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Community space for the elderly: preliminary results regarding quality of life and functionality

Espacio comunitario para personas mayores: resultados preliminares en calidad de vida y funcionalidad

Espaço comunitário para a terceira idade: resultados preliminares quanto à qualidade de vida e funcionalidade

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Abstract

The aim was to characterize the impact of the actions of a community space for the elderly on the quality of life and functionality of the elderly. Elderly people who were participating in weekly recreational, cognitive, and physical activities at least twice a week in a community center in Nova Iguaçu-RJ were included. The individuals had their quality of life assessed using the Short Form 36 (SF-36) questionnaire, handgrip strength assessed using a dynamometer, lower limb strength using the five-time sit-to-stand test, and dynamic balance and mobility using a dynamometer. of the 10-meter walk test (TC10M). Results in different domains of the quality-of-life questionnaire were superior to those described for the Brazilian population. The usual gait speed verified in the 10MWT was higher than the reference values described in the literature, however the handgrip strength and lower limbs presented values lower than the reference values. It is concluded that cognitive, social, and physical stimulation activities offered to individuals participating in the community center for the elderly contributed to the improvement or maintenance of their quality of life and mobility, although they did not have a noticeable effect on global muscle strength.

Descriptors: Aging; Quality of Life; Muscle Strength, Mobility Limitation; Health of the Elderly.

Resumén

El objetivo fue caracterizar el impacto de las acciones de un espacio comunitario para personas mayores sobre la calidad de vida y funcionalidad de las personas mayores. Se incluyeron personas mayores que participaban semanalmente en actividades recreativas, cognitivas y físicas al menos dos veces por semana en un centro comunitario en Nova Iguaçu-RJ. Se evaluó la calidad de vida de los individuos mediante el cuestionario Short Form 36 (SF-36), se evaluó la fuerza de agarre con un dinamómetro, la fuerza de las extremidades inferiores con la prueba de cinco veces sentado y de pie, y el equilibrio dinámico y la movilidad con un dinamómetro de la prueba de marcha de 10 metros (TC10M). Los resultados en diferentes dominios del cuestionario de calidad de vida fueron superiores a los descritos para la población brasileña. La velocidad de marcha habitual verificada en la 10MWT fue superior a los valores de referencia descritos en la literatura, sin embargo la fuerza de prensión y los miembros inferiores presentaron valores inferiores a los valores de referencia. Se concluye que las actividades de estimulación cognitiva, social y física ofrecidas a los individuos que participan en el centro comunitario para ancianos contribuyeron a la mejora o mantenimiento de su calidad de vida y movilidad, aunque no tuvieron un efecto notable sobre la fuerza muscular global.

Descriptores: Envejecimiento; Calidad de Vida; Fuerza Muscular; Limitación de la Movilidad; Salud del Anciano.

Resumo

Objetivou-se caracterizar o impacto das ações de um espaço comunitário para a terceira idade na qualidade de vida e funcionalidade de idosos. Foram incluídos idosos que estivessem participando de atividades semanais recreacionais, cognitivas e físicas, ao menos duas vezes por semana em um centro comunitário de Nova Iguaçu-RJ. Os indivíduos tiveram sua qualidade de vida avaliada por meio do questionário *Short Form* 36 (SF-36), força de preensão manual avaliada por meio de dinamômetro, força de membros inferiores pelo teste de sentar-levantar cinco vezes e equilíbrio dinâmico e mobilidade por meio do teste de caminhada de 10 metros (TC10M). Resulta-se em diferentes domínios do questionário de qualidade de vida foram superiores aos descritos para a população brasileira. A velocidade habitual da marcha, verificada no TC10M foi superior aos valores de referência descritos na literatura, no entanto a força de preensão manual e de membros inferiores apresentou valores inferiores aos valores de referência. Conclui-se que as atividades de estimulação cognitiva, sociais e físicas oferecidas aos indivíduos participantes do centro comunitário para terceira idade contribuíram para a melhora ou manutenção de sua qualidade de vida e mobilidade, ainda que não tenham efeito percetível na força muscular global.

