



## Prevalence of depression in servers of the National Institute of Social Security\*


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Depression is the fastest growing mental disorder in the world, and has an impact on the collective health policies of the countries. This study deals with a survey conducted with 132 government employee of the National Institute of Social Security of the State of Rondônia, whose objective was to verify the prevalence of depression in this sample. A socioeconomic questionnaire developed by the researchers and the Patient Health Questionnaire-9 was used as instruments. The results show that the prevalence of depression in this group was higher in the government employee of the interior of the State, with high schooling and who are still studying. This information can contribute to the elaboration of specific mental health policies for the context of the INSS / RO employees.

Descriptors: Depression; Prevalence; Government Employee.

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## **Prevalência de depressão em servidores do Instituto Nacional de Seguridade Social**

A depressão é o transtorno mental que mais cresce em incidência no mundo, gerando impacto de diversas ordens nas políticas de saúde coletiva dos países. Este estudo trata de uma pesquisa realizada com 132 servidores públicos do Instituto Nacional de Seguridade Social do estado de Rondônia cujo objetivo foi verificar a prevalência de depressão nessa amostra. Utilizou-se como instrumentos um questionário socioeconômico, elaborado pelos pesquisadores, e o *Patient Health Questionnaire-9*. Os resultados demonstram que a prevalência de depressão nesse grupo foi maior nos servidores do interior do estado, com alta escolarização e que permanecem estudando. Essas informações podem contribuir com a elaboração de específicas políticas de saúde mental para o contexto dos servidores do INSS/RO.

Descritores: Depressão; Prevalência; Servidores Públicos.

## **Prevalencia de depresión en servidores del Instituto Nacional de Seguridad Social**

La depresión es el trastorno mental que más crece en incidencia en el mundo, generando impacto de diversas órdenes en las políticas de salud colectiva de los países. Este estudio trata de una encuesta realizada con 132 funcionarios del Instituto Nacional de Seguridad Social del Estado de Rondônia cuyo objetivo fue verificar la prevalencia de depresión en esta muestra. Se utilizó como instrumentos un cuestionario socioeconómico, elaborado por los investigadores y el *Patient Health Questionnaire-9*. Los resultados demuestran que la prevalencia de depresión en este grupo fue mayor en los servidores del interior del Estado, con alta escolarización y que permanecen estudiando. Esta información puede contribuir a la elaboración de políticas de salud mental, específicas en el contexto de los servidores de INSS/RO.

Descriptorios: Depresión; Prevalencia; Servidores Públicos.

## Introduction

Depression is a worldwide known public health problem and is characterized by symptoms such as feeling of sadness, lack of confidence, negative opinions about oneself, about others and about the future, loss of interest in activities, and sleep and appetite disorders<sup>(1)</sup>. It is estimated<sup>(2)</sup> that by the end of this decade, depression will be the second major cause of health disability in the world. The growth of depression generally tends to affect the economy, productive sectors and health strategies of the countries.

In Brazil<sup>(3)</sup>, the prevalence of self-reported depression in adults in 2013 was 7.6% (95% CI 7.2 - 8.1), being higher in women (10.9%; 95% CI 10.3 - 11.6), people aged between 60 and 64 years (11.1%; 95% CI 9.1 - 13.1), people with complete higher education (8.7%; 95% CI 7.5 - 9.9), and self-declared whites (9.0%, 95% CI 8.3-9.6).

Numerous scientific studies have pointed out the predominance of depression in women<sup>(4-7)</sup> as an important characteristic of this disorder. Another peculiarity of depression highlighted by these studies is that age is a variable that must be taken into account because longer life time has been seen to be associated with higher prevalence of depression in women<sup>(3,8)</sup>. These researchers worked with the hypothesis that the higher prevalence of this disorder in women is associated with cultural issues; women seek for medical help more often than men, increasing the margin of diagnosis of the problem.

Besides the characteristics of gender and age, studies focusing on the incidence of depression have commonly identified an association between schooling and depression<sup>(9-10)</sup>. These studies support the idea that cognitive factors, as well as those promoted by the environments in which people with low schooling are inserted, are strongly associated with the etiology of depression.

With regard to public employees, there are not many studies focusing on the incidence of depression on this population. However, the studies that have approached the theme identified a congruence with information of population-based surveys<sup>(11)</sup>.

In Rondônia<sup>(12)</sup>, depression was the most prevalent mental disorder among federal public employees in the year of 2011, particularly affecting women (52.1%).

In this sense, our study seeks to contribute to the understanding of the variables involved in the prevalence of depression among public servants providing subsidies for the creation and implementation of health policies specifically tailored for these employees. Thus, the objective of the present study was to verify the prevalence of depression in public servants of the National Institute of Social Security of the state of Rondônia (INSS/RO).

