

PREVALENCE OF NEGATIVE PERCEPTION OF SELF-CARE AMONG BRAZILIAN OLDER ADULTS LIVING IN THE COMMUNITY AND ASSOCIATED FACTORS

Prevalência e fatores associados à percepção negativa de autocuidado em idosos brasileiros residentes na comunidade

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ABSTRACT

OBJECTIVE: To describe and identify sociodemographic factors and health behaviors associated with a negative perception of self-care in community-resident older adults in seven Brazilian cities. **METHODS:** This is a cross-sectional analysis of data from the Frailty in Brazilian Older Adults (FIBRA) study. Sociodemographic characteristics, health-related behaviors, and perception of self-care in health were assessed. For analysis, percentage distributions and respective 95% confidence intervals were estimated, at a significance level of 5%. Univariate and multivariate logistic regression analyses were carried out, with stepwise variable selection. **RESULTS:** Of 2,552 older adults in the overall sample, most (65.8%) were women, with a mean age of 72.3 ± 5.5 years. The worst perception of self-care was associated with non-use of dental care services (OR = 1.48, $p < 0.001$), income range from 1.1 to 3 times the minimum wage (OR = 1.46, $p = 0.049$), smoking (OR = 1.41, $p = 0.030$), sedentary lifestyle (OR = 1.32, $p = 0.003$), and male gender (OR = 1.24, $p = 0.023$). **CONCLUSION:** Although no high frequencies of negative health behaviors were found, the association of poor perception of self-care with modifiable factors, such as sedentary lifestyle and smoking, stands out. Failure to seek dental care continues to be a challenging aspect among the elderly. These results point to a potential subjective indicator for clinical and health research surveys throughout the aging process.

KEYWORDS: healthy behavior; life style; self-care; perception; elderly; aging.

RESUMO

OBJETIVO: Descrever e identificar fatores de natureza sociodemográfica e de comportamentos em saúde associados à percepção negativa de autocuidado em idosos residentes na comunidade de sete cidades brasileiras. **MÉTODOS:** Trata-se de um estudo transversal com dados do Estudo sobre Fragilidade em Idosos Brasileiros. Foram selecionadas características sociodemográficas, de comportamentos relacionados à saúde e de percepção de autocuidado em saúde. Para as análises, foram estimadas as distribuições percentuais e os respectivos intervalos de confiança de 95%, com nível de significância de 5%. Foi utilizada a análise de regressão logística univariada e multivariada, com critério *stepwise* de seleção de variáveis. **RESULTADOS:** Da amostra total de 2.552 idosos, a maioria foi de mulheres (65,8%), com idade média de $72,3 \pm 5,5$ anos. A pior percepção de autocuidado foi associada à não utilização de serviço odontológico (OR = 1,48; $p < 0,001$), faixa de renda de 1,1 a 3 salários mínimos (OR = 1,46; $p = 0,049$), tabagismo (OR = 1,41; $p = 0,030$), sedentarismo (OR = 1,32; $p = 0,003$) e sexo masculino (OR = 1,24; $p = 0,023$). **CONCLUSÃO:** Embora não tenham sido encontradas altas frequências de comportamentos negativos em saúde, destaca-se a associação com fatores modificáveis, como o sedentarismo e o tabagismo. A ausência de busca por serviços odontológicos continua sendo aspecto desafiador entre idosos. Os resultados apontam para um potencial indicador subjetivo nos levantamentos clínicos e de pesquisa em saúde ao longo do envelhecimento.

PALAVRAS-CHAVE: comportamentos saudáveis; estilo de vida; autocuidado; percepção; idosos; envelhecimento.

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INTRODUCTION

Self-care in health is a cornerstone of biopsychosocial models seeking to explain the health conditions of individuals and populations. In research, the operationalization of self-care encompasses a wide range of indicators, ranging from objective behavioral manifestations related to the promotion, maintenance, or restoration of health to indicators of a more subjective nature, such as attitudes, beliefs, and perceptions regarding individual health practices.¹

In this context, the perception of self-care stands out as a subjective construct. Specifically, the estimates or judgments that people make regarding the care they devote to their own health constitute an important variable in understanding the core nature of health and of investments made in it. In old age, these judgments are influenced by life-course experiences, controlled by sociodemographic and economic factors, changes in needs, motivation and strategies, beliefs about health, and outcomes related to these trajectories.² The gerontology literature reveals that one's perceptions or images of health can be influenced by indicators of health services utilization or by engagement in objective behaviors.³

