²⁾. Cancer was evidenced as a disease that leads to an increase in suicide cases⁽³⁾. It is estimated that the global suicide rate is 10.5 per 100 thousand inhabitants in the world⁽¹⁾.

The data generated by the health information systems and vital statistics and after using the database relationship will make it possible to identify the sociodemographic characteristics and the time from diagnosis until the suicidal act of individuals with cancer who attempted suicide or consummated suicide. The research has the following guiding question: What is the occurrence of suicide and suicide attempts in individuals with cancer through the relationship between the databases of the registry of cancer, mortality and violence?

OBJECTIVE

To describe the occurrence of suicide attempts and suicide in individuals with cancer through the relationship between the databases of the registry of cancer, mortality and violence.

METHOD

A cross-sectional study developed in Recife (PE). The population will consist of individuals

registered with the Population-Based Cancer Registry (*Registro de Câncer de Base Populacional*, RCBP), the Notifiable Diseases Information System (*Sistema de Informação de Agravos de Notificação*, SINAN) and the Mortality Information System (*Sistema de Informações sobre Mortalidade*, SIM). The study period for the RCBP will be from 2002 to 2015. The SINAN, which includes records of exogenous intoxication and self-harm, will be for the period from 2007 to 2017. The SIM, in turn, will run from 2002 to 2017.

For linking the databases, a probabilistic linkage will be used using the *Link Plus 12.1.0.1* program. After cleaning the databases with the removal of inconsistent or ignored fields, the work will proceed to the blocking stage. In the blocking, the following variables will be selected: patient's name, mother's name and date of birth.

In this stage, the chosen fields will be analyzed by the program that will search the records as possible pairs. The program will inform which the real pairs are, doubtful pairs and non-pairs. All pairs will be reviewed manually.

After cleaning the bases, the RCBP, the SINAN and the SIM, the variables were the following: patient's name, date of birth, age, mother's name, address and neighborhood. The result of the database relationship between the RCBP and the SINAN; and between the RCBP and the SIM will follow a manual review in which false positives and duplicates will be discarded, the true cases remaining.

The data will be tabulated and imported into the Epi Info program version 7.23.1. In the analysis of the results, descriptive statistics will be used, the Pearson's Chi-square

test for differences in proportion and the Fisher's exact test, when convenient with the adoption of a statistical significance of 5%. The research project was approved by the Research Ethics Committee of the Federal University of Pernambuco (*Universidade Federal de Pernambuco*, UFPE) on July 4th, 2019 under opinion number 3,436,927 and CAAE 14240919.4.0000.5208.

EXPECTED RESULTS

The results are expected to characterize the individuals' sociodemographic factors, the types of cancers most frequently seen and the chance of an individual with cancer attempting or committing suicide after a cancer diagnosis. The results can be used by health surveillance and cancer care services to plan and improve preventive measures for this specific population.

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