## Method

This research was registered and approved with CAAE n°: 55655916.0.0000.5300 by the Research Ethics Committee. A total of 132 public INSS employees in Rondônia participated in the study, corresponding to 40.36% of the institution's total staff. Currently, the regional service of Rondônia counts on 327 employees, 169 working in the capital and 158 in the countryside. The sample was selected for convenience (61.4% of the capital, 31.6% of the countryside). Six cities in the countryside were included in the study: Ariquemes, Ji-Paraná, Cacoal, Pimenta Bueno, Rolim de Moura and Vilhena. Besides being capital cities, they were chosen in view of the size of the agencies, the number of beneficiaries served and the geographic position in the State, so that they allowed greater representation of the INSS of Rondônia.

A socioeconomic questionnaire prepared by the researchers and the Patient Health Questionnaire-9 (PHQ-9) were used as instruments. The first questionnaire had the objective of collecting data on the socioeconomic conditions of INSS servants. It was a self-administered questionnaire with questions about the following characteristics: sex, age, time of service in the INSS, schooling and continuation of studies.

The PHQ-9 was used to evaluate depression. This instrument evaluates Major Depressive Episode according to the DSM-IV diagnostic criteria in 9 questions<sup>(10)</sup>. The instrument has the advantage of being self-administered, through a Likert-type scale that assesses the frequency of symptoms in the last two weeks. The symptoms investigated in the questionnaire are: depressed mood, anhedonia, sleep problems, physical tiredness, appetite or weight changes, feelings of guilt or uselessness, concentration problems, feeling of slowness or restless and suicidal thoughts. There is a study indicating the validity of PHQ-9<sup>(13)</sup> where it was demonstrated that the PHQ-9 is suitable for screening for major depressive episodes. The questionnaire ranks depressive levels according to scores, with the results varying between *minimally depressed* (0-4), *slightly depressed* (5-9), *moderately depressed* (10-14), *very depressed* (15-19), and *severely depressed* (20-27). In this study, the participants who scored zero were classified as *non-depressed*.

Data were analyzed according to the criteria of the instruments applied and treated by descriptive and inferential statistics using the SPSS package for Windows version 20.0. Considering the sample size and the characteristics of the test, non-parametric methods of analysis and the Mann-Whitney test, suitable for small samples and lack of homogeneous distribution, were used to check a more precise significance and correlation between independent groups<sup>(14)</sup>.

## Results

The study sample consisted of 39 males and 93 females aged between 18 and 65 years (median = 53, mean = 47.5, standard deviation = 13.31). Among the participants, 38.6% had higher education and 61.4% had high school. Among them, 35.6% continued studying. Most of the employees held a medium level

position (82.6%); only 2.3% were senior managers and 12.9% were managers.

Table 1 shows the total prevalence of manifestation of depression in public servants of INSS agencies in Rondônia. The data point to an index of 29.54% of employees with indication of moderate depression. The percentage of employees with strong (very depressed category) or severe depression was 18.18%.

Table 1 - General frequency of depression in public servants of the INSS/RO/BR-2016. Rondonia, Brazil, 2016

	Non-depressed	Minimally depressed	Slightly depressed	Moderately depressed	Very depressed	Severely depressed
<b>N</b>	7	31	31	39	15	9
<b>Mean</b>	-	2.29	7.2	11.82	16.73	22.11
<b>Median</b>	-	2.00	7.00	12.00	17.00	22.00
<b>S.D.</b>	-	0.74	1.62	1.35	1.39	1.61

As shown in Table 2, the manifestation of depression in men was slightly higher than that of women, being mostly in the category of moderately depressed, but there was no significant difference between sexes.

Table 2 - Prevalence of depression in public servants of the INSS/RO/BR-2016 according to sex. Rondonia, Brazil, 2016

	N	Mean	S.D.	Significance
Men	39	10.0	5.08	0.129
Women	93	8.76	6.59	0.129

The schooling of INSS employees was positively related to depression (Table 3). According to data, employees with higher education and who continued their studies were more depressed than those with high school only and who were not studying.

Table 3 - Prevalence of depression in public servants of the INSS/RO/BR-2016 according to level of schooling. Rondonia, Brazil, 2016

	N	Mean	S.D.	Significance	
High school	81	8.30	6.22	0.04*	
Higher education	51	10.45	5.98	0.04*	
Continued studies	Yes	47	10.66	4.65	0.07
	No	85	8.28	6.78	0.07

Note. PHQ-9 data \*p < 0.05

According to the Spearman rho's correlation coefficient, there was no relationship between the variables age or time of service and depression (Table 4).

Table 4 - Relationship between age, time of service and depression (n = 132) among public servants of the INSS/RO/BR-2016. Rondonia, Brazil, 2016

	Age	Time of service
Spearman Correlation Coefficient	-0.31	-0.45
Significance	0.728	0.607

Regarding geographic distribution, there was a significant relationship between this variable and depressive pathology. Employees working in cities in the countryside were more depressed than those in the capital (Table 5). The average score for depression among the employees in the capital was *slightly depressed*, while in the countryside the level was *moderately depressed*.

