Factors associated to the condition of bedridden in Brazilian old people, results from the National Health Survey, 2013

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Abstract

Objective: to identify the factors associated to bedridden condition among Brazilian old people, analyzing socioeconomic and health conditions and the use of health services. Method: cross-sectional study, with secondary data from National Health Survey (2013). It counted on the population of individuals ≥60 aged (n=11.177). The bedridden condition was considered a dependent variable and the sociodemographic characteristics, health conditions and use of medical services as independent. Crude and adjusted logistic regression analyses were performed and reported crude and Adjusted Odds Ratio ($OR_{adjusted}$), with 95% confidence interval (95%CI). Results: It was found that 4.9% of the old people were bedridden. This condition was shown to be associated to male gender ($OR_{adjusted}$=1.45; 95%CI= 1.13-1.84), illiteracy ($OR_{adjusted}$=1.37 95%CI= 1.11-1.70) and number of chronic diseases, old people who had five chronic diseases were 4.96 (95%CI=2.78-8.85) times more likely than those without disease. The diseases associated to bedridden condition were stroke episode ($OR_{adjusted}$=3.03; 95%CI=1.29-8.43), diagnosis of systemic arterial hypertension ($OR_{adjusted}$=1.71; 95%CI=1.31-2.24), changes in cholesterol levels ($OR_{adjusted}$=2.08; CI95%= 1.37-3.17) and depression ($OR_{adjusted}$=5.64; 95%CI=2.42-13.14). Still, old people who needed care related to their own health (OR=16.94; 95%CI=7.15-40.16), hospitalization ($OR_{adjusted}$=8.10; 95%CI=4.20-15.54) and emergency home care in the last 12 months ($OR_{adjusted}$=1.78; 95%CI=1.25-2.55) and who considered the condition of poor general health ($OR_{adjusted}$=2.68; 95%CI=2.05-3.51) were more likely to be bedridden. Conclusion: This study allowed the identification of important factors associated with the bedridden condition of Brazilian old people, with emphasis on gender and education, the clinical variables of chronic diseases, and the more frequent use of health services.

Keywords: Aged. Bedridden Persons. Health Status Indicators. Geriatric Nursing.

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The authors declare there are no conflicts of interest in relation to the present study.

No funding was received in relation to the present study.

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Received: March 13, 2020
Approved: October 8, 2020

http://dx.doi.org/10.1590/1981-22562020023.200069

INTRODUCTION

The accelerated aging of the population poses challenges to health systems, since old people have a high prevalence of chronic diseases, which can evolve to a decline in functional and cognitive capacity. In this situation, an increase in the number of bedridden old people with a high degree of dependence is expected[1]. Often progressive and variable in severity, impaired mobility in old people has a multifactorial origin, with neurological and musculoskeletal disorders predominating[2], as well as the presence of diseases and the hospitalization process[3].

Conceptually, the bedridden patient is characterized by being unable to exercise self-care, either partially or totally, requiring assistance to perform activities of daily living[4]. In addition to the functional damage to several physiological systems, the restriction to the bed can favor changes in the emotional state, manifested by anxiety attacks, apathy, depression and social isolation[4]. It is estimated that 30 to 40% of hospitalized old people, regardless of the cause of hospitalization, develop some type of immobility after hospitalization[5].

The bedridden condition in old people is an important factor to be evaluated and monitored by the multidisciplinary health team. Furthermore, interventions related to prevention and care are effective and can significantly reduce the incidence of complications from this condition[1,4]. It is worth mentioning that the discussion about the bedridden condition and the associated factors that have national coverage is an unprecedented theme in Brazil and constitutes a differential. Given the above, the present study aimed to identify the factors associated with bedridden condition among Brazilian old people, analyzing socioeconomic conditions, health and use of health services.

METHOD

This is a study with secondary data from the last population-based survey, the National Health Survey (PNS-2013), conducted throughout the Brazilian territory[6]. PNS-2013 is a cross-sectional, quantitative, population-based study, carried out at the national level, proposed by the Ministry of Health and conducted by the Brazilian Institute of Geography and Statistics (IBGE).

