https://doi.org/10.5205/1981-8963.2019.237757

Journal of Nursing
UFPE On Line
ISSN: 1981-8963

ORIGINAL ARTICLE

PROFILE OF NURSING DIAGNOSES OF TOBACCO GROWERS

PERFIL DOS DIAGNÓSTICOS DE ENFERMAGEM DE FUMICULTORES

PERFIL DE LOS DIAGNÓSTICOS DE ENFERMERÍA DE FUMICULTORES

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ABSTRACT

Objective: to describe Nursing diagnoses according to the Taxonomy II proposed by the North American Nursing Diagnosis Association. ***Method***: this is a quantitative, descriptive, cross-sectional study conducted with co plantations. The research was carried out with 51 tobacco growers exposed to agrochemicals living in the rural community. The data were collected through nursing consultations. The data collected were tabulated in the Microsoft Excel 2010 software and later entered into a database using the SPSS software version 22.0, for Windows, and subjected to statistical review and analysis. The results were presented in tables. ***Results***: the Nursing consultations revealed that the majority of the farm workers were females, had incomplete elementary education, and did not practice any type of physical exercise. In addition, they were unaware of the health risks posed by pesticides and neglected the recommended safety standards for the handling of these products. ***Conclusion***: it was observed in this study that nurses have an important role in care and education, in the various spaces of promotion, prevention and maintenance of health care. ***Descriptors***: Nursing; Nursing Diagnoses; Family Health Strategy; Rural Area; Public Health; Occupational Health.

RESUMO

Objetivo: descrever os diagnósticos de Enfermagem segundo a taxonomia da *American Nursing Diagnosis Association* II. ***Método:*** trata-se de estudo quantitativo, descritivo, transversal, com 51 produtores de tabaco expostos a agroquímicos que viviam na comunidade rural. Coletaram-se os dados por meio das consultas de Enfermagem. Tabularam-se os dados n Programa *Microsoft Excel* 2010, posteriormente inseridos no banco de dados utilizando o programa SPSS, versão 22.0, *for Windows,* e submetidos à revisão e análise estatística. Apresentaram-se os resultados em tabelas. ***Resultados:*** verificou-se, por meio das consultas de Enfermagem, que a maioria era do sexo feminino, tinha ensino fundamental incompleto e não praticava nenhum tipo de exercício físico. Acrescenta-se, além disso, que eles desconheciam os riscos para a saúde colocados pelos pesticidas e negligenciaram os padrões de segurança recomendados para o manuseio desses produtos. ***Conclusão:*** pode-se observar, a partir deste estudo, que o enfermeiro tem um papel importante no cuidado e na educação, nos diversos espaços de promoção, prevenção e manutenção do cuidado em saúde. ***Descritores:*** Enfermagem; Diagnósticos de Enfermagem; Estratégia Saúde da Família; Área Rural; Saúde Pública; Saúde do Trabalhador.

RESUMEN

Objetivo: se buscó describir los diagnósticos de Enfermería según la taxonomía de la *American Nursing Diagnosis Association* II. ***Método:*** se trata de un estudio cuantitativo, descriptivo, transversal, realizado con 51 productores de tabaco expuestos a agroquímicos que vivían en la comunidad rural. Se recogieron los datos por medio de las consultas de Enfermería. Se tabularon los datos recogidos en el programa *Microsoft Excel* 2010, posteriormente inseridos en el banco de datos utilizando el programa SPSS, versión 22.0, *for Windows,* y sometidos a la revisión y análisis estadística. Se presentaron los resultados en tablas. ***Resultados:*** se verificó, por medio de las consultas de Enfermería, que la mayoría era del sexo femenino, tenía enseñanza primaria incompleta y no praticaba ningún tipo de ejercicio físico. Además de eso, ellos desconocen los riesgos para la salud colocados por los pesticidas y negligenciaron los patrones de seguridad recomendados para el manoseo de esos productos. ***Conclusión:*** se puede observar, a partir de este estudio, que el enfermero tiene un papel importante en el cuidado y en la educación, en los diversos espacios de promoción, prevención y mantenimiento del cuidado en salud. ***Descriptores***: Enfermería; Diagnósticos de Enfermería; Estrategia Salud de la Familia; Zona Rural; Salud Pública; Salud Laboral.