Descritores: Envelhecimento; Qualidade de Vida, Força Muscular, Limitação da Mobilidade; Saúde do Idoso.

Introduction

Elderly people are more likely to suffer from various health disorders due to reduced physical and mental functions. Loneliness, impaired sexual activity, and chronic metabolic disorders are some of the causes that can result in emotional disturbances[1]. In addition, although longevity has increased around the world, especially in low- and middle-income countries like Brazil, this process is experienced along with disabilities, economic difficulties, dependence on other people for daily activities, limited access to health services. formal health and education, as well as for personal care[2].

In this context, it is necessary not only to characterize the health status and socioeconomic conditions, but also to investigate how people experience old age and their aging process. It is not just about adding years to life but ensuring that the years gained can be lived with quality. Thus, the quality of life (QL) throughout life and in old age must be a continuous object of study and its results used as a reference in the generation of specific health and aging strategies. QV is a broad concept that includes general information and individual characteristics and has different definitions and assessment methods. It is a multidimensional concept that generally includes objective and subjective domains, is related to the individual's perception of their position in life in the context of their culture and value system and in relation to their objectives, expectations, and principles. The Short-Form-36 (SF-36) questionnaire is one of the most used instruments to measure quality of life[3-6].

This instrument addresses health concepts that are relevant considering the patient's perspective. The predictive validity of the SF-36 was documented by the International Quality of Life Assessment Project (IQOLA), which first translated, validated, and adapted the SF-36 in seven European countries, followed by its application in more than 40 countries. In Brazil, the SF-36 was translated and allows the measurement of different dimensions of health, can assess the impact of diseases and treatments among subjects, and has been considered adequate to assess the health-related quality of life (HRQoL) in adults, in addition to being a good predictor of mortality[6-8].

One of the factors that interferes with the quality of life of the elderly is the reduction in physical-functional performance, especially the reduction in strength, mobility, balance, and cardiorespiratory fitness. In this sense, several instruments have been used to assess the overall muscle strength and upper limbs of elderly people (hand grip strength), lower limb strength (sit-to-stand test 5 times) and dynamic balance (walking test 10 meters). The strategies adopted to improve these physical qualities mainly involve an active lifestyle, highlighting the important social role played by community centers for the elderly. Thus, the aim of this study was to evaluate the QoL and physical-functional aspects of non-institutionalized elderly people who perform activities in a community center for the elderly and compare the results with the Brazilian population average and with reference values described in the scientific literature[9-11].

Methodology

This is a cross-sectional study, in which elderly people who regularly participate in community activities for the elderly in a municipality in the metropolitan region of the state of Rio de Janeiro were evaluated. The activities offered at this center involve physical and cognitive domains, such as dancing, chess, swimming, and various courses. The elderly attends the center at least twice a week.

Participants aged over 60 years, without cognitive impairment that would make it impossible to carry out the quality-of-life assessment, and who were participating in group activities were included. Elderly people who were not mentally healthy to answer the questionnaire, or who had musculoskeletal disorders that made it impossible to carry out the physical tests were not included.

Participants answered the Medical Outcome Study Health Survey 36-Item Short Form - SF-36 quality of life questionnaire[8]. The SF-36 includes 8 domains, namely: Functional Capacity (FC), Physical Aspects (PA), Pain (D), General Health Status (EGS), Vitality (V), Social Function (Social Aspects), Emotional Aspects (AE) and Mental Health (SM). Scores range from 0 to 100 for each domain, with higher scores indicating better status. In addition, the volunteers performed the handgrip strength assessment using the Sahean Saehan Corp dynamometer. As per the recommendations of the American Society of Hand Therapists (ASHT). Lower limb strength was assessed using the 5-time sit-up test and dynamic balance using the 10-meter walk test[10-12].

The results were initially tabulated in a Microsoft Excel® software spreadsheet. The mean values of each outcome were compared with internationally validated reference values or for the Brazilian population. Data distribution was analyzed using the Kolmogorov-Smirnov test and associations were tested using the Pearson or Spearman correlation test. The level of significance was set at 5% and the Statistical Package for Social Sciences program (SPSS version 11.5; SPSS) was used for all analyses.

