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Screening for depressive symptoms in older adults in the Family Health Strategy, Porto Alegre, Brazil

Rastreamento de sintomas depressivos em idosos na Estratégia Saúde da Família, Porto Alegre

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ABSTRACT

OBJECTIVE: To analyze the prevalence of depression in older adults and associated factors.

METHODS: Cross-sectional study using a stratified random sample of 621 individuals aged $\geq$ 60 from 27 family health teams in Porto Alegre, RS, Southern Brazil, between 2010 and 2012. Community health agents measured depression using the 15-item Geriatric Depression Scale. Scores of $\geq$ 6 were considered as depression and between 11 and 15 as severe depression. Poisson regression was used to search for independent associations of sociodemographic and self-perceived health with both depression and its severity.

RESULTS: The prevalence of depression was 30.6% and was significantly higher in women (35.9% women *versus* 20.9% men, p < 0.001). The variables independently associated with depression were: female gender (PR = 1.4, 95%CI 1.1;1.8); low education, especially illiteracy (PR = 1.8, 95%CI 1.2;2 6); regular self-rated health (OR = 2.2, 95%CI 1.6;3.0); and poor/very poor self-rated health (PR = 4.0, 95%CI 2.9;5.5). Except for education, the strength of association of these factors increases significantly in severe depression.

CONCLUSIONS: A high prevalence of depression was observed in the evaluations conducted by community health agents, professionals who are not highly specialized. The findings identified using the 15-item Geriatric Depression Scale in this way are similar to those in the literature, with depression more associated with low education, female gender and worse self-rated health. From a primary health care strategic point of view, the findings become still more relevant, indicating that community health agents could play an important role in identifying depression in older adults.

DESCRIPTORS: Aged. Depression, epidemiology. Family Health Strategy. Mental Health Services, Manpower. Cross-Sectional Studies.

RESUMO

OBJETIVO: Analisar a prevalência de depressão em idosos e os fatores associados.

MÉTODOS: Delineamento transversal com amostra aleatória estratificada de 621 indivíduos ≥ 60 anos provenientes de 27 equipes de saúde da família de Porto Alegre, RS, Brasil, no período entre 2010 e 2012. A depressão foi mensurada por agentes comunitários de saúde utilizando a Escala de Depressão Geriátrica de 15 itens. Escores ≥ 6 foram considerados depressão e entre 11 e 15, depressão severa. A regressão de Poisson foi o método de análise robusta utilizado para busca de associações independentes de variáveis sociodemográficas e autopercepção de saúde com a depressão e sua severidade.

RESULTADOS: A prevalência de depressão foi de 30,6%, significativamente maior em mulheres (35,9% mulheres *versus* 20,9% homens; p < 0,001). As seguintes variáveis apresentaram associações independentes com depressão: sexo feminino (RP = 1,4; IC95% 1,1;1,8); baixa escolaridade, sobretudo analfabetismo (RP = 1.8; IC95% 1,2;2,6); e autopercepção de saúde regular (RP = 2,2; IC95% 1,6;3,0) e ruim/péssima (RP = 4,0; IC95% 2,9;5,5). Houve aumento da força de associação desses fatores na depressão severa, exceto para escolaridade.

CONCLUSÕES: Alta prevalência de depressão foi observada na avaliação realizada por agentes comunitários de saúde, profissionais sem alta especialização. Esse modelo de aplicação da Escala de Depressão Geriátrica de 15 itens identificou achados similares aos encontrados na literatura, em que a depressão associou-se à baixa escolaridade, ao sexo feminino e à pior autopercepção de saúde. Do ponto de vista estratégico no âmbito da atenção básica, os achados são ainda mais relevantes, pois apontam que agentes comunitários de saúde podem ter um papel importante na detecção da depressão em idosos.

DESCRITORES: Idoso. Depressão, epidemiologia. Estratégia Saúde da Família. Serviços de Saúde Mental, recursos humanos. Estudos Transversais.