Population aging and the large contingent of older people in current societies have fostered and created opportunities for research aimed at a broader understanding of behavioral factors and investment in self-care throughout life and the consequent determination of healthy or pathological trajectories of aging. Older individuals tend to have a strong inner drive to stay healthy, although they are less likely to engage in new healthy behaviors.^{2,3} Identifying and understanding the factors associated with those older adults who perceive themselves as not caring for their own health can improve our understanding and facilitate health promotion practices among the elderly. Most of the literature is still dedicated to understanding self-care in younger age groups, or explores the engagement of older people in health-related behaviors, such as exercise or smoking.⁴⁻⁷ Within this context, the present study aimed to describe the prevalence and factors associated with negative perceptions of self-care in community-living older adults from seven Brazilian cities in 2008–2009.

METHODS

This cross-sectional analysis uses data from the Frailty in Brazilian Older Adults (FIBRA) study, designed to assess the phenomenon of frailty and its relationships with a series of variables in older adults living in different Brazilian regions.⁸ Cities that composed the Unicamp part of the FIBRA study were: Campinas, state of São Paulo; Belém, Pará; Parnaíba, Piauí; Campina Grande, Paraíba; Poços de Caldas,

Minas Gerais; Ermelino Matarazzo (a district of the city of São Paulo); and Ivoti, Rio Grande do Sul.

Data were collected in single sessions lasting 40 to 120 minutes, conducted at schools, churches, primary health care units, convenience centers, and clubs. Sessions were conducted by trained undergraduate and graduate students. Participants were invited, informed, and signed an Informed Consent Form. Detailed methodological information are available elsewhere.⁸

For the present study, a subsample of 2,552 older adults living in the community was used, as, in order to achieve our objectives, we had to exclude elderly individuals with evidence of cognitive deficits (as screened by the Mini Mental State Examination⁹) and those who did not respond the criterion variable of the study, namely, perception of self-care.

Perception of self-care was identified through the question “How do you assess the care you devote to your health?”. Possible answers (“very poor”, “poor”, “fair”, “good”, and “very good”) were pooled into three categories: “Very poor/Poor”, “Fair”, and “Good/Very good”. The independent variables were: sociodemographic – gender (male/female), age group (65–69, 70–74, 75–80, or >80 years), educational attainment (no formal education, 1–4 years, 5–8 years, or >9 years formal education), household income as a function of minimum wage (<1, 1.1–3.0, 3.1–5.0, 5.1–10.0, or >10.0× minimum wage), and marital status (married, single, widowed, divorced), all assessed to through self-report questions; and those related to health behaviors – regular physical exercise (active, sedentary), smoking (smoker, nonsmoker, former smoker), alcohol intake (never, moderate, high), utilization of medical services (yes, no), and utilization of dental services (yes, no).

For the “regular physical exercise” variable, 16 items from the Minnesota Leisure-Time Activity Questionnaire (MLTAQ) were used.¹⁰ The number of days per week and number of minutes per day engaged in each exercise were collected by self-reporting, and used to calculate energy expenditure in metabolic equivalents (METs). Older adults were classified as physically active if they had a cumulative total of at least 30 minutes of moderate-intensity exercise (≥ 3 to ≤ 6 MET) at least five times a week or 20 minutes of vigorous exercise (> 6 MET) at least three times a week, according to American College of Sports Medicine (ACSM) and American Heart Association (AHA) recommendations.¹¹ All others were classified as sedentary. For the smoking variable, we used the questions “Do you currently smoke?” and “Have you smoked and quit?”. For alcoholic beverage intake and its frequency, we used the question “How often do you consume alcoholic beverages?” with the following possible answers: “Never”, “once a month or less”, “two to four times a month”, “two to

three times a week”, and “four or more times a week”. Intake was categorized as absent for older adults who responded “never”, moderate for those who selected “once a month or less” or “two to four times a month”, and high consumption for those who chose “two to three times a week” or “four or more times a week”.

The variable “medical service utilization” was based on the question “How many times did you visit a doctor (of any specialty)?”, while “dental services utilization” was based on the question “How many times did you go to the dentist in the last 12 months?”.

A descriptive analysis of the variables was performed. The chi-squared test was used to assess for potential association between perception of self-care and the independent variables of interest. To analyze the factors related to negative perception of self-care (poor/very poor), univariate and multivariate logistic regression analyses with stepwise variable selection were carried out. The level of significance was set at 5% ($p < 0.05$) for all tests.

This study was approved by the Research Ethics Committee of the School of Medical Sciences, Universidade Estadual de Campinas (Unicamp), through opinion no. 208/2007. The present study was also approved as an addendum to the parent study by the same Ethics Committee, through opinion no. 1,100,955.

