Positive self-rated health in the elderly: a population-based study in the South of Brazil

Autopercepção positiva de saúde em idosos: estudo populacional no Sul do Brasil

Autopercepción positiva de salud en ancianos: estudio poblacional en el Sur de Brasil

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Abstract

The objective was to identify factors associated with positive self-rated health in the elderly in Florianópolis, Santa Catarina State, in the South of Brazil. This population-based cross-sectional study evaluated 1,705 elderly. Self-rated health was classified as positive (very good or good) or negative (fair, poor, and very poor). Crude and adjusted Poisson regression was used to identify associated factors. Prevalence of positive self-rated health was 51.2%, associated with male gender (PR = 1.13), more than 5 years of schooling, moderate (PR = 1.33) or high alcohol intake (PR = 1.37), leisure-time activity (PR = 1.20), Internet use (PR = 1.21), fewer diseases, mild/moderate dependence (PR = 2.20) or no dependence (PR = 2.67), no falls (PR = 1.19), and non-use of polypharmacy (PR = 1.27). Several modifiable factors were identified that can affect positive self-rated health in the elderly and contribute to the development of strategies to improve their quality of life.

Health of the Elderly; Self-Assessment; Cross-Sectional Studies

Resumo

O objetivo foi identificar fatores associados à autopercepção positiva de saúde em idosos de Florianópolis, Santa Catarina, Sul do Brasil. Trata-se de estudo transversal, de base populacional, com 1.705 idosos. A autopercepção de saúde foi classificada como positiva (muito boa e boa) e negativa (regular, ruim e muito ruim). A regressão bruta e ajustada de Poisson foi utilizada para identificar os fatores associados. A prevalência do desfecho foi de 51,2%, associada positivamente ao sexo masculino (RP = 1,13), ter mais de 5 anos de estudo, consumo moderado (RP = 1,33) ou alto de álcool (RP = 1,37), ser ativo no lazer (RP = 1,20), utilizar Internet (RP = 1,21), menor número de morbidades, dependência leve/moderada (RP = 2,20) ou nenhuma (RP = 2,67), não sofrer quedas (RP = 1,19) e não fazer uso de polifarmácia (RP = 1,27). Foram identificados diversos fatores modificáveis que podem interferir na autopercepção de saúde positiva de idosos e contribuir para o desenvolvimento de estratégias para melhorar a qualidade de vida desses.

Saúde do Idoso; Autoavaliação; Estudos Transversais

Introduction

Self-rated health is considered good indicator of health status in the elderly, since it incorporates physical, cognitive, and emotional components as well as aspects related to well-being and satisfaction with one's own life [1,2,3]. This measure has been widely used in population-based studies of the elderly, since it is consistently associated with mortality and functional decline in this age group [4,5,6], besides serving as a tool for developing health policies aimed at improving the elderly population's health status [4].

Prevalence of positive self-rated health differs considerably between studies. Although the question on self-rated health and the options for answers are similar between studies, the findings are not unanimous. This discrepancy in prevalence rates may be due to short-term fluctuations in health or disease caused by cyclical variations related to well-being.

Some Brazilian studies [1,2,3,4] have analyzed self-rated health in the elderly, mainly approaching the variable as negative self-rated health. However, self-rated health in its positive form facilitates understanding the factors that be modified in the search for positive determinants of health.

Prevalence rates for positive self-rated health among Brazilian population-based studies varied from 24.7 to 89.1% [1,4,7], while in international studies they varied from 35.7% to 63% [8,9,10].

Since self-rated health bears a relationship to fundamental health issues in the elderly, such as gender [11], age [11], marital status [11], schooling [3,8,11,12], monthly household income [1], physical activity [1,3,7,13], and alcohol consumption [14], it is easy to understand the discrepancies in prevalence rates between studies.

In addition, health conditions also bear a relationship to self-rated health, for example falls [15], physical capacity [4,7,16], depressive symptoms [1,16], and diseases [3,4,17,18], in addition to having an impact on mortality [4,6,19]. The use of medicines [1,11] and healthcare services are also associated, especially the number of medical consultations [1], number of hospitalizations, and type of health insurance [11].

