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FACTORS ASSOCIATED WITH DEPRESSION IN LEPROSY PATIENTS SEEN IN PRIMARY CARE

[1]Antonio José de Oliveira Freitas Neto, [1]Márcia Rodrigues Veras Batista, [1]Celijane Melo Rodrigues, [2]José Newton Lacet Vieira, [1]Adriana Sousa Rêgo, [1]Ilana Mírian Almeida Felipe da Silva, *[3]Wellyson da Cunha Araújo Firmo, [1]Flor de Maria Araujo Mendonça Silva

[1]Postgraduate Program in Management of Health Programs and Services. Ceuma University, São Luís, Maranhão, Brazil
[2]Teacher of the Physiotherapy Course at Ceuma University, São Luís, Maranhão, Brazil
[3]Teacher of the Biomedicine Course at the Ceuma University and the Postgraduate Program in Health and Environment at the Federal University of Maranhão, São Luís, Maranhão, Brazil

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***Corresponding author:**
Wellyson da Cunha Araújo Firmo

ABSTRACT

Leprosy is a chronic, infectious disease and Brazil ranks second in the prevalence of case numbers, with 12.2 cases per 100 thousand inhabitants. To screen depression in leprosy patients in São José de Ribamar city, Maranhão State. Quantitative cross-sectional study with application of two forms, the first comprising sociodemographic and clinical variables and the second consisting of the Beck Depression Inventory, applied from January to June 2019. Logistic regression was performed to identify associated factors for depression. Two-hundred and one (201) patients were evaluated, of which mostly were male (55.22%); 25.37% were in the age group 46-60 years; 49.75% were married; 42.29% had more than 8 years of schooling; 57.21% received 1 to 3 minimum wages; and 41.79% live with 4 to 7 people. Moreover, the multibacillary form was the most frequent form (70.65%) and leprosy reaction was present in 80.10% of patients; 42.29% of patients do not know whether they are diabetic or not and 42.28% do not know whether they are hypertensive or not; 79.60% do not smoke; and 87.06% do not practice physical activity. The variable household members with 1 to 3 people was associated with the minimum degree of depression, with $p \leq 0.010$. In contrast, the variables male gender, age group 46-60 years, brown color, and not knowing whether they are hypertensive or not ($p \leq 0.010$); 5 to 8 years of schooling, income of 1 to 3 minimum wages, and nonsmoking ($p=0.040$); multibacillary clinical form ($p=0.010$); and leprosy reaction ($p=0.030$) were associated with symptoms of severe depression. Leprosy patients are prone to depression, possibly due to their characteristic social stigma.

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INTRODUCTION

Leprosy is a slowly evolving chronic, infectious disease caused by the bacterium *Mycobacterium leprae*, which is an alcohol-acid resistant bacillus, intracellular parasite with a predilection for the Schwann cell and skin. This bacillus compromises peripheral nerves, causing sensory, motor, and autonomic changes on the face (eyes and nose), hands, and feet. Leprosy affects people of all ages, especially those in the economically active age group. When not treated or diagnosed late, this disease can evolve to physical disabilities, leading to decreased working capacity and limitation of social life, which still causes much fear, stigma, prejudice, and social exclusion (BRASIL, 2017). The World Health Organization (WHO) reported in 2016 that about 143 countries had 214,783 new leprosy cases, representing a detection rate of 2.9/100,000 inhabitants. In Brazil, 25,218 new cases were reported in the same year, with a detection rate of 12.2/100,000 inhabitants. These parameters classify the country as having a high burden for the disease, ranking second in the number of new cases registered worldwide (ORGANIZAÇÃO MUNDIAL DA SAÚDE, 2016). Maranhão State has the third largest prevalence of leprosy in the country, ranking first in the northeast region (BRASIL, 2018a). However, Brazil committed to adopt the recommendations of the WHO Global Strategy for characterization of the epidemiological patterns of leprosy according to gender, which aims to reduce the burden of this disease. The strategy is based on three main pillars: strengthening government control and partnership, combating leprosy and its complications, and dealing with

