Prevalence and factors associated with depression among institutionalized elderly individuals: nursing care support*

PREVALÊNCIA E FATORES ASSOCIADOS À DEPRESSÃO ENTRE IDOSOS INSTITUCIONALIZADOS: SUBSÍDIO AO CUIDADO DE ENFERMAGEM

PREVALENCIA Y FACTORES ASOCIADOS A LA DEPRESIÓN EN ANCIANOS INSTITUCIONALIZADOS: SOPORTE A LA ATENCIÓN DE ENFERMERÍA

Elisa Roesler e Silva[1], Allana Resende Pimentel Sousa[2], Luzitano Brandão Ferreira[3], Henry Maia Peixoto[4]

ABSTRACT

The objective of this study was to verify depression among institutionalized elderly individuals. The cross-section method and Yesavage's Geriatric Depression Scale were utilized in five geriatric long-term care facilities located in the Federal District to verify symptoms of depression. A total of 299 individuals were studied, 181 of whom did not meet the inclusion criteria. Sixteen individuals declined to participate. Considering the 102 individuals found suitable to participate in the study, 49.0% presented symptoms of depression; 36.3% suffered from mild to moderate depression and 12.7% showed symptoms of severe depression. Associations were found between depression symptoms and increased age, female gender, physical limitations/dependence and dissatisfaction with the institution. A significant association was also found between depression and insomnia, tachycardia, paresthesias, dizziness and excessive sweating. Depression is highly prevalent among institutionalized elderly individuals, more common among women, and correlated with a series of signs and symptoms that may help in making an early diagnosis, thus offering support to providing more effective nursing care.

DESCRIPTORS
Depression
Aged
Homes for the Aged
Health of institutionalized elderly

RESUMO

Este estudo teve como objetivo a verificação de depressão entre idosos institucionalizados. Empregou-se o método transversal utilizando-se a Escala de Depressão Geriátrica de Yesavage em cinco instituições de longa permanência do Distrito Federal para verificar sintomas de depressão. Foram estudados ao todo 299 indivíduos. Destes, 181 não atenderam os critérios de inclusão e 16 se recusaram a participar do estudo. Dos 102 idosos com condições de participar do estudo, 49,0% apresentavam depressão. Destes, 36,3% com depressão leve a moderada e 12,7% com depressão severa. Verificou-se associações entre sintomas de depressão e aumento da idade, sexo feminino, limitação/dependência e insatisfação com a instituição. Houve ainda associação significativa entre depressão e insônia, taquicardia, parestesia, tontura e suor excessivo. A depressão é altamente prevalente entre idosos institucionalizados, é mais comum entre as mulheres, e relaciona-se a uma série de sinais e sintomas que podem auxiliar em um diagnóstico precoce, subsidiando uma assistência de enfermagem mais efetiva.

DESCRITORES
Depressão
Idoso
Instituição de longa permanência para idosos
Saúde do idoso institucionalizado

RESUMEN

Se objetivó verificar la depresión en ancianos institucionalizados. Se empleó el método transversal, utilizando la Escala de Depresión Geriátrica de Yesavage en cinco hogares geriátricos del Distrito Federal, para verificar sintomatología depresiva. Fueron estudiados en total 299 individuos, 181 no atendieron los criterios de inclusión y 16 recusaron su participación. De los 102 ancianos participantes del estudio, 49,0% presentaba depresión: 36,3% de leve a moderada, 12,7% depresión severa. Se verificaron asociaciones entre síntomas depresivos y aumento etario, sexo femenino, limitación/dependencia e insatisfacción con la institución. Existió inclusive asociación significativa entre depresión e insomnio, taquicardia, parestesia, mareos y sudoración excesiva. La depresión es altamente prevalente entre ancianos institucionalizados, es más común entre las mujeres, y se relaciona a una serie de signos y síntomas que pueden cooperar a un diagnóstico precoz, facilitándose una atención de enfermería más efectiva.

