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Trend in the prevalence of depressive symptoms in Brazil: results from the *Brazilian National Health Survey* 2013 and 2019

Tendência na prevalência de sintomas depressivos no Brasil: resultados da *Pesquisa Nacional de Saúde*, 2013 e 2019

Tendencia en la prevalencia de síntomas depresivos en Brasil: resultados de las *Encuesta Nacional de Salud* de 2013 y 2019

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Abstract

This study aims to evaluate national variation in depression prevalence and in different sociodemographic groups, health behaviors, and macroregions of Brazil from 2013 to 2019. Data were obtained from two nationwide Brazilian surveys – Brazilian National Health Survey *2013 and 2019. Participants aged 18 years or older were included, totaling 60,202 individuals in 2013 and 88,531 in 2019. Depression was evaluated with the* Patient Health Questionnaire-9 *(PHQ-9). All estimations accounted for the population weights and the complex sampling. The findings showed that during the six years between the two surveys, the prevalence of depression in Brazil increased by 36.7%, going from 7.9% in 2013 to 10.8% in 2019, and this increase is higher among unemployed young adults, aged 18 to 24 years, with the increase in the prevalence of depression almost tripled (3.7 in 2013 and 10.3 in 2019), an increase of 178.4%. Those dwelling in urban areas had a higher increase in the prevalence of depression in the six-year period (39.8%) when compared to residents in rural areas (20.2%). There was an increase in the prevalence of depression from 2013 to 2019 for the worst categories of the three health behaviors included in the study for both men and women: heavy drinking, smoking, and not exercising the recommended level of physical activity. Our results show a significant increase in the prevalence of depression over the six years between the two surveys, mainly among the younger and unemployed men. The country's economic recession during this period may explain these findings.*

Health Surveys; Depression; Mental Health; Cross-Sectional Studies

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Introduction

Depression is considered one of the leading global public health issues. Data from the *Global Burden of Disease Study* show that depression is one of the three main causes for years lived with disability (YLD), especially among women [1]. Studies of trends in depression worldwide have produced mixed results. The World Health Organization (WHO) estimated the number of people with depression worldwide to exceed 300 million in 2015, an increase of 18.4% since 2005 [2]. However, a meta-analysis of 116 epidemiological studies showed that the prevalence of major depression was unchanged at 4.4% in 1990 (4.2%-4.7%) and 2010 (4.1%-4.7%); even though 8 among the 11 *General Health Questionnaires* (GHQ) studies found a significant increase in psychological distress over time [3]. These studies have shown how inconsistent the empirical evidence can be for mental health outcomes, particularly depression, where cultural differences between countries and the definitions and assessments of depression can affect the prevalence of this disorder. A recent systematic review and meta-analysis of studies focused on the change over time in the incidence and prevalence of depression in the general population showed a predominant increasing trend in the prevalence of depression, which cannot be fully explained by study design differences or publication bias [4].

Nowadays, robust evidence that social, economic, and environmental inequalities can be found, such as accelerated urbanization, affect the quality of life of populations, their health behaviors, access to health services, among others, influencing the development of chronic diseases, including mental disorders [5,6,7]. Some studies have shown that financial crises can significantly affect the mental health of populations. Worldwide, periods of major economic crises, which lead to unemployment, financial difficulties, and increased poverty, have been associated with an increase in mental disorders in the population, with a higher effect on the levels of depression and suicide [8,9,10]. Two meta-analyses have shown that people experiencing unemployment are at greater risk for mental health problems than the general population [11,12].

During the first decade of the 21st century, the Brazilian economy thrived, and the country became the sixth economy in the world [13]. However, since 2013, Brazil is facing a scenario of deterioration and economic recession, with recurrent financial crises, increased unemployment, precarious work, and increased poverty. Furthermore, young people have faced enormous difficulties in entering the labor market. These factors may affect the Brazilian population's mental health, increasing the prevalence rates of depression in the general population, especially among those more vulnerable.

The *Brazilian National Health Survey* (PNS) of 2013, a population-based survey conducted in the Brazilian population aged 18 or over, used the *Patient Health Questionnaire-9* (PHQ-9) to assess depression outcomes. The study showed a prevalence of 4.1% for major depression, 7.9% for depression, and 21% for depressed mood, being higher among women, individuals aged 40-59 years and 70 years old or more, those with lower educational level, and those who lived in urban regions. Among those with depression, about 80% did not receive any treatment, and 14% were treated only with medication [14,15].

The second edition of the PNS, held in 2019, represents an opportunity to evaluate temporal changes of several health problems in the general population for the first time in Brazil. This study aims to evaluate the variation in the overall prevalence of depressive symptoms and to examine how the prevalence of depressive symptoms may have changed in different socioeconomic and demographic groups, health behaviors, and macroregions of the country from 2013 to 2019.

Methods

Study design and population

This study used two cross-sectional population-based datasets drawn from the PNS conducted in Brazil in 2013 and 2019 [16,17]. The PNS is a household-based nationwide survey conducted by the Brazilian Ministry of Health, in partnership with the Brazilian Institute of Geography and Statistics (IBGE), in 2013 and 2019.

Both surveys are based on representative samples of the Brazilian population and allow for estimates on urban and rural areas, the country's five macroregions, Federative Units, state capitals, and

metropolitan areas. The surveys were household-based with stratified sampling and a three-stage design: In the first stage, the primary sampling units were randomly selected from the master sample, from which the major surveys conducted by IBGE are sampled. In the second stage, households were randomly selected within each primary sampling units. In the third stage, an adult resident (aged 18 years or older in the 2013 edition and 15 years or older in the 2019 edition) was selected with equal probability among all adult residents in the household. Weighting factors were calculated for each of the three sampling units, considering the probabilities of selection and the non-response rate. For the selected resident, the weight was calculated considering the weight for the corresponding household, the probability of selection of the resident, the adjustment of non-response for sex, and calibration for the total population by sex and age groups estimated with the weight of all residents [18,19].

Although the PNS 2019 included the population aged 15 years or over, to provide valid data for monitoring the indicators established by the Sustainable Development Goals (SDGs) [20], the IBGE and the Brazilian Ministry of Health publications comprise only the population aged 18 years or older [17]. Thus, to allow comparisons between the two editions of the PNS, this study follows the same approach and uses data referring only to the population aged 18 or over.

In the PNS 2013, 69,954 occupied households were visited, and 60,202 individuals were interviewed, resulting in a response rate of 86.1%. In the PNS 2019, among the 108,525 households visited, interviews were conducted in 94,114 households, with a loss rate of 13.2%. The household's sample with a individual aged 18 or over (selected resident) reached 88,531 individuals.