Table 5 - Manifestation of depression in public servants of the INSS/RO/BR-2016 according to geographic distribution. Rondonia, Brazil, 2016

PHQ-9	Capital city			Countryside			Significance
	N	Mean	S.D.	N	Mean	S.D.	
	81	8.10	5.9	51	10.76	6.4	0.03*

Note. \*p < 0.05

## Discussion

Between 2005 and 2015, the number of cases of depression grew around 18% in the world. In Brazil, the expectation of depression in 2015 was 5.8% of the population<sup>(5)</sup>. The present study identified that more than a quarter of the participants presented moderate depression, corresponding to the diagnosis of Major Depression<sup>(15)</sup>. The results found in this study are larger than those of other population-based studies<sup>(7,9,11)</sup>. This was possible thanks to the availability of several instruments to identify and measure depression, favoring a slight divergence between results. The PHQ-9, a questionnaire used in this study, for example, has a spectrum with five levels of depression, ranging

from minimally depressed to severely depressed. This instrument makes it possible to recognize the disorder in its most diverse stages. Another associated factor is culture, since the groups of public employees were from different regions and had different functions and bond regime.

The prevalence rate of depression in public servants of the INSS/RO did not differ significantly between sexes. This finding does not match those found in other scientific studies. According to the World Health Organization's report on depression and other common mental disorders<sup>(5)</sup>, the prevalence of depression in women is higher than in men worldwide with a 2% variation between the sexes.

Regarding the different prevalence rates of depression in the sexes, it is important to consider the consistency of the instrument used with respect to gender bias. In the United States, a study with 5,995 participants investigated whether the PQH-9 is influenced by the gender of the respondents. The analysis of the items showed that the differential performance between men and women is negligible, indicating that the PHQ-9 does not imply any problem in evaluations due to gender differences<sup>(16)</sup>. Thus, the gender differences found in this research may be related to the sociocultural characteristics of the state of Rondônia and not to the instrument used. Scientific literature considers that cultural factors imply socio-family differences between men and women, leading to significant psychological consequences in the perception of depression, as well as in the expression of depressive feelings<sup>(17)</sup>.

Regarding schooling, the prevalence of depression was higher in employees who had higher education and who continued their studies. These data diverge from other studies that indicate that people with less schooling suffer more depression<sup>(9-10)</sup>. However, the literature also reports, similar results to those found in this study identifying a correlation between higher schooling and prevalence of depression<sup>(18)</sup>. In Japan, a country known for valorization of education, the more years of formal studies a person has, the more susceptible to depression she becomes<sup>(5)</sup>. Differences such as these suggest that individuals with greater level of education are more aware of their own health, involving higher expectations and demands regarding themselves, factors that may favor the onset and development of depression.

The variables time of service and age did not have a significant relation with depression. In Brazil, population-based surveys studying the relationship between age and depression presented divergent results<sup>(5,10-11,19)</sup>. A possibility to explain that is that population-based studies provide more generic information, identifying in a more global manner the dynamics of depression. However, this study deals with a very specific public

and its peculiar characteristics (work regime, social and institutional goals, vulnerability to government policies etc.) may orchestrate a more uniform manifestation of depression according to age and time of service.

Regarding the differences of prevalence in the different geographical locations, it was observed that INSS employees in the countryside were more depressed than those in the capital. However, data such as these are complex because there are few surveys at the state or local level allowing comparisons and the available studies have generally focused on the prevalence of depression in big cities and capitals<sup>(3,20-21)</sup>.

A characteristic of the countryside cities of Rondônia, and a possible intervening factor influencing the preponderance of depression there, is the fact that they were predominantly colonized by immigrants from the south and southeast of the country, while Porto Velho received strong influence from the northeastern region, especially in the rubber cycles and in the construction of the Madeira Mamoré Railway<sup>(22)</sup>. Studies show that the prevalence of depression is higher in the South and Southeast, and lower in the Northeast of Brazil. These elements corroborate the idea that cultural heritage is involved in the expression of depression in rural cities in the state of Rondônia<sup>(3)</sup>. Another factor implicated is the concentration of collective and specialized health programs in the capital, unfavorable for the access to health services in countryside cities.

It should be noted that the study presents as a limitation the low number of scientific studies that studied the prevalence of depression in INSS/RO employees, making it difficult to compare the present finding with other data.

## Conclusion

This study found that INSS/RO employees who are in the countryside of the state have a higher education and who continued their studies were still more depressed. The survey also revealed that three out of ten employees in the sample studied manifested Major Depression. The variables gender, age and time of service were not related to depression. In general, this information indicates that this disorder is common in the National Institute of Social Security of Rondônia and suggests the implementation of specific mental health policies to address depression in this work context.

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