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Quality of life of elderly persons in Manaus measured by the Flanagan Scale

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Abstract

Objective: the aim of the present study was to evaluate the quality of life of elderly people enrolled in specialized elderly care centers in Manaus and compare the findings with the results of already published studies. *Method*: a cross-sectional study was conducted with 741 elderly people enrolled in three of the centers in the city, from November 2015 to March 2017 using a socioeconomic and demographic questionnaire and the Flanagan Quality of Life Scale (FQLS). Interviews were carried out by previously trained physiotherapy students of the Federal University of Amazonas. *Results*: the majority of the elderly were female, with a mean age of 69±6.6 years, married, retired but still working, with a low income and low educational level. When they assessed their quality of life, however, they appeared satisfied. When compared to populations in other countries and regions of Brazil, despite their low socioeconomic profile, they demonstrated a higher quality of life than populations of developed countries. Some domains of the scale were inverted in relation to the original scale. *Conclusion*: the results allow us to conclude that even elderly persons with low socioeconomic status are satisfied with their quality of life.

Keywords: Quality of Life. Elderly. Aging.

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INTRODUCTION

Population aging is a worldwide phenomenon, especially in developing countries. The World Health Organization (WHO) predicts that by 2025, elderly persons will number approximately 1.2 billion, with those aged 80 or over the fastest growing group. In Brazil, the elderly represent 14.3% of the population, with this proportion varying in different regions. The north and northeast regions have fewer elderly persons than other regions. In the state of Amazonas, however, the elderly population has grown 3.5% in ten years, surpassing the growth of adults and children. In Manaus, the elderly population has grown tenfold in the last 40 years[3].

The changes and wear caused by the aging process in the body can lead to a decline in the health condition of the elderly and their quality of life, forcing them to seek health services more frequently, especially those linked to the Unified Health System (SUS)[4].

The concept of quality of life is related to self-esteem and personal well-being and covers a series of aspects such as functional capacity, socioeconomic level, emotional state, social interaction, intellectual activity, self-care, health status, cultural, ethical and religious values, lifestyle, satisfaction with one's employment and/or daily activities and the environment in which one lives[5].

The Amazon region possesses a socio-cultural, economic, ethnic and macro-environmental diversity, resulting in the need for epidemiological studies on elderly persons living in these areas. This idea is further supported by the multifactorial and complex nature of the phenomenon of aging, which makes it difficult for all the variables that affect this phenomenon and the etiology of age-related diseases to be investigated at the same time, in a similar way, throughout the world[6]. In addition, the collection of information relating to the elderly receiving care through the SUS is extremely important, as it allows an understanding of aging among individuals living in the community. The objective of the present study was to evaluate the quality of life of elderly persons attending Integrated Care Centers for the Elderly (CAIMIs) in the city of Manaus.

METHOD

An epidemiological, cross-sectional, descriptive study was performed with elderly people registered at CAIMIs in the city of Manaus, in the state of Amazonas. These centers are intended for the outpatient care of the elderly, with three units distributed in the main areas of the city providing care for more than 75,000 registered elderly persons. The sample was selected for convenience, and was performed after a sample calculation. Individuals of both genders, aged 60 years and older, and registered at the health centers were included. Data collection was performed from November 2015 to March 2017 by five students of the physiotherapy course of the Universidade Federal do Amazonas, who received previous training in all the questionnaires used.

The sample was calculated based on an unknown prevalence of 50% for quality of life, with a 95% confidence level and 5% confidence interval, resulting in a minimum of 384 individuals. A correction factor was applied for the population. The inclusion criteria were: aged 60 years or over and registered with one of the three CAIMI units. As an exclusion criterion, elderly persons without the sufficient cognitive level to answer the questions of the questionnaires were excluded.

Data collection was carried out in a structured interview format, with the application of a socioeconomic questionnaire to obtain information regarding age, gender, schooling, income, marital status, retirement and work; and the Flanagan Quality of Life Scale (FQLS), translated and validated[7,8,9,10].

