QUALITY OF LIFE AND MORIBIDITIES AMONG ELDERLY WITH AND WITHOUT INDICATIVE OF DEPRESSION

QUALIDADE DE VIDA E MORBIDADES ENTRE IDOSOS COM E SEM INDICATIVO DE DEPRESSÃO

CALIDAD DE VIDA Y MORBILIDAD EN PERSONAS MAYORES CON Y SIN LA INDICACIÓN DE LA DEPRESIÓN

Nayara Paula Fernandes Martins Molina[1], Ana Carolina Lima Silva[2], Erica Midori Ikegami[3], Dayane Aparecida Viana[4], Lilane Maria Alves Silva[5], Leiner Resende Rodrigues[6]

ABSTRACT

Objective: to make a comparison of the quality of life (QOL) and self-reported morbidities of elderly people with and without symptoms of depression. **Method:** A cross-sectional study carried out from June through December 2012. Tools: Mini Mental State Examination (MMSE), Brazilian Multidimensional Functional Assessment Questionnaire (BOMFAQ), *Geriatric Depression Scale* (GDS-15), *World Health Organization Quality of Life Group – Bref* (WHOQOL-BREF) and *World of Health Organization Quality of Life Assessment for Olders Adults* (WHOQOL-OLD). Both Student's t-test and the chi-squared test with $p<0,05$ were used. **Results:** The study population was mostly female, from 70 to 80 years of age, with 1 to 5 years of schooling and an income of up to a minimum wage. The ones with symptoms of depression got lower scored in all domains and aspects of the QOL, and a higher incidence of: arthritis/arthrosis ($p<0,001$), osteoporosis ($p<0,001$), urinary incontinence ($p<0,001$), cataract ($p<0,001$), spine ($p<0,001$), sleep ($p<0,001$), among others. **Conclusion:** Depression impacts QOL and its complex connexion with morbidities demands more specific methodological approaches in order to improve QOL.

Keywords: Depression; Quality of life; Elderly health; Nursing.

RESUMO

Objetivo: comparar a qualidade de vida (QV) e as morbidades autorreferidas entre idosos com e sem indicativo de depressão. **Método:** Estudo transversal, realizado entre junho e dezembro de 2012. Instrumentos: Mini-exame do Estado Mental (MEEM), Questionário

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1 Enfermeira. Doutoranda em Atenção à Saúde. UFTM. E-mail: nayara.pfmartins@gmail.com
2 Enfermeira pela UFTM. Email: aninhacarol.enf@gmail.com
3 Fisioterapeuta, especialista em saúde do idoso e mestre em atenção à saúde pela UFTM. Email: erica.ikegami@gmail.com
4 Fisioterapeuta. Mestre em Atenção à Saúde pela UFTM. Email: dayane.viana@hotmail.com
5 Fisioterapeuta. Mestre em Atenção à Saúde pela UFTM. Email: lilanealves@yahoo.com.br
6 Enfermeira. Doutora em Enfermagem Psiquiátrica. Professora Associada do Departamento de Enfermagem em Educação e Saúde Comunitária do Curso de Graduação em Enfermagem. Universidade Federal do Triângulo Mineiro (UFTM). E-mail: leiner.r.rodrigues@gmail.com

Brasileiro de Avaliação Funcional Multidimensional (BOMFAQ), *Geriatric Depression Scale* (GDS-15), *World Health Organization Quality of Life Group – Bref* (WHOQOL-BREF) e *World of Health Organization Quality of Life Assessment for Olders Adults* (WHOQOL-OLD). Aplicaram-se testes t de Student e qui-quadrado com *p*<0,05. **Resultados:** Predominou sexo feminino, faixa etária 70├ 80 anos, 1├ 5 anos de estudo e renda de até um salário mínimo. Aqueles com indicativo apresentaram escores inferiores em todos domínios e facetas da QV, e maior proporção de: artrite/artrose (*p*<0,001), osteoporose (*p*<0,001), incontinência urinária (*p*<0,001), catarata (*p*<0,001), coluna (*p*<0,001), sono (*p*<0,001), dentre outras. **Conclusão:** A depressão impacta a QV e sua complexa relação com morbidades exige abordagens mais específicas, visando melhorar a QV.
Descritores: Depressão; Qualidade de vida; Saúde do Idoso; Enfermagem