Understanding the aspects involved in self-rated health can reveal the profile of elderly that refer to it positively, which has still received little attention in Brazilian research, as shown in a literature review on the theme, in which all the studies that were examined approached the variable in its negative form [2]. By considering the theme's relevance as an important indicator for overall health surveillance in the elderly, the current study aims to identify the prevalence of positive self-rated health and its association with demographic, socioeconomic, and lifestyle factors and health conditions in the elderly in Florianópolis, the capital of Santa Catarina State, Brazil.

Methods

Study area and population

The data in this study are part of the research project on health conditions in the elderly population in Florianópolis called *Epi*Floripa Idoso (http://www.epifloripa.ufsc.br/category/inqueritos/epi_idoso/epi_idoso_10/fin_idoso_09, accessed on 15/Aug/2014). This is a cross-sectional, population-based, household survey with elderly (≥ 60 years) living in the urban area of the city of Florianópolis, in 2009-2010.

Details on the location, study population, and sampling have been published previously [20] and will be presented briefly here. A two-stage sampling strategy was used to reach the initial sample size calculated at 1,599 elderly individuals. In the first stage, 420 urban census tracts were stratified upwardly according to the head-of-family's mean monthly income (BRL 314.76 to BRL 5,057.77), aggregated in deciles with 42 tracts each, systematically picking eight tracts in each decile in order to cover all the groups. The units in the second stage were the households, picked systematically. All the elderly living in the selected households were invited to participate in the study. Losses were defined as interviews that had not been held after four attempts (including in evenings and on weekends), and refusals were defined as persons that chose not to answer the questionnaire.

Data collection

Data collection employed a structured face-to-face interview, using personal digital assistant (PDA) to record the data.

Data consistency was verified weekly by simple frequency and comparison with expected values. Incongruent responses were identified, corrected by the supervisor and the interviewer responsible for the inconsistencies, followed by reporting back to the person responsible for the final databank. Quality control was conducted by telephone with a short version of the questionnaire in 10% of the interviews, which were randomly selected.

Self-rated health status was obtained with the question "In general, would you say that your health is: very good, good, fair, poor, or very poor?" [21].

The five categories for the answer were dichotomized as positive ("very good" and "good") and negative ("regular", "poor", and "very poor").

Independent variables

- **Demographic and socioeconomic:** gender (female; male), age group (60-69 years, 70-79, and ≥ 80), marital status (married or with partner; without partner or single/separated/divorced or widowed), currently working (no; yes), schooling in years (no formal education; 1-4; 5-8; 9-11; and ≥ 12); and per capita family income stratified in quartiles (1st quartile: ≤ BRL 327.50; 2nd quartile: BRL 327.50-BRL 700.00; 3rd quartile: BRL 700.00-BRL 1,500.00; and 4th quartile: > BRL 1,500.00).
- **Lifestyle:** smoking (current smoker, former smoker, or never smoked), alcohol consumption (never, moderate, frequent, or very frequent) verified by the first three questions of the AUDIT questionnaire (*The Alcohol Use Disorders Identification Test*) [22], leisure-time physical activity verified by the long version of the *International Physical Activity Questionnaire* (IPAQ) (insufficiently active: 0 to 149 minutes of physical activity/week and physically active: ≥ 150 minutes of physical activity/week) [23].
- **Internet use:** self-reported capacity to send and receive e-mail messages [24].
- **Health conditions:** number of diseases (none; 1 to 2; or ≥ 3 self-reported diseases) verified by the question "Has some doctor or other health professional ever told you that you have...?", followed by a list of 16 health problems (the questionnaire from the *Brazilian National Household Sample Survey* – PNAD [25]), functional dependence [26] was assessed by the *Brazilian Questionnaire for Multidimensional Functional Assessment*, adapted from the questionnaire *Older Americans Resources and Services* (BOMFAQ/OARS), categorized as no functional dependence [26] (absence of dependence), mild dependence (dependence in one to three activities), and moderate/severe (dependence in four or more activities). Cognitive status (normal versus presence of probable cognitive deficit) was investigated by the *Mini-Mental State Examination* (MMSE), with cutoff points that took schooling into account, according to Brucki et al. [27]. A fall in the previous year was verified by the question: "Did you suffer any fall in the last year?", categorized as yes or no.
- **Use of medicines and healthcare services:** health plan coverage was verified by the question "Do you have a private, company, or government health plan?" (yes; no); hospitalization in the previous 6 months (yes; no); and use of polypharmacy [28] (yes; no), obtained from packages and/or physician's prescriptions for medicines, recorded by the brand name and later classified according to the *Anatomical Therapeutic Chemical Code* (ATC) [29], defined as concurrent use of four or more medicines.