The sampling plan used by the PNS had a probabilistic sampling by clusters in three stages, with the set of census sectors being the primary sampling units, the households the secondary units and the legal-age residents selected, the tertiary units. The sample size was defined considering the level of precision desired for the estimates of some indicators of interest, resulting in the investigation of 64,348 households, of which 60,202 residents were selected for individual interviews.

Data collection was carried out in the interstice from August 2013 to February 2014 by trained researchers, conducted by three questionnaires referring to the home, the residents and the individual. The instruments include topics related to the perception of health status, risk and protection factors, chronic diseases, health of the old people, among others. Details on the sampling process, data collection and questionnaires are available on the IBGE website and in the PNS-2013 report[6,7]. It is worth mentioning that the referred survey was approved by the National Commission for Ethics in Research for Human Beings, of the Ministry of Health, under Opinion No. 328.159/2013, and the data were made available publicly and free of charge (https://www.pns.icict.fiocruz.br/).

In the present study, only information from individuals aged ≥60 years was used, who answered the individual's questionnaire, resulting in a final sample of 11,177 subjects. PNS-2013 data were obtained from the aforementioned website. All variables underwent treatment, the numerical ones were transformed into categorical ones, some variables were recategorized, and others were dichotomized as recommended in the literature. Next, the variables considered in the study and the categories formed are exposed.

The dependent variable Bedridden is the result of the question: *Have you been bedridden in the last two weeks?* with answers yes and no.

The independent variables referred to the:

- *Sociodemographic characteristics:* gender (female and male); age, followed the categorization as recommended by Morais et al.,[8] in its instrument that assesses the functional clinical condition of old people (60 to 74 years, 75 to 84 years, ≥85 years); skin color (white, black, brown, others); living with the spouse (yes and no); marital status (married, separated / divorced, widowed, single) literate (yes and no); education (literacy, elementary, middle, undergraduate); and income, being categorized according to the minimum wages at the time of the study (up to 680 Reais, 681>1,320 reais, 1,321>2,640 reais, more than 2,641 reais).

- *Health condition:* self-perception of the general health condition (positive, negative); chronic diseases, with their categorization classified according to the frequency of the number of diseases, grouping from five diseases to present a lower frequency (none, one, two, three, four, five or more); diagnosis of: depression; systemic arterial hypertension; diabetes *mellitus*; rheumatoid arthritis; spine problem; chronic obstructive pulmonary disease; repetitive strain injury; hypercholesterolemia; cancer and previous stroke, as well as smoking and drinking were all dichotomized into *yes* and *no*.

- *Use of medical services:* frequency of medical consultations in the last year (numerical variable categorized in up to three consultations and four or more consultations) this classification followed that developed in the study by Meier et al.,[9] where he mentions that the categorization followed a document from the Ministry of Health, which foresees in the year 3 consultations in primary care and 1 consultation in secondary care; hospitalization in the last 12 months (no, yes); length of stay in days (numerical variable categorized up to three days; four or more days); in the last visit, medicines were prescribed (no, yes); emergency care at home in the last 12 months (no, yes); seeking health care in the last two weeks (no, yes). The lost data were counted in the descriptive tables as not informed and were not part of the statistical tests.

The results were analyzed descriptively by means of absolute and relative frequency. To test the association between the dependent variable and the independent variables, a bivariate analysis was initially performed using the chi-square test. Then, a logistic regression analysis was performed using the stepwise input method, based on the likelihood value. The variables that presented a value of $p \leq 0.20$ in the bivariate analysis were selected to enter the multiple model, remaining in the models if they reached $p < 0.05$ and / or adjusted the model. Then, the model was adjusted according to the variables that showed an association with the dependent variable: search in the last two weeks for health care vs. hospitalization; seeking in the last two weeks for health care vs. stroke; diagnosis of depression vs. gender; diagnosis of hypertension vs. diagnosis of cholesterol. The model generated an explanatory capacity of 95.1% in the crude and adjusted analysis.