RESULTS

Of the total sample of eligible older adults ($n = 2,552$), most were women (65.8%) and in the 65-to-74 age group. The mean age was 72.3 ± 5.5 years. Approximately 60% of the respondents reported a household income of up to three times the minimum wage, with a mean sample income of 3.9 ± 4.9 MW. Of the sample, 49.1% had 1–4 years of formal education and 50.5% were married.

Regarding the dependent variable, the perception of self-care in the sample was classified as good or very good in 51.9%, fair in 31.5%, and poor or very poor in 16.6%. The survey of health behaviors resulted in 55.9% of participants classified as sedentary, 90.6% as nonsmokers, and most (70.2%) as teetotal. Regarding active behaviors related to utilization of health care services, 90.8% and 35.5% of respondents had seen a doctor or dentist at least once that year, respectively.

As shown in Table 1, the socioeconomic variables “gender”, “income”, and “educational attainment” were associated with the perception of self-care. Regarding health-related behaviors, regular engagement in physical exercise, smoking, and use of medical and dental services in the preceding year were associated with the perception of self-care.

Table 2 presents data regarding the performance of each variable and the joint performance of the study variables as a whole on the condition of poor self-care perception. Univariate regression analysis identified significant associations with the lowest ranges of household income, as well as sedentary lifestyle, smoking status, and non-use of medical and dental services. Multivariate regression analysis found that older adults with the worst perception of self-care were those who denied use of dental services (odds ratio [OR] 1.48, and 95% confidence interval [95%CI] 1.22 to 1.80), those with a household income of 1.1–3.0 times the minimum wage (OR = 1.46, 95%CI 1.01–1.15), smokers (OR = 1.41, 95%CI 1.03–1.90), those who did not engage in physical exercise regularly (OR = 1.32, 95%CI 1.10–1.58), and men (OR = 1.24, 95%CI 1.03–1.50).

DISCUSSION

This is the first Brazilian study on perception of self-care by older adults. The objective was to evaluate the prevalence and factors associated with negative perceptions of health self-care in the elderly. We identified that 16.6% of respondents perceived such self-care as poor or very poor. This variable was significantly associated with male gender, denial of dental service use, income from 1.1 to 3.0 times the minimum wage, smoking, and non-engagement in regular physical exercise.

The sociodemographic characteristics of the study sample were consistent with a distribution already described in previous studies.^{8,10} They resemble nationwide data in terms of age group, female predominance, low educational attainment, and household income.¹² Our sample reported a greater search for medical services; in Brazil, the Health, Welfare, and Aging (SABE) study identified an utilization rate of 16.7% in the state of São Paulo,¹³ while the National Health Survey reported a countrywide rate of 16.5%.¹² Previous studies corroborate the lower rates of dental as compared to medical services utilization by the Brazilian population.^{12,14} A similar prevalence was reported in a study using data from the Campinas Health Survey (ISACamp), in which 64.1% of older adults in Campinas, São Paulo, were found not to attend an annual dental visit.¹⁵

Regarding health-related behaviors, sedentary behavior was predominant in the sample, with a proportion similar to that of other studies that used the same ACSM and AHA criteria.^{6,10} The prevalence of smoking in this study was lower than that found in other investigations.^{6,16–18} This is partly justified by the fact that the sample was restricted to subjects aged >65 years, which excluded a substantial portion of possible smokers, and by the possibility of greater inclusion of

Table 1 Descriptive and bivariate analysis of perceived self-care in the elderly, considering sociodemographic variables and health-related behaviors. Frailty in Brazilian Older Adults (FIBRA) study, Unicamp arm, Brazil, 2008–2009.

