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Factors associated with the quality of life of elderly men

FATORES ASSOCIADOS COM A QUALIDADE DE VIDA DE HOMENS IDOSOS

FACTORES ASOCIADOS CON LA CALIDAD DE VIDA DE HOMBRES ANCIANOS

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ABSTRACT

This was an analytical, cross-sectional household survey study aimed at describing the sociodemographic characteristics, health and quality of life of elderly men, and to verify the socioeconomic and health factors related to quality of life. Participants in this study included 804 elderly men. Data were collected using the following instruments: Older Americans Resources and Services scale (OARS), the World Health Organization Quality of Life-BREF (WHOQOL-BREF), and the World Health Organization Quality of Life Assessment for Older Adults (WHOQOL-OLD). Descriptive analysis, student's t-test, Pearson correlation and multiple linear regression (p<0.05) were used. The prevalent characteristics were: individuals 60-70 years old, married, 4-8 years of education, and a minimum wage income. The lowest quality of life scores were in the physical domain and autonomy facet, and were associated with: the absence of a companion, education, low income, higher number of comorbidities, and functional disability. Functional disability had the strongest influence on the quality of life, except for the physical domain and intimacy facet.

DESCRIPTORS

Quality of life
Aged
Men's health
Geriatric nursing

RESUMO

Inquérito domiciliário, transversal e analítico que objetivou descrever as características sociodemográficas, de saúde e a qualidade de vida de homens idosos e verificar os fatores socioeconômicos e de saúde associados à qualidade de vida. Participaram 804 homens idosos. Os dados foram coletados pelos instrumentos: *Older Americans Resources and Services*(OARS), World Health Organization Quality of Life - Bref (WHOQOL-BREF) e Health Organization Quality of Life Assessment for Older Adults(WHOQOL-OLD). Foram realizados análise descritiva, teste *t*-Student, correlação de Pearson e regressão linear múltipla (p<0,05). Predominaram idosos com 60 ├ 70 anos, casados, 4 ├ 8 anos de estudo e renda de um salário mínimo. Os menores escores de qualidade de vida foram no domínio físico e na faceta autonomia e estiveram associados a ausência de companheira e de escolaridade, baixa renda, maior número de morbidades e incapacidade funcional. A incapacidade funcional foi o que mais influenciou a qualidade de vida, excetuando-se o domínio físico e a faceta intimidade.

DESCRITORES

Qualidade de vida
Idoso
Saúde do homem
Enfermagem geriátrica

RESUMEN

Encuesta domiciliaria, transversal, analítica, objetivando describir las características sociodemográficas, de salud y calidad de vida de hombres ancianos, y verificar los factores socioeconómicos y de salud asociados a calidad de vida. Participaron 804 hombre ancianos. Datos recolectados mediante instrumentos: *Older Americans Resources and Services*(OARS), *World Health Organization Quality of Life-Bref* (WHOQOL-Bref) y *Health Organization Quality of Life Assessment for Older Adults*(WHOQOL-Old). Se efectuó análisis descriptivo, test t-Student, correlación de Pearson y regresión lineal múltiple (p<0,05). Predominaron ancianos con 60 ├ 70 años, casados, 4 ├ 8 años de estudio y renta de un salario mínimo. Los menores puntajes de calidad de vida se dieron en el dominio físico y en la faceta autonomía; estuvieron asociados a ausencia de compañera, de escolaridad, baja renta, mayor número de comorbilidades e incapacidad funcional. La incapacidad funcional fue el factor más influyente en la calidad de vida, exceptuándose el dominio físico y la faceta intimidad.

DESCRIPTORES

Calidad de vida
Anciano
Salud del hombre
Enfermería geriátrica

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INTRODUCTION

The aging of the population is a worldwide phenomenon today, and changes in age structure are occurring at an accelerated rate in Brazil. According to the 2010 demographic census, the percentage of elderly in the country was 10.8%[1]. It is noteworthy that in Uberaba-MG, the place of the present study, the proportion of elderly is higher than the national one, at 12.6%[2], which evidences the need for studies that increase understanding about development of the aging process, considering its specificities.