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How to cite this article

Dantas NM, Moura AWA, Serbim AK, Nascimento CA, Santos ACM dos, Farias KF de. Profile of nursing diagnoses of tobacco growers. J Nurs UFPE on line. 2019;13:e237757 DOI: https://doi.org/10.5205/1981-8963.2019.237757

https://doi.org/10.5205/1981-8963.2019.237757

INTRODUCTION

According to a report by the World Health Organization (WHO), the number of annual cases of pesticide poisoning is estimated to be between one and five million, including thousands of fatalities.[1] This is a major public health problem that affects , especially low-educated workers with no access to quality information, which is typical in developing countries.[2-4]

It is known that farmers are the most exposed people and the most involved in cases of intoxication due to their direct contact with pesticides, through application and handling of such products. Their low level of schooling hinder their understanding of safety measures and the use of personal protective equipment.[5]

Intoxication can be classified as acute, subacute and chronic. It has been explained that acute intoxication causes symptoms within a shor time, only a few hours after exposure. This type of intoxication is characterized by headache, irritation in the skin mucosa, dermatitis, nausea, vomiting, abdominal cramps, dizziness, generalized weakness, paresthesia, dyspnea, salivation and increased sweating. It may happen in the most severe acute form: miosis, hypotension, cardiac arrhythmias, respiratory failure, acute pulmonary edema, chemical pneumonitis, seizures, changes in consciousness, shock, coma, or even death.

Moderate or lower exposure to highly or moderately toxic products consists in the subacute exposure, which has a slower onset.[6-11] On the other hand, chronic intoxication is characterized by late onset of symptoms, from months to years, caused by low or moderate exposure to one or multiple products, which can cause irreversible damage. Cases of chronic intoxication may be followed by neoplasias such as multiple myeloma and leukemias; aplastic, circulatory, respiratory, hepatic and digestive anemia;[12-3] polyneuropathies;[14] toxic encephalopathy;[15] visual and optic neuritis;[16] acute cholinergic syndrome;[17] neuropathy;[9] mental disorders,[18] dermatological disorders;[19] diabetes;[20] and Parkinson's disease.[21]

In view of the abovementioned, consultations aimed at the health of farm workers are necessary to subsidize the diagnosis of chronic poisoning due to exposure to pesticides, as well as the relationship of poisoning with the worker and the environment. The use of Nursing Care Systematization is of extreme importance to make correct Nursing diagnoses and implement effective interventions, to support the early identification of health problems.[22-4] It makes it possible to highlight the role of nurses in the construction of scientific knowledge that supports the provision of quality care to individuals, thus evidencing its use in the care to the health of rural workers.

OBJECTIVE

- To describe the profile of Nursing diagnoses in tobacco growers according to the NANDA-International Taxonomy II.

METHOD

This is a quantitative, descriptive and cross-sectional study carried out in four agricultural communities that have tobacco plantations in the agreste of Alagoas. Tobacco producers who used the Basic Family Health Units of the municipality, those which had been previously surveyed for the number of tobacco growers in the region, were included in the study. Data were collected through nursing consultations during home visits in the harvest period. Aspects of anamnesis and physical examination were part of the consultations.

The registry included the following elements: sociodemographic data; main complaint; history of the current illness; family history; personal background; practice of physical activity; medicines used; vital signs; anthropometric measurements; (physical examination) level of consciousness; gait; involuntary movements; aspects of the skin, head, neck, eyes and eyelids, nose and paranasal sinuses, mouth, ear, lymph nodes, thyroid, chest, breasts, abdomen; and neurological examination. After the discussion of the cases, the Nursing diagnoses and interventions for the tobacco growers were listed.

The Nursing diagnoses identified in the consultations with tobacco growers were discussed in this study. The data collected were tabulated in the Microsoft Excel 2010 software and later entered into the database using the Statistical Package for the Social Science (SPSS), version 22.0, for Windows, and submitted to statistical review and analysis. The descriptive analysis included frequency, mean and standard deviation distributions for age, ethnicity, schooling, marital status, occupation, presence of comorbidities, sexual/reproductive history, and Nursing diagnoses. This research was approved by the Ethics and Research Committee of the Federal University of Alagoas, and received a favorable Opinion under Protocol nº 739,338 and Brazilian Certificate of Submission for Ethical Appraisal (CAAE) 31373514.6.0000.5013.

