



# Characterization and factors associated with self perception in nonagenarians and centenarians elderly

## *Caracterização e fatores associados à autopercepção de saúde de idosos nonagenários e centenários*

**Juliedy Waldow Kupske<sup>1</sup>, Elisiane Bisognin<sup>2</sup>, Karla Renata de Oliveira<sup>3</sup>, Rodrigo de Rosso Krug<sup>4</sup>, Moane Marchesan Krug<sup>5</sup>**

<sup>1</sup> Master's Student of the Postgraduate Program in Comprehensive Health Care UNICRUZ-UNIJUÍ, Brazil. <sup>2</sup> Nurse preceptor of the Multiprofessional Residency Program in Family Health UNIJUÍ/FUMSSAR, Brazil. <sup>3</sup> Master in Biological Sciences: Biochemistry, Federal University of Rio Grande do Sul UFSM, Brazil. <sup>4</sup> Professor at the Postgraduate Program in Comprehensive Health Care UNICRUZ-UNIJUÍ, Brazil. <sup>5</sup> Vice-coordinator of the Multiprofessional Residency Program in Family Health UNIJUÍ/FUMSSAR, Brazil.

**Corresponding author:** Juliedy Waldow Kupske - E-mail: juliedykupske@hotmail.com

### RESUMO

O objetivo foi verificar os fatores associados à percepção de saúde de idosos nonagenários e centenários cadastrados em quatro Estratégias de Saúde da Família do município de Santa Rosa (RS). Trata-se de um estudo quantitativo, descritivo e transversal com 41 idosos com 90 anos e mais, de ambos os sexos. Foi aplicado um questionário de características sociodemográficas/socioeconômicas e de saúde e também se avaliaram a capacidade funcional e a autopercepção de saúde. Para análise dos dados, utilizaram-se estatísticas descritivas e o teste de Qui-quadrado e o Exato de Fisher ( $p \leq 0,05$ ). Os idosos perceberam sua saúde como boa (51,2%) condição que se associou com a renda ( $p = 0,015$ ) e a escolaridade ( $p = 0,038$ ). Os resultados apontaram para uma boa autopercepção de saúde dos idosos pesquisados, além de revelar que os quem possuíam renda e escolaridade mais altas tinham melhor percepção do estado de saúde.

Palavras-chave: Autoavaliação. Envelhecimento. Idoso de 80 anos ou mais. Saúde.

### ABSTRACT

The objective was to verify the factors associated with the health perception of nonagenarian and centenary elderly registered in four Family Health Strategies in the city of Santa Rosa (RS). Quantitative, descriptive and cross-sectional study with 41 elderly people aged ninety years and over of both genders, registered in four Family Health Strategies in Santa Rosa (RS). A questionnaire on socio-demographic/socioeconomic and health characteristics was applied, in addition to the assessment of functional capacity and self-perceived health. For data analysis, descriptive statistics and the chi-square test and Fisher's Exact test ( $p \leq 0.05$ ) were used. The elderly perceived their health as good (51.2%) and was associated with income ( $p = 0.015$ ) and education ( $p = 0.038$ ). The results point to a good self-perceived health of the elderly surveyed and that those who had higher income and education had a better perception of their health status.

Keywords: Aging. Aged 80 and over. Health self-assessment.

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## INTRODUCTION

Surpassing life expectancy and celebrating the birthday more than ninety times, a few decades ago was considered a rare fact, but this episode is happening more frequently and each year the number of elderly people in this age group is growing rapidly. This scenario has led to changes in the age pyramid, with an inversion of the ends<sup>1</sup>.

According to statistics from the Brazilian Institute of Geography and Statistics (IBGE)<sup>1</sup> in 2018, the Brazilian population over 90 years comprised 731,945, of which 54,126 lived in the State of Rio Grande do Sul. The projections for the year 2050 for this age group is that this number may reach 3,637,926, which shows the growth of the elderly of this age group.

Very old elderly are generally more vulnerable to several health problems, such as systemic arterial hypertension, type II diabetes mellitus, hypercholesterolemia, arthrosis, decreases in functional capacity and in the performance of activities of daily living, higher prevalence and incidence of falls, cognitive problems, low level of education and poorer self-perception of health, so it is important and necessary to know and pay attention to the health profile of this population<sup>2</sup>.