The Brazilian National Ethics Research Committee (CONEP) of the Brazilian National Health Council (CNS) approved the PNS 2013 and PNS 2019 surveys in June 2013, n. 328,159, and in August 2019, n. 3,529,376, respectively. In both editions, all participants signed an informed consent agreement.

Assessment of depressive symptoms

In both PNS editions, depressive symptoms were assessed with the PHQ-9, which evaluates the frequency of depressive symptoms over the two weeks before data collection [21]. The instrument was validated in Brazil [22], with good validity in diagnosing major depression at the cutoffs of > 9 and > 10. The presence of depressive symptoms was determined using the PHQ-9 score as recommended by Kroenke et al. [21], which classifies depression severity according to the following thresholds: none (1-4 points), mild (5-9), moderate (10-14), moderately severe (15-19), and severe (20-27 points). In this study, the presence of depressive symptoms was defined by a PHQ-9 score of 10 or higher, which is considered the best cutoff point to detect the presence of clinically relevant symptoms [23,24].

Other measures

In both surveys, sociodemographic variables were assessed, including sex (male and female); age group (18-24, 25-29, 30-39, 40-49, 50-59, 60-69, 70 years or over), race/skin color (white, black and brown, and others, which includes Asians and indigenous); level of education (uneducated or incomplete primary school; complete primary school or incomplete high school, complete high school or incomplete undergraduation, complete undergraduation); per capita household income, classified into minimum wages (0 to 1, more than 1 to 3, more than 3 to 5 and more than 5); marital status (married or living with a partner and single, divorced or widowed not living with a partner) and work status (employed, unemployed). Geographical areas were defined as macroregion of residence (North, Northeast, Central-West, Southeast, and South) and living in urban vs. rural areas.

Health behaviors selected for analysis were: current smoker of any tobacco (yes, no); excessive alcohol consumption (heavy drinking) being defined as the weekly consumption of 15 or more alcoholic drinks for men and 8 or more for women [25], a dose being considered equivalent to a can of beer, a glass of wine, or a dose of distilled drink; and leisure-time physical activity considering the recommended level of 150 minutes per week of mild or moderate leisure-time physical activity or 75 minutes of vigorous leisure-time physical activity [26].

Data analysis

The prevalence of depressive symptoms was described according to sociodemographic characteristics and geographical area. Estimates were computed for PNS 2013 and PNS 2019, with their respective 95% confidence intervals (95%CI) based on the t distribution, considering a large number of primary sample units. The prevalence change between the 2013 and 2019 surveys was expressed in absolute difference and percent prevalence ratio to quantify its magnitude and relative variation. Both were computed with generalized linear models, the former using a Gaussian and the latter a Poisson model. The datasets from the surveys were stacked to compose a single dataset, and an indicator variable was created to flag their respective survey iteration, 2013 or 2019. Post-stratification calibration was performed to adjust the weights accordingly. The prevalence in each grouping category in 2013 was held as the baseline by making the intercept equal to zero. To compute the prevalence change from 2013 to 2019, an interaction term between the grouping variable and the indicator variable estimated either the absolute difference or the log of the prevalence ratio. The reported percent prevalence ratio was computed as the exponential of the interaction coefficient minus one and multiplied by 100.

All statistical analyses were performed using survey-specific weighting factors adjusting the study samples to the demographic-geographic distribution of the population in Brazil. The analyses were conducted in R version 4.0.5 (http://www.r-project.org) and the survey package version 4.0.

Results

Demographic features of PNS 2013 and PNS 2019 samples are shown in Table 1. Overall, the sample characteristics of PNS 2013 and PNS 2019 showed little change in the underlying population regarding the included variables, except for age distribution, which shifted towards the older ages, and the increase in higher levels of education.

Table 2 shows the prevalence of depressive symptoms according to sociodemographic characteristics and health behaviors in the general population in 2013 and 2019. Overall, there was a 37.6% increase in the prevalence of depressive symptoms between 2013 (7.9%) and 2019 (10.8%). This increase was higher among the youngest (aged 18-24 years old), women, those living in urban areas, and those living in the Southeast Region. There was a significant sex difference in the prevalence of depressive symptoms; women had a higher prevalence in both surveys, with an increase in prevalence between 2013 (10.7%) and 2019 (15%) greater than that observed among men (4.7% vs. 6.1%). Prevalence among women was significantly higher than among men in all age groups and at both time points (Table 3).

Although increase in the prevalence of depressive symptoms for all age groups was observed, this increase was more noticeable among the younger age groups, especially among those aged 18 to 24 years, where the prevalence of depressive symptoms almost doubled, being 5.6% in 2013 and 11.1% in 2019. This pattern was observed for women (8.3% vs. 15.6%) and men (2.9% vs. 6.6%) for the same age group in the stratified analysis. In contrast, for those aged 70 years or more, the prevalence remained almost constant in the whole population, changing from 10.2% to 11.1%, increasing among women but not among men.

Those living in urban areas showed a higher increase (39.8%) in the prevalence of depressive symptoms (from 8.1% in 2013 to 11.3% in 2019) when compared to those living in rural areas (from 6.4% to 7.7% in the same period), a relative increase of 20.2%. When considering the country's macroregions, the absolute differences between the prevalence of depressive symptoms in 2013 and 2019 followed the 2-3% found for the whole country, except the Southeast (Table 2). When stratified by sex, the absolute differences of 4-5% in the prevalence of depressive symptoms between 2013 and 2019 among women remained for all regions, except for the South Region, where it was less than 1% (13.4% in 2013 and 14.3% in 2019). In 2013, the prevalence of depressive symptoms among women in the South Region was higher than in the rest of the country and remained stable until 2019 (Table 3).

Table 1

Distribution of sociodemographic characteristics of the population aged 18 years or older. *Brazilian National Health Survey*, 2013 and 2019.