RESULTS

Table 1 summarizes the sociodemographic data of the 56 farm workers who participated in the Nursing consultations.

https://doi.org/10.5205/1981-8963.2019.237757

Table 1. Sociodemographic data of tobacco growers. Arapiraca (AL), Brazil, 2018.

Variables	N (%)
Sex	7 (12.5%)
Male	49 (84%)
Female	
Age	42.8
Mean	10.912
Standard deviation	21
Minimum	67
Maximum	
Religion	47(84%)
Catholicism	4 (7.1%)
Evangelical	1 (1.8%)
None	4 (7.1%)
Not applicable	
Schooling	6 (10.7%)
Incomplete higher education	6 (10.7%)
Complete secondary school	3 (5.4%)
Incomplete secondary school	2 (3.6%)
Complete primary school	23 (44.7%)
Incomplete primary school	12 (21.3%)
Illiterate	
Alcoholism	4 (7.1%)
Yes	35 (62.5%)
No	7 (12.5%)
Social	9 (16.1%)
Not applicable	
Smoking	4 (7.1%)
Yes	40 (71.4%)
No	12 (21.4%)
Not applicable	

Table 2 presents the complaints reported by tobacco growers.

Table 2. Distribution of complaints reported by tobacco growers. Arapiraca (AL), Brazil, 2018.

Grievances	N	%
Headache	37	28.9
Nerve crisis	2	1.6
Diarrhea	3	2.3
Dysuria and other urinary problems	7	5.5
Chest pain	1	0.8
Abdominal pain	4	3.1
Joint pain	4	3.1
Leg pain	3	2.3
Foot pain	3	2.3
Back pain	3	2.3
Bone pain*	2	1.6
Difficulty hearing	3	2.3
Pain in the shoulder	4	3.1
Ear pain	1	0.8
Foot pain	5	3.9
Knee pain	2	1.6
Weakness	11	8.5
Pain in the frontal sinuses	2	1.6
Cyst on the wrist	2	1.6
Intestinal dryness	1	0.8
Trembling	4	3.1
Lack of appetite	2	1.6
Dizziness	8	6.1
Shortness of breath	2	1.6
Breast pain	2	1.6
Pain in the left arm	1	0.8
Hip pain	1	0.8
Chest pain	1	0.8
Numbness in hands	1	0.8
Numbness in the head	1	0.8
Blurred vision	2	1.6
Tingling and numbness in arms	2	1.6
Sadness	1	0.8
Total	128	100

https://doi.org/10.5205/1981-8963.2019.237757

Note: An individual may have expressed more than one complaint at the time of the consultation.

It was verified, in relation to the current history of the disease as summarized in Table 3.

Table 3. Distribution of the current history of the disease of tobacco growers exposed to pesticides. Arapiraca, AL, Brazil, 2018.

Diagnoses	N	%
Arthritis/Arthralgia	4	4.8
Allergy	16	1.0
Astigmatism	1	1.2
Bursitis	1	1.2
Renal calculus	3	3.6
Throat cyst	2	2.4
Ovarian cyst	1	1.2
High cholesterol	2	2.4
Contact dermatitis	2	2.4
Diabetes	5	5.9
Endometriosis	2	2.4
Gastritis	6	7.1
Glaucoma	3	3.6
Herniated disc	5	5.9
Hypertension	18	21.4
Myopia	1	1.2
Mental problems	4	4.8
Intestinal dryness	2	2.4
Rheumatism	2	2.4
Rhinitis	2	2.4
Tendonitis	1	1.2
Depression	1	1.2
Total	84	100

https://doi.org/10.5205/1981-8963.2019.237757

Table 4. Frequency of Nursing Diagnoses, defining characteristics, and related factors in tobacco growers. Arapiraca (AL), Brazil, 2017.