Interviews answered by informants (n = 49) were excluded, since self-rated health is subjective and can only be provided by the elderly themselves.

Data analysis

Descriptive analyses were performed for all the variables. Prevalence rates and respective 95% confidence intervals (95%CI) were calculated for positive self-rated health according to the nature of the exposures. Bivariate and adjusted analysis used Poisson regression [30] estimating crude and adjusted prevalence ratios (PR) with the respective 95%CI. Adjusted analysis used a hierarchical model that included the demographic and socioeconomic variables (first level), lifestyle (second level), Internet use (third level), health conditions (fourth level), and use of medicines and healthcare services (the fifth and last level, more proximal in relation to the dependent variable). The statistical significance of each variable in the model was verified by the Wald test for heterogeneity or trend. Variables were entered into the model by level, and the adjusted analysis included all those with $p < 0.20$. Statistical significance was set at 5%.

Data analysis used Stata SE 12.0 (Stata Corp., College Station, USA). All the analyses considered the cluster sample design effect, incorporating sample weights with the *svy* command.

Ethical issues

The project was approved by the Ethics Research Committee at the Federal University of Santa Catarina, protocol n. 352/2008. Free and informed consent was obtained from all the subjects. The authors reported no conflicts of interest.

Results

Of all the elderly eligible for the study (n = 1,911), 1,705 were interviewed, or 89.1% response rate, including the interviews with informants. Still, for the current analysis, the latter interviews were excluded (n = 49), totaling an analytical sample of 1,656 elderly. Median age was 69 years (range: 60 to 102). More than half were females (62.5%), belonged to the 60 to 69 year age group (51.7%), reported being married or having a partner (58.9%), and were not working at the time of the interview (86.5%), and 32.5% had 1 to 4 years of schooling.

More than 60% reported not consuming alcoholic beverages, and 59.2% reported never having smoked. Less than one-third (31.5%) were classified as sufficiently active in their leisure time. The majority reported not using the Internet (76.7%), reported 3 or more diseases (52%), showed normal cognitive status (54.3%), had not suffered falls in the previous year (82.1%), had a private health plan (66%), reported a hospitalization in the previous six months (92.9%), and did not use polypharmacy (55.4%), and 43.9% reported mild dependence in activities of daily living (ADL) (Table 1).

The proportion of elderly with positive self-rated health was 51.2% (95%CI: 48.8-53.6). Table 2 shows the associations in the crude and adjusted analysis between positive self-rated health and independent variables. All independent variables presented significant associations with the outcome. Adjusted analysis showed that prevalence of positive self-rated health was 1.13 times higher in men than in women. Prevalence of positive self-rated health was also directly associated with schooling.

Prevalence rates for the outcome were 33% and 37% higher in the elderly with moderate and high alcohol consumption, respectively, compared to non-consumers. Elders that were active in their leisure time showed 20% higher prevalence of positive self-rated health when compared to their inactive peers.

Internet users presented 21% higher prevalence of positive self-rated health when compared to non-users. Elderly that reported no diseases or only 1 to 2 diseases showed 52% and 45% higher prevalence of the outcome when compared to those with 3 or more diseases. Those with mild dependence or absence of dependence presented 2.20 and 2.67 times the prevalence of positive self-rated health when compared to elderly with moderate to severe dependence.

Prevalence of the outcome was 19% and 27% higher in the elderly that had not suffered falls in the previous year and those not using polypharmacy, respectively, when compared to their peers.

Discussion

In the current study, prevalence of positive self-rated health was 51.2%. This result is consistent with a previous study by Silva et al. [7], who found 50.4% prevalence in three municipalities (counties) in the Northeast, Southeast, and South of Brazil. The study in Bambuí, Minas Gerais State [1], showed a prevalence rate of 24.7% for this outcome, while a study by Borim et al. [4] in the elderly in Campinas, São Paulo State, found a higher estimated prevalence of positive self-rated health (80.9%) than in the current study. Two possibilities may explain the differences between prevalence rates in the various studies: first, different options for answers to the question on self-rated health or even the kind of categorization, which is not homogeneous, and second, potential differences between the target regions in socioeconomic and demographic terms, both of which can affect the prevalence of self-rated health.