discrimination by promoting social inclusion. These pillars include early case detection, immediate treatment with multidrug therapy, the development of basic research, and coping with stigma by promoting community mobilization and awareness (BRASIL, 2018b). In this context, in clinical practice and comprehensive health care in leprosy, it is necessary to broaden the understanding of the elements that make up the disease of each patient in primary care. From then on, every intervention must also be based on understanding the complexity of mental illness (CAMPOS *et al.,* 201). Thus, there are several concepts for understanding mental health, which nevertheless present as consensus the absence of mental disorders. Mental health is closely linked to organic, social, and behavioral conditions. Moreover, it is noteworthy the public and private spending to treat mental illnesses that grow each year in both industrialized and developing countries (CAMPOS *et al.,* 201).

According to the International Code of Diseases (ICD-10 F33) (ORGANIZAÇÃO MUNDIAL DA SAÚDE, 2018), depression is characterized by sadness, loss of interest or pleasure, feeling of guilt or lack of self-esteem, sleep or appetite disturbance, tiredness, and lack of concentration. This disease can be persistent or recurrent, substantially impairing the individual's functional capacity at work, at school, or in daily life (WORLD HEALTH ORGANIZATION, 2018). Brazil is the country with the highest prevalence of depression in Latin America, ranking second in the prevalence of this disease in the Americas, behind only the United States (WORLD HEALTH ORGANIZATION, 2017). Maranhão State reported 161,000 cases of the disease in 2013 (INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA, 2013), being the 11th state with the most cases of depression. It is understood that leprosy-related depression is not an exclusively biological process, but rather comprises several psychosocial phenomena that involve conditions of housing, work, public transportation, basic sanitation, education, health practices, spirituality, among other factors. In some contexts, however, primary care practices still neglect such influences in the disease process (NUNES; OLIVEIRA; VIEIRA, 2008). In this sense, this study screens signs and symptoms of depression and its associated factors in leprosy patients undergoing Primary Care (PC).

MATERIALS AND METHODS

This is a cross-sectional analytical study conducted with 201 leprosy patients under Primary Care in São José de Ribamar city, Maranhão State. According to data from the Brazilian Institute of Geography and Statistics (INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA, 2010), the city has a population of 163,045 inhabitants, in an area of 388,371 km^2. The research was conducted from January to June 2019. The data were collected through two forms, the first aiming to obtain sociodemographic and clinical information, and the second consisting of the Beck Depression Inventory (BDI) for screening signs and symptoms of depression, with a scale that classifies depressive symptoms as: minimal, mild, moderate, and severe (GANDINI *et al.,* 2007). The selected participants were aged 18 or more, lived in São José de Ribamar city, and were treated by the municipal primary care service. They were invited to sign the Informed Consent Form (ICF). This study was approved by the Ethics Committee on Research with Human Beings of Ceuma University, under Opinion Nº. 2,627,601.

Table 1. Distribution of the socioeconomic, demographic, and clinical variables of leprosy patients. São José de Ribamar-MA, 2019

Variable	N	%
Gender		
Male	111	55.22
Female	90	44.78
Age (years)		
18-25	34	16.92
26-34	35	17.41
35-45	46	22.89
46-60	51	25.37
61-75	35	17.41
Race/color		
White	57	28.36
Brown	89	44.28
Black	55	27.36
Marital status		
Single	77	38.31
Married	100	49.75
Separated	6	2.99
Stable union	18	8.66
Schooling (years of study)		
0-4	35	17.41
05-08 Aug	81	40.3
More than 8	85	42.29
Family income		
Less than 1 minimum wage	86	42.79
1 to 3 minimum wages	115	57.21
When did you start working?		
Before 14 years of age	72	35.82
Between 14 and 16 years of age	71	32.32
Between 17 and 18 years of age	30	14.93
After 18 years of age	28	16.93
Household members		
Alone	15	7.46
1 to 3 people	35	17.41
4 to 7 people	84	41.79
8 or more people	30	14.92
Clinical form		
Paucibacillary	59	29.35
Multibacillary	142	70.65
Leprosy reaction		
Present	161	80.1
Absent	40	19.9
Diabetes		
Yes	33	16.42
No	83	41.29
Does not know	85	42.29
Hypertension		
Yes	38	18.91
No	74	36.82
Does not know	89	44.28
Smoking		
Yes	35	17.41
No	160	79.6
Former smoker (6 months or more)	6	2.99
Physical activity		
Yes	26	12.94
No	175	87.06

N = Absolute value; % = Percentage.