Domain	Diagnoses	n	Defining characteristics	n	Related risk factors	n
Nutrition	Unbalanced nutrition: less than bodily needs	7.7(18)	Food intake less than the Recommended Dietary Allowance (RDA)	6.8(18)	Insufficient food intake	7.4(18)
		2.2(05)	Insufficient interest in food	6.8(18)		
	Risk of Unstable Glucose	2.2(05)	-	-	Physical health condition compromised	2.1(05)
	Overweight	1.7(04)	Adult BMI > 25 Kg/m²	1.5(04)	Inadequate and disordered food intake behavior	1.6(04)
	Excess fluid volume	10.3(24)	Change in blood pressure	9.0(24)	Excessive sodium intake	9.9(24)
	Deficient fluid volume	0.8(02)	Dry skin	0.7(02)	Compromised regulatory mechanism	0.8(02)
Comfort	Acute pain	27.0(63)	Self-focused	23.0(63)	Physical injury agent	25.0(63)
			Expressive Behavior	9.5(25)		
	Nausea	2.2(05)	Feeling like vomiting/sour taste in the mouth	1.9(05)/1.1 (03)	Harmful environmental stimuli	2.1(05)
	Risk for Loneliness	0.4(01)	-	-	Affective deprivation	0.5(01)
	Poor Knowledge	3.9(09)	Insufficient knowledge	3.4(09)	Insufficient information	3.7(09)
	Lack of adherence	1.3(03)	Failure to achieve results	1.3(03)	Inadequate access to care	1.3(03)
Health Promotion	Sedentary Lifestyle	12.9(30)	Daily physical activity less than recommended for gender and age	11.0(30)	Insufficient interest in physical activity;	12.7(30)
			Preference for activities with little exercise	7.0(21)	Poor knowledge about the benefits that physical activity brings to health	4.5(11)
Activity and rest	Impaired physical mobility	1.3(03)	Postural instability	1.1(03)	Pain	1.3(03)
	Impaired Spontaneous Ventilation	1.3(03)	Dyspnea	1.1(03)	Metabolism change	1.3(03)
	Activity Intolerance	4.7(11)	Fatigue	4.2(11)	Generalized weakness	4.5(11)
	Insomnia	2.2(05)	Alteration in sleep pattern	1.9(05)	Stressors	1.6(04)
			Difficulty initiating sleep	1.9(05)	Anxiety	0.5(01)
	Decreased cardiac output	0.4(01)	Bradycardia	0.4(01)	Decreased cardiac index	0.5(01)
	Constipation	0.4(01)	Effort to evacuate	0.4(01)	Inadequate eating habits	0.5(01)
Elimination and exchange			Pain during evacuation		Decreased gastrointestinal motility	0.4(01)
			Hard and formed feces	0.4(01)		
	Impaired urinary	3.0(07)	Dysuria	2.6(07)	Urinary tract infection	2.9(07)

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	elimination					
	Diarrhea	1.3(03)	Abdominal pain	1.1(03)	Gastrointestinal irritation	1.3(03)
			More than three bowel movements in 24 hours	1.1(03)		
Perception/cognition	Impaired gas exchange	0.8(02)	Tachycardia	0.8(02)	Imbalance in ventilation-perfusion ratio	0.8(02)
	Poor knowledge	3.9(09)	Insufficient knowledge	3.4(09)	Insufficient information	3.7(09)
Coping/Stress tolerance	Anxiety	3.0(07)	Scanning behavior	2.6(07)	Situational crisis	2.9(07)
			Increased perspiration	0.8(02)	Stressors	2.9(07)
			Restlessness	1.1(03)		
Safety/Protection	Risk for dry eye	4.7(11)			Ocular surface damage	4.5(11)
	Risk of allergic response	2.2(05)			Exposure to allergen	2.1(05)

During the Nursing consultations, 23 Nursing diagnoses, 27 defining characteristics and 25 related factors were identified belonging to eight domains of NANDA taxonomy. Some of them were repeated in the evaluation of the patients, totaling 245 ND, 28 DC and 25 RF. These diagnoses were present in the areas of: Nutrition, Comfort, Perception/cognition, Coping/Stress tolerance, Elimination and Exchange, Health promotion, Activity/rest, and Safety/protection. The frequencies of the diagnoses, defining characteristics and related factors are summarized in Table 4.

https://doi.org/10.5205/1981-8963.2019.237757

DISCUSSION

We identified, in this research, the most prevalent Nursing diagnoses in tobacco growers in a rural area of Northeast Brazil. The Nursing consultations carried out during the home visits revealed a predominance of female workers in activities related to agriculture, showing that women play an important role in agricultural production.[25]

Participation in the agricultural activity and exposure to pesticides during the adult life and the beginning of the third age, represented by the age group of 21 to 67 years, was observed in this study. This is consistent with a study carried out in Ceará, Brazil,[26] in which the elderly were seen to carry out rural work activities, although at this stage of life they were supposed to dedicate to activities that are less tiring and that benefit their quality of life. It was noticed that the level of schooling of the rural workers interviewed was low; regardless of gender, most had incomplete elementary education or were illiterate.