The FQLS was developed by the American psychologist John Flanagan in the mid-1970s. Using the critical incident technique, the study addressed approximately 3,000 North American individuals of both genders and different age groups. Participants were asked what important things had happened to them and how satisfied they were with these events. From the results obtained, 15 components were identified, grouped into five dimensions: physical and mental well-being, relations with other people, involvement in social, community and civic activities, personal development and fulfilment, and recreation. In the original Flanagan article, the Cronbach alpha

value is not reported, but in the study by Burckhardt et al. an alpha value of 0.82 to 0.92 was found, while in a test and re-test study, values varied from 0.78 to 0.84. In the present study, the alpha value obtained was 0.81, which is within the expected values for the validity of the instrument.

The 15 FQLS questions assess: 1) material well-being: home, food, financial situation; 2) health: physically fit and vigorous; 3) relationship with parents, siblings and other relatives: communicating, visiting and helping; 4) establishing a family: having and raising children; 5) close relationship with spouse, partner or significant other; 6) close friends: sharing interests, activities and opinions; 7) voluntarily helping and supporting other people; 8) participation in associations and activities of public interest; 9) learning: attending other courses for general knowledge; 10) self-knowledge: recognizing potential and limitations; 11) work (job or home): interesting, rewarding, worthwhile activity; 12) creative communication; 13) participation in active recreation; 14) listening to music, watching television or movies, reading or other such activity; 15) socializing: "making friends". A value of 1 to 7 was applied to each question, which corresponds respectively to: terrible; unhappy; mostly dissatisfied; mixed; mostly satisfied, pleased, delighted.

All the information collected was tabulated in a database distributed in spreadsheets. A descriptive analysis of the data was performed and, for the analysis of quality of life, factor analysis was performed with varimax rotation to obtain the domains defined by the scale. The Kaiser-Meyer-Olkin coefficient (KMO) was used to verify the factorization of the sample data. The KMO value was 0.843, indicating that the factor analysis is appropriate. The criterion for determining the factors was based on the scale. In the original study, five factors were proposed and, to verify the dimensions, the data were analyzed in this context. The factor loading value is shown in table 2 for each item. Varimax rotation was used as it was an orthogonal rotation and provided a better visualization of the factors.

The study was approved by the Research Ethics Committee of the Universidade Federal do Amazonas under number 786.685/2014, and complied with Resolution 466/12 of the National Health Council for Research with Human Beings, of the Department of Health.

RESULTS

A total of 741 elderly people aged 60 years and over were evaluated in the three CAIMI in the city of Manaus. The mean age was 69 (±6.6) years (60 to 102 years), the female gender was more prevalent (70.31%), 44.94% of those sampled were married or had a partner, 60.05% had not completed elementary school, and only 31 had completed the third grade. Although there was a predominance of retirees (72.74%), 79.76% still worked, 40.60% earned one minimum wage and 3.52% received over four times the minimum wage (Table 1).

The mean of the scores obtained in the FQLS was 80.07, with a minimum of 30 and a maximum of 105. The Cronbach α score was 0.8098, which confirms the good consistency of the instrument in response to the question of quality of life of the elderly.

Table 2 shows the descriptive analysis of the factor analysis obtained as the valid model, with the limit of 0.5 used as the cut-off point for the formation of factors. In this case, only 13 of the 15 items made up the factors. Two items presented a factor loading lower than the limit. This indicates that these items may not be important in the composition of the factor. According to the original article, each factor is expected to consist of three items, but this did not occur in the present study. The final result therefore considers only one item in the last factor.

Table 3 shows a comparison with other studies, using the means and standard deviation of each scale item.

The results of the present study exhibited some differences regarding the dimensions of the quality of life concept proposed by Flanagan[26] and those considered by the elderly to be of greatest importance in determining their quality of life, as shown in Table 4.

Table 1. Socioeconomic characteristics of elderly persons registered with CAIMI. Manaus, Amazonas, 2017.