RESULTS

It was found that of the 11,177 old people who made up the sample 4.9% (n=549) presented the bedridden condition at the time of the interview. In the sample, men prevailed, aged between 60 and 74 years, white, do not live with a spouse, married, literate, with low education and income below six hundred and eighty reais. Among the sociodemographic characteristics, an association with bedridden condition was found: gender, age, living with the spouse and being literate ($p < 0.05$) (Table 1).

Regarding the health condition of Brazilian old people, it was associated with the condition of being bedridden: self-perceived general health, number of chronic diseases, diagnosis of depression, systemic arterial hypertension, diabetes *mellitus*, rheumatoid arthritis, spinal problem, chronic obstructive pulmonary disease, hypercholesterolemia, repetitive strain injury, cancer and previous episode of stroke ($p<0.05$). Still, smoking and drinking were associated with bedridden condition ($p<0.05$) (Table 2).

As for the use of health services, shown in Table 3, all the variables investigated showed an association with the condition of being bedridden ($p < 0.05$), denoting greater use of these services by old people who were bedridden.

Table 1. Sociodemographic profile of Brazilian old people, according to their bedridden condition (n=11177). Brazil, 2013.

Variables n(%)	Bedridden		Total n(%) (n=11177; 100%)	*p*
	Yes n(%) (n=549; 4.9%)	No n(%) (n=10,628; 95.1%)		
Gender				
Female	178(32.4)	4377(41.2)	4555(40.8)	<0.001
Male	371(67.6)	6251(58.8)	6622(59.2)	
Age (years)				
60 to 74	391(71.2)	7899(74.3)	8290(74.2)	0.040
75 to 84	112(20.4)	2142(20.2)	2254(20.2)	
≥ 85	45(8.2)	779(7.3)	824(7.4)	
Not informed *	1(0.2)	8(0.1)	9(0.1)	
Skin color				
White	270(49.2)	5044(47.5)	5314(47.5)	0.370
Black	48(8.7)	1001(9.4)	1049(9.4)	
Brown	219(39.9)	4433(41.7)	4652(41.6)	
Others	12(2.2)	150(1.4)	162(1.4)	
Living with a spouse				
Yes	212(38.6)	4836(45.5)	5048(45.2)	0.002
No	337(61.4)	5792(54.5)	6129(54.8)	
Marital status				
Married	208(37.9)	4600(43.3)	4808(43.0)	0.088
Separated / Divorced	57(10.4)	1076(10.1)	1133(10.1)	
Widower	192(35.0)	3234(30.4)	3426(30.7)	
Not married	92(16.8)	1718(16.2)	1810(16.2)	
Literate				
Yes	371(67.6)	8015(75.4)	8386(75.0)	<0.001
No	178(32.4)	2613(24.6)	2791(25.0)	
Education				
Basic	213(38.8)	3993(37.6)	4206(37.6)	0.090
Fundamental	66(12.0)	1710(16.1)	1776(15.9)	
Medium	60(10.9)	1431(13.5)	1491(13.3)	
University graduate	55(10.0)	1112(10.5)	1167(10.4)	
Not informed *	155(28.2)	2382(22.4)	2537(22.7)	
Income				
> 680 Reais	279(50.8)	4806(45.2)	5085(45.5)	0.180
680> 1.320 Reais	74(13.5)	1238(11.6)	1312(11.7)	
1.320> 2.640 Reais	73(13.3)	1318(12.4)	1391(12.4)	
More than 2.640 Reais	62(11.3)	1433(13.5)	1495(13.4)	
Not informed *	61(11.1)	1760(16.6)	1821(16.3)	

Source: PNS/ IBGE, 2013. * These data were not part of the analysis.

Table 2. Health condition of Brazilian old people, according to bedridden condition (n=11177). Brazil. 2013.