	Population in 2013			Population in 2019		
	n	N	%	n	N	%
Brazil	60,202	145,572,210	100.0	88,531	159,171,311	100.0
Region						
North	12,536	10,873,762	7.5	16,937	12,494,635	7.8
Northeast	18,305	38,515,102	26.5	30,702	42,106,815	26.5
Southeast	14,294	63,924,452	43.9	19,435	69,148,495	43.4
South	7,548	21,474,791	14.8	11,276	23,373,724	14.7
Central-West	7,519	10,784,103	7.4	10,181	12,047,642	7.6
Area						
Urban	49,245	125,446,098	86.2	68,220	137,171,226	86.2
Rural	10,957	20,126,112	13.8	20,311	22,000,085	13.8
Sex						
Male	25,920	68,568,527	47.1	41,662	74,552,698	46.8
Female	34,282	77,003,683	52.9	46,869	84,618,613	53.2
Skin color						
White	24,106	69,229,919	47.6	32,409	68,857,990	43.3
Black/Brown	35,143	74,369,370	51.1	54,778	87,974,298	55.3
Others	953	1,972,921	1.4	1,344	2,339,023	1.5
Age (years)						
18-24	7,823	23,186,777	15.9	8,145	22,072,088	13.9
25-29	6,498	14,823,285	10.2	7,249	13,107,254	8.2
30-39	14,269	31,430,214	21.6	18,150	33,411,675	21.0
40-49	11,405	26,360,041	18.1	16,602	28,930,814	18.2
40-59	9,030	23,487,729	16.1	15,657	27,250,627	17.1
60-69	6,238	14,866,884	10.2	12,555	19,367,899	12.2
70+	4,939	11,417,281	7.8	10,173	15,030,954	9.4
Work status						
Working	36,442	89,494,928	61.5	52,475	97,520,408	61.3
Not working	23,760	56,077,282	38.5	36,056	61,650,903	38.7
Income (minimum wage)						
0-1	31,760	72,378,747	49.7	48,296	81,499,740	51.2
> 1-3	20,828	55,532,384	38.1	29,675	59,294,591	37.3
> 3-5	3,851	9,338,544	6.4	5,490	10,117,149	6.4
5+	3,752	8,298,877	5.7	5,048	8,209,612	5.2
Education						
Less than primary	24,083	56,741,611	39.0	35,572	55,320,373	34.8
Primary	9,215	22,589,072	15.5	12,005	23,048,597	14.5
Secondary	19,149	47,729,621	32.8	27,337	55,612,506	34.9
Higher education	7,755	18,511,905	12.7	13,617	25,189,835	15.8
Marital status						
Not living with a partner	23,989	53,371,566	36.7	35,700	58,478,288	36.7
Married or living with a partner	36,213	92,200,644	63.3	52,831	100,693,023	63.3

n: sample size; N: expanded population.

Table 2

Prevalence of depressive symptoms by sociodemographic factors and health behaviors among adults (> 18 years of age), absolute prevalence difference, and percent prevalence ratio. *Brazilian National Health Survey*, 2013 and 2019.

	Prevalence of depressive symptoms in 2013		Prevalence of depressive symptoms in 2019		Absolute change in the prevalence 2013-2019		Relative change in the prevalence 2013-2019	
	%	95%CI	%	95%CI	Absolute differences	95%CI	%PR	95%CI
Brazil	7.9	7.5; 8.3	10.8	10.4; 11.2	3.0	2.4; 3.5	37.6	29.2; 46.5
Region								
North	6.1	5.3; 6.8	8.3	7.6; 9.0	2.2	1.2; 3.2	36.7	18.0; 58.3
Northeast	8.0	7.3; 8.7	10.7	10.1; 11.2	2.7	1.8; 3.6	33.7	21.1; 47.6
Southeast	7.7	7.0; 8.4	11.5	10.7; 12.3	3.8	2.8; 4.9	50.0	34.0; 68.0
South	9.1	8.0; 10.1	10.2	9.3; 11.1	1.2	-0.2; 2.6	12.9	-2.6; 31.0
Central-West	8.2	7.3; 9.1	11.4	10.3; 12.4	3.2	1.8; 4.5	38.7	20.2; 60.2
Area								
Urban	8.1	7.7; 8.6	11.3	10.9; 11.8	3.2	2.6; 3.9	39.8	30.6; 49.6
Rural	6.4	5.6; 7.2	7.7	7.0; 8.4	1.3	0.3; 2.3	20.2	3.4; 39.7
Sex								
Male	4.7	4.2; 5.1	6.1	5.7; 6.5	1.4	0.8; 2.1	30.8	16.0; 47.4
Female	10.7	10.1; 11.3	15.0	14.4; 15.6	4.3	3.4; 5.1	39.8	30.4; 49.8
Age (years)								
18-24	5.6	4.8; 6.4	11.1	9.8; 12.4	5.5	3.9; 7.0	97.4	63.7; 138.1
25-29	5.6	4.8; 6.5	8.7	7.6; 9.8	3.1	1.7; 4.4	54.4	26.9; 88.0
30-39	7.3	6.6; 8.0	10.0	9.2; 10.8	2.7	1.6; 3.8	36.8	20.3; 55.7
40-49	8.7	7.8; 9.7	11.7	10.8; 12.5	2.9	1.7; 4.2	33.7	17.6; 51.9
40-59	9.8	8.7; 10.8	11.9	11.0; 12.9	2.2	0.8; 3.6	22.5	7.1; 40.1
60-69	8.6	7.4; 9.9	10.5	9.5; 11.5	1.8	0.2; 3.5	21.4	1.9; 44.6
70+	10.2	8.8; 11.5	11.1	10.0; 12.1	0.9	-0.8; 2.6	8.9	-7.8; 28.5
Race/Skin color								
White	7.5	6.9; 8.0	10.6	9.9; 11.2	3.1	2.3; 3.9	41.4	28.7; 55.3
Black/Brown	8.2	7.7; 8.8	11.0	10.6; 11.5	2.8	2.1; 3.5	34.0	23.9; 45.0
Others	7.7	4.9; 10.6	10.2	6.4; 14.0	2.5	-2.2; 7.2	31.8	-21.6; 121.5
Work status								
Employed	6.1	5.6; 6.5	8.8	8.3; 9.2	2.7	2.1; 3.3	44.8	32.8; 57.9
Unemployed	10.7	10.0; 11.5	14.1	13.4; 14.7	3.3	2.3; 4.3	30.8	20.6; 41.8
Income (minimum wage)								
0-1	9.2	8.6; 9.8	12.2	11.7; 12.7	3.0	2.2; 3.8	32.9	23.0; 43.6
> 1-3	7.1	6.5; 7.7	9.9	9.3; 10.6	2.8	1.9; 3.7	39.3	24.9; 55.4
> 3-5	5.1	4.0; 6.2	7.6	6.3; 8.8	2.5	0.8; 4.1	47.8	12.5; 94.1
5+	4.5	3.4; 5.6	7.8	6.5; 9.0	3.3	1.6; 4.9	73.0	29.1; 131.7
Education								
Lower than primary	10.2	9.5; 10.9	12.4	11.8; 13.0	2.2	1.2; 3.1	21.3	11.4; 31.9
Primary	7.7	6.8; 8.6	11.5	10.4; 12.5	3.7	2.3; 5.2	48.3	27.3; 72.7
Secondary	6.0	5.4; 6.5	9.8	9.2; 10.5	3.9	3.0; 4.7	64.5	47.0; 84.2
Higher education	5.7	4.8; 6.6	9.0	8.0; 10.0	3.3	1.9; 4.6	57.3	29.6; 90.8
Marital status								
Not living with a partner	8.0	7.4; 8.6	12.7	12.0; 13.4	4.7	3.8; 5.6	58.6	44.7; 73.7
Married or living with a partner	7.8	7.3; 8.3	9.8	9.3; 10.2	2.0	1.3; 2.6	25.1	15.6; 35.3