DESCRIPTORES
Depresión
Anciano
Hogares para ancianos
Salud del anciano institucionalizado

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INTRODUCTION

Human aging can be defined as morphologic and functional alterations that lead to an ongoing process of irreversible organic destruction. It encompasses hereditary factors, environmental factors, age, diet, type of occupation, lifestyle and others, all conditioned by the social context to which the individual belongs[1].

In recent years, with the increase in the elderly population, studying this population has gained in importance, especially diseases shown to be prevalent in this age group, including a large number of psychiatric illnesses such as depression[2].

The World Health Organization considers depression to be a serious public health problem and estimates that 154 million people are affected worldwide[3]. The predominance of depression among the elderly can vary, depending on the instrument used and the severity studied[4]. It is estimated that 15% of the elderly experience some type of depressive symptom and that the depression is frequent in the elderly patient who is hospitalized (5 to 13%) and institutionalized (12 to 16%)[5].

The elderly individual with symptoms of depression is often overlooked in terms of diagnosis and depression treatment, which changes his/her quality of life and leads to an increased economic burden on health services due to direct and indirect costs[6]. In spite of its clinical relevance, depressive symptomatology in the elderly is infrequently addressed and appreciated on the part of health professionals[7].

In this perspective, the nurse can play a key role, providing a practice focused on healthy aging, understanding the phenomena as they present themselves and ensuring that the needs of the elderly are met in order to preserve their physical and mental health, as well as moral, intellectual, and spiritual needs so that the elderly can live in independent and dignified conditions. Thus the approach to geriatric depression in nursing must go beyond a conventional approach with a curative focus, addressing mental health promotion and prevention of depression, as well as proper identification of the disorder and related risk factors[8-10].

Studies on depression in the elderly prove to be relevant in clinical practice, as they allow for early and effective intervention, in addition to identifying risk factors[4,6]. Under this perspective, depressive symptomatology evaluation by means of the application of internationally known scales can contribute to better detection of depression in this age range[7]. The present study aimed at assessing the predominance of depression symptoms in institutionalized elderly individuals and identifying possible associated factors that might improve nursing care.

> In spite of its clinical relevance, depressive symptomatology in the elderly is infrequently addressed and appreciated on the part of health professionals.

METHOD

The present study utilized a randomized, observational and cross-sectional methodology and was conducted in five long-term institutions for the elderly, located in the Federal District.

Yesavage (GDS-15), a shorter version of the Geriatric Depression Scale, was used to detect warning signs of depression in the elderly. The study was conducted to identify the presence of warning signs of depression and not as a clinical diagnostic evaluation. The depression scale presents 15 negative questions/statements which check for the presence of depressive symptoms. A score between 0 and 5 is considered normal, 6-10 indicates mild to moderate depression and 11-15 indicates severe depression.

Inclusion criteria were: seniors aged 60 years or older, of both sexes, having the cognitive ability to answer the questionnaire without prior dementia or psychiatric illness (verified by medical records), who agreed to participate in the study and signed a consent form.

The elderly who consented to participate in the study completed a questionnaire divided into three sections: in the first section, socio-economic information was verified including: sex, age, marital status, race (self-defined), level of education and religion. In the second section, aspects that could influence the onset of depression in the elderly participants were evaluated, such as medication use, degree of limitation/dependence and length of time spent in the institution. In the third section, pre-determined signs and symptoms (insomnia, pain, tachycardia, dizziness, excessive sweating) that could be associated with depression were evaluated.

A statistical analysis was performed using the program Epi Info version 3.5.1. Chi-Square and Fisher's Exact tests were used for the association between independent category variables. The Mann-Whitney test, was used for numerical and category variables after confirming non-normality of frequency distributions, taking into consideration the level of significance of 5% ($p < 0.05$).

All participants signed an informed consent form (ICF) and the present study was approved by the Research Ethics Committee of the Foundation for Education and Research in Health Sciences (CEP-FEPECS), under the Federal District Government (protocol no. 191/10).