Statistical analysis was performed using Stata 14.0 software (Stata Corp, College Station, Texas, USA). Qualitative variables were presented as absolute and relative frequencies, and descriptive statistics included calculation of absolute and relative frequencies (percentages). For nominal categorical variables, the association between explanatory variables and the response variable was performed using the chi-square test (χ^2) for independent samples. In univariate analysis, the associated factors were tested between the explanatory variable (leprosy patients) and the response variable (level of depression in leprosy patients). Statistical analysis comprised univariate analysis with a 95% confidence interval, and associated factors were tested for the response variable, with

their respective prevalence ratios (PR), 95% confidence intervals (95% CI), statistical significance ($p \leq 0.05$), and the number of exposed patients in the sample. Multivariate analysis was performed using the logistic regression model in the variables with $p<0.20$, which were selected for inclusion in the multivariate model, remaining in the final multivariate model those with $p<0.10$.

RESULTS

Table 1 shows socioeconomic, demographic, and clinical data of the 201 leprosy patients. Most of the patients interviewed (111 or 55.02%) were male; 51 (25.37%) were aged 46-60 years; 89 (44.28%) were brown; 100 (49.75%) were married; and 85 (42.29%) had more than 8 years of schooling. Most respondents (142 or 70.65%) started working before 14 years of age. For 84 patients (41.79%), the number of household members was 4 to 7 people; and family income was between 1 to 3 minimum wages for 115 (57.21%) patients. Regarding the clinical form, the multibacillary operational classification had the highest percentage (142 patients or 70.65%), and leprosy reaction was present in 161 (80.10%) patients. Of the survey participants, 83 (41.29%) were not diabetic, 85 (42.29%) did not know whether they were diabetic or not, 89 (44.28%) did not know whether they were hypertensive or not, 160 (79.6%) did not smoke, and 175 (87.06%) did not practice physical

Table 2. Distribution of information obtained from the Beck Depression Inventory and its relationship with socioeconomic, demographic, and clinical variables of leprosy patients. São José de Ribamar-MA, 2019