In 2010, 44.5% of the total elderly population was male, representing a contingent of more than nine million people[1]. Therefore the need to conduct studies to identify the specificities of elderly people considering gender differences is also evident.

In this context, the National Policy on Comprehensive Men's Healthcare stands out, which refers to the need for articulation of health services within several governmental, private sector and societal areas, in order to create networks of commitment and co-responsibility for health and quality of life (QoL) of the male population[3].

For the present study, the concept of QoL adopted was that of a subjective, multidimensional concept, with negative and positive aspects, proposed by a group of researchers on the subject, supported by World Health Organization (WHO): *individuals* perception of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards and concerns[4].

Scientific literature on the aging process, QoL and health of elderly men is scarce. One study found that men have low self-esteem as they age and concluded that there is an influence of gender issues on health and QoL[5]. Another study with elderly in Italy showed that lower QoL scores in physical appearance were related to age, family income, being single and chronic diseases[6].

It is known that men enter the healthcare system through specialized care and that late entry worsens morbidity, which could be avoided with preventive measures. However, males are resistant to attending health services, so there is a need to understand the social, cultural and institutional barriers in order to promote men's access to these services[3].

Research with elderly which considers the specificities of gender and the influence of sociodemographic conditions, health and functional capacity (FC) on QoL can contribute to health planning and improvement of attention directed to this population.

Thus, the objectives of this study were to describe the sociodemographic characteristics, morbidities, FC and QoL of elderly men, and to verify socioeconomic and health factors associated with QoL.

Scientific literature on the aging process, quality of life and health of elderly men is scarce. One study found that men have low self-esteem as they age and concluded that there is an influence of gender issues on health and quality of life.

METHOD

This study is part of a larger analytical and cross-sectional household survey, which assessed QoL of elderly residents in the urban area of Uberaba-MG. The municipality is divided into three Health Districts, which are subdivided into 18 coverage areas. It is the largest and main center for hospital and dental services at Triângulo Mineiro, and it has its own services through contract or affiliation. There are 25 urban Basic Health Units (BHU), of which 12 are Family Health Units (FHU). Coverage of Family Health Teams is 44.95%[7]. The estimate of the total elderly population in the city for the year 2010 was 37,399 inhabitants[2].

The calculation of the sample population was conducted by the Center for Research in Community Health, Universidade Federal do Triângulo Mineiro (UFTM), considering 95% confidence, 80% test power, error margin of 4.0% for the interval estimates and an estimated ratio of π=0.5 for the proportions of interest. For the selection of the elderly, we used the technique of proportional stratified sampling, considering the several districts as strata.

Based on a sample of 2,683 elderly, 541 were excluded; of these, 201 could not be located after three visits, 174 refused to participate, 142 died, and 25 were hospitalized. Thus, the population sample was 2,142. Data were collected at home from August to December of 2008. Inclusion criteria were: 60 years of age or older; obtained a minimum score of 13 points in cognitive assessment by Mini Mental State Examination (MMSE)[8]; being male; and, living in urban areas in Uberaba. Eight hundred four elderly men met the inclusion criteria.

The data collection instrument containing sociodemographic variables was based on the questionnaire, Older Americans Resources and Services (OARS), constructed by Duke University and adapted to the Brazilian context[9]. For QoL assessment, we used the adapted WHOQOL-BREF[10] and WHOQOL-OLD instruments[11], validated in Brazil. The first is a generic instrument which has four domains and two general questions for measuring QoL. WHOQOL-OLD is specific to elderly, contains six facets and should be applied along with the WHOQOL-BREF[10-11].

For activities of daily living (ADL), an instrument based on the OARS questionnaire and adapted to the Brazilian context[9] was used, which consists of 15 activities and daily life practices, namely: eating, bathing, getting dressed, combing the hair, getting in/out of bed, getting to the bathroom in time, bladder control, bowel control, walking on a flat surface, going up and down stairs, getting from chair to bed, walking close to home, cutting toenails. The response options are: without difficulty, with difficulty, unable[9].