The first institution where the elderly were evaluated is a philanthropic institution serving individuals of both sexes who are unable to support themselves under a long stay regimen. The physical structure is divided into separate male and female wards consisting of triple rooms. The health care team consists of professionals hired by

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the institution (caregivers and occupational therapists) and by volunteer professionals (physician, nutritionist, and psychologist).

The second institution, which is also philanthropic, serves low-income elderly who may be dependent or independent and require a long stay regimen. The home offers caregivers hired by the institution and professional volunteers (physician and nutritionist). The rooms are shared by a maximum of two seniors.

The third institution is private, serves the elderly of both sexes who are both dependent and independent and live in the institution on a permanent or semi-permanent basis. It offers a multidisciplinary team hired by the institution (geriatrician, nurse, nutritionists and nursing technicians). It has both single and double rooms.

The fourth institution is private and serves independent and dependent elderly. It offers permanent and semi-permanent care. It has a geriatric medical service and nursing care is provided by nurses and nursing technicians. The institution also offers nutritionists, physiotherapists and occupational therapists. The physical structure consists of comfortable single, double, triple and quadruple rooms.

The fifth institution, also private, serves seniors who are independent or dependent, regardless of income. It offers double rooms. The institution hires caregivers and volunteer doctors, nurses, physiotherapists and dietitians are also available.

RESULTS

Of the 299 institutionalized elderly individuals surveyed, 181 did not meet the inclusion criteria. Two were aged below 60 years and 179 were deemed unable to answer the questionnaire due to dementia, decreased level of consciousness or previous psychiatric disorder (verified by chart review). After exclusion of seniors who failed to meet the inclusion criteria, 118 subjects were included in the study. Of these, 16 declined to participate in the study, leaving the present sample with the final number of 102 participants.

Table 1 details the sociodemographic characteristics of the subjects. There was a predominance of females (60.8%), aged above 80 years (41.2%), Caucasian (43.1%) and unmarried (35.3%). The average number of years of schooling of the population was 5.6 years and 84.3% of the individuals receive retirement pensions.

Of the subjects evaluated, 50 (49.0%) had depression. Of these, 37 (36.3%) were classified as having mild depression and 13 (12.7%) had severe depression.

The findings of associations between depression, demographic and socioeconomic variables (Table 1) were significant for age (p=0.04) and sex (p=0.01). The number of subjects with depression, as well as the severity of the depression, was proportionately higher as age increased. Severe depression, which was not found in the age group between 60 and 69 years, increased to 14.3% in subjects aged 70-80 years and 19.0% among the elderly over 80 years of age. There was a higher prevalence of women with depression. Of these, 19.4% had severe depression and 38.7% had mild depression. Among men, 2.5% had severe depression and 32.5% had mild depression.

Table 1 – Distribution of elderly living in long-term institutions in the Federal District, according to depression diagnosis, classification on Geriatric Depression Scale (EDG-15) and demographic and social-economic variables of the Federal District in 2010

	Total		ND		WD		p	SDep		LMDep		Normal		P
	f	%	f	%	f	%		f	%	f	%	f	%	
LMDep														
60-70	25	(24.5)	17	(68.0)	8	(32.0)	0.025*	0	(0.0)	8	(32.0)	17	(68.0)	0.044[a]
71-80	35	(34.3)	20	(57.1)	15	(42.9)		5	(14.3)	10	(28.6)	20	(57.1)	
> 80	42	(41.2)	15	(35.7)	27	(64.3)		8	(19.0)	19	(45.2)	15	(35.7)	
Gender														
Female	60	(60.8)	26	(41.9)	36	(58.1)	0.019**	12	(19.4)	24	(38.7)	26	(41.9)	0.016[a]
Male	40	(39.2)	26	(65.0)	14	(35.0)		1	(2.5)	13	(32.5)	26	(65.0)	
Marital Status														
Married	13	(12.7)	8	(61.1)	5	(38.5)	0.134*	1	(7.7)	4	(30.8)	8	(61.5)	0.277[a]
Divorced	17	(16.7)	11	(64.7)	6	(35.3)		2	(11.8)	4	(23.5)	11	(64.7)	
Dating	1	(1.0)	1	(100)	0	(0.0)		0	(0.0)	0	(0.0)	1	(100)	
Single	36	(35.3)	20	(55.6)	16	(44.4)		2	(5.6)	14	(38.9)	20	(56.6)	
Widowed	35	(34.3)	12	(34.3)	23	(65.7)		8	(22.9)	15	(42.9)	12	(34.3)	
Retired														
No	16	(15.7)	7	(43.8)	9	(56.3)	0.360**	5	(31.3)	4	(25.0)	7	(43.8)	0.051[a]
Yes	86	(84.3)	45	(52.3)	41	(47.7)		8	(9.3)	33	(38.4)	45	(52.3)	