INTRODUCTION

The ageing population is a global phenomenon. It is occurring at an unprecedented rate in developing countries such as Brazil, due to improvements in health indicators, such as increased life expectancy at birth and progressive falls in the fertility rate.[a] In Brazil, in 2011,[b] the estimated number of older adults was 23.5 million (12.1% of the population) according to estimates from the Brazilian Institute of Geography and Statistics (IBGE). Porto Alegre, RS, Southern Brazil, has one of the highest concentrations of older adults in the country (211,896 individuals).

Depression[4] is one of the most common pathologies in older adults.[6] Now understood as a chronic disease, it is a mental disorder, the main criteria of which are depressed mood and loss of interest or enjoyment. Complementary criteria include feelings of guilt or worthlessness, sleep and appetite disturbances, weight loss, lack of energy, poor concentration and suicidal thoughts. The prevalence of depression in the general population varies between 3.0% and 11.0% and is twice as high in females as in males. This proportion varies between 15.0% and 30.0% in older adults, depending on location, socioeconomic conditions and the instrument

used to measure it.[16] Depression is seen as a significant public health problem, with worrying perspectives for the future. The World Health Organization estimates that the disorder will be the pathology with the heaviest global disease load by 2030, being more intense in low and middle income countries due to lack of diagnosis and treatment.[c]

Internationally, rates of recognition for mood disorders in primary care are poor or inaccurate. Under diagnosis or late diagnosis in more severe depressive episodes,[15] not detecting bipolar disorder in patients suffering from episodes of depression[21] and under diagnosis in patients with chronic illness[20] have been well documented. Diagnosing depression in older adults may be challenging due to varied or atypical phenomenology, differing from classic forms and combining depressed mood or persistent sadness with anhedonia. Loss of pleasure can be prominent in severe depression and sadness may go unnoticed or be denied. Depression is the psychological disease most commonly leading to suicide. Older adults in primary care (PC) with mood disorders may be at higher risk of suicide.[9] Suicidal behavior in this age group tends to be more lethal – ratio of around 1:1 suicides/attempts by older adults, whereas in adolescents this figure is 1:100.[d]

The Geriatric Depression Scale (GDS-15)[2] – instrument recommended by the Brazilian Ministry of Health – has been shown to be of great value in detecting geriatric depression in different clinical contexts and is of growing important in PC.[d] The short version of the GDS-15 plays a well-established role in screening and national studies have validated it in samples in both psychiatric[2] and general outpatient contexts.[18] Studies validating the GDS-15 show it to be accurate in identifying depressive disorders with a 5/6 cut-off point. The GDS-15 is an instrument made up of 15 questions, with each positive response associated with depression scoring 1 point, giving a score of 0 to 15.

There have been few studies of geriatric depression in PC using robust methodology, despite its relevance. Studies validating the GDS-15 in this environment are more recent and the scale was applied by trained medical students, doctors or research collaborators, even when the studies were of methodological quality.[8,17] The GDS-15 was considered more appropriate for use in primary care than the GDS with 5, 10 or 30 items, both nationally and internationally.[8,17]

PC is responsible for promoting and maintaining health, preventing health problems, diagnosis, treatment and rehabilitation. For elderly users, it is the main access

to the Unified Health System (SUS). Studies in realistic situations with SUS professionals may encourage the implementation of more effective and pro-active strategic actions.

The aim of this study was to analyze the prevalence of depression and associated factors in older adults.

METHODS

This was a cross-sectional study of 621 older adults registered with the *Estratégia Saúde da Família* (ESF – Family Health Strategy), in Porto Alegre, RS, between 2011 and 2012. The original project was developed in order to discover the target population's health problems. The sample was of 900 older adults for different prevalence with a margin of error varying between 1.0% (very low or very high prevalence) and 10.0% (prevalence approaching 50.0%). We selected 30.0% of family health care strategy teams for each of the eight administrative districts of Porto Alegre; 36 older adults were selected for each team, corresponding to the team's maximum care capacity. All of the data pertaining to the older adults between March 2011 and August 2012 were analyzed.