Positive self-rated health was associated with male gender, corroborating previous studies [31,32]. The aging process is marked by differences in health status between men and women, which may result from a combination of biological, social, and behavioral factors, leading to different perceptions of health status [33,34]. Women also tend to use healthcare services more, have a higher life expectancy, are susceptible to more diseases and functional decline, which can influence and favor the discovery of health problems [35], and are more prone to less lethal conditions [35,36], so that they perceive their own health worse than men.

According to the current study, positive self-rated health was associated with more schooling, corroborating a previous study [12]. Individuals with more schooling and higher income are known to have more access to information, leading to the adoption of healthy habits like adequate, balanced diet and regular physical activity [37]. Elderly with more schooling thus have better health-related quality of life [31] and therefore better self-rated health.

As for health behaviors, the current study found that positive self-rated health was associated with alcohol consumption. According to Poikolainen et al. [14], after adjusting for sociodemographic and lifestyle variables, moderate alcohol intake was associated with positive self-rated health. Lang et al. [36] found that individuals 50 years or older that drank moderately showed better cognition and quality of life and fewer depressive symptoms. The latter authors reported that moderate alcohol intake is frequently associated with more active social life, which may explain such associations. Still, the results should be interpreted with caution, given the risk of excessive alcohol intake, especially by the elderly. Further research is thus needed to elucidate this relationship.

Two studies [3,13] found an association between leisure-time activity and positive self-rated health, corroborating the current study's findings. Physical activity provides benefits such as the maintenance and/or improvement of functional capacity, maintenance of indepen-

Table 1

Description of sample and prevalence rates for positive self-rated health according to demographic, socioeconomic, and lifestyle variables, Internet use, health conditions, and use of medicines and healthcare services among the elderly in Florianópolis, Santa Catarina State, Brazil, 2009-2010.

Variables	n	% (95%CI)	Positive self-rated health [% (95%CI)]	p-value
Gender [n = 1,656]				< 0.001
Female	1,058	62.5 (59.7 -65.3)	48.9 (45.0-52.7)	
Male	598	37.5 (34.7-40.3)	61.1 (55.8-66.1)	
Age group (years) [n = 1,656]				0.001
≥ 80	214	12.8 (10.3-15.3)	43.9 (36.7-51.3)	
70-79	596	35.5 (32.6-38.4)	48.3 (43.2-53.6)	
60-69	846	51.7 (48.8-54.7)	59.3 (53.6-64.8)	
Marital status [n = 1,656]				< 0.001
With partner	974	58.89 (55.4-62.4)	57.2 (52.8-61.4)	
Without partner	682	41.11 (37.6-44.6)	48.1 (43.8-52.4)	
Currently working [n = 1,656]				0.004
No	1,429	86.5 (84.1-88.8)	51.8 (47.6-55.9)	
Yes	227	13.5 (11.2-15.8)	64.1 (57.2-70.5)	
Schooling (years) [n = 1,648]				< 0.001
No formal schooling	148	7.4 (5.3-9.5)	35.5 (28.0-43.7)	
1-4	568	32.6 (27.8-37.3)	39.7 (34.9-44.8)	
5-8	315	18.6 (16.0-21.3)	49.6 (43.0-56.2)	
9-11	231	16.2 (12.6-19.8)	62.3 (56.0-68.3)	
≥ 12	386	25.2 (20.6-29.8)	73.3 (66.8-70.0)	
Per capita income (BRL) [n = 1,656]				< 0.001
1st quartile (lowest)	414	22.5 (18.7-26.4)	46.9 (39.8-52.5)	
2nd quartile	418	25.2 (21.7-28.8)	41.3 (36.1-46.7)	
3rd quartile	414	25.4 (22.4-28.4)	56.5 (50.9-62.0)	
4th quartile (highest)	410	26.8 (21.7-32.0)	68.2 (62.6-73.2)	
Alcohol consumption [n = 1,656]				< 0.001
None	1,061	63.3 (59.8-66.8)	43.9 (40.2-47.6)	
Moderate	315	19.3 (16.0-22.5)	67.2 (60.3-73.3)	
High	280	17.5 (14.5-20.3)	73.0 (62.5-57.0)	
Smoking [n = 1,656]				0.004
Never smoked	1,004	59.2 (55.9-62.6)	49.9 (45.9-53.8)	
Former smoker	511	32.2 (29.0-35.4)	57.1 (51.5-62.6)	
Current smoker	141	8.6 (6.6-10.5)	64.2 (54.5-73.0)	
Leisure-time physical activity [n = 1,656]				< 0.001
Insufficiently active	1,165	68.5 (63.5-73.6)	48.0 (43.8-52.1)	
Active	491	31.5 (26.4-36.4)	65.3 (60.9-69.5)	
Internet use [n = 1,656]				< 0.001
No	1,313	76.7 (72.3-81.2)	46.2 (43.0-49.4)	
Yes	343	23.3 (18.8-27.7)	77.3 (71.3-82.5)	
Number of diseases [n = 1,637]				< 0.001
≥ 3	873	52.0 (48.5-55.5)	36.8 (32.1-41.7)	
1 to 2	617	38.5 (35.7-41.4)	70.3 (65.7-74.6)	
None	147	9.5 (7.7-11.3)	78.8 (70.5-85.2)	
Cognitive status [n = 1,648]				0.028
Cognitive deficit	771	45.7 (40.9-50.4)	49.0 (44.1-53.8)	
Normal	877	54.3 (49.6-59.1)	57.1 (51.9-62.1)	