The variables studied were: age; marital status; education, in years; individual monthly income in minimum wages; number of self-reported morbidities; ADL; number of functional disabilities (FD); QoL through WHOQOL-BREF (domains: physical, psychological, social relationships and environment)[10] and WHOQOL-OLD (facets: sensory; autonomy; past, present and future activities; social participation; death and dying; and, intimacy)[11].

An electronic spreadsheet was constructed in Excel® and data collected were entered in duplicate to check the consistency between the two sheets. When necessary, inconsistent data were corrected by returning to the original interview.

Data were analyzed using the statistical program, Statistical Package for Social Sciences (SPSS), version 17.0. Each domain of WHOQOL-BREF and each WHOQOL-OLD facet were separately analyzed, using the syntax provided by WHO. Scores ranged from 0 to 100, and the higher scores represented better QoL.

Descriptive statistical analysis used simple frequencies, means and standard deviations. In order to identify factors associated with QoL, a preliminary bivariate analysis was performed by comparing two independent samples through a student's t-test. The variables were dichotomized and recategorized: marital status (with or without partner), education (with or without), and income (with or without). The Pearson's correlation was used for age, number of morbidities and FD. Tests were considered significant when $p<0.1$, which has been suggested for the variables to be maintained in subsequent multivariate models[12]. Data normality was obtained by Kolmogorov-Smirnov test.

The variables that met the criterion $p<0.1$ were included in the multiple linear regression model without residual analysis, with time phasing (backward method). Scores for each domain and QoL facets were considered individual dependent variables; age, marital status, education, income, number of comorbidities, and number of FD were predictor variables. Tests were considered significant when $p<0.05$.

This study was approved by the UFTM Ethics Committee on Human Research, under protocol #897. The elderly were contacted in their homes; the study objectives were presented and relevant information was provided. The interview was conducted after signing of the Terms of Free and Informed Consent.

RESULTS

Table 1 shows the distribution of the sociodemographic variables of the elderly.

The predominant characteristics of the elderly were: age range among 60-70 years (47.4%), married or living with a partner (68.5%), 4-8 years of education (33.5%), and individual monthly income of one minimum wage (49.6%), as shown in Table 1.

Table 1 – Frequency distribution of the sociodemographic variables - Uberaba, 2011

Variables	n	%
Age range (years)		
60 ├ 70	381	47.4
70 ├ 80	302	37.6
80 or more	121	15.0
Marital status*		
Married or lives with a partner	551	68.5
Separate/Divorced	68	8.5
Widow(er)	149	18.5
Single	35	4.5
Education (years)		
Not educated	147	18.3
1 ├ 4	246	30.6
4 ├ 8	269	33.5
8	42	5.2
9 ├ 11	21	2.6
11 or more	74	9.2
Income (minimum wages)		
Does not have an income	32	4.0
<1	4	0.5
1	399	49.6
1┤ 3	298	37.1
3┤ 5	42	5.2
>5	25	3.1

*0.1% did not respond.

Elderly men had polimorbidities, with the highest percentages of 4-7 (35.2%), followed by 1-4 (25.2%), 7-10 (25.2%) and ≥10 (11.4%). Prevalent morbidities were vision (76.4%), spinal (58.4%) and hypertensive (54.3%) problems.

Functional disability to perform ADL represented 19.9%, of which 16.4% presented from 1- 4 or more. The most compromised ADL were: cutting toenails (18%), going up and down stairs (6%), walking close to home (4.1%) and walking on a flat surface (3.3%).

Most of the elderly men rated the self-assessment of QoL, question 1 of the WHOQOL-BREF, as either good (66.5%), or neither good nor bad (23%). Regarding self-satisfaction with health, issue 2 of WHOQOL-BREF, 67.4% reported satisfaction, while 14.7% were neither dissatisfied nor satisfied. Quality of life, measured by the WHOQOL-BREF, had the highest score in the domain of social relations (69.31) and the lowest one in the physical domain (61.03). Quality of life measured by the WHOQOL-OLD had the highest score on the functioning of the senses facet (80.08) and the lowest one in autonomy (61.19).