RESUMEN

Objetivo: Comparar la calidad de vida (CV) y las morbilidades autoinformadas entre los ancianos con y sin indicación de depresión. **Método**: Estudio transversal, realizado entre junio y diciembre de 2012. Instrumentos: Mini-Examen del estado mental (MMSE), Cuestionario de evaluación funcional multidimensional brasileño (BOMFAQ), Escala de depresión geriátrica (GDS-15), Grupo de calidad de vida de la Organización Mundial de la Salud - Bref (WHOQOL-BREF) y Evaluación de la calidad de vida de la Organización Mundial de la Salud para Adultos Mayores (WHOQOL-OLD). Las pruebas de t de Student y chi-cuadrado se aplicaron con p <0.05. **Resultados**: Mujeres con predominio, grupo de edad 70├ 80 años, 1├ 5 años de estudio e ingresos de hasta un salario mínimo. Los ancianos con indicación de depresión presentaron puntajes inferiores en todos los dominios y facetas; y una mayor proporción de: artritis/artrosis (*p*<0.001), osteoporosis (*p*<0.001), incontinencia urinaria (*p*<0.001), catarata (*p*<0.001), columna vertebral (*p*<0.001), dormir (*p*<0.001), entre otros. **Conclusión**: la depresión afecta la calidad de vida y su compleja relación con la morbilidad requiere enfoques más específicos para mejorar la calidad de vida.
Descriptores: Depresión; Calidad de vida; Salud del Anciano; Enfermería

INTRODUCTION

Depression has emerged as one of the most prevalent psychiatric diseases in elderly people of the community.[1] Even though it is not inherent to this time of life, elderly people is hugely affected by the disease due to experiences and changes considered negative, such as the death of close people, relationship problems, adaptation to retirement, fear of dying and aggravation of chronic diseases. This context makes elderly people more vulnerable to the onset of the disease.[2]

Regarding the diagnosis, besides the diagnostic criteria for depression of the Internation Classification of Diseases (ICD-10) and the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), the Geriatric Depression Scale (GDS-15) adapted for Brazil may be used to track the disease, being attractive for clinical practice since less time is needed for its application and it assists with the diagnosis of major depressive episodes using valid measures.[3]

The disease is characterized by changes in some functions, such as:

concentration, self-esteem, self-confidence, sleep, hunger, ability to experience pleasure and presence of negative feelings like guilt.[4] Moreover, it may cause hormonal and physiological changes, increasing the individual's predisposition to develop chronic diseases.[5]

Boing *et al.*[5] state that the presence of chronic diseases may result in limitations which affect mobility, feeding, physical activity and the performance of daily life activities related to personal, social and work life, contributing to the emergence of mood disorders such as depression.

It should be noted that the association between depression and other chronic diseases has a bidirectional character[6], showing complexity in the understanding of cause and consequence, as observed in a study carried out in the United States which found a connexion between depression and fecal incontinence and constipation, despite the direction of the association.[7]

As consequences of depression, it is observed an increase in the risk of morbidity and mortality, a greater use of health services and costs which have a negative impact in the quality of life (QOL) of the elderly.[1] Similar to depression, there are specific tools to measure QOL, such as the *World Health Organization Quality of Life Group – Bref* (WHOQOL-BREF)[8] and the *World of Health Organization Quality of Life Assessment for Olders Adults* (WHOQOL-OLD)[9] propounded by the *World Health Organization.*