(continues)

Table 2 (continued)

	Prevalence of depressive symptoms in 2013		Prevalence of depressive symptoms in 2019		Absolute change in the prevalence 2013-2019		Relative change in the prevalence 2013-2019	
	%	95%CI	%	95%CI	Absolute differences	95%CI	%PR	95%CI
Heavy drinking								
Yes	8.9	7.5; 10.4	12.0	10.5; 13.6	3.1	0.9; 5.3	34.7	9.0; 66.3
No	7.8	7.4; 8.2	10.7	10.3; 11.1	2.9	2.4; 3.5	37.6	28.9; 46.8
Recommended physical activity								
Yes	4.8	4.2; 5.4	7.4	6.8; 8.0	2.6	1.7; 3.4	53.3	31.7; 78.5
No	8.8	8.3; 9.2	12.3	11.8; 12.8	3.5	2.8; 4.2	40.4	31.2; 50.1
Smoking								
Yes	10.8	9.7; 11.9	14.7	13.5; 15.9	3.9	2.3; 5.5	35.9	19.4; 54.8
No	7.4	7.0; 7.8	10.3	9.9; 10.7	2.9	2.3; 3.5	39.4	30.2; 49.4

95%CI: 95% confidence interval; %: prevalence; %PR: percent prevalence ratio.

Table 3

Prevalence of depressive symptoms by sociodemographic factors and health behaviors among adults (> 18 years of age), absolute prevalence difference, and percent prevalence ratio, by sex. *Brazilian National Health Survey*, 2013 and 2019.

	Prevalence of depressive symptoms in 2013		Prevalence of depressive symptoms in 2019		Absolute change in the prevalence 2013-2019		Relative change in the prevalence 2013-2019	
	%	95%CI	%	95%CI	Absolute differences	95%CI	%PR	95%CI
Male								
Brazil	4.7	4.2; 5.1	6.1	5.7; 6.5	1.4	0.8; 2.1	30.8	16.0; 47.4
Region								
North	3.4	2.7; 4.2	4.3	3.7; 4.9	0.9	-0.1; 1.9	26.1	-3.0; 63.8
Northeast	5.0	4.2; 5.7	5.8	5.2; 6.4	0.8	-0.1; 1.8	17.2	-2.1; 40.2
Southeast	4.9	4.0; 5.7	6.7	5.9; 7.6	1.9	0.7; 3.1	39.1	12.1; 72.6
South	4.2	3.3; 5.1	5.7	4.8; 6.5	1.5	0.2; 2.8	35.2	3.2; 77.3
Central-West	4.6	3.5; 5.7	5.9	4.9; 7.0	1.3	-0.1; 2.8	29.2	-3.4; 72.8
Area								
Urban	4.8	4.3; 5.3	6.5	6.0; 7.0	1.7	1.0; 2.4	35.0	18.4; 53.9
Rural	3.8	3.0; 4.6	4.0	3.4; 4.5	0.1	-0.8; 1.1	3.8	-19.6; 34.0
Age (years)								
18-24	2.9	2.0; 3.8	6.6	5.0; 8.2	3.7	1.9; 5.5	127.1	54.1; 234.6
25-29	2.7	1.8; 3.5	5.0	3.8; 6.2	2.3	0.9; 3.8	87.3	26.2; 178.1
30-39	4.1	3.3; 4.9	4.7	3.9; 5.5	0.6	-0.5; 1.7	14.5	-11.4; 48.0
40-49	4.8	3.7; 5.9	6.4	5.4; 7.3	1.5	0.1; 2.9	31.7	1.1; 71.5
40-59	6.2	4.9; 7.5	7.0	5.9; 8.0	0.8	-0.9; 2.5	12.3	-13.5; 45.9
60-69	6.0	4.4; 7.6	6.7	5.5; 7.9	0.7	-1.3; 2.8	11.9	-19.4; 55.4
70+	7.4	5.6; 9.3	6.4	5.3; 7.5	-1.1	-3.2; 1.1	-14.5	-36.7; 15.7
Race/skin color								
White	4.8	4.1; 5.6	6.2	5.6; 6.9	1.4	0.4; 2.3	28.2	7.1; 53.6
Black/Brown	4.5	3.9; 5.1	6.0	5.4; 6.6	1.5	0.7; 2.3	33.9	14.1; 57.1
Others	3.8	0.8; 6.8	4.8	1.1; 8.5	1.1	-3.7; 5.8	27.7	-57.5; 283.8

(continues)

Table 3 (continued)