The study followed the norms of Resolution 466/12 of the National Health Council, which establishes the ethical precepts for research involving human beings13. Before performing any procedure, all patients or their guardians were informed about the objectives and procedures of the study and signed the Informed Consent Form. The project was approved by CEP-UNIG on July 4, 2019, under opinion number 3,437,939 (CAAE: 14520819.5.0000.8044).

Results

Quality of life data from 34 elderly people (33 women) were collected, aged between 60 and 85 years and a mean age of 69 years. The study was based on activities proposed at the Municipal Space for the Elderly of Nova Iguaçu (ESMUTI).

The elderly in this study had a quality of life higher than the average for the Brazilian population. Table 1 and Figure 1 show the comparisons of the results of the domains of the SF-36 questionnaire in the sample of this study with the results reported and that assessed the quality of life of 12423 elderly people from different regions of the country.

As for the muscle strength of the upper and lower limbs, the results of the sample in this study were lower than the reference values in (hand grip), as can be seen in Tables 2 and 3. Regarding the usual gait speed in the test of ten-meter walk, the elderly in this study presented higher values for all age groups (Table 4). Handgrip strength results moderately correlated with performance in the five-time sit-stand test (R=-0.62; P=0.000078). The 10MWT showed a weak correlation with the "emotional aspects" domain of the SF-36 (R=-0.34; P=0.048)[10,14-16].

Table 1. Comparison of the results of the domains of the SF-36 questionnaire with those of the Brazilian population. Rio de Janeiro, RJ, Brazil, 2019

SF-36	TOTAL	60-74 anos	65-74 anos	≥ 75 anos	≥ 75 anos
	(N=34)	(N=26)	(N=1565)	(N=8)	(N=754)
CF	76,8	76,3	58,2	78,1	45,4
AF	57,4	51,9	65,1	75,0	54,3
DOR	77,6	74,9	68,4	87,2	64,5
EGS	72,9	72,3	60,7	75,0	55,8
VT	84,4	85,4	67,2	81,3	64,7
AS	91,5	93,8	76,6	84,4	70,9
AE	84,3	84,6	73,1	83,3	66,8
SM	75,8	74,5	73,2	80,0	73,2

SF-36: Short-Form Health Survey-36 Quality of Life Questionnaire, CF: functional capacity, PA: physical aspects, PAIN: pain, EGS: general health status, VT: vitality, AS: social aspects, AE: aspects emotional, SM: mental health. Values are shown as averages. *reference study of mean values of the domains of the SF-36 questionnaire observed for the Brazilian population.

Figure 1. Comparison of quality-of-life results. Rio de Janeiro, RJ, Brazil, 2019