The connexion between depression and QOL has been the object of study of cross-sectional and longitudinal studies as indicated by the review which gathered 74 articles and found a significant connexion between the severity of the depression and lower levels of QOL in elderly people, regardless of the wide conceptual variation of QOL and the diversity of tools used to measure both variables.[10] The incidence of depression is also higher in people with more morbidities.[5] Moreover, multiple morbidities in the elderly tend to impact the self-assessment of health status, having physical, social and emotional impact, as well as a higher demand and need for health services and increased susceptibility to the onset of depression and impact of QOL.[11]

An inverse correlation is observed between QOL, symptoms of depression and multiple morbidities; however, researches have shown more concern regarding the number of diseases, not having the identification of such morbidities as an objective.[11] It should be noted that their identification might guide the planning and performance of health professionals, especially the ones working with primary care, in order to do an early identification of possible signs and symptoms of depression and other morbidities, thus reducing their impact on QOL, which challenge elderly health.[11;12]

This study reinforces the need of addressing the issue of the symptoms of depression, making a comparison between the groups of elderly people according to

informed consent form, answered the Mini Mental State Examination (MMSE), which considered a cognitive decline based on time of schooling ($\leq$ 13 points for illiterates; $\leq$ 18 points for 1 to 11 years of schooling and $\leq$ 26 points for over 11 years of schooling).[13]

The interview went on with the application of the Brazilian Multidimensional Functional Assessment Questionnaire (BOMFAQ) for the identification of self-reported morbidities and sociodemographic (sex, age, marital status and schooling) and economic (individual monthly income in minimum wage terms) information.[14]

QOL was measured using two tools by the *World Health Organization:* WHOQOL-bref[8] and WHOQOL-OLD.[9] The first is made up of four domains (physical, psychological, relationships and environment) and the second of six aspects (working both ways, autonomy, past, present and future activities, social engagement, death and dying, and intimacy). Scores for both vary from 0 to 100 points, higher scores being consistent with higher QOL.

The Brazilian version of the *Geriatric Depression Scale* (GDS-15) was used. It is made up of 15 objective questions, with scores going from 0 to 15.

Elderly people with a score higher than 5 points were classified as presenting symptoms of depression[3], forming two groups: elderly people with (n=250) and without symptoms of depression (n=730).

The data obtained were input in an Excel spreadsheet by double entry. The data were subsequently analyzed with the application *Statistical Package for the Social Science* (SPSS), version 17.0. Descriptive analyses were carried out with absolute and relative frequencies and measures of central tendency (mean and median) and variability (standard deviation, minimum and maximum).

In accordance with the normality verified with the Kolmogorov-Smirnov test, the variables were measured using the following tests: Student's t-test for comparison of continuous variables normally distributed; Chi-squared test to measure dichotomous variables. The significance level was set at $p<0.05$.

RESULTS

Of the elderly people interviewed, most were female between 70-80 years of age, lived with a partner, had 1 to 5 years of schooling and a minimum wage individual monthly income (Table 1).

Table 1 – Distribution of the frequencies of the sociodemographic and economic variables, according to the presence of symptoms of depression – Uberaba, 2017.

Variables	With symptoms		No symptoms	
	%	n	%	n
Sex				
Female	64.4	178	71.2	453

Male	35.6	72	28.8	277
Age group				
60 ⊢ 70	28.9	68	27.2	215
70 ⊢ 80	50.0	123	49.2	367
80 or over	21.1	59	23.6	148
Marital status				
Never married or lived with a partner	4.7	15	6.0	33
Lives with a spouse or partner	42.7	99	39.6	319
Widow(er)	41.9	114	45.6	297
Separated / divorced	10.5	22	8.8	81
Schooling				
Illiterate	21.6	66	26.4	146
1 ⊢ 5 years	56.0	144	57.6	405
5 or more	22.3	40	16.0	179
Income				
No income	7.7	25	10.0	50
Up to one minimum wage	51.2	152	60.8	350
> 1 minimum wage	41.1	73	29.2	330

Table 2 shows the comparison of QOL scores according to domains and aspects of the WHOQOL-BREF and WHOQOL-OLD, in which elderly people with symptoms of depression got lower scores in all domains of the WHOQOL-BREF.