Considering current literature,[2,8,18] the outcome, depression, was measured using the GDS-15,[2] with scores of ≥ 6 signifying depression and classified as mild to moderate depression (MMD) (scores between 6 and 10); severe depression (SD) (score of 11). Community health agents (CHA) from the selected family health care strategy teams were trained to apply the instrument. It contained questions concerning current depressive symptoms, avoiding somatic complaints. It is a scale of easily understood questions, with objective responses (yes; no) which can be applied by health care professionals who are not mental health specialists, after a brief training period.[18]

Home visits, part of the ESF pro-active model, were conducted to obtain various types of data, including that concerning health. Each CHA received a list of selected individuals, inhabitants in their health micro region. If the older adult was not at home, the CHA was instructed to attempt contact various times (at least twice) at different times of day and on different days. Of the 972 older adults selected, 809 were located (alive and residing at the registered address). The response rate was 76.7%. In total, 621 older adults were evaluated and complete data were obtained for 585 of them, who were therefore included in this analysis.

Absolute and relative frequencies were used in the descriptive analysis. Pearson's Chi-square test was used to compare the frequency of the variables (classification shown in Tables 1 and 2) between groups with and without alteration in the GDS-15 and between groups with mild to severe alteration in the GDS-15. The variables associated with the outcome with significance ≤ 0.20 were included in the Poisson regression analysis with robust variance and a 95% confidence interval (CI). The Statistical Package for the Social Sciences (SPSS), version 17.0, was used.

This research was approved by the Research Ethics Committee of the Municipal Health Secretariat (Record 499 – Process 001.021434.10.7/2009) and of the *Pontifícia Universidade Católica do Rio Grande do Sul* (Protocol 11/05663). All individuals signed an informed consent form.

RESULTS

The prevalence of depression was 30.6% (95%CI 26.9 to 34.3%). Women predominated (63.8%) and the mean age was 69.4 (SD = 7.31 years), with decreasing frequency of depression between ages 60 and 69 (56.4%), 70 and 79 (33.2%) and 80 and over (10.5%). With regards to schooling, 21.8% were illiterate (including functional illiterates), 40.2% had between one and three years of schooling, 21.7%, between four and seven years and 16.3%, > eight years of schooling. Low income (< 2 minimum wages – MW) was the case for 89.5% of the older adults. The majority of the older adults reported that they were white (64.9%), followed by black (19.9%) and mixed race (12.1%). The majority (64.8%) were retired. Most were married (36.1%) or widowed (30.6%). The majority reported practicing some religion (67.7%) and being Catholic (66.6%). Regular self-perceived health was reported in 55.7% of the older adults, while 10.0% reported their health as poor or very poor (Table 1).

The non-controlled analysis showed in detail the frequency of distribution of the sociodemographic and self-perceived health data in relation to the outcomes: cases of depression *versus* not cases (Table 1) and two groups regarding severity of symptoms (Table 2).

Higher prevalence of detecting depression were seen in the Poisson regression*:* women, with PR:.4 (95%CI 1.1;1.8) for detecting depression, PR: 1.6 (95%CI 1.2;2.3) for MMD and PR: 2.9 (95%CI 1.2;6.8) for SD; illiterates, with PR: 1.8 (95%CI 1.2;2.6) and with four to seven years of schooling, PR: 1.5

(95%CI 1.0;2.2) for detecting depression, with four to seven years of schooling PR: 2.0 (95%CI 1.1;3.5) for MMD; and in individuals with regular or poor/very poor self-perceived health, highlighting the relationship between more severe depression and worse reported health, reaching PR: 23.6 (95%CI 7.2;77.4) for SD and poor/very poor self-perceived health (Table 3).