Variables	Bedridden		Total n(%)	*p*
	Yes n(%)	No n(%)		
Self-perceived general health condition				
Positive	77(14.0)	4855(45.7)	4932(44.1)	<0.001
Negative	472(86.0)	5773(54.3)	6245(55.9)	
Number of chronic diseases				
None	41(7.5)	2735(25.7)	2776(24.8)	<0.001
One	107(19.5)	3047(28.7)	3154(28.2)	
Two	118(21.5)	2296(21.6)	2414(21.6)	
Three	109(19.9)	1366(12.9)	1475(13.2)	
Four	80(14.6)	736(6.9)	816(7.3)	
Five or more	94(17.1)	448(4.2)	542(4.8)	
Diagnosis of depression				
No	377(68.7)	9790(92.1)	10167(91.0)	<0.001
Yes	172(31.3)	838(7.9)	1010(9.0)	
Diagnosis of systemic arterial hypertension				
No	212(38.6)	5318(50.0)	5530(49.5)	<0.001
Yes	336(61.2)	5188(48.8)	5524(49.4)	
Not informed *	1(0.2)	122(1.1)	123(1.1)	
Diagnosis of diabetes *mellitus*				
No	391(71.2)	8298(78.1)	8689(77.7)	<0.001
Yes	134(24.4)	1762(16.6)	1896(17.0)	
Not informed *	24(4.4)	568(5.3)	592(5.3)	
Diagnosis of rheumatoid arthritis				
No	366(66.7)	8931(84.0)	9297(83.2)	<0.001
Yes	183(33.3)	1697(16.0)	1880(16.8)	
Diagnosis of any spine problem				
No	321(58.5)	7959(74.9)	8280(74.1)	<0.001
Yes	228(41.5)	2669(25.1)	2897(25.9)	
Diagnosis of any chronic obstructive pulmonary disease				
No	508(92.5)	10317(97.1)	10825(96.9)	<0.001
Yes	41(7.5)	311(2.9)	352(3.1)	
Diagnosis of hypercholesterolemia				
No	356(64.8)	7480(70.4)	7836(70.1)	<0.001
Yes	166(30.2)	2438(22.9)	2604(23.3)	
Not informed *	27(4.9)	710(6.7)	737(6.6)	
Diagnosis of any type of cancer				
No	507(92.3)	10128(95.3)	10635(95.2)	0.002
Yes	42(7.7)	500(4.7)	542(4.8)	
Previous episode of stroke				
No	472(86.0)	10142(95.4)	10614(95.0)	<0.001
Yes	77(14.0)	486(4.6)	563(5.0)	

to be continued

Continuation of Table 2

Variables	Bedridden		Total n(%)	*p*
	Yes n(%)	No n(%)		
Presence of any repetitive strain injury				
No	541(98.5)	10492(98.7)	11033(98.7)	0.720
Yes	8(1.5)	136(1.3)	144(1.3)	
Smoking				
No	504(91.8)	9429(88.7)	9933(88.9)	0.030
Yes	45(8.2)	1199(11.3)	1244(11.1)	
Drinking				
No	479(87.2)	8266(77.8)	8745(78.2)	<0.001
Yes	70(12.8)	2362(22.2)	2432(21.8)	

Source: PNS/ IBGE, 2013. * These data were not part of the analysis.

Table 3. Use of health services by Brazilian old people, according to their bedridden condition. (n=11177). Brazil. 2013.

Variables	Bedridden		Total n(%)	*p*
	Yes n(%)	No n(%)		
Frequency of medical consultation in the last year				
Up to 3	207(37.7)	5808(54.6)	6015(53.8)	<0.001
4 or more	316(57.6)	2959(27.8)	3275(29.3)	
Not informed*	26(4.7)	1861(17.5)	1887(16.9)	
Hospitalization in the last 12 months				
No	360(65.6)	9712(91.4)	10072(90.1)	<0.001
Yes	189(34.4)	916(8.6)	1105(9.9)	
Length of stay (days)				
Up to 3	169(30.8)	866(8.1)	1035(9.3)	0.008
4 or more	20(3.6)	50(0.4)	70(0.6)	
Not applicable*	360(65.6)	9712(91.4)	10072(90.1)	
In the last visit, medicines were prescribed				
No	58(10.6)	786(7.4)	844(7.6)	<0.001
Yes	285(51.9)	1573(14.8)	1858(16.6)	
Not applicable*	206(37.5)	8269(77.8)	8475(75.8)	
Emergency care at home in the last 12 months				
No	488(88.9)	10381(97.7)	10869(97.2)	<0.001
Yes	61(11.1)	247(2.3)	308(2.8)	
Search in the last two weeks for health care				
No	108(19.7)	8036(75.6)	8144(72.9)	<0.001
Yes	308(56.1)	2345(22.1)	2653(23.7)	