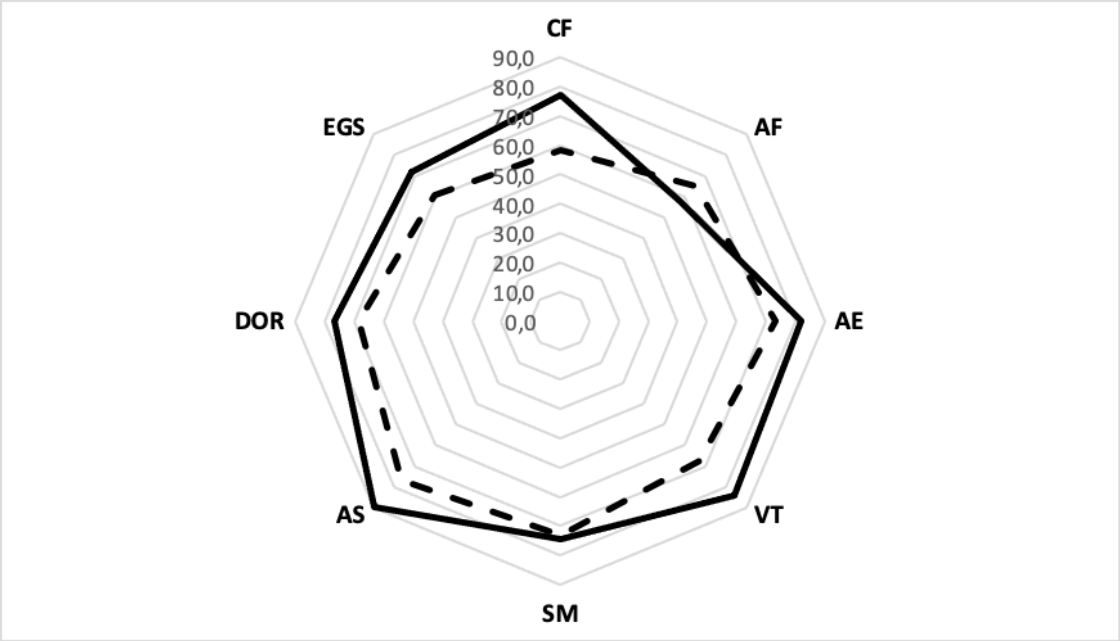

Figure 1 shows the sample results of the Questionnaire 36-item Short-Form Health Survey - SF-36, which sought to characterize the typical values of elderly people in the Brazilian population. EGS: general health status, AS: social aspects, SM: mental health, VT: vitality, AE: emotional aspects, AF: physical aspects, CF: functional capacity. The smaller the internal area of the graph, the worse the overall quality of life[14].

Table 2. Handgrip strength: comparison with reference values for the Brazilian population. Rio de Janeiro, RJ, Brazil, 2019

	TOTAL*	60-69 years	60-69 years	≥ 70 years	≥ 70 years
	N=34	N=22	N=1928#	12	N=1928*
Handgrip Force (kgf)	14,7	15,4	22,1	13,3	17,2

Index: Total study sample. The authors did not specify the sample size by age group. *reference values for the Brazilian population[15].

Table 3. Five-time sit-up test: comparison with reference values. Rio de Janeiro, RJ, Brazil, 2019

	. TOTAL	60-69 years	60-69 years	70-79 years	70-79 years	80-89 years	80-89 years
	N=34	N=22	N/A	N=9	N/A	N=3	N/A
TSL 5X (s)	14,7	14,52	11,4	14,7	12,6	15,7	14,8

Index: TSL 5X: sit and stand test five times. N/A: not applicable/not informed. *reference values from with the study[14].

Table 4. Ten-meter walk test: comparison with reference values. Rio de Janeiro, RJ, Brazil, 2019

	TOTAL	60-69 years	60-69 years	70-79 years	70-79 years	80-89 years	80-89 years
	N=34	N=22	N/A	N=9	N/A	N=3	N/A
TC10M (cm/s)	165,9	166,1	124,1	164,2	113,2	169,8	94,3

Index: N/A: not applicable/not informed. *reference values according to the study[16].

Discussion

In the present study, it was found that elderly individuals participating in physical activities in a community group had higher quality of life scores, lower muscle strength in the lower and upper limbs, and satisfactory dynamic balance and mobility.

According to the World Health Organization (WHO), quality of life is defined as the individual's perception of their position in life, in the cultural context, in the value system in which they live and in relation to their goals, expectations, norms and concerns. This concept also encompasses physical health, psychological status, level of independence, social relationships, environmental factors, and personal beliefs. To quantify health-related quality of life, the SF-36 health questionnaire has been widely used, being one of the most used instruments, especially for the elderly. The elderly's functional autonomy affects their quality of life, with exercise being a protector and precursor of this autonomy. Therefore, the promotion of active aging with more years free from functional limitations, combined with compensatory strategies to support autonomy and independence among the elderly, are essential for their quality of life and happiness[3,17].