Regarding the aspects of the WHOQOL-OLD, it was observed that the elderly with symptoms of depression also got lower scores in all aspects in comparison with those without symptoms of depression.

Table 2 – Quality of life of elderly people with and without symptoms of depression, according to the WHOQOL-BREF and WHOQOL-OLD – Uberaba, 2017.

	With symptoms		No symptoms			
	Mean	**Standard Deviation**	**Mean**	**Standard Deviation**	**t**	***p***
Domains of WHOQOL-BREF						
Physical	46.99	16.999	67.02	15.635	-23.008	<0.001
Psychological	50.67	15.777	71.32	11.975	-25.197	<0.001
Relationship	63.01	16.963	74.11	12.527	-12.650	<0.001
Environment	50.00	13.613	64.11	12.58	-19.179	<0.001
Aspects of WHOQOL-OLD						
Sensory abilities	59.37	23.896	74.85	21.793	-12.554	<0.001
Autonomy	54.30	16.556	68.53	14.576	-16.044	<0.001
Past, present and future activities	55,97	16.151	70.99	13.206	-17.624	<0.001

Social Engagement	50.31	17.419	67.64	13.787	-18.972	<0.001
Death and Dying	68.90	25.658	76.27	25.016	-5.304	<0.001
Intimacy	60.09	22.179	72.61	19.511	-10.551	<0.001

In the comparison of self-reported morbidities, there was a higher incidence of elderly people with symptoms of depression who reported rheumatism, arthritis/arthrosis, osteoporosis, embolism, poor circulation, heart problems, stroke, Parkinson's disease, urinary incontinence, constipation, sleep disorders, cataract, spine conditions, kidney problems and vision problems, as can be observed in table 3.

Table 3 – Morbidities reported by the elderly with and without symptoms of depression – Uberaba, 2017.

Morbidities reported	With symptoms		No symptoms		
	N	%	n	%	P
Reumatism	60	24,3	117	16,2	0,005
Arthritis/ arthrosis	112	45,3	231	32,0	<0,001
Osteoporosis	68	27,6	114	15,7	<0,001
Asthma or bronchitis	25	10,0	59	8,1	0,353
Tuberculosis	1	0,4	1	0,1	0,429
Embolism	5	2,0	4	0,5	0,039
High blood pressure	174	69,9	461	63,4	0,065
Poor circulation (varicose veins)	131	51,2	285	39,3	<0,001
Heart problems	93	37,1	217	29,8	0,034
Diabetes	58	23,1	128	17,6	0,053
Obesity	40	15,9	85	11,7	0,080
Stroke	18	7,2	21	2,9	0,003
Parkinson's disease	8	3,2	4	0,5	0,001
Urinary incontinence	64	25,5	101	13,9	<0,001
Fecal incontinence	11	4,4	9	1,2	0,002
Constipation	89	35,5	144	19,8	<0,001
Sleep disorders	141	56,2	216	29,6	<0,001
Cataract	86	34,4	163	22,4	<0,001
Glaucoma	19	7,6	41	5,6	0,267
Spine conditions	162	64,5	343	47,1	<0,001
Kidney problems	49	19,6	65	8,9	<0,001
Sequelae of accident or trauma	34	13,5	68	9,3	0,059
Malignant tumour	7	2,8	8	1,1	0,057
Benign tumour	9	3,6	12	1,6	0,063
Vision problems	149	59,5	366	50,1	0,007

DISCUSSION

The sociodemographic and economic characterization of the sample, regardless of the presence of symptoms of depression, was similar to the findings in a study carried out with community dwelling elderly in seven Brazilian cities, which observed a predominance of female individuals between the ages of 70-80, who lived with a partner, had 1-5 years of schooling and individual monthly income of up to a minimum wage.[15]