[a] Chi-square test
Note: ND: no depression; WD: with depression; LMDep: light/moderate depression; SDep: severe depression

With respect to possible confounding factors of depression in institutionalized elderly subjects (Table 2), the analysis of the results showed a significant association with the existence of some type of limitation/dependence (p=0.01) and elderly dissatisfaction with the institution in which he/she lives (p=0.002). Among the elderly with depression, 60.4% have some type of physical limitation/dependence and 80.8% claim to be dissatisfied with the institution in which they live.

Table 2 - Key factors related to depression in elderly living in long-term institutions of the Federal District in 2010

Variables	Total		No Depression		With Depression		P
	f	%	f	%	f	%	
Religion							0.6201[b]
No	8	(7.8)	4	(50.0)	4	(50.0)	
Yes	94	(92.2)	48	(51.1)	46	(48.9)	
Religion Category							0.8348[a]
Catholic	68	(66.7)	35	(51.5)	33	(48.5)	
Spiritualist	8	(7.8)	5	(62.5)	3	(37.5)	
Protestant	15	(14.7)	6	(40.0)	9	(60.0)	
Other	3	(2.9)	2	(66.7)	1	(33.3)	
Has visitors							0.4605[b]
No	28	(27.5)	15	(53.6)	13	(46.4)	
Yes	74	(72.5)	37	(50.0)	37	(50.0)	
Limitations/dependence							0.0141[b]
No	49	(48.0)	31	(63.3)	18	(36.7)	
Yes	53	(52.0)	21	(39.6)	32	(60.4)	
Physical Activity							0.1627[b]
No	49	(48.0)	22	(44.9)	27	(55.1)	
Yes	53	(52.0)	30	(56.6)	23	(43.4)	
Illness							0.3646[b]
No	25	(24.5)	14	(56.0)	11	(44.0)	
Yes	77	(75.5)	38	(49.4)	39	(50.6)	
Use of medication							0.0539[b]
No	15	(14.7)	11	(73.3)	4	(26.7)	
Yes	87	(85.3)	41	(47.1)	46	(52.9)	
Leaves the Institution							0.3123[b]
No	68	(66.7)	33	(48.5)	35	(51.5)	
Yes	34	(33.3)	19	(55.9)	15	(44.1)	
Years living in the institution							0.6417[a]
Up to 5 years	63	(61.8)	34	(54.0)	29	(46.0)	
5 to 10 years	22	(21.6)	11	(50.0)	11	(50.0)	
Over 10 years	17	(16.7)	7	(41.2)	10	(58.8)	
Satisfied with the institution							0.0002[b]
No	26	(25.5)	5	(19.2)	21	(80.8)	
Yes	76	(74.5)	47	(61.8)	29	(38.2)	
Participates in institution activities							0.2787[b]
No	49	(48.0)	23	(46.9)	26	(53.1)	
Yes	53	(52.0)	29	(54.7)	24	(45.3)	
Would like to be with family							0.1538[b]
No	26	(25.5)	16	(61.5)	10	(38.5)	
Yes	76	(74.5)	36	(47.4)	40	(52.6)	
Years since retirement							0.781[a]
Up to 5 years	6	(5.9)	3	(50.0)	3	(50.0)	
5 to 10 years	11	(10.8)	7	(63.6)	4	(36.4)	
Over 10 years	43	(42.2)	20	(46.5)	23	(53.5)	
Does not remember	42	(41.2)	22	(52.4)	20	(47.6)	

[a] Chi-Square Test; [b] Fisher's Exact Test

Table 3 shows the distribution of depression according to the five institutions surveyed. There was no statistically significant association between living in the institutions and having symptoms of depression.