Variable	Beck Depression Inventory [N (%)]				
	Minimum	Light	Moderate	Serious	p-value
Gender					≤ 0.01
Male	39(65.00)	4(23.53)	11(30.56)	57(64.77)	
Female	21(35.00)	13(76.47)	25(69.44)	31(35.23)	
Age (years)					≤ 0.01
18-25	13(21.67)	2(11.76)	2(5.56)	17(19.32)	
26-34	9(15.00)	1(5.88)	9(25.00)	16(18.18)	
35-45	24(40.00)	0(0.00)	9(25.00)	13(14.77)	
46-60	5(8.33)	9(52.94)	7(19.44)	30(34.09)	
61-75	9(15.00)	5(29.41)	9(25.00)	12(13.64)	
Race/color					≤ 0.01
White	19(31.67)	2(11.76)	0(0.00)	57(28.36)	
Brown	28(46.67)	9(52.94)	28(77.78)	89(44.28)	
Black	13(21.67	6(35.29)	8(22.22)	55(27.36)	
Marital status					0.6
Single	24(40.00)	26(43.33)	2(3.33)	8(13.33)	
Married	6(35.29)	9(52.94)	0(0.00)	2(11.76)	
Separated	13(36.11)	21(58.33)	2(5.56)	0(0.00)	
Stable union	34(38.64)	44(50.00)	2(2.27)	8(9.09)	
Schooling (years of study)					0.04
0-4	8(13.33)	0(0.00)	4(11.11)	23(26.14)	
05-08 Aug	21(35.00)	10(58.82)	17(47.22)	33(37.50)	
More than 8	31(51.67)	7(41.18)	15(41.67)	32(36.36)	
Family income					0.04
Less than 1 minimum wage	22(36.67)	12(70.59)	12(33.33)	40(45.45)	
1 to 3 minimum wages	38(63.33	5(29.41)	24(66.67)	48(54.55)	
When did you start working?					0.27
Before 14 years of age	18(30.00)	8(47.06)	17(47.22)	29(32.95)	
Between 14 and 16 years of age	18(30.00)	7(41.18)	10(27.78)	36(40.91)	
Between 17 and 18 years of age	12(20.00)	0(0.00)	6(16.67)	12(13.64)	
After 18 years of age	12(20.00)	2(11.76)	3(8.33)	11(12.50)	
Household members					≤ 0.01
Alone	0(0.00)	0(0.00)	5(13.89)	10(11.36)	
1 to 3 people	36(60.00)	8(47.06)	4(11.11)	24(27.27)	
4 to 7 people	20(33.33)	9(52.94)	27(75.00)	28(31.82)	
8 to 10 people	4(6.67)	0(0.00)	0(0.00)	26(26.14)	
10 or more people	0(0.00)	0(0.00)	0(0.00)	3(3.41)	
Clinical form					0.01
Paucibacillary	27(45.,00)	4(23.53)	10(27.78)	18(20.45)	
Multibacillary	33(55.00)	13(76.47)	26(72.22)	70(79.55)	
Leprosy reaction					0.03
Present	44(73.33)	15(88.24)	36(100.00)	66(75.00)	
Absent	16(26.67)	2(11.76)	0(0.00)	21(23.86)	
Diabetes					0.1
Yes	7(11.67)	4(23.53)	5(13.89)	17(19.32)	
No	32(53.33)	8(47.06)	17(47.22)	26(29.55)	
Does not know	21(35.00)	5(29.41)	14(38.89)	45(51.14)	
Hypertension					≤ 0.01
Yes	5(8.33)	6(35.29)	11(30.56)	16(18.18)	
No	34(56.67)	4(23.53)	13(36.11)	23(26.14)	
Does not know	21(35.00)	7(41.18)	12(33.33)	49(55.68)	
Smoking					0.04
Yes	4(6.67)	4(23.53)	9(25.00)	18(20.45)	
No	54(90.00)	11(64.71)	26(72.22)	69(78.41)	
Former smoker (6 months or more)	2(3.33)	2(11.76)	1(2.78)	1(1.14)	
Physical activity					0.34
Yes	11(18.33)	2(11.76)	2(5.56)	11(12.50)	
No	49(81.67)	15(88.24)	34(94.44)	77(88.50)	

activity. The level of depression as assessed by the BDI is described in Table 2. The variables gender, age (age group 46-60), and race/color (brown) were statistically significant (p≤0.01), being associated with severe depression. The variable marital status was not statistically significant (p=0.60), although there was a higher prevalence of stable union in the mild form of depression (44 patients or 50.00%). Schooling was significant (p=0.04) in the range of 5 to 8 years of study, with the severe form being more prevalent (33 patients or 37.50%). For family income (p=0.04), there was a higher prevalence of 1 to 3 minimum wages in severe depression (48 patients or 54.55%).

The variable household members was statistically significant (p≤0.01), in which 1 to 3 people was associated with mild depression (36 patients or 60.00%). Regarding the clinical form, the multibacillary form was more prevalent in severe depression (70 patients or 79.55%), being statistically significant (p=0.01). Leprosy reaction was also significant (p=0.03), being more prevalent in severe depression (66 patients or 75.00%). For hypertension (p≤0.01), patients who do not know whether they have this cardiovascular disease or not are more prevalent in severe depression (49 patients or 55.68%).