Variable	n (%)
Gender	
Female	521 (70.31)
Male	220 (29.69)
Marital status	
Married/cohabiting	333 (44.94)
Divorced/single	191 (25.78)
Widowed	217 (29.28)
Schooling	
Nine years of schooling	88 (11.88)
From 1 to 8 years of schooling	445 (60.05)
12 years of schooling	144 (19.43)
From 9 to 11 years of schooling	21 (2.83)
Complete higher education	31 (3.37)
Illiterate/no schooling	18 (2.42)
Work	
Yes	591 (79.76)
No	150 (20.24)
Retired/receive pension	
Yes	539 (72.74)
No	202 (27.26)
Income	
Up to 1 minimum wage	300 (40.60)
2 minimum wages	230 (31.12)
3 minimum wages	134 (18.13)
≥4 minimum wages	75 (10.15)
Main income	
Yes	396 (53.51)
No	344 (46.49)

Minimum wage at time of study: beginning of study – R$788.00 (2015); end (2017) – R$937.00.

Table 2. Demonstration of the application of factor analysis and identification of the components that influenced the level of satisfaction with quality of life of the elderly in Manaus, Amazonas, 2017.

Flanagan Scale	Factor loading
Factor 1: Relationship with other persons (variance explained: 29%)	
Item 4: relationship with parents, siblings and other relatives.	0.77995
Item 3: establishing a family: having and raising children.	0.75332
Item 5: intimate relationship with spouse, partner or significant other.	0.55015
Item 6: close friends: sharing interests, activities and opinions.	0.51911
Factor 2: Recreation (explained variance: 11%)	
Item 12: creative communication	0.76407
Item 10: self-knowledge: recognizing potential and limitations	0.73199
Item 13: participation in active recreation	0.65341
Item 8: participation in associations and activities of public interest	0.51505

to be continued

Continuation of Table 2

Flanagan Scale	Factor loading
Factor 3: Community and civic activities (explained variance: 7%)	
Item 7: Voluntarily help and support other people	0.79922
Item 11: Work (job or at home)	0.71616
Factor 4: Physical and material wellbeing (explained variance: 7%)	
Item 2: Health: physically fit and vigorous	0.80317
Item 1: Material comfort: home, food and financial situation	0.60219
Factor 5: Personal development (explained variance: 6%)	
Item 9: Learning: attending other courses for general knowledge	0.64972

Table 3. Comparison of mean and standard deviation of the original FQLS version, three validated versions, the Botucatu-SP version and the version of the present study. Manaus, Amazonas, 2017.

Item	England	Sweden	Norway	Israel	Botucatu/SP*	Manaus/AM**
	N=584	N=100	N=282	N=100	N=361	N=741
1	5.6(±1.0)	5.7(±1.4)	5.5(±1.3)	4.3(±1.8)	5.9(±1.1)	5.6 (±1.5)
2	3.9(±1.4)	3.9(±1.6)	4.4(±1.5)	2.3(±1.5)	5.4(±1.4)	4.4(±2.0)
3	5.3(±1.1)	6.0(±1.0)	5.5(±1.5)	5.9(±1.2)	6.0(±1.0)	5.9(±1.1)
4	5.6(±1.2)	5.6(±1.6)	6.7(±1.2)	5.9(±1.2)	5.9(±1.2)	5.9(±1.0)
5	5.5(±1.4)	5.6(±1.6)	5.5(±1.6)	5.8(±1.2)	5.3(±1.7)	5.0(±1.4)
6	5.4(±1.1)	6.2(±0.9)	5.9(±1.1)	5.4(±1.6)	5.7(±1.2)	5.8(±1.0)
7	5.4(±0.9)	5.3(±1.2)	5.2(±1.2)	3.0(±2.0)	5.5(±1.3)	5.2(±1.3)
8	4.6(±1.2)	4.9(±1.6)	4.3(±1.6)	2.3(±1.9)	5.1(±1.3)	4.8(±1.4)
9	4.7(±1.2)	5.2(±1.4)	4.6(±1.5)	2.1(±1.6)	5.0(±1.5)	4.3(±1.1)
10	5.1(±1.1)	5.5(±1.2)	5.3(±1.1)	3.0(±1.8)	5.8(±1.2)	5.6(±1.2)
11	4.1(±1.4)	5.0(±1.5)	5.3(±1.4)	3.2(±1.8)	5.8(±1.4)	5.1(±1.3)
12	4.8(±1.2)	5.0(±1.4)	4.7(±1.6)	2.5(±1.7)	5.8(±1.2)	5.7(±1.1)
13	4.7(±1.2)	5.3(±1.3)	5.1(±1.4)	3.6(±1.9)	5.5(±1.5)	5.0(±1.3)
14	5.5(±0.9)	6.0(±1.0)	5.7(±1.1)	3.6(±2.0)	6.1(±1.3)	6.0(±0.9)
15	4.0(±1.5)	4.0(±1.7)	4.5(±1.6)	2.2(±1.5)	5.9(±1.4)	5.9(±1.1)