(continues)

Table 1 (continued)

Variables	n	% (95%CI)	Positive self-rated health [% (95%CI)]	p-value
Dependence in ADL [n = 1,656]				< 0.001
Moderate/Severe	491	29.9 (26.6-33.2)	22.1 (18.0-26.7)	
Mild	707	43.9 (39.7-40.0)	60.2 (54.7-65.4)	
Absence of dependence	458	26.2 (22.7-29.8)	77.8 (73.1-81.9)	
Fall in previous year [n = 1,656]				< 0.001
Yes	308	17.9 (15.6-20.2)	38.3 (31.2-46.0)	
No	1,348	82.1 (79.8-84.4)	56.7 (53.1-60.3)	
Health plan [n = 1,656]				< 0.001
Yes	597	34.0 (28.6-39.3)	45.4 (40.1-50.9)	
No	1,059	66.0 (60.7-71.4)	57.6 (53.9-61.1)	
Hospitalization in previous 6 months [n = 1,656]				0.007
No	128	7.1 (5.8-8.5)	37.2 (26.6-49.3)	
Yes	1,528	92.9 (91.5-94.2)	54.7 (51.0-58.3)	
Polypharmacy [n = 1,656]				< 0.001
Yes	743	44.6 (40.7-48.5)	36.2 (30.6-42.1)	
No	913	55.4 (51.5-59.3)	67.4 (63.6-70.9)	

95%CI: 95% confidence interval; ADL: activities of daily living.

Table 2

Crude and adjusted analysis of factors associated with positive self-rated health in the elderly. Florianópolis, Santa Catarina State, Brazil, 2009-2010.

Variables	Crude analysis		Adjusted analysis	
	PR (95%CI)	p-value	PR (95%CI)	p-value
Block 1: Demographic and socioeconomic				< 0.001
Gender		< 0.001		
Female	1.00		1.00	
Male	1.25 (1.14-1.37)		1.13 (1.02-1.26)	
Age group (years)		0.001		
≥ 80	1.00		1.00	
70-79	1.10 (0.88-1.37)		1.07 (0.86-1.34)	
60-69	1.35 (1.09-1.68)		1.20 (0.94-1.52)	
Marital status		< 0.001		
With partner	1.00		1.00	
Without partner	0.84 (0.76-0.93)		0.94 (0.82-1.07)	
Currently working		0.003		
No	1.00		1.00	
Yes	1.24 (1.08-1.42)		1.04 (0.90-1.20)	
Schooling (years)		< 0.001		
No formal schooling	1.00		1.00	
0-4	1.12 (0.84-1.50)		1.05 (0.80-1.39)	
5-8	1.40 (1.13-1.73)		1.26 (1.03-1.55)	
9-11	1.76 (1.40-2.21)		1.53 (1.21-1.95)	
≥ 12	2.07 (1.62-2.64)		1.68 (1.32-2.13)	
Per capita income (BRL)		< 0.001		
1st quartile (lowest)	1.00		1.00	
2nd quartile	0.90 (0.73-1.09)		0.87 (0.71-1.06)	
3rd quartile	1.23 (1.02-1.47)		1.08 (0.90-1.28)	
4th quartile (highest)	1.48 (1.28-1.71)		1.12 (0.96-1.31)	