The American College of Sports Medicine recommends that adults participate in at least 150 minutes of moderate-intensity physical activity per week to improve or maintain health. Furthermore, participation in low-intensity physical activities has been suggested to improve the daily life skills of the elderly, increasing balance, flexibility and muscle strength. Sarcopenia and impairment of skeletal muscle function is generally related to the functional capacity of the elderly. In this sense, adequate protein intake and the practice of high-intensity exercise, i.e., strength training, have been recommended to preserve and increase functionality. In our study, the elderly women did not regularly practice high-intensity activities, which was reflected in the relatively low values of strength in the upper and lower limbs. However, the quality of life in our sample was superior compared to the average for the Brazilian population. These results agree with those that observed a correlation between low-intensity exercise and quality of life in postmenopausal women, aged between 50 and 79 years[18-20].

This work was carried out in a community center for the elderly in a municipality in the state of Rio de Janeiro. ESMUTI is described as a space dedicated to the elderly, with the objective of integrating the elderly into sociocultural activities and physical activities, thus working towards an improvement in the quality of life of the elderly. There is currently renewed political interest in the idea that community and its cohesion is an important determinant of health and quality of life (QL). This approach is strongly based on the notion that an individual's situation can be improved by reducing loneliness and increasing social cohesion. Two connected but distinct elements - social prescription and community assets - underlie the basic community approaches outlined in this plan. Social prescription emerged from the recognition of the vital contribution that communities can contribute to health and well-being. It can be used as a stand-alone intervention or, more often, as a component of more complex interventions. Social prescription works by referring people to a variety of non-clinical and non-medical assets. It is an innovative model of care as it is patient-centered and provides an effective framework for engaging patients in their community[21,22].

Conclusion

We conclude that the results of this study suggest that cognitive, social, and physical stimulation activities offered to individuals participating in the community center for the elderly contribute to the improvement and maintenance of their quality of life and mobility, even though they have no noticeable effect on global muscle strength.

References

1. Farzianpour F, Foroushani AR, Badakhshan A, Gholipour M, Roknabadi EH. Quality of Life for Elderly Residents in Nursing Homes. Global Journal of Health Science. 2015;8(4). DOI: 10.5539/gjhs.v8n4p127
2. Wong R, Obregón AM, Palloni A, Robledo LMG, González-González C, López-Ortega M, et al. Progression of aging in Mexico: the Mexican Health and Aging Study (MHAS). Salud Publica Mex. 2015;57(Sup.1). DOI: 10.21149/spm.v57s1.7593