*São Paulo; **Amazonas.

Table 4. Comparison of FQLS dimensions and those identified in the sample. Manaus, Amazonas, 2017.

Dimensions of FQLS*	Dimensions identified in present study
Physical and material well-being	Relationship with other people
Relationship with other people	Recreation
Social, community and civic activities	Social, community and civic activities
Personal development and achievement	Physical and material well-being
Recreation	Personal development and achievement

*FQLS = Flanagan Quality of Life Scale

DISCUSSION

The number of studies that evaluate quality of life in different populations, including the elderly, has increased in recent times. The improvement of measurements, through the use of several types of questionnaires, and the identification of factors associated with quality of life, have been the focus of this type of study. As it is a subjective issue, the components responsible for a better or worse quality of life are not the same for all populations. Individual and cultural aspects should be taken into account at the time of evaluation.

The mean age of the subjects of the present study was 69 years and 70.31% of the sample was female, which confirms the trend of studies of the elderly[11-14]. However, because our sample was selected for convenience, there is a selective bias, which may explain the high percentage of women. It has been reported in several studies[15,16,17], however, that women tend to worry about and care for their health more than men, seeking out health services, whether private or public, resulting in many diseases being treated in their early stages, which is one of the factors responsible for the high rate of women who reach senior citizen age. In Brazil, women live, on average, eight years longer than men, in addition to being more concerned with their well-being in general, when compared to elderly men[18].

The results of the present study agree with several other studies in terms of schooling, marital status, and income[11,12,19,20]. The majority of the elderly in the sample did not complete elementary school, and the proportion of people with low educational levels increases with age. This may be due to the fact that the elderly persons of the sample, especially older individuals, did not have the culture or the opportunity to study for long when they were children, especially as adolescents, as they married and started a family very early in life, and had to start working while still very young[21]. According to the National Household Sample Survey (PNAD) 2016[22], the average number of years of study of the working elderly is 5.7 years. The majority are retired, an outcome found in the studies cited above. However, most of the elderly persons in the present study were still working, a finding which contradicts other studies[11,14]. This may be due to the city of Manaus having a higher cost of living than the cities of previous studies, which causes elderly persons to seek other ways to supplement their income, as most earn up to one minimum wage. This fact can also be explained by the fact that the majority of the individuals are the breadwinners of their family, and that due to the current economic situation in Brazil, the elderly are returning to the labor market to supplement their pensions, as many of the adults and young people in families are unemployed. This figure is confirmed by the PNAD 2016, which found an increase in the proportion of employed elderly people.

A high average score in the Flanagan scale was observed, showing that the population of the present study has a good quality of life. Thirteen out of the 15 scale items exhibited satisfactory factor loading. When the averages obtained in each item of the scale were compared, the population of the present study had several items with higher values than those observed among populations of developed countries, which have a higher income than this sample. However, for the elderly in the present study, the factor of income does not seem to be responsible for having a good quality of life. The last item of the scale, which refers to socialization - "making friends", both the population of the present study and that of Botucatu, São Paulo, obtained higher scores than those of other countries, which may suggest that Brazilian elderly persons are more sociable.

