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**DEPRESSION IN** THE ELDERLY: A **POPULATION-BASED MULTIFACTORIAL ANALYSIS OF THE FAMILY HEALTH** STRATEGY (ESF)

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Abstract: In the period between 2005 and 2015, the age group of the elderly aged 60 years and over had an increase of 4.5% compared to the general population, which indicates a significant growth. Population aging is related to the greater burden of disease in the population, more disability and increased use of health services. Thus, the difficulties in solving the problems of the Brazilian public health system, associated with the rapid aging process, indicate the need to redefine the sector's policies, with a view to the need to generate resources and improve infrastructure, which would allow for more active aging. Geriatric depression has been identified as a public health problem in the country, which affects at least one in six patients to be treated in primary care. Given the above, it is identified that depression among individuals over 60 years of age involves, in addition to a psychiatric disorder, sociocultural factors and the way in which they are inserted in society. Depressive states in the elderly have been studied, however, most articles focus only on the biological factors of the disease, with little emphasis on the psychosocial aspects associated with the disorder. This research aimed to assess the importance of some factors associated with the prevalence of depression in the elderly population of Várzea Grande - MT. This study was carried out through a cross-sectional design of a population over 60 years old, residing in the city mentioned above. The elderly participants in the sample had their information collected from the register of the Family Health Strategy program. We took advantage of the information generated through a database made by a project developed on vulnerability in the elderly. The analysis of depression in the elderly demonstrates a relationship between socioeconomic factors and a lower degree of independence associated with the disorder. As a result, there was a predominance of depressive symptoms in women and elderly people aged over 80 years. It is recommended that elderly people diagnosed with depression or with depressive symptoms are monitored with greater emphasis on Primary Health Care, in units close to their homes, enabling health promotion, improved quality of life and well-being.

**Keywords:** Geriatrics, depression, elderly, primary care.

#### INTRODUCTION

According to IBGE data, in the period between 2005 and 2015, the age group of the elderly aged 60 years and over had an increase of 4.5% compared to the general population, which indicates a significant growth. For Veras (2009), population aging is related to a greater burden of disease in the population, more disability and increased use of health services. Thus, greater physical and mental care is essential for the studied population.

Thus, the difficulties in solving the problems of the Brazilian public health system, associated with the rapid aging process, indicate the need to redefine the sector's policies, with a view to the need to generate resources and improve infrastructure, which would allow a more active aging (Freitas et al., 2010).

In addition, according to Reynolds (1999), geriatric depression has been identified as a public health problem in the country, which affects at least one in six patients to be treated in primary care. According to Del Porto (1999), the term depression generates enormous diagnostic confusion among health professionals, due to its numerous meanings, for example, the normal state of sadness, a depressive symptom, a syndrome or an illness.

At this stage of life, depressive symptoms are permeated by elements that relate not only to the disease, but to sentimental fluctuations typical of aging and the social context marked by the cult of youth values (HARTMANN JUNIOR; SILVA; BASTOS, 2009).

Given the above, it is identified that depression among individuals over 60 years of age involves, in addition to a psychiatric disorder, sociocultural factors and the way in which they are inserted in society. Several authors have studied depressive states in the elderly, however, most articles focus only on the biological factors of the disease, with little emphasis on the psychosocial aspects associated with the disorder. (HARTMANN JUNIOR; SILVA; BASTOS, 2009).

Therefore, this research aims to assess the importance of some factors associated with the prevalence of depression in the elderly population of Várzea Grande - MT.

## **METHODS**

This study was carried out through a cross-sectional design of a population over 60 years old, residing in the municipality of Várzea Grande, state of Mato Grosso. The elderly participants in the sample had their information collected from the register of the Family Health Strategy (ESF) program. We took advantage of the information generated through a database made by a project developed on vulnerability in the elderly (REF).

Data were collected in the period between March and June of 2016, in these samples, 11 units of the Family Health Strategy were selected, out of the 15 existing within the city. In addition, dependent and independent variables were applied using the Epi Info version 7.2 instrument. This application was used in order to identify elderly individuals who have a psychiatric disorder (depression), due to biopsychosocial factors. We analyzed sample size, trend analysis and sociodemographic frequency. The dependent factors studied were – CIRS-G comorbidities, polypharmacy, nutritional status (MANR),

ADL functionality (Katz Scales) and AIVD functionality (Lawton Scale), while the independent factors were sex, age group, per capita income, race/color, marital status and education level.

## **RESULTS**

Of the 377 elderly analyzed, 227 (60.2%) are female, the majority being married and living with a partner (56.2%), in addition to which 72% are illiterate. Another result is that only 11.7% received more than the minimum wage. (Table 1)

Based on the bivariate analyses, there was a higher risk of depression, with statistical significance, in females (PR=1.45, 95%CI 1.04-2.01), aged over 80 years (PR=1, 73, 95%CI 1.19 -2.51), illiterate (RP=1.98, 95%CI 1.49 -2.64), and with an income of up to half the minimum wage (RP= 1.40, 95%CI 1.04 – 1.90) (Table 2).