Source: PNS/ IBGE, 2013.

* These data were not part of the analysis.

Table 4 shows that males and illiterate old people were 1.45 and 1.37, respectively more likely to experience bedridden than women and literate individuals. The number of chronic diseases was a contributing factor for old people to be bedridden. Old people with a chronic disease are 2.04 more likely to be bedridden, while an old person who had five chronic diseases had 4.96. Experiencing an episode of stroke, having a diagnosis of systemic arterial hypertension (SAH) and changes in cholesterol levels also increased the chances of the old person being bedridden.

Still, old people who needed some care related to their own health considering the two weeks prior to data collection were more likely to be bedridden, as well as those who were hospitalized and required emergency care at home in the last 12 months. The general health condition considered poor and the diagnosis of depression were also factors associated with the condition of being bedridden with old people (Table 4).

Table 4. Crude and adjusted final model of the bedridden condition. (n = 11177). Brazil. 2013.

Variable	OR_{crude} (95%CI)*	*p*	$OR_{adjusted}$ (95%CI)**	*p*
Gender				
Female	1.00	0.03	1.00	0.003
Male	1.26 (1.02-1.56)		1.45 (1.13-1.84)	
Illiterate				
No	1.00	0.004	1.00	0.003
Yes	1.37 (1.02-1.56)		1.37 (1.11-1.70)	
Chronic disease number				
None	1.00	<0.001	1.00	<0.001
One	1.93 (1.28-2.91)	0.002	2.04 (1.35-3.10)	0.001
Two	2.31 (1.50-3.56)	<0.001	2.48 (1.59-3.87)	<0.001
Three	2.88 (1.79-4.64)	<0.001	3.10 (1.91-5.05)	<0.001
Four	4.69 (2.64-8.33)	<0.001	3.25 (1.91-5.53)	<0.001
Five or more	4.69 (2.64-8.33)	<0.001	4.96 (2.78-8.85)	<0.001
Previous episode of stroke				
No	1.00	0.004	1.00	0.012
Yes	1.59 (1.16-2.17)		3.03 (1.29-8.43)	
Diagnosis of systemic arterial hypertension				
No	1.00	0.001	1.00	<0.001
Yes	1.48 (1.17-1.86)		1.71 (1.31-2.24)	
Diagnosis of hypercholesterolemia				
No	1.00	0.003	1.00	0.001
Yes	1.44 (1.11-1.69)		2.08(1.37-3.17)	
Search in the last two weeks for health care				
No	1.00	<0.001	1.00	<0.001
Yes	4.21 (3.46-5.13)		16.94 (7.15-40.16)	
Hospital admission in the last 12 months				
No	1.00	<0.001	1.00	<0.001
Yes	3.12 (2.51-3.88)		8.10 (4.20-15.54)	

to be continued

Continuation of Table 2

Variable	OR_{crude} (95%CI)*	*p*	$OR_{adjusted}$ (95%CI)**	*p*
Emergency care at home in the last 12 months				
No	1.00	0.002	1.00	0.002
Yes	1.74 (1.23-2.48)		1.78 (1.25-2.55)	
General health condition				
Boa	1.00	<0.001	1.00	<0.001
Ruim	2.65 (2.03-3.47)		2.68 (2.05-3.51)	
Diagnosis of depression				
No	1.00	<0.001	1.00	<0.001
Yes	2.20 (1.71-2.83)		5.64 (2.42-13.14)	

Source: PNS/ IBGE, 2013.