Table 2 – Multiple regression model of quality of life scores of WHOQOL-BREF and WHOQOL-OLD of elderly men - Uberaba, 2011

Quality of Life	Initial Model		Final Model	
	Standardized β[b]	p	Standardized β[b]	p
WHOQOL-BREF				
Physical				
Education	0.007	0.805	–	–
Income	0.005	0.864	–	–
Age	0.002	0.941	–	–
Morbidity	-0.432	<0.001	-0.432	<0.001
Functional incapacity	-0.328	<0.001	-0.328	<0.001
Psychological				
Education	0.027	0.415	–	–
Income	0.050	0.132	–	–
Morbidity	-0.209	<0.001	-0.205	<0.001
Functional incapacity	-0.241	<0.001	-0.243	<0.001
Social relationships				
Marital status	0.110	0.002	0.110	0.002
Income	0.014	0.679	–	–
Morbidity	-0.038	0.290	–	–
Functional incapacity	-0.121	0.001	–0.131	<0.001
Environment				
Education	0.018	0.607	–	–
Income	0.040	0.250	–	–
Incapacidade funcional	-0.137	<0.001	-0.138	<0.001
WHOQOL-OLD				
Functioning of senses				
Age	-0.082	0.017	-0.079	0.021
Education	0.104	0.002	0.104	0.002
Income	0.043	0.211	–	–
Morbidity	-0.080	0.023	-0.078	<0.001
Functional incapacity	-0.201	<0.001	-0.203	0.027
Autonomy				
Education	0.017	0.625	–	–
Salary	0.038	<0.001	–	–
Morbidity	-0.054	0.128	–	–
Functional incapacity	-0.260	0.270	-0.275	<0.001
Past, present and future				
activities	0.093	0.009	0.089	0.011
Age	0.009	0.806	–	–
Education	0.067	0.057	0.065	–
Income	-0.046	0.201	–	–
Morbidity	-0.155	<0.001	-0.166	<0.001
Functional incapacity				
Social participation	0.021	0.536	–	–
Income	-0.024	0.488	–	–
Morbidity	-0.306	<0.001	-0.311	<0.001
Functional incapacity				
Intimacy	0.053	0.117	–	–
Education	0.253	<0.001	0.253	<0.001
Marital status	0.084	0.014	0.084	0.014
Morbidity	0.071	0.038	0.069	0.043

[b] Regression coefficient.

In order to identify factors associated with the QoL of elderly men, a bivariate analysis (p<0.1) was initially performed. The variables entered in the multiple regression model for the QoL scores, with significance in the bivariate analysis, are shown in Table 2.

In multivariate analysis, using multiple regression, the predictor found to contribute the most to the lowest scores in the physical domain was morbidity (β=-0.432), and in the psychological domain it was PD (β=-0.243). In social relationships, the one which contributed the most to the lowest scores of QoL was FD (β=-0.131). The lowest QoL scores in the environment were associated with the highest number of FD (p<0.001), as shown in Table 2.

In the QoL assessment based on WHOQOL-OLD, FD was the main predictor of the lowest QoL scores (β=-0.131). The autonomy (p<0.001) and social participation (p<0.001) facets had the lowest QoL scores, associated with the highest numbers of FD (Table 2). The past, present and future activities facet had the lowest scores, most strongly associated with the highest numbers of FD (p<0.001). Intimacy had lower QoL scores, most strongly associated to the absence of a partner (β=0.253), as shown in Table 2

DISCUSSION

The predominance of elderly men aged 60-70 years was lower than the overall Brazilian percentage (57.5%)[1]. Most elderly men were married or lived with a partner, which differed from a study conducted in Australia, China, Britain, Greece and Italy (76.8%)[13], in which the percentages were higher. In Brazil, a survey conducted in São Carlos-SP (75.4%)[14] converged with this investigation. Being married or living with a partner enables healthcare professionals to involve the family in care for this population group, contributing to the stimulation of elderly men in health care.