This situation can be related to low motivation and incentive to education in rural areas, which Is the reality of tobacco growers. It is important to emphasize that the low level of schooling of these workers makes it difficult for them to read safety manuals for the handling of products and inputs, making them more vulnerable to the risk of intoxication.[27]

The 128 complaints reported by the study participants, including as leg and back pain, exhaustive working hours, and headache, weakness, dizziness, nausea and tremors may be directly related to foliar disease (RSV), in concordance with studies carried out in the countryside of RS and Arapiraca – AL.[26-7] It may be related to symptoms such as malaise, weakness, nausea and symptoms reported by tobacco growers in this study. There is a clear relationship between diseases caused by constant exposure to health risks and diseases, possibly as a result of work involving the intensive use of these products, and physical exhaustion. The use of pesticides in crops leads to the occurrence of accidents and diseases, causing negative impacts on human health and on the environment.[27]

The analysis of data and the observation of the clinical practice of tobacco growers were part of a clinical trial where 232 nursing diagnoses were defined. Eight of the 13 domains of NANDA International were listed: Nutrition, Comfort, Perception/cognition, Coping/Stress tolerance, Elimination and Exchange, Health promotion, Activity/rest, and Safety/protection. The most frequent diagnoses among smokers were: acute pain, sedentary lifestyle, nutritional imbalance: less than bodily needs, risk for dry eye, fatigue, poor knowledge, deficit of production, anxiety, risk of allergic response and nausea.

Diagnoses are especially related to contact with humid smoke with signs and symptoms compatible with intoxication, respiratory diseases aggravated by dry leaf dust, allergies and dermatological lesions caused by contact with pesticides and the exhaustive working days, since the research was carried out during the planting of tobacco. [27] It is therefore considered that there is a close relationship between this set of diagnoses and the occupational hazards evidenced among smokers.

In this context, nurses can use instruments to diagnose the Nursing Process in Worker's Health, considering the vulnerability of tobacco growers, in order to make their work less unhealthy, reducing the possibility of illnesses caused by exposure to pesticides and nicotine or exhaustion caused by work. The present study highlights the important role of nurses, both in care and education in the various spaces of promotion, prevention and maintenance of the adequate health care of rural workers. Continuous studies to deepen the knowledge about the health care aspects of the population of farmers, especially tobacco growers, are extremely important because these people are constantly exposed to occupational hazards involving agrochemicals and nicotine.

CONCLUSION

The SNC is an indispensable tool during Nursing consultations because it facilitates the work and of nurses and their interaction with patients, allowing the provision of comprehensive care through the necessary guidance, in view of the vulnerability of these farm workers exposed to occupational hazards and precarious life conditions.

In view of this situation, it is believed that the SNC and the NP are instruments that can subsidize the early identification of health problems, as well as promote the role of nurses in the construction of scientific knowledge that supports the provision of quality care to individuals. The importance of the use of these intruments in the health care to rural workers is therefor stressed. Nursing diagnoses are in fact related to the clinical, social and working conditions of tobacco growers.

It is understood that Nursing has to provide a comprehensive care to individuals, promoting their health through the construction of knowledge with exchange of knowledge and information that encourages self-care. It is inferred that, in view of the human needs of rural workers, nurses can contribute more to the early identification of complaints and to the decision-making process about the necessary care and subsequent evaluation of the results obtained.

It is believed that it is necessary to study this class of workers so susceptible to various occupational hazards, who still live in precarious conditions and receive limited support from the government, and the systematization of Nursing care in the provision of care for tobacco growers can be an effective tool to reveal the needs of tobacco growers and to design better strategies for this population.

ACKNOWLEDGMENTS

To all tobacco growers in the city of Arapiraca who agreed to participate in this study.

To the Federal University of Alagoas, Campus Arapiraca, for the scholarship grated to support Naise de Moura Dantas.

To community health agents of the basic health units of the rural area and the city of Arapiraca for the support provided with the recruitment of volunteers.

To Marly Maria Ferreira da Silva, in particular.

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Submission: 2018/02/12
Accepted: 2019/02/20
Publishing: 2019/05/08

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