DISCUSSION

The prevalence of depression (30.6%) is comparable to the higher levels found in studies whose samples were from primary care. Meta-analysis evaluating 17 publications which used the GDS-15 or -30 in primary care showed that overall prevalence of depression in older adults was 17.1% of a sample of 4,869 older adults.[17] Brazilian population-based research indicates a prevalence of depression between 1.0% and 3.0% in the community, between 10.0% and 12.0% in individuals in outpatient care and 15.0% in hospitalized patients. The prevalence of depressive symptoms is around 15.0%, climbing to 20.0% in patients in primary care and 25.0% of hospitalized patients.[e] A meta-analysis examining geriatric depression in national studies using non-clinical samples found a prevalence of depression varying between 13.0% and 38.5%.[5] The frequencies in other national studies were not uniform when studies conducted in different places were compared: 14.3% in Sao Paulo, SP,[4] 22.8% in Itajaí, SC,[f] and 35.3% in Rio de Janeiro, RJ.[e] A study evaluated more than 7 thousand older adults living in the community, both urban and rural, in Rio Grande do Sul. It used the Short Psychiatric Evaluation Schedule and showed a 22.7% prevalence of depressive symptoms.[6] Such variations may be explained by the use of different screening instruments, as well as the small sample size and the different age group profiles (ages included and mean ages) of the studies.

A study conducted in Fortaleza, CE, with older adults in primary care found a 17.2% prevalence in detecting depression.[d] However, this study only investigated individuals who spontaneously sought health care services. A large study of around 2,000 older adults conducted in Sao Paulo, SP, detected depression in 27.1%.[e] The samples from the two studies shared more characteristics with this study as the subjects were on low income and from primary care. However, trained health care specialists conducted the screening in these cases. This makes it more difficult to approach the reality of PC and the aim of brief evaluations and screening for depression conducted by lay professionals.

[e] Carvalho JMA. Prevalência de sintomas depressivos em uma população de idosos usuários de serviços públicos de saúde [dissertation]. Rio de Janeiro: Instituto de Medicina Social da Universidade do Estado do Rio de Janeiro; 2010.
[f] Pereira SP. Prevalência de depressão na população idosa de Itajaí (SC): relação com variáveis biopsicossociais [end of course project]. Itajaí: Curso Saúde Psicologia da Universidade do Vale do Itajaí; 2005.

Table 1. Sociodemographic data and frequency of alteration on the Geriatric Depression Scale. Porto Alegre, RS, Southern Brazil, 2012.

Variable	n[a]	Geriatric Depression Scale ≥ 6		p[b]
		n	%	
Sex				< 0.001[c]
Female	379	136	35.9	
Male	206	43	20.9	
Age (years)				0.798
60 to 69	332	98	29.5	
70 to 79	192	62	32.3	
≥ 80	61	19	31.3	
Schooling (years)				0.004
< 1	127	46	36.2	
1 to 3	231	68	29.4	
4 to 7	130	49	37.7	
≥ 8	94		17.0[b]	
Income (Brazilian minimum wage)				0.115
< 2	514	165	32.1	
≥ 2	38	7	18.4	
Household income (Brazilian minimum wage)				0.220
≤ 3	451	144	31.9	
> 3	53	12	22.6	
Retired				0.217
Yes	363	102	28.1	
No	197	66	33.5	
Race/Ethnicity				0.636
White	378	113	29.9	
Non-white	202	65	32.2	
Religion				0.287
Catholic	382	108	28.3	
Evangelic	109	39	38.5	
Other	86	28	32.6	
Marital status				0.939
Single	104	32	30.8	
Married	207	60	29.0	
Widowed	182	58	31.9	
Separated/Divorced	90	28	31.1	
Living alone				0.079
Yes	104	40	38.5	
No	471	137	29.1	
Practicing religion				0.312
Yes	381	111	29.1	
No	187	63	33.7	
Self-perceived health				< 0.001[c]
Very good/Good	194	26	13.4[d]	
Regular	323	109	33.7	
Poor/Very poor	59	41	69.5[e]	
Total	585	179	30.6	

[a] Values may not total 585 due to data losses
[b] based on the Chi-square test.
[c] p ≤ 0,05
[d] Frequencies of residues lower than expected (residue ≤ -1.96).
[e] Frequencies of residues higher than expected (residue ≥ 1.96).