The 15 items of the FQLS are grouped into five dimensions, in this order: physical and material well-being, relationships with other people, social, community and civic activities, personal development and achievement, and recreation. However, when we compared the results of the population of the present study, the order of four of the domains were inverted. In Flanagan's initial proposal7, the physical and material well-being domain was the first dimension, while in the present study, the domain "relationships with other people" was more important for quality of life than that observed by Flanagan. This can be explained by the population studied by Flanagan, which has very different habits and cultures from that of the present study. In addition, Flanagan worked with a population of different age groups, which may contribute to a change in the order of the domains. For the older people in the study, relationships with other people, recreation and social, community and

civic activities are more important than physical and material well-being and personal development and achievement. The results of the present study also differed from a study performed in the city of Avaré, São Paulo[11]. In this study, physical and material well-being was the first domain and recreation was the last, corroborating the results obtained by Flanagan[7].

Santos *et al.*[23] analyzed the quality of life of the elderly using the same scale as the present study, and identified divergences in terms of the dimensions of the concept of quality of life proposed by Flanagan[7]. When evaluating 128 elderly people from the city of João Pessoa, Paraíba, they concluded that, for this population, personal development and achievement is the most important domain in determining quality of life. In their research, items 7 and 14 (7= voluntarily helping and supporting other people; 14= listening to music, watching television or movies, reading or other activities) had little influence and were discarded, as they did not obtain a factor loading within the established limit. In the present study, the highest averages were in items 14 and 15 (14= listening to music, watching television or movies, reading or other activities; 15 = socializing: "making friends"), which relate to the domain of recreation, which came first in our review. The lowest averages were in items 9 and 2. Item 9 evaluates learning, such as attending courses for general knowledge. These different results in the scale responses influenced the order of the dimensions, explaining the differences between the populations.

As a whole, the data of the present study are consistent with those obtained in other studies carried out with populations from other countries, as shown in Table 3. When comparing the results obtained with the FQLS for an English population, the present study identified a higher average in 11 of the 15 criteria evaluated. With Swedish and Norwegian population, only six and seven averages, respectively, were higher in the present study than in those populations. However, while the averages of the present study were not as disparate as in those studies, Brazilian elderly persons, both in Botucatu and Manaus, had a better final score than the populations from other countries, with only Israel well below the score obtained by the other studies. It can be said, therefore, that elderly persons, even from different countries, with different habits and cultures, are for the most part alike, even though they do not share similar socioeconomic characteristics. Quality of life must be understood as an active concept, which can be constructed and interpreted from the dialectical relations of the individual, and can present equivalences, contradictions and differences between individuals.

One of the limitations of this study was in relation to the sample, in which, because of convenience, the majority were women and had low levels of education and income. Additional samples, including larger proportions of men and people from different socioeconomic classes, are needed to provide additional evidence for these populations. In addition, quality of life studies of the elderly population using the same questionnaire are difficult to find.

CONCLUSION

Based on the data found, it can be said that the perspective of the quality of life and well-being of the elderly enrolled in the Integrated Care Centers for the Elderly in the city of Manaus is good. The majority of the elderly persons studied were women, married, with low levels of schooling and income, but with a good quality of life when evaluated by the Flanagan Quality of Life Scale. When compared to populations from developed countries using the same scale, the elderly in the present study have a better satisfaction with quality of life. The results suggest that demographic and socioeconomic aspects, although not favorable, had little influence on satisfaction with quality of life when evaluated by the Flanagan Quality of Life Scale.

It is important that more studies like this are carried out with the purpose of evaluating quality of life in samples from different locations. Furthermore, new studies should consider whether socioeconomic and demographic aspects exert any influence on quality of life when evaluated by the Flanagan Quality of Life Scale. Results of future studies may contribute to further improve prevention and health promotion actions in aging.

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