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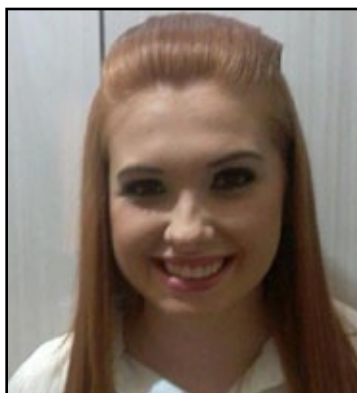
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Common mental disorders in rural workers who use pesticides: a cross-sectional study

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ABSTRACT

Objective: To evaluate the occurrence of common mental disorders in rural workers who use pesticides and connect them with sociodemographic and clinical data. **Method:** A cross-sectional, descriptive, analytical study of 361 rural workers from a municipality in northwestern Rio Grande do Sul. Information was collected through an identification form, sociodemographic data, clinical data, and the Multidimensional Scale SQR-20 *Self-Reporting Questionnaire*. All ethical aspects of research involving human beings have been followed. The project was approved by a research ethics committee (CAAE 51397615.4.0000.5322). Data analysis will be performed using descriptive and inferential statistics. **Expected results:** Analysis of the occurrence of mental disorders in participants, the planning of healthcare precautions, and the impact of pesticides on the physical and mental health of rural workers. As investigated by a health care professional, the results obtained may contribute to reflections, discussions, and the implementation of actions with a positive impact on the health and quality of life of these individuals.

Descriptors: Pesticides; Health; Agriculture; Psychic Suffering.

INTRODUCTION

To improve results, minimize losses, enhance the quality of the production focusing on profitability, contemporary agriculture invests in different technologies, with an emphasis on the high use of pesticides.

Brazil is the largest producer of food in the world, especially in the production of cotton, biofuel, soy, corn, sugar cane, coffee, and vegetables. This production is associated with the use of pesticides, with an impact on the production chain and worker health. In the national context, the state that has the highest consumption of pesticides is Mato Grosso, with a percentage of 18.9%, followed by the states of São Paulo (14.5%), Paraná (14.3%), Rio Grande do Sul (10.8%), Goiás (8.8%), Minas Gerais (9.0%), Bahia (6.5%), Mato Grosso do Sul (4.7%), Santa Catarina (2.1%), and other states (10.4%)⁽¹⁾.

In this setting, the physical and mental health of rural workers is directly exposed to the indiscriminate use of these substances. Among the possible damage to physical health, the following can be highlighted: reduction of immune defense; anemia; impotency; headache; insomnia; blood pressure changes; dysthymia; and several types of cancer⁽²⁾. In the scenario of pesticide use by and mental illness of rural workers, the incidence of common mental disorders is significant. Such disorders can be manifested by nonspecific somatic complaints such as irritability, insomnia, nervousness, headache, forgetfulness, lack of focus, and fatigue. These symptoms are not necessarily characterized as depression, anxiety, or somatic disorders because they comprise a variety of general symptoms that do not fit within a categorical diagnosis, as described in the literature⁽³⁾.

In view of the problem of rural labor, the use and exposure to pesticides, it is important to perform further studies on this subject and the-

reby elucidate the experiences of these workers, their manner of work, health care precautions, and the impact of these products on physical and mental health.

OBJECTIVES:

This study aims to evaluate the occurrence of common mental disorders in rural workers using pesticides and to relate these disorders to sociodemographic and clinical information mentioned by these individuals. The following specific objectives will be pursued:

- To characterize the research participants through identification, sociodemographic, and clinical data;
- To identify the presence of physical and emotional symptoms in rural workers;
- To assess the presence of common mental disorders in the participants using a validated instrument and to relate these disorders to sociodemographic and clinical data;
- To identify the use of personal protective equipment (PPE) by the research participants; and
- To analyze the health care precautions used by workers after the use of pesticides.

METHOD

This is a cross-sectional, descriptive, analytical, and quantitative study, involving 361 rural workers from the municipality of Três de Maio, RS, who use pesticides. The inclusion criteria were employment as a rural worker; use of pesticides at work; residence in the municipality of Três de Maio; and age of at least 18 years. The exclusion criteria were having cognitive impairment and difficulty in understanding the questions in the data collection instruments, as identified by the researcher.

Data were collected through a form requesting information including identification, sociodemographic, and clinical data; use of pesticides; health care precautions; and physical and emotional symptoms associated with the use of pesticides. In addition, the SQR-20 Self-Reporting Questionnaire was used.

Data collection was performed from December 2015 to March 2016. Data analysis is ongoing and involves descriptive and inferential statistics using the software *Statistical Package for Social Sciences* (SPSS) version 17.0. Chi-square (χ^2) tests, Cronbach's alpha coefficient, and nonparametric tests (Kruskal-Wallis and Mann-Whitney) will be performed.

EXPECTED RESULTS

This research is expected to allow an analysis of the occurrence of common mental disorders, to document health care precautions, and to monitor the impact of pesticides on the physical and mental health of the rural workers involved. Designed by a health care professional, the study is intended to stimulate reflections on the theme and thereby raise awareness of the population through health education initiatives.

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All authors participated in the phases of this publication in one or more of the following steps, in According to the recommendations of the International Committee of Medical Journal Editors (ICMJE, 2013): (a) substantial involvement in the planning or preparation of the manuscript or in the collection, analysis or interpretation of data; (b) preparation of the manuscript or conducting critical revision of intellectual content; (c) approval of the versión submitted of this manuscript. All authors declare for the appropriate purposes that the responsibilities related to all aspects of the manuscript submitted to OBJN are yours. They ensure that issues related to the accuracy or integrity of any part of the article were properly investigated and resolved. Therefore, they exempt the OBJN of any participation whatsoever in any imbroglios concerning the content under consideration. All authors declare that they have no conflict of interest of financial or personal nature concerning this manuscript which may influence the writing and/or interpretation of the findings. This statement has been digitally signed by all authors as recommended by the ICMJE, whose model is available in http://www.objnursing.uff.br/normas/DUDE_eng_13-06-2013.pdf

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