3. The World Health Organization quality of life assessment (WHOQOL): Position paper from the World Health Organization. Social Science & Medicine [Internet]. 1995 [acesso em 26 mai 2021];41(10). Disponível em: https://www.sciencedirect.com/science/article/abs/pii/027795369500112K?via%3Dihub
4. Halvorsrud L, Kalfoss M. The conceptualization and measurement of quality of life in older adults: a review of empirical studies published. European Journal of Ageing [Internet]. 2007 [acesso em 26 mai 2021];4. Disponível em: http://link.springer.com/10.1007/s10433-007-0063-3
5. Bowling A. Quality of life: measures and meanings in social care research. NIHR School for Social Care Research Methods Review (Internet). 2014 [acesso em 26 mai 2021]. Disponível em: https://sscr.nihr.ac.uk/PDF/MR/MR16.pdf
6. Ware JE, Gandek B. Overview of the SF-36 Health Survey and the International Quality of Life Assessment (IQOLA) Project. Journal of Clinical Epidemiology. 1998;51(11). DOI: 10.1016/S0895-4356(98)00081-X
7. Aaronson NK, Acquadro C, Alonso J, Apolone G, Bucquet D, Bullinger M, et al. International quality of life assessment (IQOLA) project. Qual Life Res [Internet]. 1992 [acesso em 26 mai 2021];1. Disponível em: http://link.springer.com/10.1007/BF00434949
8. Ciconelli RM, Ferraz MB, Santos W, Meinão I, Quaresma MR. Tradução para a língua portuguesa e validação do questionário genérico de avaliação de qualidade de vida SF-36 (Brasil SF-36). Revista Brasileira de Reumatologia [Internet]. 1999 [acesso em 26 ami 2021];39(3). Disponível em: https://www.ufjf.br/renato_nunes/files/2014/03/Valida%C3%A7%C3%A3o-do-Question%C3%A1rio-de-qualidade-de-Vida-SF-36.pdf
9. Lima TRL, Almeida VP, Ferreira AS, Guimarães FS, Lopes AJ. Handgrip Strength and Pulmonary Disease in the Elderly: What is the Link? Aging and disease. 2019;10(5). DOI: 10.14336/AD.2018.1226
10. Bohannon RW. Reference Values for the Five-Repetition Sit-to-Stand Test: A Descriptive Meta-Analysis of Data from Elders. Percept Mot Skills. 2006;103. DOI: 10.2466/pms.103.1.215-222
11. Bohannon RW. Comfortable and maximum walking speed of adults aged 20—79 years: reference values and determinants. British Geriatrics Society. 1997;26(1). DOI: https://doi.org/10.1093/ageing/26.1.15
12. Fess E, Moran C. American Society of Hand Therapists Clinical Assessment Recommendations. American Society of Hand Therapists [Internet]. 1981 [acesso em 25 mai 2021]. Disponível em: https://www.researchgate.net/publication/303400806_American_Society_of_Hand_Therapists_Clinical_Assessment_Recommendations
13. Conselho Nacional de Saúde (CNS). Resolução n.º 466, de 12 de dezembro de 2012. Considera o respeito pela dignidade humana e pela especial proteção devida aos participantes das pesquisas científicas envolvendo seres humanos [Internet]. Brasília (DF): CNS; 2012 [acesso em 25 mai 2021]. Disponível em: https://bvsms.saude.gov.br/bvs/saudelegis/cns/2013/res0466_12_12_2012.html
14. Laguardia J, Campos MR, Travassos C, Najar AL, Anjos LA dos, Vasconcellos MM. Brazilian normative data for the Short Form 36 questionnaire, version 2. Rev bras epidemiol. 2013;16(4). DOI: 10.1590/S1415-790X2013000400009
15. Schlüssel MM, Anjos LA, Kac G. A dinamometria manual e seu uso na avaliação nutricional. Rev Nutr. 2008;21(2). DOI: 10.1590/S1415-52732008000200009
16. Bohannon RW, Williams Andrews A. Normal walking speed: a descriptive meta-analysis. Physiotherapy. 2011;97(3). DOI: 10.1016/j.physio.2010.12.004
17. Esain I, Larrad AR, Letona IB, Gil SM. Health-related quality of life, handgrip strength and falls during detraining in elderly habitual exercisers. Health Qual Life Outcomes [Internet]. 2017 [acesso em 26 mai 2021];15(226). Disponível em: https://hqlo.biomedcentral.com/articles/10.1186/s12955-017-0800-z
18. Haskell WL, Lee I-M, Pate RR, Powell KE, Blair SN, Franklin BA, et al. Uptade Recommendation for Adults from the American College of Sports Medicine and the American Heart Association. Medicine & Science in Sports & Exercise. 2007;39(8). DOI: 10.1249/mss.0b013e3180616b27
19. Buman MP, Hekler EB, Haskell WL, Pruitt L, Conway TL, Cain KL, et al. Objective Light-Intensity Physical Activity Associations With Rated Health in Older Adults. American Journal of Epidemiology. 2010;172(10). DOI: 10.1093/aje/kwq249
20. Felipe J, Viezel J, Reis AD, Barros EAC, Paulo TRS, Neves LM, et al. Relationship of different intensities of physical activity and quality of life in postmenopausal women. Health Qual Life Outcomes [Internet]. 2020 [acesso em 26 mai 2021];18(123). Disponível em: https://hqlo.biomedcentral.com/articles/10.1186/s12955-020-01377-1
21. Robinson A. Social prescribing: coffee mornings, singing groups, and dance lessons on the NHS. BMJ. 2018;363. DOI: 10.1136/bmj.k4857
22. Chatterjee HJ, Camic PM, Lockyer B, Thomson LJM. Non-clinical community interventions: a systematised review of social prescribing schemes. Arts & Health. 2018;10(2). DOI: 10.1080/17533015.2017.1334002