In Brazil, population surveys on elderly with advanced age are scarce and punctual. There are limited studies on their health and lifestyle conditions, making it appropriate to study the physical, psychological and socio-cultural characteristics that contribute to the successful aging process, in order to provide better care programs for this population<sup>3</sup>.

Some research with older elderly is being carried out, seeking to analyze leisure habits and the level of physical activity<sup>3</sup>, functional capacity<sup>4</sup>, perceptions about aging through speeches<sup>5</sup>, falls<sup>6</sup> and lifestyle<sup>7</sup>.

Self-perceived health is an indicator that has been frequently assessed in different populations, showing that it is reliable and easy to apply<sup>8</sup>. This is used as a marker of their well-being and quality of life, being useful to assess the needs of the elderly and the quality of health services<sup>9</sup>. In addition, this instrument can help to promote health promotion programs in

a universal, comprehensive way and equitable to the actions of Primary Health Care, aiming at improving the health of all users.

This indicator can be influenced by several factors, including the presence of morbidity, frailty and other conditions that determine the greater need for seeking and using health services<sup>10</sup>. Under these conditions, a more frequent search also implies greater difficulties in access and use<sup>11</sup>.

Thus, it is relevant to characterize this age group and to know their perception of health. This information can contribute to the planning of interventions that may be developed with nonagenary and centenary elderly. Thus, the present study aimed to check the factors associated with health perception of nonagenary and centenary elderly registered in four Family Health Strategies in the municipality of Santa Rosa, State of Rio Grande do Sul.

## METHODOLOGY

This was a quantitative, descriptive and cross-sectional study, with participation of nonagenary and centenary elderly men and women, enrolled in the four major Family Health Strategies (FHS) in the municipality of Santa Rosa, State of Rio Grande do Sul. This study included elderly people over ninety years old. The sampling process took place intentionally and all the elderly (90 years and older) registered in these health facilities were surveyed.

Based on the definition of the FHS that would be part of the sample, a search was made in the electronic registration of users in each FHS through the Public Management System called IPM<sup>®</sup>, a computerized health record of the municipality. During this search, 112 elderly were identified. The report generated by the system provided the user's name, mother's name, date of birth and address. In August and September 2018, home visits were carried out at the addresses provided. During this process, incorrect addresses and the occurrence of deaths of elderly who were still active in the system were identified, totaling 41 individuals who were found and accepted to participate in the study (Figure 1).

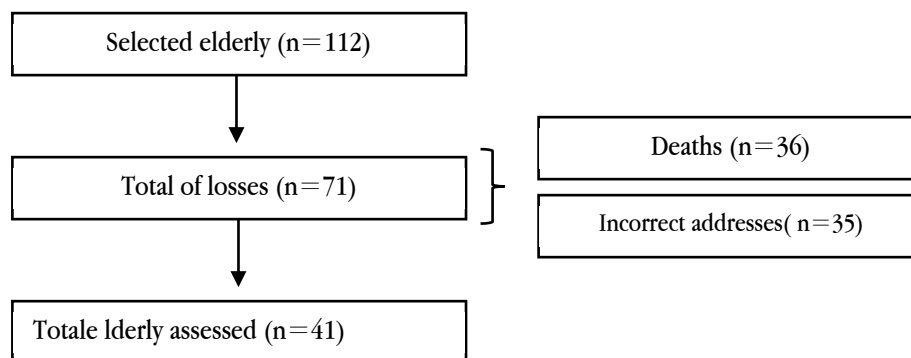


Figure 1. Sampling process of the study. Santa Rosa, State of Rio Grande do Sul, 2018.

The instruments used for data collection consisted of a questionnaire built by the researchers with closed questions about the sociodemographic/economic characteristics (gender, monthly income, education, marital status and with whom he/she lives) and health (referred pathologies, medications, use of health services, services used and home visits). The variables corresponding to access and use of services were formed by closed questions, considering the period of use in the last 12 months.

In addition, the Index of Independence in Activities of Daily Living (ADL) developed by Katz<sup>12</sup> was used to assess functional capacity. This scale is composed by the evaluation of six domains that generate a score from 1 to 6, in which, they are considered very dependent (0-2), moderately dependent (3-4) and independent (5-6).

Self-perceived health was assessed using the question “How do you consider your health?” with five response options (very good, good, regular, bad and very bad), following previous investigations on the topic<sup>8</sup>.