	Prevalence of depressive symptoms in 2013		Prevalence of depressive symptoms in 2019		Absolute change in the prevalence 2013-2019		Relative change in the prevalence 2013-2019	
	%	95%CI	%	95%CI	Absolute differences	95%CI	%PR	95%CI
Work status								
Working	3.6	3.1; 4.1	4.8	4.3; 5.2	1.2	0.6; 1.9	34.0	13.9; 57.6
Not working	7.8	6.7; 8.9	9.5	8.5; 10.5	1.7	0.2; 3.2	22.0	2.3; 45.5
Income (minimum wage)								
0-1	5.4	4.8; 6.1	6.6	6.0; 7.3	1.2	0.3; 2.1	21.9	4.1; 42.6
> 1-3	4.3	3.6; 5.0	5.8	5.1; 6.5	1.5	0.5; 2.5	35.2	10.6; 65.3
> 3-5	2.4	1.4; 3.4	4.6	3.0; 6.1	2.2	0.3; 4.0	90.4	11.2; 226.0
5+	3.3	1.7; 4.9	4.9	3.4; 6.3	1.6	-0.6; 3.7	48.2	-16.1; 161.6
Education								
Lower than primary	6.3	5.5; 7.1	7.0	6.2; 7.7	0.7	-0.4; 1.7	10.7	-5.8; 30.1
Primary	4.1	3.0; 5.1	5.9	4.8; 7.0	1.9	0.4; 3.3	45.8	6.8; 99.0
Secondary	3.3	2.7; 3.9	5.7	5.0; 6.4	2.4	1.4; 3.4	73.1	37.1; 118.5
Higher education	3.6	2.3; 4.9	5.0	4.0; 6.0	1.4	-0.3; 3.0	38.4	-8.2; 108.6
Marital status								
Not living with a partner	4.8	4.1; 5.6	7.9	6.9; 8.8	3.0	1.9; 4.2	63.0	34.5; 97.4
Married or living with a partner	4.6	4.0; 5.1	5.3	4.8; 5.7	0.7	0.0; 1.5	16.1	-0.2; 35.0
Heavy drinking								
Yes	6.8	5.2; 8.5	7.4	5.7; 9.1	0.6	-1.8; 3.0	8.8	-22.2; 52.1
No	4.4	4.0; 4.9	5.9	5.5; 6.4	1.5	0.9; 2.1	33.7	17.5; 52.2
Recommended physical activity								
Yes	2.2	1.7; 2.7	4.4	3.7; 5.0	2.1	1.3; 3.0	95.8	49.6; 156.3
No	5.6	5.0; 6.1	7.0	6.4; 7.5	1.4	0.6; 2.2	25.4	9.9; 43.2
Smoking								
Yes	6.3	5.2; 7.4	9.0	7.7; 10.2	2.6	1.0; 4.3	41.9	13.7; 77.1
No	4.3	3.8; 4.7	5.5	5.1; 6.0	1.3	0.6; 1.9	29.8	13.2; 48.7
Female								
Brazil	10.7	10.1; 11.3	15.0	14.4; 15.6	4.3	3.4; 5.1	39.8	30.4; 49.8
Region								
North	8.6	7.3; 9.8	12.0	10.8; 13.2	3.4	1.7; 5.2	39.9	17.2; 67.1
Northeast	10.7	9.7; 11.6	14.9	14.0; 15.8	4.2	2.9; 5.5	39.8	25.6; 55.5
Southeast	10.1	9.1; 11.1	15.6	14.4; 16.8	5.5	3.9; 7.1	54.3	36.0; 75.0
South	13.4	11.7; 15.1	14.3	12.9; 15.8	0.9	-1.4; 3.1	6.5	-9.4; 25.3
Central-West	11.5	10.1; 12.8	16.2	14.7; 17.8	4.8	2.7; 6.8	41.7	21.7; 64.9
Area								
Urban	11.0	10.3; 11.6	15.4	14.7; 16.1	4.5	3.5; 5.4	40.6	30.5; 51.5
Rural	9.1	7.8; 10.4	11.9	10.8; 13.1	2.8	1.1; 4.6	31.3	10.5; 55.8
Age (years)								
18-24	8.3	6.9; 9.6	15.6	13.5; 17.7	7.4	4.9; 9.8	89.1	53.6; 132.7
25-29	8.6	7.1; 10.0	12.1	10.4; 13.8	3.5	1.3; 5.8	41.1	13.2; 76.0
30-39	10.2	9.0; 11.3	14.9	13.5; 16.3	4.7	2.9; 6.5	46.3	26.7; 68.9
40-49	12.0	10.5; 13.5	16.0	14.7; 17.4	4.1	2.1; 6.0	33.8	15.5; 55.1
40-59	13.0	11.4; 14.6	16.5	15.1; 17.9	3.5	1.4; 5.6	26.8	9.4; 46.9
60-69	10.6	9.0; 12.3	13.4	12.0; 14.9	2.8	0.6; 5.0	26.1	4.2; 52.6
70+	12.2	10.3; 14.2	14.5	12.9; 16.1	2.2	-0.3; 4.8	18.2	-2.7; 43.5

(continues)

Table 3 (continued)

	Prevalence of depressive symptoms in 2013		Prevalence of depressive symptoms in 2019		Absolute change in the prevalence 2013-2019		Relative change in the prevalence 2013-2019	
	%	95%CI	%	95%CI	Absolute differences	95%CI	%PR	95%CI
Race/Skin color								
White	9.8	9.0; 10.6	14.3	13.3; 15.3	4.5	3.3; 5.8	46.3	31.6; 62.8
Black/Brown	11.7	10.8; 12.5	15.6	14.8; 16.3	3.9	2.8; 5.0	33.4	22.4; 45.4
Others	10.5	6.2; 14.8	15.7	9.3; 22.0	5.2	-2.5; 12.8	49.2	-16.2; 165.7
Work status								
Working	9.4	8.7; 10.1	13.8	12.9; 14.6	4.4	3.3; 5.5	46.8	32.9; 62.2
Not working	12.1	11.2; 13.0	16.3	15.5; 17.1	4.2	3.0; 5.4	34.9	23.5; 47.4
Income (minimum wage)								
0-1	12.2	11.3; 13.0	16.7	15.9; 17.5	4.6	3.4; 5.7	37.5	26.4; 49.7
> 1-3	9.9	9.0; 10.9	13.8	12.6; 15.0	3.9	2.4; 5.4	39.0	22.4; 58.0
> 3-5	7.7	5.8; 9.5	10.5	8.5; 12.6	2.9	0.1; 5.7	37.7	0.4; 88.7
5+	5.8	4.2; 7.3	10.8	8.7; 12.8	5.0	2.4; 7.6	87.0	34.2; 160.7
Education								
Lower than primary	13.9	12.8; 14.9	17.4	16.3; 18.4	3.5	2.0; 5.0	25.2	13.6; 38.0
Primary	11.4	9.9; 12.9	17.2	15.4; 18.9	5.8	3.5; 8.0	50.4	27.5; 77.4
Secondary	8.3	7.5; 9.1	13.4	12.4; 14.4	5.1	3.9; 6.4	61.8	43.3; 82.6
Higher education	7.3	6.0; 8.6	11.9	10.5; 13.3	4.6	2.7; 6.6	63.9	32.2; 103.2
Marital status								
Not living with a partner	10.5	9.6; 11.3	15.8	14.8; 16.7	5.3	4.0; 6.5	32.1	10.7; 57.6
Married or living with a partner	10.9	10.2; 11.7	14.5	13.6; 15.3	3.6	2.4; 4.7	45.8	35.4; 57.1
Heavy drinking								
Yes	13.6	10.6; 16.5	19.6	16.8; 22.4	6.0	2.0; 10.1	44.4	11.3; 87.4
No	10.6	10.0; 11.2	14.8	14.1; 15.4	4.1	3.3; 5.0	38.8	29.4; 49.0
Recommended physical activity								
Yes	8.2	7.0; 9.5	10.9	9.9; 11.8	2.6	1.1; 4.2	32.1	10.7; 57.6
No	11.3	10.7; 12.0	16.5	15.7; 17.3	5.2	4.2; 6.2	45.8	35.4; 57.1
Smoking								
Yes	17.7	15.6; 19.9	23.1	20.8; 25.4	5.4	2.3; 8.5	30.4	11.5; 52.6
No	9.9	9.3; 10.5	14.1	13.5; 14.8	4.3	3.4; 5.1	43.2	32.8; 54.4

95%CI: 95% confidence interval; %: prevalence; %PR: percent prevalence ratio.