Table 2. Sociodemographic data and intensity of the Geriatric Depression Scale. Porto Alegre, RS, Southern Brazil, 2012.

Variable	n[a]	%	Geriatric Depression Scale				p[b]
			6-10		11		
			n	%	n	%	
Sex							< 0.001[c]
Female	136	35.9	103	27.2	33	8.7	
Male	43	20.9	35	17.0	8	3.9	
Age (years)							0.967
60 to 69	98	29.5	76	22.9	22	6.6	
70 to 79	62	32.3	47	24.5	15	7.8	
≥ 80	19	31.3	15	24.6	4	6.6	
Schooling (years)							0.021
< 1	46	36.2	33	26.0	13	10.2	
1 to 3	68	29.4	53	22.9	15	6.5	
4 to 7	49	37.7	40	30.8	9	6.9	
≥ 8	16[b]	17.0	12	12.8	4	4.3	
Income (Brazilian minimum wage)							0.115
< 2	165	32.1	124	24.1	41	8.0	
≥ 2	7	18.4	7	18.4	0	0.0	
Household income (Brazilian minimum wage)							0,107
≤ 3	144	31.9	109	24.2	35	7.8	
> 3	12	22.6	11	20.8	1	1.9	
Retired							0.211
Yes	102	28.1	77	21.2	25	6.9	
No	66	33.5	52	26.4	14	7.1	
Race/Ethnicity							0.851
White	113	29.9	87	23.0	26	6.9	
Non-white	65	32.2	50	24.8	15	7.4	
Religion							0.006
Catholic	108	28.3	75[b]	16.9	33[a]	8.6	
Evangelic	39	38.5	36[a]	33.0	3	2.8	
Other	28	32.6	25	29.1	3	3.5	
Marital status							0.982
Single	32	30.8	25	24.0	7	6.7	
Married	60	29.0	49	23.7	11	5.3	
Widowed	58	31.9	43	23.6	15	8.2	
Separated/Divorced	28	31.1	20	22.2	8	8.9	
Living alone							0.153
Yes	40	38.5	32	30.8	8	7.7	
No	137	29.1	105	22.3	32	6.8	
Practicing religion							0.198
Yes	111	29.1	91	23.9	20	5.2	
No	63	33.7	46	24.6	17	9.1	

Continue

Continuation

Self-perceived health							< 0.001[c]
Very good/Good	26[d]	13.4	21	10.8	5	2.6	
Regular	109	33.7	88	27.2	21	6.5	
Poor/Very poor	41[e]	69.5	27	45.8	14	23.7	
Total	179	30.6					

[a] Values may not total 621 due to data losses
[b] based on the Chi-square test.
[c] p ≤ 0,05.
[d] Frequencies of residues lower than expected (residue ≤ -1.96).
[e] Frequencies of residues higher than expected (residue ≥ 1.96).

This study found a higher frequency of depression in women (35.9% *versus* 20.9%), as in the literature. In the regression analysis, there were 1.4 times more cases of depression in women. Being female is a recognized risk factor, described in the literature.[5,f] In a study of older adults on low income in Sao Paulo, depressive symptoms in women were practically double those in men (34.5% *versus* 18.0%). Sociocultural factors associated with greater vulnerability to stressor events[3] may contribute to this difference between genders. Another possible explanation may lie in cultural aspects, as women tend to seek more help for health problems and to express their feelings more openly.