The elderly with symptoms of depression had lower scores in all domains of the WHOQOL-BREF and aspects of the WHOQOL-OLD compared to those without symptoms. The data resemble the results of a study carried out with community dwelling elderly which found a negative correlation between symptoms of depression and domains and aspects (except death and dying) of the WHOQOL-BREF and the WHOQOL-OLD, respectively.[12]

Regarding the assessment of QOL, it is worth noting that elderly people with symptoms of depression had a higher proportion of morbidities than those without symptoms. The diseases, even though self-reported, may in many cases cause pain, discomfort, substance dependence among others, which may have a negative impact on daily life activities[11], items assessed in the physical domain.[8]

The assessment of the psychological domain is related to memory and concentration, learning, negative feelings, self-esteem[8], which may be more evident in the presence of symptoms of depression such as sadness, discouragement, cry, anhedonia, pessimism, hopelessness, fear, nervousness, anguish and feelings of guilt[1], which is consistent with the findings of the study.

The relationship domain had the highest score of QOL according to the WHOQOL-BREF for both groups, which corroborates the research regarding QOL of community dwelling elderly of João Pessoa-PB who had symptoms of depression, which found in this domain the highest score for QOL.[12] This domain is related to social support, personal relationships and sexual activity.[8] The higher percentage of married elderly people amongst those with symptoms of depression may justify, partially, the higher score in the domain.

The environment domain assesses, among other items, health and social care, financial resources, recreation/leisure opportunities.[8] The low income of the elderly, associated with health care costs, limitations and loss of autonomy end up restricting leisure options and access to recreational activities, which may have a negative impact in the assessment of this domain of QOL.[12]

Regarding the sensory abilities aspect, it is related to sensory function and loss[9]; in this survey, the highest percentage of elderly people is in the 70-80 age group, a period in which sensory loss related to the natural aging process may become

more evident, associated with morbidities which accentuate such losses, like the highest proportion of vision problems and cataract among those with symptoms of depression, which may partially explain the difference in this aspect.

Moreover, the limited financial resources associated with sensory loss may also impact autonomy and social engagement, aspects which assess independence in old age and participation in everyday activities[9], respectively. When associated with symptoms of depression, which may interfere with self-esteem, self-confidence, ability to experience pleasure[4], the elderly may be more susceptible to social isolation and less secure to make their own decisions, being more likely to get depressed.[12]

In this sense, it is observed that symptoms of depression have a considerable impact on elderly perception of self-worth, and on their possibility to maintain autonomy and independence. These findings call attention to the importance of training professionals to address the psychological aspects of aging, providing support, early detection and treatment for depression in a more specific way, improving the QOL of this population.[12]

Concerning the morbidities, it is known that chronic musculoskeletal pain in the elderly affects bones, joints, muscles and related soft tissues, and may be caused by diseases such as arthritis, with a significant disparity in the presence of this morbidity between elderly people with and

without symptoms of depression. Both chronic pain and depression are prevalent in old age and have a bidirectional relationship in regard to acting as risk factors, with growing evidence of the neuroinflammatory role in the development of both conditions[16] which interfere negatively in the life of the elderly.

A more significant presence of cardiovascular and cerebrovascular in the group with symptoms of depression was also observed in a population-based study in the state of Rio Grande do Sul, in which elderly people with coronary heart disease, heart failure and who had had a stroke had a prevalence ratio of depression of 1.94, 1.40 and 1.33 times greater, respectively. This finding suggests vascular diseases play a role as a risk factor for brain impairment related to depression.[6] Considering these results, it seems worth noting that health professionals must be alert for any manifestations of the aforementioned morbidities as a way to intervene to prevent any related symptoms of depression.