Table 3. Unadjusted and adjusted analysis of socioeconomic, demographic, and clinical variables of leprosy patients. São José de Ribamar-MA, 2019

Variable	Unadjusted analysis			Adjusted analysis		
	PR	CI	p-value	PR	CI	p-value
Gender			0.81			
Male	1	1	-	-	-	-
Female	0.97	0.79-1.19	0.81	-	-	-
Age (years)			≤ 0.01			0.05
18-25	1	1	-	1	1	-
26-34	1.14	0.80-1.62	0.46	1.25	0.90-1.73	0.17
35-45	0.73	0.48-1.12	0.16	0.77	0.51-1.18	0.24
46-60	1.32	0.96-1.80	0.05	1.11	0.80-1.56	0.50
61-75	1.00	0.69-1.45	0.97	0.88	0.56-1.36	0.57
Race/color			0.05			≤ 0.01
White	1	1	-	1	1	-
Brown	0.79	0.62-1.02	0.05	0.94	0.69-1.28	≤0.01
Black	0.99	0.77-1.29	0.05	1.29	0.82-2.03	≤0.01
Marital status			0.78			
Single	1	1	-	-	-	-
Married	1.05	0.84-1.30	0.64	-	-	-
Separated	0.95	0.51-1.78	0.89	-	-	-
Stable union	0.83	0.51-1.39	0.45	-	-	-
Schooling (years of study)			0.03			≤ 0.01
0-4	1	1	-	1	1	-
5-8	0.80	0.63-1.02	0.05	0.73	0.55-0.98	0.03
More than 8	0.71	0.54-0.92	0.01	0.78	0.58-1.03	0.05
Family income			0.58			
Less than 1 minimum wage	1	1	-	-	-	-
1 to 3 minimum wages	0.94	0.77-1.15	0.58	-	-	-
When did you start working?			0.49			
Before 14 years of age	1	1	-	-	-	-
Between 14 and 16 years of age	1.06	0.85-1.32	0.59	-	-	-
Between 17 and 18 years of age	0.89	0.63-1.25	0.51	-	-	-
After 18 years of age	0.81	0.55-1.19	0.30	-	-	-
Household members			≤ 0.01			0.02
Alone	1	1		1	1	1
1 to 3 people	0.45	0.34-0.60	≤ 0.01	0.69	0.52-0.93	0.01
4 to 7 people	0.65	0.55-0.77	≤ 0.01	1.07	0.74-1.55	0.68
8 or more people	0.97	0.82-1.15	0.76	1.27	0.82-1.96	0.27
Clinical form			≤ 0.01			0.05
Paucibacillary	1	1	-	1	1	-
Multibacillary	1.46	1.11-1.93	≤ 0.01	1.32	0.98-1.78	0.05
Leprosy reaction			0.78			
Present	1	1	-	-	-	-
Absent	0.96	0.72-1.27	0.78	-	-	-
Diabetes			0.02			0.72
Yes	1	1		1	1	-
No	0.73	0.55-0.97	0.03	1.08	0.68-1.73	0.72
Does not know	1.00	0.78-1.28	0.97	1.36	0.75-2.45	0.3
Hypertension			≤ 0.01			0.04
Yes	1	1	-	1	1	-
No	0.66	0.50	≤ 0.01	0.77	0.57-1.03	0.05
Does not know	1.00	0.80	1.00	0.86	0.58-1.28	≤ 0.01
Smoking			0.02			0.03
Yes	1	1	-	1	1	-
No	0.77	0.63-0.94	0.01	0.82	0.64-1.06	0.14
Former smoker (6 months or more)	0.53	0.25-1.13	0.10	0.68	0.30-1.52	0.35

PR = prevalence ratio; CI = confidence interval.

The variable working time was not statistically significant (p=0.27%), but there was a higher prevalence of 14 to 16 years of work experience in severe depression (36 patients or 40.91%).