For socioeconomic and demographic characteristics, no relevant absolute differences were found in the prevalence of depression between 2013 and 2019 in the categories under study, with increases mostly around 3% between 2013 and 2019 for the overall population, 4-5% for women, and 1.5% for men. On the other hand, considering the relative variation, one can observe increases of up to 127.1% for men aged 18 to 24 and 89.1% for women in the same age group (Tables 2 and 3).

When stratified by sex, age, and working status, the absolute difference increase in the prevalence of depressive symptoms almost tripled in the group of men aged 18 to 24, who were unemployed (3.7% in 2013 and 10.3% in 2019), a relative increase of 178.4%, when compared to those who were employed (2.6% vs. 4.9%), a relative increase of 90.5% (Table 4).

Table 4

Prevalence of depressive symptoms by sociodemographic factors and health behaviors among adults (> 18 years of age), absolute prevalence difference, and percent prevalence ratio, by sex, work status, and age. *Brazilian National Health Survey*, 2013 and 2019.

Work status/ Age (years)	Prevalence of depressive symptoms in 2013		Prevalence of depressive symptoms in 2019		Absolute change in the prevalence 2013-2019		Relative change in the prevalence 2013-2019	
	%	95%CI	%	95%CI	Absolute differences	95%CI	%PR	95%CI
Both sex								
Working								
18-24	5.2	4.2; 6.3	9.9	8.2; 11.6	4.7	2.7; 6.7	89.4	45.5; 146.6
25-29	4.4	3.6; 5.2	8.2	6.9; 9.5	3.8	2.3; 5.4	86.8	45.8;139.2
30-39	6.3	5.6; 7.1	8.1	7.3; 9.0	1.8	0.7; 3.0	28.8	10.1;50.8
40-49	6.7	5.7; 7.6	9.5	8.7; 10.3	2.8	1.5; 4.1	42.2	20.3;68.2
40-59	6.9	5.7; 8.0	9.2	8.1; 10.2	2.3	0.7; 3.9	33.6	9.0; 63.7
60-69	6.5	4.5; 8.5	7.7	6.1; 9.2	1.2	-1.3; 3.8	18.6	-18.3;72.1
70+	5.0	1.4; 8.5	4.2	2.6; 5.8	-0.8	-4.7; 3.1	-16.3	-62.5;87.1
Not working								
18-24	6.2	4.9; 7.5	12.8	10.7; 14.9	6.6	4.2; 9.1	106.5	58.9; 168.4
25-29	9.3	7.0; 11.5	9.9	8.0; 11.7	0.6	-2.4; 3.5	6.3	-22.0; 44.9
30-39	10.7	8.8; 12.6	16.8	14.8; 18.8	6.2	3.4; 8.9	57.7	27.4; 95.3
40-49	14.7	12.3; 17.0	18.9	16.6; 21.1	4.2	1.0; 7.5	28.8	5.5; 57.1
40-59	14.3	12.4; 16.3	17.1	15.4; 18.8	2.8	0.2; 5.4	19.4	0.8; 41.5
60-69	9.6	8.2; 11.0	12.0	10.7; 13.3	2.4	0.5; 4.3	25.1	4.1; 50.4
70+	10.8	9.3; 12.2	11.9	10.7; 13.1	1.1	-0.7; 3.0	10.5	-6.5; 30.7
Male								
Working								
18-24	2.6	1.7; 3.5	4.9	3.4; 6.5	2.3	0.5; 4.2	90.5	18.6; 205.8
25-29	2.4	1.5; 3.2	4.6	3.4; 5.9	2.3	0.8; 3.8	96.2	24.8; 208.5
30-39	3.7	2.9; 4.5	4.3	3.5; 5.2	0.6	-0.5; 1.8	17.3	-12.0; 56.4
40-49	3.4	2.4; 4.3	5.3	4.4; 6.1	1.9	0.6; 3.2	55.9	12.0; 117.1
40-59	4.9	3.5; 6.3	5.2	4.1; 6.4	0.4	-1.4; 2.1	7.4	-24.6; 53.0
60-69	5.6	2.8; 8.4	4.4	2.9; 5.9	-1.2	-4.4; 1.9	-21.6	-57.1; 43.2
70+	3.6	-0.4; 7.5	3.5	1.6; 5.4	-0.1	-4.5; 4.3	-2.7	-71.6; 234.0
Not working								
18-24	3.7	1.7; 5.6	10.3	6.6; 14.0	6.6	2.4; 10.7	178.4	46.9; 427.7
25-29	5.2	2.0; 8.5	6.9	3.5; 10.3	1.6	-3.1; 6.4	31.1	-41.1; 192.0
30-39	8.3	4.4; 12.2	8.4	5.8; 11.0	0.1	-4.6; 4.8	1.6	-42.1; 78.2
40-49	15.1	9.8; 20.5	14.9	11.2; 18.6	-0.2	-6.7; 6.3	-1.6	-36.1; 51.5
40-59	10.6	7.2; 14.0	13.2	10.5; 15.9	2.6	-1.8; 6.9	24.2	-15.2; 81.8
60-69	6.3	4.4; 8.2	8.8	6.9; 10.7	2.5	-0.2; 5.1	39.0	-3.8; 101.1
70+	8.3	6.3; 10.4	7.0	5.7; 8.2	-1.3	-3.8; 1.1	-16.2	-38.4; 14.0
Female								
Working								
18-24	8.8	6.7; 10.9	16.7	13.4; 20.0	7.9	4.0; 11.8	89.8	39.8; 157.8
25-29	7.4	5.8; 9.0	12.7	10.3; 15.1	5.3	2.4; 8.2	71.6	28.5; 129.0
30-39	9.6	8.3; 10.8	12.8	11.1; 14.5	3.2	1.1; 5.3	33.6	11.0; 60.8
40-49	10.5	8.8; 12.3	14.1	12.7; 15.6	3.6	1.3; 5.9	34.2	10.3; 63.2
40-59	9.8	7.8; 11.8	14.4	12.6; 16.3	4.6	1.9; 7.3	47.0	15.8; 86.6
60-69	7.9	4.8; 10.9	12.3	9.2; 15.3	4.4	0.1; 8.7	56.1	-1.0; 146.2
70+	9.4	1.4; 17.3	5.5	2.7; 8.4	-3.8	-12.3; 4.6	-40.8	-78.1; 60.0

(continues)

Table 4 (continued)