Parkinson's disease (PD) was also more prevalent in elderly people with symptoms of depression, which corroborates a population-based study carried out with elderly people from India, China, Cuba, the Dominican Republic, Venezuela, Mexico and Peru. There is a hypothesis depression or cognitive decline may be symptoms of a more severe manifestation of PD, or also that depression causes cognitive deterioration[17],

raising awareness not only for the identification and screening for not only the cognitive state associated to PD but also for the consequences of depression.

Findings related to bowel conditions in the elderly with symptoms of depression are still being investigated in regard to causality. Regardless of the association, a population-based study in the United States indicated that moderate to severe depression was considered one of the risk factors for both fecal incontinence and constipation, intervention being necessary for both conditions since they are prevalent in older adults.[7]

There is also a higher proportion of elderly people with urinary incontinence amongst those with symptoms of depression, which demands more attention, like bowel conditions, from health care professionals because they may be a source of embarrassment for the elderly, generating negative feelings that may impact the elderly physically, emotionally and socially, negatively affecting QOL.

The report of sleep problems by the elderly with symptoms of depression corroborates the findings of a study carried out in Canada with asymptomatic individuals, with anxiety and mood disorders like depression. The results indicated that one in every four depressed individuals assessed their sleep quality as poor or very poor; more than half had difficulty falling asleep or experienced interrupted sleep at night or in early morning at least once a week; used medication and reported daytime

sleepiness.[18] Considering the importance of sleep for mood regulation, it is important that health professionals are able to do an early identification of any sleep issues the elderly experience, in order to avoid any possible repercussions on mood.

Concerning vision problems, a review study confirms the findings of this study, in which it was observed a prevalence of depression in elderly people with common vision problems such as age-related macular degeneration, cataract, glaucoma and Fuchs' corneal dystrophy. Although there is a strong connexion between these disorders and depression, the studies observed in the review indicate that the combination of both conditions is not always properly diagnosed or treated, resulting in psychiatric relapses and worsening of QOL.[19] In this sense, a precise diagnosis of such morbidities may contribute to prevent relapses related to symptoms of depression.

Regarding kidney problems, a longitudinal study carried out in the United States with community dwelling elderly aged 65 or older, indicated that depressed patients (21.2%) had a higher prevalence of chronic kidney disease and outcomes such as hospitalization for acute kidney failure[20], highlighting the importance of treating the diseases together, respecting their peculiarities.

It is observed that the bidirectionality of depression with other morbidities must be considered with care since the first is a sum of common alterations originating from several

aetiologies which interfere in the treatment and prognosis of the disease.[16] However, regardless of the direction in which this association occurs, the combination of two conditions implies worse handling of any aggravations and outcome.[5]

The presence of depression concomitantly with other diseases jeopardizes its treatment and care, since health professionals tend to pay more attention to somatic complaints associated to both depressive disorders and other diseases, which compromises the QOL of the elderly who could receive more specific care.[2] In view of the findings, it is highlighted the importance of an early and adequate treatment to aspects of depression and other morbidities that may afflict the elderly. It is essential that training activities be carried out in health care centers in order to prepare professionals to take more specific actions and strengthen actions for health promotion, prevention and rehabilitation to minimize or prevent negative effects of depression and of other morbidities on QOL.

CONCLUSION

The data in this study indicate that elderly people with symptoms of depression presented lower scores of QOL in all aspects and domains and also made up the largest proportion of elderly patients with morbidities when compared to those without symptoms. The diversity of tools used to measure the symptoms of depression, QOL and morbidities makes it difficult to compare the results. Besides, given the cross-sectional characteristic of this study, it was not possible to establish cause and effect of the variables observed.

Considering the impact that depression has in the QOL of these elderly people and its complex connexion to other morbidities, it is necessary that it be detected early in order to prevent related diseases and provide basis for a more specific approach to deal with those already affected by the condition, thus contributing for disease management and consequent improvement of QOL.

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