Frequency of depression was similar in the age groups, even in the Poisson analysis, although some studies show that depressive symptoms dominate in the younger age groups.[3,14] Other studies indicate that being aged > 75 is a risk factor in depression.[14,19] The uniformity found is worth noting, as depression is a highly prevalent condition throughout the life cycle. The pro-active form of collecting data (home visits) may have contributed to reduced chances of losing individuals who are organically more affected and may have been more effective in healthy older adults and those in lower age groups who, although registered in the health district, are not patients. Some sub-types of depression may be more common in older adults, such as late-onset depression and secondary symptoms with organic causes, something which this study did not examine in-depth.

Illiteracy and low levels of schooling were associated with detecting greater levels of depression, as in the literature,[3,a,f] although this independent association was not clear when we examined the two groups of severity of symptoms (MMD and SD). In our sample, 17.0% of the older adults with > 8 years of schooling had depressive symptoms. Crepaldi reports a 50.0% reduction in the prevalence of depressive symptoms in older adults with ≥ 8 years of schooling compared with those with no schooling, a statistically significant difference.[c]

There was an association between detecting depression and income < 2 minimum wages, as described in the literature, which indicates low income and poverty as risk factors for depression.[a] Household income was tested in the Poisson analysis, the contribution was lower and it was not maintained in the analysis. Being on a low income may deprive older adults of appropriate health care and make it more difficult to buy medication and follow treatments, interfering with autonomy and recovering and remaining healthy.[13,16]

There was no significant difference in prevalence between the different religions or practicing religion in this sample. Drucker investigated religiosity in depressed older adults in the city of Campinas, SP, and stated that reading religious literature was the religious practice most predictive of depressive symptoms, which may indicate better mental health, compared with prayer, which was negatively related to depressive symptoms.[a,g] The main motive for increased religiosity was experiencing stressor events and it was identified as a resource for dealing with or alleviating symptoms of depression.[g] A study with 6,961 older adults living in the community in Rio Grande do Sul showed that the majority of the population were Catholic, followed by Evangelical. Subjects who were illiterate or had never been to school, those on low income, women, those who were separated or divorced and the Evangelicals reported becoming more religious with age and were at lower risk of developing mental disorders over time. Older adults who were Spiritists or Evangelical were at higher risk of psychological disease compared with other religious groups.[6]

The relationship between depression and self-perceived health is consistent. The more severe the depression, the worse the self-perceived health. The strongest association was found between SD and poor/very poor

[g] Drucker C. Religiosidade, crenças e atitudes em idosos deprimidos em um serviço de saúde mental de São Paulo, Brasil [dissertation]. Campinas: Faculdade de Educação da Universidade Estadual de Campinas; 2005.

Table 3. Composition of Poisson Regression with robust variance, Porto Alegre, RS, Southern Brazil, 2012.