(continues)

Table 2 (continued)

Variables	Crude analysis		Adjusted analysis	
	PR (95%CI)	p-value	PR (95%CI)	p-value
Block 2: Lifestyle				< 0.001
Alcohol consumption		< 0.001		
None	1.00		1.00	
Moderate	1.53 (1.34-1.75)		1.33 (1.18-1.51)	
High	1.66 (1.45-1.91)		1.37 (1.18-1.57)	
Smoking		0.001		
Never smoked	1.00		1.00	
Former smoker	1.14 (1.02-1.28)		1.04 (0.93-1.15)	
Current smoker	1.29 (1.11-1.48)		1.16 (0.99-1.36)	
Leisure-time physical activity		< 0.001		
Insufficiently active	1.00		1.00	
Active	1.36 (1.25-1.48)		1.20 (1.12-1.30)	
Block 3: Internet use				< 0.001
Internet use		< 0.001		
No	1.00		1.00	
Yes	1.67 (1.53-1.83)		1.21 (1.07-1.36)	
Block 4: Health conditions				< 0.001
Number of diseases		< 0.001		
≥ 3	1.00		1.00	
1-2	1.91 (1.69-2.16)		1.45 (1.29-1.64)	
None	2.14 (1.79-2.56)		1.52 (1.27-1.82)	
Cognitive status		0.028		
Cognitive deficit	1.00		1.00	
Normal	1.16 (1.02-1.34)		1.05 (0.94-1.18)	
Dependence in ADL		< 0.001		
Moderate/Severe	1.00		1.00	
Mild	2.72 (2.19-3.40)		2.20 (1.74-2.76)	
Absence of dependence	3.53 (2.89-4.31)		2.67 (2.10-3.39)	
Fall in previous year		< 0.001		
Yes	1.00		1.00	
No	1.48 (1.22-1.79)		1.19 (1.05-1.36)	
Block 5: Use of medicines and healthcare services				< 0.001
Health plan		< 0.001		
No	1.00		1.00	
Yes	1.27 (1.12-1.43)		1.10 (0.99-1.22)	
Hospitalization in previous 6 months		0.019		
No	1.00		1.00	
Yes	1.47(1.07-2.02)		1.04 (0.78-1.41)	
Polypharmacy		< 0.001		
Yes	1.00		1.00	
No	1.47 (1.07-2.02)		1.27 (1.14-1.41)	

95%CI: 95% confidence interval; ADL: activities of daily living; PR: prevalence ratio.

Block 2: adjusted for gender, age group, and schooling; Block 3: adjusted for gender, age group, schooling, alcohol consumption, and leisure-time physical activity; Block 4: adjusted for gender, age group, schooling, alcohol consumption, leisure-time physical activity, and Internet use; Block 5: adjusted for gender, age group, schooling, alcohol consumption, leisure-time physical activity, Internet use, number of diseases, dependence in ADL, and falls in previous year.

dence and autonomy, reduction of diseases [38], and improvement in quality of life [13], which fosters more social activity and thus biopsychosocial well-being and preservation of physical and mental health [38].

As for Internet use, no studies were found that demonstrate this association. This is a new and promising field of study, since digital inclusion of the elderly is a recent phenomenon with various positive effects on health and quality

of life. Studies show that elderly Internet users have healthier habits [24,39] and better functional capacity [24,40] and cognitive status [41], which can foster better self-rated health. Elderly that use new technologies are also motivated to improve their connection to the world, seek communication and interaction, especially with family and friends, pursue possibilities for leisure, and want to feel less excluded from society in the digital age [42]. This may be linked to better self-esteem, self-confidence, and mental health [43], which could explain the relationship between Internet use and more optimistic self-rated health.

The current study found that the absence or lower number of diseases increased the prevalence of positive self-rated health. This finding may be explained by the fact that elderly that reported 1 or 2 chronic diseases might have more ease in controlling them, and thus see themselves as healthy and enjoy better self-rated health. Previous studies found an association between diseases [44] and negative self-rated health [3,17] (the more the diseases, the higher the prevalence of negative self-rated health). Elderly with three or more diseases present worse quality of life [45,46], worse health conditions [45], and more difficulty in performing ADL and consequently worse functional capacity [45]. These elements may lead older individuals with 3 or more diseases to rate their health less optimistically.