Concerning education, it is relevant to note that in Brazil, the elderly have little education, and 25% of elderly men are illiterate[1]. This low education should be considered by health professionals in the development of activities directed to the elderly, contributing to knowledge about the aging process and enabling a healthy experience of this stage of life.

The income of one minimum wage, verified in this study, was lower than that obtained in elderly of both sexes in a survey conducted in Paraná, in which 79% reported income from one to three minimum wages (43.4%)[15].

A survey conducted in São Paulo found that elderly men had fewer morbidities (1 to 5) than what was found in the data obtained in this study[14]. Hypertension (73.2%) and vision problems (67.1%), although in different percentages, were also more prevalent in another study[16]. In addition to hypertension (40%), circulatory problems (50%) and heart problems (40%) were important in a survey conducted with elderly men in Ribeirão Preto-SP[17]. In the Concord Health and Aging in Men Project (CHAMP), arthritis (51.7%) and hypertension (46.2%) prevailed[13]. It should be noted that self-report of morbidity was a limitation of this research.

Polimorbidities and the prevalence of non-transmissible chronic diseases, especially hypertension among elderly men, showed the need for health services to reorient the hegemonic model of care focused on attending acute diseases. Furthermore, health professionals, especially nurses, should be able to identify this situation and assist the elderly and their families in coping with the challenges arising from chronic polimorbidities, emphasizing self-care, maintaining independence and social inclusion.

Differing from what was observed in this research (1|-4), another study with elderly men had a prevalence of three or more FD in the performance of ADL[16]. A survey conducted in the same city, with elderly of both sexes, obtained a similar percentage for the ADL, cutting toenails (18.9%). However, for the activities of going up and down stairs (4.8%) and walking close to home (3.8%), the percentages were lower[18].

The composition of ADLs related to mobility may favor the removal of elderly men from society, creating dependency in conducting activities that previously promoted personal satisfaction. The healthcare team should promote health actions in line with the interests of elderly men, to stimulate social contact[14]. On the other hand, one should investigate the FC of the elderly man, in order to delay the onset of disability, contributing to the maintenance of independence.

Self-assessment of good QoL in this study showed that a higher percentage of elderly men had a positive view of their living conditions. Regarding self-satisfaction with health, it should be emphasized that the elderly men related it to autonomy. By defining their health as good or fair, elderly men were not characterized as disease-free, but as someone with the ability to act within the environment[19].

The highest score of QoL in the social relationships domain favored social support, as well as family responsibility in healthcare, in view of the dependence for some ADL related to mobility. The lower QoL scores in the physical domain could be related to the high percentage of elderly men with polimorbidities, which contributes to a negative impact in this area because of its relationship to dependence on medication or treatments[10].

The highest score of QoL on the functioning of senses facet diverged from research conducted with elderly men living in Paraná, which related to death and dying (90.4) whereas the lowest score obtained on autonomy was concordant (74.5)[15]. About the latter, research conducted with elderly people of both sexes evidenced that loss of autonomy related to the disrespecting of their decisions and economic dependence[20]. It is mandatory that health professionals, especially nurses, along with family members reflect on the negative impact of this condition on the QoL of elderly men.

Regarding factors associated with the lowest QoL scores, dichotomization of the education and income variables were noteworthy as limitation of this study, which may have influenced the bivariate analysis.

Morbidity was found to be the predictor that most negatively impacted the physical domain, agreeing with the scientific literature, which evidenced the worst score in the physical component score among elderly with more than one chronic disease (37.59), compared with those who did not have diseases (48.72)[6]. The lowest QoL score associated with comorbidities may have been related to poor access to health services, as well as possible limitations imposed by the disease, which can negatively influence the ability to work and to perform daily activities measured in this domain[10].

Functional disability to perform ADL was associated with the lowest scores in the psychological domain, which assesses self-esteem and positive feelings[10]. Elderly men have difficulties experiencing the aging process due to retirement and physical, emotional, economic and social losses[5]. Group activities contribute to the exchange of experiences and allow us to observe that other people go through similar situations, contributing to group reflection about their daily lives.