The data were tabulated in a spreadsheet and later exported to the statistical software STATA<sup>®</sup> 11.0, for analysis. Descriptive statistics were used, using absolute and relative frequencies, mean and standard deviation. To check the association between self-perceived health and sociodemographic/economic and health variables, Fisher’s exact test ( $p \leq 0.05$ ) was applied.

The research was developed according to the recommendations of Resolution 466/2012, of the National Health Council<sup>13</sup> and was approved by the

Teaching and Research Center of the Municipal Health Foundation of Santa Rosa (FUMSSAR) and by the Research Ethics Committee of the Regional University of the Northwest of the State of Rio Grande do Sul (UNIJUI), under opinion 2.758.805. All the elderly people who participated in the study signed an Informed Consent Form (ICF).

## RESULTS

Among the 41 elderly people interviewed, the average age was  $96.5 \pm 3.4$  years, with a predominance of women, income of a minimum wage, with incomplete elementary school, widowed and living with family members (Table 1).

Table 1. Sociodemographic characteristics of nonagenary and centenary elderly registered in four FHS in the municipality of Santa Rosa, State of Rio Grande do Sul. (n=41)

| (Continua)              |    |      |
|-------------------------|----|------|
| Variables               | n  | %    |
| <b>Sex</b>              |    |      |
| Male                    | 14 | 34.1 |
| Female                  | 27 | 65.9 |
| <b>Monthly income</b>   |    |      |
| 1 minimum wage          | 22 | 53.7 |
| 2 minimum wages         | 16 | 39.0 |
| 3 or more minimum wages | 3  | 7.3  |
| <b>Education</b>        |    |      |

|   | (Conclusão) |      |
|---|-------------|------|
| Illiterate  | 13          | 31.7 |
| Incomplete elementary school                      | 27          | 65.9 |
| Complete elementary school                        | 1           | 2.4  |
| <b>Marital status</b>                             |             |      |
| Married   | 4           | 9.8  |
| Widowed   | 30          | 73.2 |
| Single  | 7           | 17.1 |
| <b>With whom he/she lives</b>                     |             |      |
| Alone   | 10          | 24.4 |
| Family  | 20          | 48.8 |
| Caregivers  | 2           | 4.9  |
| Long-term Care Institution for the Elderly (ILCE) | 9           | 22.9 |

There was a predominance of elderly people who perceived their health as good, without any pathology, using medication and classified as very dependent. Regarding health services, stood out the elderly without a private health plan, who did not seek health care, use the BHU and who did not receive a home visit (Table 2).

**Table 2.** Health characteristics of nonagenary and centenary elderly registered in four FHS in the municipality of Santa Rosa, State of Rio Grande do Sul, 2018 (n=41)

| (Continua)                   |    |      |
|------------------------------|----|------|
| Variables                    | N  | %    |
| <b>Self perceived health</b> |    |      |
| Very good                    | 8  | 19.5 |
| Good                         | 21 | 51.2 |
| Regular                      | 10 | 24.4 |
| <b>Variables</b>             |    |      |
| Bad                          | 2  | 4.9  |
| <b>Referred pathology</b>    |    |      |
| None                         | 18 | 43.9 |
| 1 pathology                  | 13 | 31.7 |
| 2 pathologies                | 8  | 19.5 |
| 3 or more pathologies        | 2  | 4.9  |
| <b>Medications</b>           |    |      |
| Yes                          | 32 | 78.0 |

|                                  |    |      |
|----------------------------------|----|------|
| No                               | 9  | 22.0 |
| <b>Functional Capacity</b>       |    |      |
| Very dependent                   | 28 | 67.2 |
| Moderately dependent             | 12 | 29.3 |
| Independent                      | 1  | 2.4  |
| <b>Use of the health service</b> |    |      |
| Yes                              | 13 | 31.7 |
| No                               | 28 | 68.3 |
| <b>Services used</b>             |    |      |
| FHS                              | 20 | 33.8 |
| ECU                              | 14 | 23.8 |
| Drugstore                        | 10 | 16.9 |
| Home care / HCW                  | 15 | 25.4 |
| <b>Home visit</b>                |    |      |
| Yes                              | 5  | 12.2 |
| No                               | 36 | 87.8 |

Table 3 lists the associations between self-perceived health status and sociodemographic/economic and health characteristics of individuals, of which the educational level ( $p = 0.038$ ) and the monthly income ( $p = 0.015$ ) stand out.