OR=Odds Ratio; *Explanatory capacity of the final model 95.1%. -2 Log likelihood: 3285,710; Cox & Snell R^2: 0.079; Nagelkerke R^2: 0.240. **Explanatory capacity of the final model 95.1% -2 Log likelihood: 3255,634; Cox & Snell R^2: 0.082; Nagelkerke R^2: 0.248.

DISCUSSION

The present study, which assessed the prevalence of bedridden condition in old people and its associated factors, found that approximately 5% of the old people investigated were in this condition. And that illiterate male individuals with multimorbidity, episodes of stroke, diagnosis of SAH and hypercholesterolemia were more likely to be bedridden. As well as those who sought health care in the last two weeks, needed hospitalization and emergency care at home in the last 12 months, who had negative self-perception of general health and depression.

It is noteworthy that in the literature there are no studies of national scope, with old people living at home, who refer to the prevalence of the bedridden condition for the purpose of comparing the findings of the present study. However, a study carried out in long-term care facilities for old people found a prevalence of 24% of bedridden[1].

Although the prevalence of bedridden condition, when compared to other diseases that affect the old people population, is low, it is a complication that leads to an important social, economic and family impact[10]. The immobility associated with the prolonged period of bed rest can trigger several health complications, in addition to causing problems with people's usual activities, mobility and self-care[11]. In old people, these complications added to changes of the aging process itself can lead to even greater complications[3].

The cardiovascular, pulmonary, gastrointestinal, musculoskeletal and urinary systems are the most affected, and the prolonged period of bed rest favors the development of diseases that have affected these systems, such as deep venous thrombosis[12], pressure injury[13], pneumonia[14] and urinary tract infection[15]. In this way, bedridden old people require health care in a continuous and systematic way, a caregiver must be aware of some signs and symptoms that may mean some harm to the health of the old person.

As for the factors associated with the bedridden condition, it was found that old men were more likely to be bedridden. This fact may be due to the lower demand for health services by men in relation to women, as well as less preventive care provided to their own health and greater exposure to risk factors throughout life[16].

It was also found that illiterate old people were more likely to be bedridden, in relation to the literate. Studies are consistent with the findings of previous studies[17,18] and demonstrate that individuals with a low level of education are more likely to have diseases and disabilities, due to limited access to health information. Illiteracy has a cumulative burden, as it reflects, throughout life, less self-care and self-perception about their health status and understanding about diseases, thus inferring less search for health services, late diagnoses timely treatment, increasing the aggravation of diseases and resulting in more serious limitations, such as

bedridden condition[19]. In addition, illiterates have more unfavorable social determinants of health, a condition that also weakens the individual[19] and increases the chances of being bedridden.

The quality of life of the old person can be hindered with the onset of chronic non-communicable diseases (NCDs), such diseases can be responsible for what is defined as functional disability of the old person, that is, affecting the functionality and independence of these individuals, in temporary or permanent form[20], as observed in the present study. In addition, the greater the number of chronic diseases, the greater the chance of disability of this individual, since NCDs can trigger other complications and, consequently, the need to seek medical attention, hospitalizations, reduced functional capacity and mortality is increased[18,21,22].

The gradual increase in the chances of being bedridden according to the growing number of chronic diseases found in the present study can be explained in two ways: cause and consequence. "Cause" because, with the increase in the number of NCDs, the weaknesses in old people also increase due to the continuous loss of the functions of the organs and biological system; and "consequence" because the bedridden condition weakens the functioning of the organism and increases the chances of having new injuries, these being linked to the time the individual is in that condition[23].

Stroke is among the most common diseases of death and permanent disability[24], which may result in bedridden condition. Among the main consequences of stroke, the following can be observed: cognitive, motor, emotional changes, memory and speech problems, attention, language and impairment in executive functions[24], factors that hinder the quality of life of the old person and their family.