The predictor that contributed the most to the lowest QoL score in the social relationships domain was FD. With retirement, elderly men had their home as their primary living space. This new social status can determine losses and limitations that influence the physical and emotional health, triggering or worsening DCNT and impacting on their QoL[21]. From this perspective, two situations to be faced must be added to healthcare: one dealing with strategies to expand the social network, and another related to the implementation of technologies aimed at improving the functional abilities of elderly men.

The environment domain assesses, among other factors, physical security and protection[10]. Functional disability, the predictor that contributed the most to the lowest score in that domain, can influence these aspects in that the old man feels unprotected at home and in the community environment to perform his daily activities.

The functioning of the senses facet was associated with several variables, however FD contributed more effectively to the lowest QoL score. With advancing age, several changes occur in the sense organs[21], resulting in a decrease of their functioning, which can interfere with the daily life of the elderly. Through senses, the body perceives various situations that surround it, contributing to its integration into the environment, allowing a person's relationship with the environment in which he lives[21]. Health professionals should use assessment tools to verify whether or not the sensory changes presented by elderly men are due to the physiological aging process, implementing measures for its improvement or adaptation.

Functional disability was associated with lower QoL scores on the autonomy facet. This result indicates that depending on another person to perform ADL negatively impacts on the QoL of elderly men in relation to decision-making capacity. Furthermore, it was found that FD also interferes with the QoL score on the social participation facet.

Regarding the present and future activities facet, the limitation resulting from decreased functionality negatively impacted future achievements, an aspect measured in this facet[11]. Thus, elderly men should be encouraged to identify activities that bring them personal satisfaction. Actions that promote healthy aging encourage us to be proactive, setting goals and establishing objectives in order to achieve them. In the process, useful resources accumulate for adaptation to the change experienced in this stage of life and they remain actively involved in the preservation of their well-being[22].

The lowest score on the intimacy facet strongly correlated to the lack of a partner, evidencing the need for adaptation of affective relationships of elderly men. The intimacy facet assesses capacity for personal and intimate relationships[11]. One study found that for 56.4% of elderly men, the wife was the primary confidant, and 61.8% had at least one good weekly conversation with the spouse[23]. Therefore, the need for health professionals to identify this situation in health services is evident, in order to assist the elderly men in constructing new ties and strengthening existing ones. It is necessary to guide them and direct them to join senior groups, thus enabling improvement of the sense of fellowship among elderly who have no spouses.

CONCLUSION

The results presented can contribute to the design of new public policies specific to the monitoring of health conditions of elderly men.

It is noteworthy that the highest percentages of FD found in this study were related to the mobility-related ADL. It is possible that some home adjustments are necessary to provide greater safety for elderly men and to prevent falls. However, one must consider that these adaptations can be expensive and the elderly in this study had low incomes. In this sense, the healthcare team should research with the elderly and their relatives forms of effective and accessible adaptations.

It is necessary to effectively include the assessment of ADL in different areas of the network of healthcare for the elderly, seeking to improve care, especially nursing care. Thus, research on the functionality of the elderly can subsidize the healthcare team in developing actions aimed at maintaining the autonomy and independence of the elderly.

The identification of factors impacting on the QoL of elderly men can contribute to the planning of their healthcare. Nurses can develop educational activities with the

elderly in order to reflect on this issue and to jointly develop actions for coping.

Attention should be paid to the influence of functional limitation on QoL in the elderly, and its interference with their participation in community activities and reducing their social contacts. It is essential that health professionals promote discussion about these issues in order to establish strategies for maintaining autonomy and expanding the possibilities of participation of elderly men in social activities. Discussions and reflections can be conducted in groups, which can also include the participation of family members. Activities to stimulate the maintenance of functionality can also be implemented, aiming at minimizing the impact of FD in the everyday life of the elderly.

Limitations of the present study included: the cross-sectional design, which does not establish causal relationships between variables, and, the cut point used for the MMSE, which had no distinction between the years of education.

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