

Jefferson Traebert<sup>I</sup>

Marcelo Carlos Bortoluzzi<sup>II</sup>

Ruth Terezinha Kehrig<sup>III</sup>

# Self-rated health conditions of the adult population, Southern Brazil

---

## ABSTRACT

The study aimed to estimate how the adult population (20 to 59 years) of Joaçaba, Southern Brazil, rates its health status. A cross-sectional study involving a representative sample (n=707) was carried out in 2006. The questionnaire surveyed sociodemographic conditions, restriction on daily activities, medical consultation, hospitalization and self-rated health. A hierarchical multiple logistic regression analysis was performed. It was verified that 74.7% of the individuals perceived their health as good and 3.9% perceived it as poor/very poor. Being unemployed at the moment of the interview and ceasing to perform daily activities due to health problems significantly increased the chance of poor /very poor self-rated health.

**DESCRIPTORS:** Adult Health. Self-Assessment. Activities of Daily Living. Socioeconomic Factors. Cross-Sectional Studies.

---

## INTRODUCTION

Subjective measures such as self-rating provide information on the health situation of populations,<sup>7</sup> and are considered predictors of morbidity, disability and mortality.<sup>6</sup> Regarding this last component, self-rating is a better predictor than objective measures of the health condition, as it reflects an integrated apprehension of the individual in the biological, psychological and social dimensions, and presents high reliability and validity.<sup>5</sup> However, few studies relate the population's self-reporting of its health status to its life conditions.<sup>4,7</sup>

Referring to Canguilhem's<sup>1</sup> classic analysis of health as an expression of people's "ways of leading life", these ways of living place health-associated factors in normativity fields situated beyond the limits of the physical body, oriented towards their conditions of expression in daily life. Thus, health and illness express life and shape phenomena that translate life processes and their concrete form to each person and population group.<sup>2</sup>

National surveys<sup>a</sup> confirm that self-reported health problems are unequally distributed across socially different people, and less favored social groups are the most affected.<sup>5,7</sup> The jeopardizing of daily activities together with self-rated health are prominent components of the population's quality of life and health.<sup>3</sup>

Studies of adults' self-rated health are more frequent in elderly populations<sup>5</sup> and desirable to evaluate whether subjective indicators applied to this population are appropriate to the younger adult.

<sup>I</sup> Programa de Pós-Graduação em Ciências da Saúde. Universidade do Sul de Santa Catarina. Tubarão, SC, Brasil

<sup>II</sup> Faculdade de Odontologia. Universidade do Oeste de Santa Catarina. Joaçaba, SC, Brasil

<sup>III</sup> Instituto de Saúde Coletiva. Universidade Federal de Mato Grosso. Cuiabá, MT, Brasil

### Correspondence:

Jefferson Traebert  
Av. José Acácio Moreira, 787  
Dehon  
88704-900 Tubarão, SC, Brasil  
E-mail: jefferson.traebert@unisul.br

Received: 10/13/2009

Approved: 4/15/2011

The present study aimed to estimate how the adult population of a city rates its health status and to identify the main factors associated with poor/very poor self-rated health.

## METHODS

A cross-sectional study was carried out with a representative sample of the adult population of Joaçaba,<sup>b</sup> Southern Brazil, in 2006. The municipality has approximately 24 thousand inhabitants and is located in the middle-west region of the State of Santa Catarina. For sample size determination, we adopted: 95% confidence level (95%CI), unknown proportion of self-reported health situations, margin of error of 4%, correction factor of 1.2 due to the study's design, and 20% of losses. The final number of individuals of the sample was 828.

The municipality's 25 census tracts were included in the study. The first 12 households were visited starting from the drawn corner, until the individuals estimated in the sample were obtained. All adults aged 20 to 59 years living in the household were interviewed.

The questionnaire contained questions referring to sociodemographic aspects, restriction on daily activities due to health problems<sup>4</sup> in the month before the interview, medical consultation in the previous year, hospitalization in the previous year and self-rated health status.

The results were inserted in SPSS 18.0 and analyzed in the complex samples module, which considered the complex sample design, represented by two-stage cluster sampling. In the first stage of sample selection, the probability of a block being drawn in each census tract was calculated, dividing one by the number of blocks in the tract. In the second stage, the probability of the household being drawn was calculated, dividing 12 by the number of households in the block. The final probability was obtained by the product of the probabilities of both stages. The design effect was calculated by the ratio between the estimated variance for the real characteristics of the design and the expected variance, assuming a simple random sampling.