Work status/ Age (years)	Prevalence of depressive symptoms in 2013		Prevalence of depressive symptoms in 2019		Absolute change in the prevalence 2013-2019		Relative change in the prevalence 2013-2019	
	%	95%CI	%	95%CI	Absolute differences	95%CI	%PR	95%CI
Not working								
18-24	7.7	6.0; 9.3	14.5	11.9; 17.0	6.8	3.7; 9.9	88.4	42.4; 149.4
25-29	10.4	7.7; 13.2	11.2	8.9; 13.4	0.7	-2.8; 4.3	6.8	-23.3; 48.9
30-39	11.3	9.2; 13.4	19.4	16.9; 21.9	8.1	4.8; 11.4	71.7	36.5; 115.9
40-49	14.5	12.0; 17.1	20.0	17.4; 22.7	5.5	1.8; 9.2	37.9	10.5; 72.1
40-59	15.8	13.4; 18.2	18.8	16.7; 20.8	3.0	-0.2; 6.1	18.7	-1.5; 43.1
60-69	11.4	9.5; 13.4	13.9	12.3; 15.4	2.4	-0.1; 4.9	21.2	-1.2; 48.6
70+	12.4	10.4; 14.4	15.1	13.4; 16.8	2.7	0.1; 5.3	21.8	0.1; 48.2

95%CI: 95% confidence interval; %: prevalence; %PR: percent prevalence ratio.

Regarding health behaviors in the general population, Table 2 shows that the prevalence of depressive symptoms increased in all of them around 3% in absolute value. In 2013 and 2019, people who reported heavy drinking, who did not exercise the recommended level of physical activity (inactive), and who smoked had a higher prevalence of depressive symptoms than those without such health risk behaviors. The variation in the prevalence of depressive symptoms among smokers varied from 10.8% in 2013 to 14.7% in 2019, a 35.9% prevalence ratio. A percent prevalence ratio increase of 40.4% was found among those that did not exercise the recommended level of physical activity (inactive), higher than differences observed in the other categories of health risk behaviors.

When stratifying by sex (Table 3), among women who reported heavy drinking, there was a higher increase in the prevalence of depressive symptoms from 2013 to 2019 than among those who did not report this pattern of alcohol consumption. Women who reported smoking in 2013 showed a higher prevalence of depressive symptoms (17.7% among smokers vs. 9.9% among nonsmokers) and in 2019 (23.1% among smokers and 14.1% among nonsmokers); with an increase of 30.4% in the percent prevalence ratio among smokers from 2013 to 2019. Among men, smoking showed a higher prevalence of depressive symptoms in 2013 and 2019, with a relative increase of 41.9%, considerably higher than the variation among men in the general population. Regarding physical activity, women who did not exercise the recommended time/intensity of physical activity in 2019 showed a higher prevalence of depressive symptoms than those who did exercise, as observed in 2013, with a relative increase of 45.8%. Conversely, among men, those who did not practice the recommended time/intensity of physical activity had a relative increase of 25.4% in the prevalence of depressive symptoms as compared to those who did practice physical activity, moving from 5.6% in 2013 to 7% in 2019 (Table 3).

Discussion

This is the first study that compares the prevalence of depressive symptoms in the Brazilian population in two distinct time-periods. The study shows an increase in the prevalence of depressive symptoms from 2013 to 2019, from 7.9% to 10.8%, mainly among women and the youngest. Across all age groups, the prevalence of depressive symptoms showed different change, with a higher increase among those aged 18 to 24 years. This increase among the youngest was even higher among unemployed individuals and especially among younger men.

Overall, the current results differ from those in the initially presented meta-analysis and from the *Global Burden of Disease Study* findings, which found no differences in the prevalence of depression over time [1,3]. A study in Chile, which compared the prevalence of major depression in 2003 and 2010, also found no significant variation (20.5% vs. 18.4%, respectively) [27]. However, studies that assessed the impact of financial crises and economic recessions on the prevalence of depression in adult popu-

lations from different countries found results similar to ours. In Spain, a study conducted to assess the impact of the economic crisis that began in 2007 on different health outcomes showed that, compared with the pre-crisis period of 2006, the 2010 survey revealed that the highest increase in frequency was for mood disorders, major depression (an absolute increase of 19.4%) and dysthymia (10.8%) [28]. In Greece, the prevalence of major depression increased from 3.3% in 2008 to 8.2% in 2011, and this increase was attributed to the economic crisis experienced by the country in 2008 [29]. To assess short-term differences in population mental health before and after the 2008 recession in England, a study conducted with representative samples of the general population in the working-age (25-64 years) was made between 1991 and 2010. The results showed an increase of common mental disorders from 13.7% in 2008 to 16.4% in 2009 and 15.5% in 2010 [30].

Some of these studies also found that financial crises, periods of recession, and unemployment have a higher impact in specific subgroups, especially among the youngest and among men [31]. Probably, these groups are more affected by economic crisis. The loss of their jobs, or the impossibility to get one, may conduct them to disillusion and hopelessness situations. On the other hand, women, who already have a higher risk of depression, are also very affected by periods of economic crisis. However, none of these studies found differences in the prevalence of depression as large as those observed in this study. Our findings showing a 178.4% increase in the prevalence of depressive symptoms among unemployed men aged 18 to 24 years, and 89.8% among women in the same age group and work situation, is unparalleled in the literature. Brazil had a period of good economic growth from the beginning of the 21st century to 2014, which was followed by a period of deep economic crisis, with a significant increase in unemployment, which led to a dramatic drop in the population's standard of living, affecting mainly those who were at the age of entry into the labor market. As Brazil did not have effective mechanisms for social protection in such periods of crisis, it is possible that more vulnerable groups suffered the consequences of economic hardships more intensively.

This study also found that individuals dwelling in urban areas of the country had a higher prevalence of depressive symptoms in 2013 and 2019 and a higher increase in the percent prevalence ratio of depressive symptoms in the 6 years (39.8%) when compared to residents in rural areas (20.2%), and this pattern was similar for men and women. We did not find any other study that investigated living in urban vs. rural areas and the mental health trend in Brazil, but previous studies on the prevalence of common mental disorders/depression in urban and rural areas have shown inconclusive results; some studies showed association, whereas others did not [32,33,34]. However, studies conducted in other countries corroborate our findings and show that living in urban regions with high demographic density is associated with a higher risk of depression [35,36]. Among the studies that have investigated the trend of depression over time, some have observed a tendency towards an increase in the prevalence of depression in urban vs. rural regions, following accelerated urbanization processes [37,38]. Other studies, however, did not observe such a trend [27,39]. A recent study to assess trends in the prevalence of depression between 2014 and 2018, conducted in Peru, found no significant differences in the prevalence of depression in that period for urban and rural regions [40].