	n (%)	Perception of self-care n (%)			p-value
		Very poor/Poor 423 (16.6)	Fair 805 (31.5)	Good/Very good 1,324 (51.9)	
Age (years)					
65 to 69	967 (37.9)	173 (40.90)	317 (39.38)	477 (36.03)	0.250
75 to 79	796 (31.2)	138 (32.62)	242 (30.06)	416 (31.42)	
70 to 74	486 (19.0)	65 (15.37)	154 (19.13)	267 (20.17)	
≥ 80	303 (11.9)	47 (11.11)	92 (11.43)	164 (12.39)	
Sex					
Male	873 (34.2)	137 (32.4)	303 (37.6)*	433 (32.7)	0.046*
Female	1,679 (65.8)	286 (67.6)*	502 (62.4)	891 (67.3)*	
Family income (MW)					
< 1.0	243 (11.0)	47 (12.4)*	74 (10.7)	122 (10.8)	< 0.001*
1.1 to 3.0	1,064 (48.2)	209 (55.0)*	365 (52.7)*	490 (43.2)	
3.1 to 5.0	487 (22.1)	87 (22.9)	135 (19.5)	265 (23.4)	
5.1 to 10.0	276 (12.5)	27 (7.1)	75 (10.8)*	174 (15.4)*	
> 10.0	136 (6.2)	10 (2.6)	44 (6.3)*	82 (7.2)*	
Educational attainment (years)					
0	505 (19.8)	99 (23.4)*	179 (22.3)*	227 (17.2)	< 0.001*
1 to 4	1,252 (49.1)	215 (50.8)*	390 (48.5)	647 (48.9)	
5 to 8	461 (18.1)	78 (18.5)	145 (18.0)	238 (18.0)	
≥ 9	332 (13.0)	31 (7.3)	90 (11.2)	211 (15.9)*	
Marital status					
Married	1,287 (50.5)	224 (53.0)	406 (50.5)	657 (49.7)	0.298
Single	210 (8.2)	33 (7.8)	59 (7.3)	118 (8.9)	
Divorced	188 (7.4)	30 (7.1)	72 (9.0)	86 (6.4)	
Widowed	863 (33.9)	136 (32.1)	267 (33.2)	460 (34.8)	
Regular engagement in physical exercise					
Inactive	1,294 (55.9)	208 (61.5)*	436 (59.9)*	650 (52.1)	< 0.001*
Active	1,019 (44.1)	130 (38.5)	291 (40.1)	598 (47.9)*	
Smoking					
Nonsmoker	2,314 (90.6)	364 (86.1)	717 (89.1)	1,233 (93.1)*	< 0.001*
Smoker	238 (9.4)	59 (13.9)*	88 (10.9)*	91 (6.9)	
Intake of alcoholic beverages					
Never	1,767 (70.2)	312 (74.6)	534 (67.5)	921 (70.5)	0.094
Moderate	583 (23.2)	78 (18.7)	203 (26.7)	302 (23.1)	
High	166 (6.6)	28 (6.7)	54 (6.8)	84 (6.4)	
Utilization of medical services					
No	225 (9.2)	56 (13.9)*	77 (9.9)	92 (7.3)	< 0001*
Yes	2,212 (90.8)	345 (86.1)	699 (90.1)	1,168 (92.7)*	
Utilization of dental services					
No	1,625 (64.5)	309 (74.1)*	527 (66.1)	789 (60.5)	< 0.001*
Yes	895 (35.5)	108 (25.9)	271 (33.9)	516 (39.5)*	

*p < 0.05 (chi-squared test); MW: minimum wage.

elderly women from outside of large urban centers, which suggests to cohort effects. Regarding alcohol-related behavior, the Brazilian National Survey on Alcohol identified a rate of alcohol intake similar to that of the present study (approximately 28%).¹⁹ Many studies point to a positive association between weekly intake of alcoholic beverages and higher quality of life and functioning among the elderly,

although the mechanisms underlying this purported association remain unclear.^{16,20}

As for perception of self-care, although the majority of respondents perceived and evaluated their self-care positively, 16.6% of the sample rated their perception as poor or very poor. Subjective assessment tended to be consistent with objective data on involvement in healthy behaviors or avoidance of unhealthy

Table 2 Univariate and multivariate logistic regression analyses for worse perception of self-care (n = 2,552). Frailty in Brazilian Older Adults (FIBRA) study, Unicamp arm, Brazil, 2008-2009.

	Worse perception of self-care			
	Univariate analysis		Multivariate analysis	
	OR (95%CI)	p-value	OR (95%CI)	p-value
Age (years)				
≥ 80	1	–		
75 to 79	0.94 (0.71–1.24)	0.664		
70 to 74	1.09 (0.85–1.41)	0.490		
65 to 69	1.21 (0.94–1.54)	0.138		
Sex				
Female	1	–	1	–
Male	1.08 (0.93–1.27)	0.309	1.24 (1.03–1.50)	0.023*
Family income (MW)				
> 10.0	1	–	1	–
5.1 to 10.0	0.94 (0.62–1.42)	0.773	0.84 (0.54–1.31)	0.434
3.1 to 5.0	1.44 (0.98–2.10)	0.061	1.18 (0.78–1.77)	0.438
1.1 to 3.0	1.90 (1.33–2.72)	< 0.001*	1.46 (1.01–2.15)	0.049*
< 1.0	1.68 (1.11–2.54)	0.014*	1.22 (0.76–1.96)	0.403
Regular engagement in physical exercise				
Active	1	–	1	–
Inactive	1.39 (1.18–1.63)	< 0.001*	1.32 (1.10–1.58)	0.003*
Smoking				
Nonsmoker	1	–	1	–
Smoker	1.81 (1.42–2.32)	< 0.001*	1.41 (1.03–1.9)	0.030*
Intake of alcoholic beverages				
Never	1	–		
Moderate	0.94 (0.78–1.12)	0.485		
High	1.03 (0.76–1.40)	0.837		
Utilization of medical services				
Yes	1	–		
No	1.68 (1.28–1.75)	< 0.001*		
Utilization of dental services				
Yes	1	–	1	–
No	1.50 (1.28–1.75)	< 0.001*	1.48 (1.22–1.80)	< 0.001*