The association between self-rated health and less dependence in ADL was found in other studies [7,44]. Greater difficulty in performing ADL is known to lead to worse functional capacity [45], negatively impacting quality of life in the elderly [47]. In addition, dependence in ADL interferes in the social activities in which the elderly participate, such as attending church, visiting friends [46], and attending social groups, among others. This may explain the lower prevalence of positive self-rated health in more dependent elderly.

The association between better self-rated health and not suffering falls may be understood by the loss of autonomy and independence in ADL generated by falls, which involve feelings of frailty and insecurity, decrease in social activities, and low self-esteem [47]. Falls can negatively affect quality of life in the elderly and lead to lower prevalence of positive self-rated health. Another study found similar results [15].

Non-use of polypharmacy is associated with positive self-rated health. Among the elderly, medication is one of the most widely used interventions to treat diseases. Thus, the use of medicines can indicate that something is wrong and interfere in their self-rated health [48]. Polypharmacy can also be attributed to one or more self-reported diseases, which can contribute to clinical alterations, in addition to higher frequency of drug-drug interactions with potential adverse effects, worse health status [3,45], and less optimistic self-rated health.

This study has some limitations to be considered when interpreting the results. The cross-sectional design does not allow establishing causal relations between self-rated health and the exposure variables, but indicates the magnitude of the associations and can raise new hypotheses for developing this area of study. Second, the use of self-reported measures (socioeconomic and lifestyle variables, health conditions, and use of medication and healthcare services) may involve an information bias. However, various precautions were taken to avoid biases, using standardized instruments and extensive training of the field team.

Among the study's strengths, the results are population-based data with a representative sample of the elderly population in Florianópolis. These findings may differ from those of other studies, due to the reasons presented in the introduction, since the city has one of the highest Municipal Human Development Indices (IDH-M) in Brazil, in addition to high income and educational indicators (Programa das Nações Unidas para o Desenvolvimento. Atlas do Desenvolvimento Humano no Brasil 2013. Ranking – todo o Brasil (2010). http://atlasbrasil.org.br/2013/ranking, accessed on 08/Nov/2014). This may influence residents' quality of life and self-rated health.

Self-rated health is a subjective measure that is considered a good indicator of health status in the elderly. This study can reveal the profile of older persons with positive self-rated health, essential for monitoring their overall health. Based on this, the development of health policies can support measures on issues associated with positive self-rated health and indirectly promote strategies to improve quality of life in this population group.

In conclusion, more schooling, more alcohol consumption, leisure-time physical activity, Internet use, fewer chronic illnesses, less dependence in ADL, absence of falls, and non-use of polypharmacy were associated with positive self-rated health in the elderly in the city of Florianópolis.

Resumen

El objetivo fue identificar factores asociados a la autopercepción positiva de salud en ancianos de Florianópolis, Santa Catarina, sur de Brasil. Se trata de un estudio transversal, de base poblacional, con 1.705 ancianos. La autopercepción de salud fue clasificada como positiva (muy buena y buena) y negativa (regular, mala y muy mala). La regresión bruta y ajustada de Poisson se utilizó para identificar los factores asociados. La prevalencia del desenlace fue 51,2%, asociada positivamente al sexo masculino (RP = 1,13), contar con más de 5 años de estudios, consumo moderado (RP = 1,33) o alto consumo de alcohol (RP = 1,37), ser activo durante el tiempo de ocio (RP = 1,20), utilizar Internet (RP = 1,21), menor número de morbilidades, dependencia leve/moderada (RP = 2,20) o ninguna (RP = 2,67), no sufrir caídas (RP = 1,19) y no polimedicarse (RP = 1,27). Se identificaron diversos factores modificables que pueden interferir en la autopercepción de salud positiva de los ancianos y contribuir al desarrollo de estrategias para mejorar su calidad de vida.

Salud del Anciano; Autoevaluación; Estudios Transversales

Contributors

S. C. Confortin, M. W. C. Giehl, D. L. Antes, I. J. C. Schneider, and E. d'Orsi participated in the study's conceptualization, data analysis and interpretation, writing of the article, and approval of the final version for publication and are responsible for all aspects pertaining to the entire article's accuracy and integrity.

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