Regarding health conditions, there was a higher risk of depression among the elderly with statistically significant associations with dependence on Basic Activities of Daily Living (PR=1.58, 95%CI 1.17-2.12), dependence on Activities Instrumentals of Daily Living (PR=2.79, 95%CI 1.82-4.26) and at nutritional risk/malnourished (PR=2.32, 95%CI 1.68 -3.20). Therefore, data such as severe comorbidity (PR=0.97, 95%CI 0.58-1.63) and use of polypharmacy (PR=1.06, 95%CI 0.75-1.52) did not show statistically significant results and relevant when we analyze the major depressive disorder in old age. (Table 3).

#### DISCUSSION

According to Gazalle et al (2004), a survey carried out in the city of Pelotas-RS in 2003 showed that older adults, female, with low education/illiteracy and income below one minimum wage per month, still are the most affected by major depressive disorder.

Variable	N	%
Gender		
Female	227	60,2
Male	150	39,8
Age		
60-69 years	214	56,8
70-79 years	117	31,0
≥80 years	46	12,2
Breed/Color		
Brown	222	59,2
Black	80	21,3
White	73	19,5
Marital status		
Married and living with a partner	212	56,2
Widow	118	31,3
Divorced, separated and single	47	12,5
Education		
Literate	270	71,6
Illiterate	107	28,4
Per capita income		
Up to ½ SM	122	32,4
½ to 1 SM	211	56,0
>1 SM	44	11,7

SM - Current Minimum Salary (880 reais).

Table 1 – Sociodemographic characteristics of the elderly in the study sample, Várzea Grande – MT, 2016 (N=377).

Variáble	Depressi	Depression			
	n/N	%	Gross PR (95%CI)	P value	
Gender					
Male	37/150	24,7	1	0,024	
Female	81/227	35,7	1,45 (1,04-2,01)		
Age					
60 a 69 years	59	27,6	1		
70 a 79 years	37	31,6	1,14 (0,81 -1,62)	0,430	
80 years and over	22	47,8	1,73 (1,19 -2,51)	0,007	
Per capita income					
Over ½ SM	55	26,5	1	0,024	
Up to ½ SM	63	37,3	1,40 (1,04-1,90)		
Breed/color					
Others	93	30,8	1	0,730	
White	24	32,9	0,93 (0,64 -1,35)		
Marital status					
The person lives with a partner	60	36,4	1	0,061	
The person lives with a partner	58	27,3	1,33 (0,98-1,79)		
Education					
Literate	66	24,4	1	<0,001	
Non-literate	52	48,6	1,98 (1,49-2,64)		

RP - Prevalence Ratio; IC - Confidence Interval.

Table 2 – Prevalence and Prevalence Ratio of depression according to socio-demographic characteristics of the elderly in the study sample, Várzea Grande, MT, 2016 (N=377).

SM - Minimum Salary in force (880 reais).

Variables/Instruments	Depression			
	N	%	Gross PR (95%CI)	P value
AVD Functionality (Katz Scale)				
Independent	74	27,0	1	0,003
Dependent	44	42,7	1,58 (1,17 -2,12)	
AIVD Functionality (Lawton Scale)				
Independent	21	14,8	1	
Dependent	97	41,2	2,79 (1,82 -4,26)	<0,001
Nutritional status (MANR)				
No risk	40	19,5	1	40.001
At risk/malnourished	78	45,3	2,32 (1,68 -3,20)	<0,001
Comorbidity (CIRS-G)				
Absence	107	31,4	1	0,919
With comorbidity grade 4	11	30,5	0,97 (0,58 -1,63)	0,919
Polypharmacy				
No	91	30,8	1	0.710
Yes	27	32,9	1,06 (0,75-1,52)	0,719

RP - Prevalence Ratio; IC - Confidence Interval.

Table 3 – Prevalence and Prevalence Ratio of depression according to health conditions of the elderly in the study sample, Várzea Grande, MT, 2016 (N=377).

The risk factors found in the present study, carried out in the population of Várzea Grande – MT, demonstrated the coincidence of the profile of depressive elderly people from Rio Grande do Sul and Mato Grosso, even though the research was carried out in another region of the country and 14 years later. (GAZALLE et al, 2004)

Another study carried out through a literature review agrees with the fact that patients with severe comorbidities (CIRS-G) and using polydrugs are the most affected by depression. However, our survey showed that even elderly people with mild, moderate, absent comorbidities or who do not use many medications are also relevant for depression, and these factors have low specificity for depressive disorder. (PINHO, CUSTODIO and MAKDISSE, 2007).

## **CONCLUSION**

The analysis of depression in the elderly demonstrates a relationship between socioeconomic factors and a lower degree of independence (ADL/IADL) associated with the disorder. As a result, there was a predominance of depressive symptoms in women and elderly people aged over 80 years. It is recommended that elderly people diagnosed with depression or with depressive symptoms be monitored with greater emphasis on Primary Health Care, in units close to their homes, enabling health promotion, improved quality of life and well-being, consequently increasing the longevity and preventing early death of the population analyzed in the study.

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