Moreover, patients who did not smoke (69 or 78.41%) are more prevalent in severe depression, with statistical significance (p=0.04). The unadjusted analysis of the interviewees' socioeconomic, demographic, and clinical data is

shown in Table 3; the variables with statistical significance of p≤0.10 remained in the final model. The following variables were statistically significant: age (p≤0.01); race/color (p=0.05) (brown: p=0.05; and black: p=0.05); schooling (p=0.03); and number of household members (p≤0.01). As can be seen in Table 3, the clinical form (p≤0.01) and the multibacillary form (p≤0.01) showed statistical significance (PR=1.46; CI=1.11-1.93). The variables diabetes (p=0.02), hypertension (p≤0.01), and smoking (p=0.02) were also statistically significant.

Regarding the adjusted analysis shown in Table 3, the variable age (p=0.05) was statistically significant, and the age group 26-34 years showed p=0.17, PR=1.25, and CI=0.90-1.73.
The variable race/color was statistically significant (p≤0.01) and the brown color showed the following results: p≤0.01, PR=0.94, and CI=0.69-1.28. The variable schooling was statistically significant (p≤0.01), with the following results for 5 to 8 years of study: p=0.03, PR=0.73, and CI=0.55-0.98. The variable household members was also statistically significant (p=0.02), where 1 to 3 members accounted for p=0.01, PR=0.69, and CI=0.52–0.93. Moreover, the clinical form showed statistical significance (p=0.05), with the following results for the multibacillary form: p=0.05, PR=1.32, and CI=0.98-1.78. The variable diabetes was not statistically significant (p=0.72), the same being observed for not knowing whether the disease was present or not (p=0.3, PR=1.36, and CI=0.75-2.45). The significant variable hypertension (p=0.04) resulted in p=0.05, PR=0.77, and CI=0.57-1.03 for patients without hypertension. Smoking was also statistically significant (p=0.03).

DISCUSSION

Among infectious diseases, leprosy is considered one of the main causes of physical disabilities due to its potential to cause neural injuries. In this regard, visible deformities are one of the main causes of stigma and isolation of people in society. These factors contribute to the development of depressive symptoms. Of the 201 patients evaluated in this study, 43.78% had severe symptoms of depression, showing the impact of this disease on patients' lives. In a study conducted in Piauí, some authors reported that the impact of severe and disabling forms of leprosy is directly related to poor quality of life, even for cured patients (LUSTOSA *et al.,* 2011). In the present study, most patients were male, corroborating both national data that showed that between 2012 and 2016 the detection rate per 100,000 inhabitants was higher in males compared to females (BRASIL, 2018b), and data found by other authors (FINEZ; SALOTTI, 2011; JANSEN *et al.,* 2011). The higher incidence of leprosy in men can be explained by the fact that they have a more active life and a greater opportunity of contact with the bacillus and thus greater exposure to the disease (LANA *et al.,* 2000). In this study, severe symptoms of depression were more prevalent in middle-aged men, coinciding with the higher prevalence of leprosy patients in this age group and gender, indicating that work leave and exclusion may be linked to the onset of symptoms. In the same sense, the brown race had a significant prevalence in relation to the others.

Regarding age and the beginning of work activity, this study pointed to a higher prevalence of leprosy for patients in the age group 46-60 years and starting to work before 14 years old. These findings may be justified due to the increase of elderly people in the Brazilian population; in addition, aging provides greater susceptibility to infectious diseases. Studies show that even at full work, the productivity of leprosy patients is compromised, being often necessary to take time off work (CASTRO *et al.,* 2009; SILVA SOBRINHO *et al.,* 2007). The distribution of leprosy cases according to race/color showed a predominance of brown color. Data from the Ministry of Health from 2012 to 2016 show that most new cases of leprosy occurred in the brown race/color, followed by the white, black, yellow and, lastly, the indigenous race/color (CAMPOS *et al.,* 2011). The Brazilian population is mostly constituted of self-declared brown or black people, with the incidence of leprosy being proportionally prevalent for this population group compared to others (BRASIL, 2018b). Almost half of the patients were married, corroborating the findings of a study that highlights that marital status prevails predominantly in the quality of life and support networks during the diagnosis and treatment of leprosy (NASCIMENTO, 2012). Most patients live in homes with 4 to 7 people, reinforcing the importance of contact surveillance as the main detection strategy for case finding as it facilitates early diagnosis, contributing to the reduction of the transmission chain and consequently reducing deficiencies that arise from delayed diagnosis (HACKER *et al.,* 2012). The data from this study show that patients with schooling between 5 and 8 years, with family income between 1 and 3 minimum wages had severe symptoms of depression. It is believed that schooling and family income are important factors for the course of the disease, since higher values correspond to greater information about the disease, avoiding dropout and treatment failure and the appearance and worsening of comorbidities.