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Table 3 - Presence of depression among the elderly living in different long-term institutions in the Federal District in 2010

Variable	Inst 1 f (%)	Inst 2 f (%)	Inst 3 f (%)	Inst 4 f (%)	Inst 5 f (%)	P
Without depression	13 (52)	17 (48.6)	2 (50)	8 (66.6)	12 (46.1)	
Mild Depression	12 (48)	11 (31.4)	2 (50)	2 (16.7)	10 (38.5)	
Severe Depression	0 (0)	7(20)	0 (0)	2(16.7)	4 (15.4)	
Total	25 (100)	35 (100)	4 (100)	12 (100)	26 (100)	0.354[a]

[a]Chi-Square Test

Note: Inst: = Institution

Table 4 shows a significant association between insomnia (p<0.01), tachycardia (p=0.01), paresthesias (p<0.01), dizziness (p<0.01), excessive sweating (p<0.01) and depression. Among the depressed elderly the prevalence of symptoms ranged from 65% (pain) to 88.2% (excessive sweating). Among those without depression, the prevalence of symptoms was much lower, ranging from 11.8% (excessive sweating) to 35% (pain).

Table 4 - Distribution of clinical complaints of elderly living in long-term institutions in the Federal District in 2010

Variables	Total		Without Depression		With Depression		p
	F	%	F	%	f	%	
Insomnia							0,0001[b]
No	62	(60.8)	41	(66.1)	21	(33.9)	
Yes	40	(39.2)	11	(27.5)	29	(72.5)	
Tachycardia							0.0125[b]
No	85	(83.3)	48	(56.5)	37	(43.5)	
Yes	17	(16.7)	4	(23.5)	13	(76.5)	
Pain							0.0001[b]
No	42	(41.2)	31	(73.8)	11	(26.2)	
Yes	60	(58.8)	21	(35.0)	39	(65.0)	
Paresthesias							0.0069[b]
No	84	(82.4)	48	(57.1)	36	(42.9)	
Yes	18	(17.6)	4	(22.2)	14	(77.8)	
Dizziness *							0.0009[b]
No	69	(67.6)	43	(62.3)	26	(37.7)	
Yes	33	(32.4)	9	(27.3)	24	(72.7)	
Excessive sweating							0.0003[b]
No	85	(83.3)	50	(58.8)	35	(41.2)	
Yes	17	(16.7)	2	(11.8)	15	(88.2)	

[b]Fisher's Exact Test

The data shown in Table 5 demonstrate that there was a significant difference among means between the elderly with depression and those without depression. Associated factors included the frequency with which the individual left the institution, frequency of physical activity, participation in activities within the institution, number of years since admission and years of study.

Table 5 - Averages and standard deviation among the elderly with and without depression living in long-term institutions in the Federal District in 2010

Variable	Without Depression	With Depression	p
Number of times the individual left the institution (per year)	25.67 (63.83)	16.30 (44.48)	0.3934[a]
Monthly frequency of physical activity	6.69 (8.83)	3.40 (4.77)	0.0935[a]
Monthly frequency of participation**	3.54 (4.86)	2.88 (3.84)	0.5537[a]
Number of years in the institution	4.46 (4.10)	5.96 (7.11)	0.6561[a]
Years of study	5.31 (4.91)	5.88 (5.67)	0.819[a]

SD: Standard deviation. [a] Mann-Whitney. **In activities of the institution

The results of this research were presented to the participating institutions and those professionals responsible for the health care of the elderly patients, so that the professionals can better evaluate clinical conditions, monitoring and improving the quality of life of all institutionalized elderly.