**Table 3.** Associação entre autopercepção de saúde, características sociodemográficas e de saúde de idosos nonagenários e centenários cadastrados em quatro ESF do município de Santa Rosa/ RS. (n=41)

| Variables                     | Very good |      | Good |      | Regular |      | Bad |     | Total |      | P     |
|-------------------------------|-----------|------|------|------|---------|------|-----|-----|-------|------|-------|
|                               | n         | %    | n    | %    | n       | %    | n   | %   | n     | %    |       |
| <b>Sex</b>                    |           |      |      |      |         |      |     |     |       |      |       |
| Male                          | 5         | 12.2 | 9    | 22.0 | 0       | 0.0  | 0   | 0.0 | 14    | 34.1 | 0.059 |
| Female                        | 3         | 7.3  | 12   | 29.3 | 10      | 24.4 | 2   | 4.9 | 27    | 65.9 |       |
| <b>Monthly income</b>         |           |      |      |      |         |      |     |     |       |      |       |
| 1 minimum wage                | 3         | 7.3  | 10   | 24.4 | 7       | 17.1 | 2   | 4.9 | 22    | 53.7 | 0.015 |
| 2 minimum wages               | 3         | 7.3  | 10   | 24.4 | 3       | 7.3  | 0   | 0.0 | 16    | 39.0 |       |
| 3 or more minimum wages       | 2         | 4.9  | 1    | 2.4  | 0       | 0.0  | 0   | 0.0 | 3     | 7.3  |       |
| <b>Education</b>              |           |      |      |      |         |      |     |     |       |      |       |
| Illiterate                    | 0         | 0.0  | 8    | 19.5 | 5       | 12.2 | 4   | 0.0 | 13    | 31.7 | 0.038 |
| Incomplete elementary school  | 7         | 17.1 | 13   | 31.7 | 5       | 12.2 | 2   | 4.9 | 27    | 65.9 |       |
| Complete elementary school    | 1         | 2.4  | 0    | 0.0  | 0       | 0.0  | 0   | 0.0 | 1     | 2.4  |       |
| <b>Marital status</b>         |           |      |      |      |         |      |     |     |       |      |       |
| Married                       | 3         | 7.3  | 1    | 2.4  | 0       | 0.0  | 0   | 0.0 | 4     | 9.8  | 0.059 |
| Widowed                       | 5         | 12.2 | 15   | 36.6 | 8       | 19.5 | 2   | 4.9 | 30    | 73.2 |       |
| Single                        | 0         | 0.0  | 5    | 12.2 | 2       | 4.9  | 0   | 0.0 | 7     | 17.1 |       |
| <b>With whom he/she lives</b> |           |      |      |      |         |      |     |     |       |      |       |
| Alone                         | 2         | 4.9  | 6    | 14.6 | 1       | 2.4  | 1   | 2.4 | 10    | 24.4 | 0.352 |
| Family                        | 4         | 9.8  | 11   | 26.8 | 4       | 9.8  | 1   | 2.4 | 20    | 48.8 |       |
| Caregivers                    | 0         | 0.0  | 1    | 2.4  | 1       | 2.4  | 0   | 0.0 | 2     | 4.9  |       |
| (ILCE)                        | 2         | 4.9  | 3    | 7.3  | 4       | 9.8  | 0   | 0.0 | 9     | 22.0 |       |
| Variables                     | Very good |      | Good |      | Regular |      | Bad |     | Total |      | P     |
|                               | n         | %    | n    | %    | n       | %    | n   | %   | n     | %    |       |
| <b>Functional Capacity</b>    |           |      |      |      |         |      |     |     |       |      |       |
| Very dependent                | 5         | 12.5 | 16   | 40.0 | 5       | 12.5 | 1   | 2.4 | 27    | 67.5 | 0.300 |
| Moderately dependent          | 3         | 7.5  | 3    | 7.5  | 5       | 12.5 | 1   | 2.4 | 12    | 24.4 |       |
| Independent                   | 0         | 0.0  | 1    | 2.4  | 0       | 0.0  | 0   | 0.0 | 1     | 2.4  |       |

## DISCUSSION

The present study evidenced that the majority of nonagenary and centenary elderly surveyed were mostly women, with income of one minimum wage, incomplete elementary school, widowed and living with family members. The increase in co-living

between family members and the elderly is evidenced in the scientific literature and this leads to mutual help between both involved<sup>8</sup>.

It was also evident in this research that a high proportion of the elderly did not report a diagnosis of existing pathologies and the use of at least one continuous medication. A study carried out with elderly

over 100 years old found similar results, in which the elderly people have, on average, the presence of a morbidity and the continuous use of at least one medication<sup>4</sup>.