Thus, the greater the clarification of patients about the disease and its aspects, the better the evolution and completion of the treatment. In addition, variables such as schooling, income, relapse or nonadherence to treatment contribute significantly as a risk factor for the spread of leprosy (PIERI *et al.,* 2012). In this regard, the present study highlights that education and family income data were alarming, being major factors for leprosy and depression. The predominant clinical form was the multibacillary form. These results are similar to clinical data from other studies (NASCIMENTO *et al.,* 2011) and national data between 2012 and 2016, in which the multibacillary form was predominant among men (BRASIL, 2018b), with the presence of leprosy reaction. The multibacillary form and the presence of leprosy reactions occur in individuals with less effective cellular immunity against *M. leprae* and/or treatment failure, representing an important focus of infection. Furthermore, late diagnosis, multibacillary forms, disease reactions, grade II disability, and prejudice are factors related to poor quality of life (LUSTOSA *et al.,* 2011). Regarding the presence of comorbidities, almost half of the patients do not know whether they are diabetic and/or hypertensive or not. These findings show failure to follow these individuals by PC once there are well-established programs for free diagnosis and treatment of these conditions in the units, as these clinical conditions are risk factors and cause disability and death in the country. Moreover, this screening is important since chronic diseases such as *Diabetes mellitus* favor significant depressive symptoms (FRÁGUAS; SOARES; BRONTEIN, 2009; FURLANETTO *et al.,* 2006). A key point found in the present study is that most patients were nonsmokers, and it is known that people with depression are more likely to develop addictions in an attempt to escape the symptoms of the disease. However, many patients do not practice physical activity, which is a bad condition since physical exercise can improve quality of life and reduce comorbidities (FERREIRA;

DIETTRICH; PEDRO, 2015). There is a strong cyclic relationship between leprosy and deficits in patients' quality of life, since the neural impairment caused by the disease can lead to skin lesions and, consequently, trigger physical disabilities and varied sequelae (ROSA *et al.,* 2016; CASSOL *et al.,* 2015).

Depression in leprosy has been very common (SINGH, 2012; TSUTSUMI *et al.,* 2004), corroborating the results of this study, in which the identification of severe depressive symptoms is relevant, indicating the possibility of clinical depression (SENTÜRK; SAĞDUYU, 2004). The percentages found indicate that patients were emotionally fragile and in need of psychiatric and/or psychological follow-up. On the other hand, patients who are institutionalized as a result of leprosy and its complications suffer due to stigma and prejudice, closely related to the disease (BITTENCOURT *et al.,* 2010). In some situations, the life histories of these patients allow deepening the psychological sequelae of the disease and reveal a true and unacceptable social exclusion (CAVALIERE; COSTA, 2011). With the decrease in the pace of activities and interest in daily life, the individual may develop low self-esteem. All these symptoms can be minimized with family support, a factor of great importance for coping with the disease, facilitating the reduction of psychological distress and the improvement of quality of life (NUNES; OLIVEIRA; VIEIRA, 2008). Although leprosy has a history of social exclusion and family life, the results of the present study revealed that patients living with 1 to 3 people have minimal symptoms of depression, suggesting a paradigm shift and greater awareness of the disease without the oppressive stigma attached to since ancient times (PEREIRA *et al.,* 2012).

CONCLUSION

Leprosy patients are prone to depression, and risk factors such as age, race, schooling, number of household members, clinical form, and hypertension are important indicators for screening this disease. Thus, these factors can help health teams develop strategies for identifying depressive symptoms in leprosy patients.

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