Studies show that SAH and hypercholesterolemia are present in the majority of the old people population, and end up becoming one of the main causes for the development of other complications, whether or not it is associated with another disease.[23,25–27]. SAH and high cholesterol can trigger cardiac, renal, peripheral and cerebral vascular impairment, leading to a hindered quality of life, resulting in the old person being unable to perform their activities due to neurological and motor complications[23,25–27], condition that explains the association found between NCDs, SAH, hypercholesterolemia and being bedridden.

The cross-sectional research carried out with Japanese old people with the objective of testing the hypothesis that an increase in the difference in systolic blood pressure between the arms would be associated with a reduction in physical activity in old people, found that bedridden old people presented a difference in the systolic blood pressure between the arms in relation to walking and wheelchair-using old people[26]. Still, the bedridden lack of physical activity can be a predictive factor to raise blood pressure.

A similar condition was observed in relation to the relationship found between bedridden condition and hypercholesterolemia, a study that analyzed fasting blood samples in clinically stable bedridden patients under long-term and sedentary normolipidemic care, concluded that inactivity has a major impact in reducing serum levels of HDL and elevated lipid concentration[28].

Still, another chronic disease that was associated with mobility restricted to the bed was depression, which can be caused by several factors, such as mourning, abandonment, disabling diseases, among others[29]. The depressive disorder causes the old person to not perform self-care, not eating properly and staying in bed longer, increasing their degree of fragility and having more chances of becoming bedridden[30]. However, the opposite also happens, since in this study, it was shown that the number of bedridden old people with depression has an odds ratio of 2.13, since the loss of functional capacity, the appearance of NCDs, the use of medicines, can make this old person feel useless, leading them to develop these disorders[29,30].

It was also found, in the present study, that bedridden old people require a greater need for health-related care, be it for outpatient care, hospitalization, or urgent and emergency care in relation to old people with mobility, since the condition of being bedridden, by itself, denotes greater health care for the individual, since their health is at a greater level of fragility, as explained above. And it also ends up being a risk factor for the appearance of

complications and health problems, such as the development of pressure injuries, worsening of the respiratory condition, anxiety and infections, social isolation, depression, hospitalization, which when it comes to old people, the hospitalization period may be even longer, as it is a more fragile individual where the outcome may be death[23].

When talking about health perception, it is observed that having a bad perception about health increases the chance of the old person being bedridden. The condition that the old person is, in the presence of chronic diseases, prevented from carrying out their activities, makes the old person assess their health as a bad condition. The presence of diseases changes the quality of life, which leads to a negative perception of health[31]. The bedridden self-perception ends up generating a certain type of insecurity, since they need care and attention, whether basic or more complex, which makes this old person see their life as a burden on the life of a family member or caregiver[32]. Thus, this old person ends up losing the desire to relate maintaining social isolation, which causes the decline of their health to occur even more, increase their dependence and with this the appearance of new complications, such as hospitalizations, depression, and even lead to death[31].

The study's limitation is the use of secondary data from cross-sectional research, which makes it impossible to analyze cause and effect and the time elapsed in the collection of these data. However, the data came from a research with great methodological rigor and quality. In addition, it is worth highlighting the limited number of studies, in recent national and international literature, that addresses prevalence and factors associated with the theme of bedridden condition, making it difficult to compare the findings. However, the importance of carrying out studies that address this condition is emphasized, since the number of old people is growing, both nationally and worldwide. The findings of the present study may support the planning of gerontological care aimed at the specific needs of this age group, considering active and healthy aging and providing better quality of life for old people.

CONCLUSION

It is concluded that the prevalence of bedridden condition in Brazilian old people is low, when compared to other health problems, and that it was associated with sociodemographic conditions, male gender and illiteracy; and also to health conditions expressed by the presence of chronic non-communicable diseases, with a greater predilection for stroke, systemic arterial hypertension, changes in cholesterol levels, depression and worse health perception. Regarding the use of health services, it was shown to be associated with the recent search for health services, hospitalizations and emergency home care.

Edited by: Daniel Gomes da Silva Machado

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