Data from the Brazilian Institute of Geography and Statistics<sup>1</sup> indicate that 32.8% population of the State of Rio Grande do Sul has access to a private health plan (medical or dental). In the present study, a smaller proportion had a private health plan. It was also found that the demand for health services in the last year was low, regardless of the level of technological density; the BHU was the service with the highest demand. In this sense, the FHS has an important participation in care, with a higher level of capillarity, bringing the user closer to the health worker, enhancing care over time, focusing on the individual, expressing a continued source of assistance<sup>14</sup>. It should be noted that Primary Health Care is the gateway to the services of the National Health System (SUS), justifying its greater use by the elderly since most of them do not have a health plan.

The ability to perform the Basic Activities of Daily Living in an autonomous and independent way has been one of the health dimensions considered fundamental in the assessment of the health of the elderly population<sup>14,15</sup>. There was a decreased functional capacity of the subjects in this sample, which were very dependent, thus needing the help of another person to perform the tasks.

Another important aspect of this study is the portion of the population that has not received home visits by any health professional in the last year. In this sense, regular home visits by a professional from the team to which he/she is attached would facilitate the use of health services, considering the principle of equity for this population that has difficulties<sup>14</sup>, and would strengthen the bond with the team.

Although there are studies<sup>8</sup> in the national scenario evaluating the self-perceived health of several populations, few are related to the studied age group<sup>9</sup>, making it difficult to compare the findings of this research. The National Health Survey<sup>16</sup> carried out in 2013, evaluated the perception of health in different age groups, and over 75 years of age, 39.7%

considered their health to be good, results that are lower than those found in this study.

When verifying the factors associated with the self-perception of the health status of the elderly aged 90 and over herein, the level of education and income stood out, which corroborates the findings of other studies<sup>17,18</sup> that evaluated this variable and its associations.

The association between low education and negative health perception is in line with research already carried out<sup>19,20</sup>. Related to this, there is a relevant aspect found in this study, which was the low level of education presented by the elderly in the sample. The low level of education presented by the elderly is a Brazilian reality<sup>21</sup> and is related to the difficulties in accessing the predominantly rural population to school environments found during the literacy process, and cultural ones, where education was informal and the priority was work<sup>17</sup>.

The low level of education may reflect problems in mental health, chronic conditions, in addition to social exclusion, less access to information and unfavorable socioeconomic conditions<sup>22</sup> and make it difficult to understand their treatment and self-care<sup>24</sup>, factors that can interfere with the perception of health<sup>20</sup>.

A relatively low income was found in this population and these results are consistent with other studies<sup>24</sup>. Retirements, pensions and government benefits are the main sources of income and support for the elderly in the Brazilian population<sup>25</sup>. The receipt of some benefit can be considered as a factor of social protection, since this feeling can come from the fact that it is a fixed income of the elderly, with a great impact on their health conditions<sup>8</sup>.

This can be associated with the fact of the increase in spending (especially with medicines) and the decrease in income with the arrival of retirement. This situation can generate anxiety and worries, affecting the perception of health and can contribute both to the onset or maintenance of a depressive condition<sup>26</sup>. Other aspects, such as quality in the environment in which they live, security and access to health care and leisure<sup>27</sup> are conditions that can influence the perception of health status.

The low income of the elderly may be related to low education, which makes it difficult to enter and access the job market, in a job that guarantees higher income and, later, a better retirement<sup>28</sup>. Related education and income can directly influence lifestyle, such as adequate nutrition and regular practice of physical activities<sup>29</sup>, access to health services and medicines, which will provide a better quality of life and consequently induce a positive perception of health of this individual.

A limitation found in this study is the memory bias, as they are older elderly people who can confuse or deceive information. In addition, the lack of a sampling process is also a factor to be considered.

On the other hand, a positive and relevant point is precisely the age group under study, with more than ninety years old, however, it is necessary more studies that evaluate the multidimensional aspects of this population and follow-up studies.

## CONCLUSION

From this study, it can be concluded that the self-perception of health status was positive and the outcome was associated with the level of education and income. This investigation helps to expand and deepen research with elderly people aged 90 and over, considering that self-perceived health and the identification of the main characteristics of this population can be used as tools for the creation of public policies for the elderly, seeking to meet the users based on their health and life needs, as individuals and citizens.

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