Chi-square was used to test the homogeneity of the proportions. To test the independence of the association between poor/very poor self-rated health status with the explanatory variables, a multiple logistic regression analysis was performed based on a hierarchical pattern in which the block of the socioeconomic variables constituted the distal determinants. These variables conditioned the following block, constituted by restriction on daily activities due to health problems, medical

consultation and hospitalization. The observation of the associated factors was initially performed in each block, where the variables that presented level of significance  $p < 0.20$  in the bivariate analysis were included in the logistic model. The variables that presented level of significance  $p < 0.05$  or that adjusted the model in each block were maintained. In these conditions, the variables were also maintained in the final model.

The project was approved by the Research Ethics Committee of Universidade do Oeste de Santa Catarina through the protocol no. 251/2005.

## RESULTS

In the study, 707 individuals were interviewed, equivalent to the response rate of 85.4%, which varied from 69.7% to 100% in the census tracts.

Regarding self-rating of health, 74.7% (95%CI 71.5;77.9) perceived it as good; 3.9% (95%CI 3.6;4.2) perceived it as poor/very poor; 11.0% (95%CI 8.7;13.3) reported ceasing to perform habitual activities due to health reasons; 25.5% (95%CI 22.3;28.7) had consulted a doctor; and 13.6% (95%CI 11.1;16.1) had been hospitalized in the previous 12 months.

In the block related to socioeconomic condition, age ( $p=0.005$ ), level of schooling ( $p=0.003$ ), family income ( $p=0.028$ ), and being employed at the moment of the research ( $p<0.001$ ) were associated with poor/very poor self-rated health. In the multiple analysis, the variable being employed at the moment of the research ( $p=0.001$ ) remained associated after adjustment inside the block.

In the second block, the variables ceasing to perform habitual activities due to health problems ( $p<0.001$ ) and hospitalization in the 12 previous months ( $p=0.003$ ) were associated with the outcome. After the adjustment, ceasing to perform habitual activities ( $p<0.001$ ) continued to be associated and was maintained in the final model.

The final analysis was started after internal adjustment by block and selection of the variables maintained in the hierarchical model. In the socioeconomic condition block, being unemployed at the moment of the research was independently associated with poor/very poor self-rated health, producing higher odds of poor/very poor self-rated health [odds ratio, OR 3.60 (95%CI 1.31;9.90)]. In the proximal block, ceasing to perform habitual activities maintained association [OR 7.07 (95%CI 3.00;16.63)] after adjustment for the upper block (Table).

<sup>b</sup> The Human Development Index (HDI, 2000) of Joaçaba was 0.866. IDH – Índice de Desenvolvimento Humano – Municipal, 1991 e 2000: todos os municípios do Brasil. [cited 2011 May 13]. Available from [http://www.pnud.org.br/atlas/ranking/IDH-M%2091%2000%20Ranking%20decrecente%20\(pelos%20dados%20de%202000\)](http://www.pnud.org.br/atlas/ranking/IDH-M%2091%2000%20Ranking%20decrecente%20(pelos%20dados%20de%202000))

**Table.** Non-conditional hierarchized multiple logistic regression analysis for poor/very poor self-rated health status. Joaçaba, Southeastern Brazil, 2006.

Model	OR <sup>a</sup> (95%CI)	p	OR <sup>b</sup> (95%CI)	p
Demographic characteristics and socioeconomic status				
Age (median)				0,055 <sup>a</sup>
20 to 39 years	1	0,015	1	
40 to 59 years	3,89 (1,24;12,25)		3,27 (0,95;11,31)	
Sex				0,486 <sup>a</sup>
Male	1	0,447	1	
Female	1,39 (0,57;3,44)		1,44 (0,49;4,27)	
Level of schooling (years of study)				0,501 <sup>a</sup>
>8	1	0,002	1	
≤8	3,30 (1,58;6,90)		1,31 (0,56;3,05)	
Family income (median)				0,202 <sup>a</sup>
> R\$ 1738.00	1	0,028	1	
≤ R\$ 1738.00	2,48 (1,08;5,67)		1,80 (0,69;4,72)	
Having a job at the moment of the research				0,008
Yes	1	<0,001	1	
No	5,50 (2,16;14,05)		3,60 (1,31;9,90)	
Restriction on daily activities due to health problems, medical consultation and hospitalization				
Ceasing to perform habitual activities in the previous month due to health problems				<0,001
No	1	<0,001	1	
Yes	7,63 (3,34;17,40)		7,07 (3,00;16,63)	

<sup>a</sup> Bivariate analysis.

<sup>b</sup> Adjusted for the characteristics among themselves.

<sup>c</sup> Maintained in the model independently of the level of significance.