Regarding health behaviors, this work found an increase in the prevalence of depressive symptoms between 2013 and 2019 for the worst categories of the three health behaviors under study, for both sexes: heavy drinking, smoking, and no physical activity during leisure-time, following the pattern observed for the general population. However, when stratified by sex, the differences in the prevalence of depressive symptoms are higher for women who reported excessive alcohol consumption than for men who reported such behavior. The relationship between health risk behaviors and depressive symptoms is well established in the literature [41,42,43,44]. However, few studies have evaluated the role of health risk behaviors on changes in the prevalence of depression over time. Although estimating associations is not the goal of this study, the stratified analysis suggests that such relationship may be worth investigating. Overall, the current results are in line with those presented by a study based on the annually cross-sectional *U.S. National Health Interview Surveys* (NHIS) of 1997-2016, among individuals aged 18 years and older [45]. They found that psychological distress became more strongly associated with smoking and physical inactivity but less strongly associated with heavy alcohol consumption. Another study, also in the American population, examined changes in the prevalence of major depression in the United States between 1991-1992 and 2001-2002 and sought to determine whether these changes were associated with changes in substance abuse (includ-

ing alcohol). They found that increases in the prevalence of depression associated with substance use disorders were consistent only for black men aged 18 to 29 years [46]. Our results are also in line with longitudinal studies showing that women in the higher risk drinking group at baseline were at a higher risk of developing depression disorder at follow-up [44,47].

Strengths and limitations of this study

One of the strengths is that this study is the first one to assess the trend in the prevalence of depressive symptoms based on two national representative surveys. Thus, it allows assessing changes in the prevalence of depressive symptoms according to sociodemographic characteristics, region of residence, and health behaviors. Moreover, both surveys used the same standardized questionnaire (PHQ-9), widely used in national and international studies to assess depressive symptoms, according to internationally accepted criteria, that allows the comparison of this study results with those of other international studies.

Some limitations need to be addressed: Firstly, the presence of depressive symptoms was assessed with the PHQ-9 with the cutoff 10 to classify depression, and pooled estimates for such cutoff are 0.77 for sensitivity and 0.85 for specificity, implying that some degree of random misclassification may have occurred. It may have biased the prevalence estimates and, therefore, the differences and ratios. Secondly, more severe cases of depression may have been unaccounted due to non-response, measurement error, and exclusion of institutionalized individuals in both surveys. Another limitation is that the primary sample units use different identification codes across surveys; since primary sample units may be overlapped in both samples, there may be some variability due to dependency not accounted for. Thus, the standard errors for the differences and ratios may be slightly underestimated, and the confidence limits close to the null hypothesis should be interpreted with caution.

Conclusion

Our findings show a significant increase in the prevalence of depressive symptoms over the six years between the two surveys. The finding that the group of younger and unemployed men showed the highest variation in the prevalence of depressive symptoms draws attention. It encourages us to seek explanations based on the literature and the country's socioeconomic context during this period. It is possible that such subgroup is today one of the most vulnerable and this condition may affect their mental health. Although economic crises tend to reduce healthcare budgets, mental health care budget must be maintained or even increased, so that economic recovery and mental health of the population can achieve faster and better results.

Contributors

All authors contributed to the study design, data analysis, interpretation of results and preparation of the manuscript.

Additional informations

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Resumo

O estudo objetiva avaliar a variação nacional na prevalência geral da depressão e em diferentes grupos sociodemográficos, comportamentos de saúde e macrorregiões do Brasil entre 2013 e 2019. Os dados foram obtidos de dois inquéritos brasileiros de abrangência nacional, a Pesquisa Nacional de Saúde *(PNS) 2013 e a 2019. Entre os participantes com idade de 18 anos ou mais, houve 60.202 indivíduos em 2013 e 88.531 em 2019. A depressão foi avaliada com o* Questionário de Saúde do Paciente-9 *(PHQ-9). Todas as estimativas levaram em conta os pesos populacionais e a amostragem complexa. Os achados mostraram que durante os seis anos entre as duas edições da PNS, a prevalência de depressão no Brasil aumentou em 36,7%, de 7,9% em 2013 para 10,8% em 2019, com um aumento ainda maior em adultos jovens, no grupo etário de 18 a 24 anos, e naqueles que não estavam trabalhando, onde houve um aumento de quase três vezes na prevalência de depressão (3,7% em 2013 e 10,3% em 2019), ou seja, um aumento de 178,4%. Indivíduos residindo em áreas urbanas tiveram um aumento maior na prevalência de depressão ao longo do período de seis anos (39,8%), em comparação com os residentes em áreas rurais (20,2%). Houve um aumento na prevalência de depressão entre 2013 e 2019 para as piores categorias dos três comportamentos de saúde incluídos no estado, tanto em homens quanto em mulheres: etilismo, tabagismo e sedentarismo. Nossos resultados mostram um aumento significativo na prevalência de depressão nos seis anos entre as duas edições da PNS, principalmente entre homens mais jovens e desempregados. A recessão econômica no Brasil durante o período pode explicar esses achados.*

Inquéritos Epidemiológicos; Depressão; Saúde Mental; Estudos Transversais

Resumen

El objetivo de este estudio es evaluar la variación nacional en la prevalencia general de depresión, así como en diferentes grupos sociodemográficos, comportamientos de salud, y macrorregiones del país entre 2013-2019. Los datos se obtuvieron de dos encuestas nacionales brasileñas -Encuesta Nacional de Salud *2013 y 2019-. Los participantes con edades entre los 18 años y con más edad incluyeron a 60 202 personas en 2013 y 88 531 en 2019. La depresión se evaluó mediante el* Cuestionario de Salud del Paciente-9 *(PHQ-9). Todas las estimaciones justificaron los pesos de la población y el muestreo complejo. Los resultados mostraron que durante seis años entre las dos encuestas, la prevalencia de depresión en Brasil se incrementó en un 36,7%, yendo de un 7,9% en 2013 a un 10,8% en el 2019, y este incremento es mayor entre adultos jóvenes, de 18 a 24 años de edad, que no estaban trabajando, donde casi había un incremento tres veces superior en la prevalencia de depresión (3,7 en 2013 y 10,3 en 2019), un incremento de un 178,4%. Aquellos que vivían en áreas urbanas tenían un incremento mayor en la prevalencia de depresión durante el período de seis años (39,8%), cuando se comparó con los residentes en áreas rurales (20,2%). Hubo un incremento en la prevalencia de depresión entre 2013-2019 para las peores categorías de los tres comportamientos de salud incluidos en el estudio para tanto hombres como mujeres: consumo excesivo de alcohol, fumar, y no practicar deporte al nivel recomendado de actividad física. Nuestros resultados muestran un significado incremento en la prevalencia de depresión durante los seis años entre las dos encuestas, principalmente entre los hombres más jóvenes y desempleados. La recesión económica del país durante este periodo puede explicar estos resultados.*

Encuestas Epidemiológicas; Depresión; Salud Mental; Estudios Transversales

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