DISCUSSION

Depression is the most common psychiatric disorder in the elderly[2], leading to loss of individual autonomy and aggravation of preexisting conditions. Depression scales for tracking elderly symptoms of depression are important because they allow the early detection of depression so that appropriate intervention and prevention of risk factors can be performed[7]. In the present study, tracking was performed to identify the presence of signs indicating depression and not as a means of clinical diagnostic evaluation.

Of the total elderly subjects of the present study, 59.8% did not meet the inclusion criteria and were excluded because they did not have the cognitive ability to answer the questionnaire due to dementia, decreased level of consciousness or a previous psychiatric disorder. Among several studies in Brazil, the prevalence of psychiatric disorders among older adults living in long-term institutions ranged from 32.1% to 80.1%[11].

Results from Project SABE (Health, Welfare and Aging), of the Pan American Health Organization, conducted with elderly living in urban areas of the metropolis of seven countries in Latin America and the Caribbean, determined a prevalence rate for depression among the elderly of 18.1%, according to the Geriatric Depression Scale[12]. The predominance of depression symptoms detected in this study (49.0%) was larger than that reported among the elderly of large cities in Latin America and the Caribbean[12], and larger than results found in a study carried out in England and Wales[13], in which a predominance of depression of 27.1% in people living in institutions was found, as compared with 9.3% in people living at home. However, it was similar to another national study, using the same assessment tool, which found a prevalence of 51% for depression symptoms in institutionalized elderly subjects[14].

With respect to gender, there was a higher prevalence of depression symptoms among women (p=0.018), a fact which is in agreement with literature suggesting that women are more vulnerable to developing depressive symptoms in old age[15]. Among the possible explanations is the fact that women, on average, live longer than men[16] and old age is accompanied by a higher incidence of chronic diseases, including depression[17].

Human aging leads to a progressive decrease in functional reserve of individuals, which may be proportion- ate to the increase in age and worsening quality of life in the elderly, which may in turn make the elderly more susceptible to symptoms of depression[18]. The association between the presence of depression and the limitation/dependence variable was significant in this study.

We observed a positive association between dissatisfaction of the elderly and depression symptoms. Dissatisfaction can be explained partly by the fact that the elderly individual is forced to live with strangers, follow a regimented schedule[18], lose some of their autonomy and feel like just one of many within the community or institution[19]. These facts may lead to the increase in the incidence of depression. Thus, it becomes necessary for the effective treatment of depression in the elderly to understand that people do not experience depression uniformly, and that care should be directed to meeting the unique needs of each individual[20].

Depression is often accompanied by frequent physical complaints[13]. Insomnia, pain, paresthesias, dizziness, excessive sweating and tachycardia had important and significant associations with depression among the elderly.

In identifying depression, a multidisciplinary team should ensure that an effective treatment plan is established. Accordingly, nurses play a key role and should not restrict themselves to the care related to physical treatment, although this, too, is important. Goal setting, listening, interacting with a view to making the patient aware of his/her role in the treatment, maintenance or suppression of symptoms, perceptual congruence between nurse and patient so that the individual understands the therapeutic intentions, in addition to perceiving that the nursing staff is there to support him/her, are attitudes expected from the nurses who care for patients with depression[21-22].

CONCLUSION

This study found that symptoms of depression are common among institutionalized elderly individuals and occur more frequently in women, older individuals, individuals with some type of limitation/dependence and who are dissatisfied with their institution. The observation of these aspects can help nurses in proposing preventive measures, early identification of depression as well as in treatment established in partnership with other health professionals.

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Correspondence addressed to: Luzitano Brandão Ferreira
Faculdade de Ciências da Saúde,
Centro Universitário de Brasília
Bloco 9 - Asa Norte SEPN 707/907
CEP 70790-075 – Brasília, DF, Brazil