Variable	No depression versus GDS ≥ 6					No depression versus GDS 6-10					No depression versus GDS ≥ 11				
	PR_{raw}	95%CI	$PR_{ajusted}$	95%CI	p	PR_{raw}	95%CI	$PR_{ajusted}$	95%CI	p	PR_{raw}	95%CI	$PR_{ajusted}$	95%CI	p
Sex															
Male	1		1			1		1			1		1		
Female	1.4	1.1;1.8	1.4	1.1;1.8	0.002	1.7	1.2;2.4	1.6	1.2;2.3	0.004	2.6	1.2;5.4	2.9	1.2;6.8	0.016
Age (age)															
> 80	1		1			1		1			1		1		
70 to 79	1.2	0.8;1.8	1.2	0.8;1.8	0.393	1.0	0.6;1.7	1.0	0.6;1.6	0.95	1.2	0.4;3.4	0.9	0.3;3.2	0.921
60 to 69	1.3	0.9;1.9	1.3	0.9;1.9	0.221	0.9	0.6;1.5	0.9	0.6;1.5	0.697	1.0	0.4;2.7	0.8	0.2;2.7	0.719
Schooling (years)															
≥ 8	1		1			1		1			1		1		
4 to 7	2.1	2.4;3.2	1.5	1.0;2.2	0.041	2.5	1.4;4.4	2.0	1.1;3.5	0.02	2.1	0.7;6.4	1.4	0.4;4.7	0.548
1 to 3	1.7	1.1;1.5	1.3	0.9;1.9	0.115	1.8	1.0;3.3	1.3	0.7;2.3	0.334	1.7	0.6;5.0	1.2	0.4;3.2	0.761
< 1	2.1	1.4;3.1	1.8	1.2;2.6	0.003	2.2	1.2;4.0	1.4	0.8;2.6	0.259	2.8	1.0;8.4	1.2	0.4;3.5	0.693
Income (Brazilian minimum wage)															
≥ 2	1					1									
< 2	1.8	1.0;3.2				1.4	0.7;2.8								
Living alone															
No	1		1			1		1			1		1		
Yes	1.1	0.9;1.4	1.0	0.8;1.3	0.764	1.4	1.0;1.9	1.3	1.0;1.8	0.101	1.3	0.6;2.6	0.9	0.4;2.0	0.852
Practicing religion															
No	1		1			1		1			1		1		
Yes	0.9	0.7;1.1	0.9	0.8;1.1	0.514	0.9	0.7;1.3	1.0	0.7;1.3	0.919	0.6	0.3;1.1	0.7	0.4;1.3	0.276
Self-perceived health															
Very good/Good	1		1			1		1			1		1		
Regular	2.3	1.7;3.1	2.2	1.6;3.0	< 0.001[a]	2.6	1.7;4.1	2.5	1.6;3.9	< 0.001[a]	3.1	1.2;8.0	4.5	1.4;15.1	0.014
Bad/Very bad	4.1	3.1;5.6	4.0	2.9;5.5	< 0.001[a]	5.4	3.4;8.6	5.3	3.3;8.5	< 0.001[a]	15.1	5.9;39.1	23.6	7.2;77.4	< 0.001[a]

[a] Personal income excluded as there were no individuals in the sample with GDS ≥ 11 and income > 2 Brazilian minimum wage.

health (PR: 23.6, 95%CI 7.2;77.4). Pereira showed that 78.0% of those who perceived their own health to be poor/very poor had depressive symptoms, with likelihood ration of 4.56 in binary logistic regression.[f] A study of 310 older adults in primary care in Santa Cruz, RN, showed a likelihood ratio of depression 6.15 times higher (95%CI 3.09;13.71) in those with poor or very poor self-perceived health.[16] According to the study, although this is a subjective aspect, the form in which the individual reports their overall status is closely associated with depression. Worse organic health also increases the chance of depression and this increase is directly related to the number of chronic diseases.[7] The bi-directional relationship between depression and organic diseases appears well-established, although care should be taken when making this generalization. Some clinical situations appear to be more associated with depression, such as the pre-motor stage or diagnosis period in Parkinson's disease,[1] and late-onset depression may be more closely related to mild cognitive decline or dementia.[12] This study is limited to self-related health and does not examine organic pathology in-depth.

The cross-sectional design meant that causal relationships between organic and mental pathologies were not able to be examined. The phenomenological examination of depressive symptoms is limited in discerning melancholic depression or intense apathy, characteristics more closely related to organic alterations.

The high prevalence of depression in older adults requires special attention due to its direct and indirect impact on worsening the individual's health. Improvements in the rate of diagnosis, in identifying cases early and better approaches to depression in PC are down to systematic screening. Using standardized instruments minimizes the influence of subjective factors which may result in differences in data collection by the interviewees.[d] Although the GDS-15 is recommended by the Brazilian Ministry of Health for use in PC, it is only used routinely in local initiatives. Including this screening in pre-consultation may lead to earlier and more accurate diagnosis and intervention, as well as lowering costs for the health care system.

This study may contribute to greater diffusion of systematic screening and detecting depression in older adults in primary care. CHA, the health care professionals closest to the interface between health care and the community, are able to make this assessment, which is essential at this level.

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