## DISCUSSION

Approximately three quarters of the interviewed individuals self-rated their health as good. In *Pesquisa Mundial de Saúde no Brasil* (World Health Survey in Brazil) (2003)<sup>7</sup> only 53% of the people rated their health in this way and approximately 9% as poor. Data from *Pesquisa Nacional por Amostra de Domicílio 2003* (National Household Sample Survey) showed that 4.3% of the population older than 14 years rated their health as poor.<sup>4</sup> In that research, self-rated health varied according to sex, with worse rating among women,<sup>4</sup> which did not occur significantly in the present study. Practically one third of the studied population had level of schooling above eight years and the median of the monthly family income surpassed R\$ 1,700.00. Besides these two conditions that influenced the differences found in relation to other Brazilian studies, other conditions that were not investigated may influence self-rated health, like the dominant Italian and German ethnicities in the region of the study and their ways of life.

The higher odds of occurrence of poor self-rated health in the population that was unemployed can be discussed in relation to the objective impossibility of being able to work. The question asked only if the person was

working or not. It was not possible to investigate if poor self-rating occurred after a possible unemployment, after being unable to find a job, if it preceded losing the job, or if it was caused by any other reasons that prevented the person from working. As work is viewed here as a form of subjectivation, identity and social inclusion, being unemployed can interfere in self-esteem and affect the personal/professional capacity, independently of the connected reasons. Thus, the present study presupposes that some suffering caused by not being able to work in a certain moment of life is hypothetically associated with poor/very poor self-rated health.

Among the expressive proportion of the investigated population that reported restrictions on daily activities, the odds of poor/very poor self-rated health were higher when compared to those who did not report difficulties. The reduction in people's conditions to perform habitual activities can be caused by health problems and can precede, follow or occur independently of the existence of perceived diseases. People feel ill when health reasons limit the fulfillment of their activities/projects. In addition, poor self-rated health tends to increase mortality rates, physical limitations and psychological problems if compared to individuals with good or excellent self-rated health.<sup>6</sup>

The consideration of people's ability or capacity to develop life's daily activities and play their social roles enables a movement from negative health indicators (illness and death) to positive indicators (wellbeing, self-satisfaction and quality of life).<sup>3</sup>

The methodological option of the present study enabled only to identify associations that raise hypotheses, with the possibility of an estimation bias, in view of the degree of subjectivity of the outcome. Another possible limitation of the study's design is that, among the individuals who were not working, there may be some to whom the presence of a disease caused their poor self-rated health, and this may have happened with the restriction on daily activities as well.

The centrality of work in people's lives, expressed in terms of having a job or not, was associated with self-rated health status. Like in the scope of workers' health studies, working determines the life and health

conditions of population groups. The subjective meaning of work constituted a possible predictor of self-rated health. The fact of having a job or not may be a relevant indicator in health situation studies, and also guide necessary interventions in the promotion of actions to improve life and work conditions.

As the individuals who ceased to perform their daily life activities presented higher odds of poor/very poor self-rated health, it can be deduced that the attribute of being able to perform habitual activities, as a predictor and positive health indicative, also has an intervention potential for public health. It implies health promotion actions directed at healthy habits concerning the exercise of daily activities.

In conclusion, the population's ways of leading life are expressed also in the self-rated health and life status, which is greatly associated with the fact of having a job and being able to perform daily activities.

## REFERENCES

1. Canguilhem G. O normal e o patológico. 5ªed. Rio de Janeiro: Forense Universitária, 2000.
2. Castellanos PL. Epidemiologia, saúde pública, situação de saúde e condições de vida: considerações conceituais. In: Barata RB, organizador. Condições de vida e situação de saúde. Rio de Janeiro: ABRASCO; 1997. p. 31-75. (Saúde e Movimento, 4).
3. Costa AJL. Metodologias e indicadores para avaliação da capacidade funcional: análise preliminar do Suplemento Saúde da Pesquisa Nacional por Amostra de Domicílios – PNAD, Brasil, 2003. *Cienc Saude Coletiva*. 2006;11(4):927-40. DOI:10.1590/S1413-81232006000400015
4. Dachs JNW, Santos APR. Auto-avaliação do estado de saúde no Brasil: análise dos dados da PNAD/2003. *Cienc Saude Coletiva*. 2006;11(4):887-94. DOI:10.1590/S1413-81232006000400012
5. Lima-Costa MF, Firmo JOA, Uchôa E. A estrutura da auto-avaliação da saúde entre idosos: projeto Bambuí. *Rev Saude Publica*. 2004;38(6):827-34. DOI:10.1590/S0034-89102004000600011
6. Manor O, Matthews S, Power C. Self-rated health and limiting longstanding illness: inter-relationships with morbidity in early adulthood. *Int J Epidemiol*. 2001;30(3):600-7. DOI:10.1093/ije/30.3.600
7. Szwarcwald CL, Souza-Júnior PRB, Esteves MAP, Damacena GN, Viacava F. Socio-demographic determinants of self-rated health in Brazil. *Cad Saude Publica*. 2005; 21 Supl 1:S54-64. DOI:10.1590/S0102-311X2005000700007

---

Research funded by Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq – Process n. 402829/05-0). The authors declare no conflicts of interests.