OR: odds ratio; 95%CI: 95% confidence interval; MW: minimum wage. *p < 0.05.

behaviors, assigning predictive power to subjective indicators, which are increasingly relevant to health and aging research.²¹

Lower search for dental services was more strongly associated with perception of self-care, and had greater discriminative ability, than search for medical services. The lack of a perceived need has been cited as a barrier to utilization of dental services, as many people view oral problems as non-life-threatening and their impacts on well-being are not obvious.¹⁴ One must also take into account the capacity of older adults to access such services, which is directly related to income and educational attainment.¹³ Even when taking into account the subjectivity and individuality of each older adult, differences in perceptions about health services and access to these services cannot be ignored.²²

The regular practice of physical exercise is widely recognized as a behavior that promotes health and quality of life, reducing the risk of development of chronic noncommunicable diseases.^{1,23} According to the Brazilian National Health Policy (PNS), smoking is one of the main avoidable hazards to health, and may contribute to the development of several chronic diseases, such as cardiovascular diseases, cancer, and chronic obstructive pulmonary disease.²⁴ It is well known that health-related behaviors do not manifest in isolation, but rather are coupled with other risk or protective behaviors, as in the case of smoking and sedentary lifestyle. Therefore, adequate engagement in physical activities and abstinence from smoking can prevent diseases, increase longevity, and improve subjective perception regarding care for one's own health. Furthermore, intervention from this perspective is essential, as these are modifiable factors.²⁵

The worst perceptions of self-care were seen among men and low-income individuals. The presence of the male population in health interventions poses a challenge for the health services; health prevention and promotion activities targeting this group must take into account individual perceptions of care and of the continuum of health and disease.²⁶ Individuals with lower income tend to adopt life-threatening health habits because they have less access to information, and because their living conditions lead to the incorporation of behaviors considered unhealthy; this probably leads to worse perceptions of self-care. Some limitations of this study must be noted. Broad-ranging questions, administered through a variety of different instruments and validated criteria, precluded more developed and in-depth analyses, such as the non-discrimination of factors associated with the use of health services and the lack of inclusion of food behavior among the variables of interest. According to the authors who conducted cross-cultural translation and adaptation of the MLTAQ questionnaire, some team sports

and high-intensity activities are not performed by Brazilian older adults,²⁷ which means the actual energy expenditure of the sample may have been underestimated; furthermore, the reported information for health-related behaviors may underestimate data on socially undesirable behaviors^{4,17}, while the cross-sectional design is associated with reverse causality bias. These limitations suggest that careful interpretation of results is warranted, especially when attempting to extrapolate them to different populations.

There is a pressing need to develop simple, practical, easy-to-understand, and low-cost strategies to obtain knowledge about the health of older adults, such as the use of subjective measures. The present study contributes to the recognition of perception of self-care in health as another indicator for gerontology research and clinical practice. Specifically, the concept of self-care perception and its measurement can be used to refine the design of interventions aimed at health self-management.²⁸

It is worth noting that positive experiences and the attainment of satisfactory, healthy indicators of aging are not only the result of individual efforts and personal control over one's own health and well-being.^{4,5,29} The multiple determinants of health, such as public policies, favorable or unfavorable environments for health, community actions, sociocultural factors, and the organization of health systems must also be taken into account.

CONCLUSION

The present study uncovered important components for the understanding of self-care as it pertains to the health of older adults. Elderly men, those with a household income of 1.1 to 3.0 times the minimum wage, those with a sedentary lifestyle, smokers, and those who had not sought dental care recently reported the poorest perceptions of self-care. We believe that negative perception of self-care among the elderly is an important indicator for clinical surveys and health research in old age, with implications for trajectories of aging.

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CONFLICT OF INTERESTS

The authors declare no conflict of interests.

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