

## FRAILITY, SOCIODEMOGRAPHIC PROFILE AND HEALTH EVALUATION OF OLDER ADULTS IN VULNERABILITY

Fragilidade, perfil sócio-demográfico e avaliação de saúde de idosos em vulnerabilidade

Fragilidad, perfil sociodemográfico y evaluación de adultos mayores en vulnerabilidad

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### ABSTRACT

**Objective:** The study's main purpose has been to compare the prevalence of frailty with both demographic profile and subjective evaluation of health of older adults registered in Social Assistance Referral Centers of a countryside municipality from the São Paulo State. **Methods:** It is a comparative and cross-sectional study with a quantitative approach. There were assessed 247 older adults using the following: a questionnaire for the characterization of older adults, Subjective Evaluation of Health and the Edmonton Frail Scale. The interviews were carried out at home. All ethical precepts were respected. This research was approved under the *Certificado de Apresentação para Apreciação Ética (CAAE)* [Certificate of Presentation for Ethical Appraisal] No. 00867312.8.0000.5504. **Results:** Considering the assessed older people, 41.7% did not show frailty, whereas 36.8% did show some level (mild, moderate or severe) of it. There was found a statistically significant difference between frailty and the following: number of reported diseases and subjective evaluation of health ( $p < 0.01$ ). **Conclusion:** Frail older adults bearing comorbidities and negative self-perception of their health deserve special attention from social assistance and health care services.

**Descriptors:** Frail older adult; Social vulnerability; Primary health care.

### RESUMO

**Objetivo:** O estudo teve como objetivo comparar a prevalência da fragilidade com perfil sociodemográfico e a avaliação subjetiva de saúde de idosos cadastrados em Centros de Referência de Assistência Social em um município do Estado de São Paulo. **Métodos:** Estudo comparativo e transversal, baseado no método quantitativo de investigação. Foram avaliados 247 idosos utilizando-se: questionário para caracterização do idoso, Avaliação Subjetiva de Saúde e Escala de Fragilidade de Edmonton. As entrevistas foram realizadas no domicílio. Todos os cuidados éticos foram observados. A pesquisa foi aprovada sob CAAE 00867312.8.0000.5504. **Resultados:** Considerando a avaliação dos idosos, 41,7% dos idosos avaliados não apresentaram fragilidade e 36,8% possuíam algum nível (seja fragilidade leve, moderada ou severa). Houve diferença estatisticamente significativa entre fragilidade e: número de doenças relatadas e avaliação subjetiva

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de saúde. **Conclusão:** Idosos frágeis, com comorbidades e auto percepção negativa da saúde merecem especial atenção dos serviços de saúde e de assistência social.

**Descritores:** Idoso fragilizado; Vulnerabilidade social; Serviço de cuidado primário.

## RESUMÉN

**Objetivo:** El estudio tuvo como objetivo comparar la prevalencia de la fragilidad con el perfil sociodemográfico y la evaluación subjetiva de la salud de las personas mayores inscrita en los Centros de Referencia de Asistencia Social en un municipio del Estado de Sao Paulo. **Métodos:** Estudio comparativo y transversal, basado en el método cuantitativo de investigación. Se evaluarón 247 adultos mayores utilizando: cuestionario para caracterización del adulto mayor, Evaluación Subjetiva de Salud y Escala de Fragilidad de Edmonton. Las encuestas se realizaron en el domicilio. Se tuvieron todos los cuidados éticos. La investigación fue aprobada bajo CAAE 00867312.8.0000.5504. **Resultados:** Considerando la evaluación de los adultos mayores, 41,7% de los adultos mayores evaluados no presentaron fragilidad y 36,8% tenían algún nivel (sea fragilidad leve, moderada o severa). Se observó una diferencia estadísticamente significativa entre la fragilidad y el número de enfermedades notificadas y la evaluación subjetiva de la salud. **Conclusión:** Adultos mayores frágiles, con comorbilidad y auto percepción negativa de la salud merecen especial atención de los servicios de salud y de asistencia social.

**Descritores:** Adultos mayores fragilizados; Vulnerabilidad social; Servicio de atención primaria.

## INTRODUCTION

Frailty does not have a consensual definition, being considered a multifactorial clinical syndrome, with decreased energy reserves and reduced resistance to stressors. This is a public health problem, given the impact on the costs of social assistance and health care systems, in addition to the negative impact on the quality of life of these people.<sup>1</sup>

The literature addresses that the conditions of older people inserted in contexts of high social vulnerability are critical and complex, which present a worse assessment of their health. This happens because there is an absence or difficulty of support from social security institutions, affecting their ability to react to adverse situations. Therefore, under these circumstances, there is a bigger risk of falling ill and damage to well-being.<sup>2</sup>

In this scenario, frail older adults have greater needs for care, with the family being the main support when assuming responsibilities. This situation becomes complex when family support is limited and there is a need to seek support in public services, which generates demands for Social Assistance and Health Care, and it is the responsibility of these instances to promote support and meet the needs of both older adults and their family members.<sup>3</sup>

Social factors such as living in contexts of greater social vulnerability, with worse financial conditions, lower education level, history of dementia, presenting a negative perception of health, less access to public services, lack of social support can contribute to the installation of frailty.<sup>4-6</sup>

Given the aforesaid, investigating the prevalence and factors associated with frailty is necessary for early detection and implementation of appropriate interventions, to avoid the frailty of more older people and to provide an improvement in the situation of those who are already frail.

Multidimensional interventions undertaken by a multidisciplinary team are of vital importance for social assistance and health care services to create mechanisms for monitoring, applicability and pointing out solutions, in order to guarantee risk prevention both in care and in the basic protection of the public system. It is noteworthy that there are no studies in the literature that investigated the prevalence of frailty and its relationship with sociodemographic, as well as the health aspects concerning older adult users of basic protection services, which justifies this research. This study meant to compare the prevalence of frailty with both demographic profile and subjective evaluation of health of older adults registered in Social Assistance Referral Centers of a countryside municipality from the *São Paulo* State.

## METHODS

It is a comparative and cross-sectional study with a quantitative approach, which was performed with older adults registered in five Social Assistance Referral Centers (SARC) in *São Carlos* city, *São Carlos* State, located in both urban and rural areas considered vulnerable regions.

To assess the social vulnerability of the region in which these older people were inserted, the Social Vulnerability Index of *São Paulo* was used. According to the population of the municipality of *São Carlos* - 221,950 thousand citizens, the classification is divided into six groups: very low vulnerability; very low; low; medium; high; very high. The surveyed regions corresponded to very low, medium and high vulnerability.<sup>7,8</sup>

The SARC had 1,451 registered older people, 1,204 were excluded for reasons that 679 (46.79%) were not found at the referred registration addresses or had changed address or lived in areas outside the scope of the SARC and 447 (57.9%) they corresponded to losses due to refusal, death, withdrawal or the older person was alone and had no understanding in answering the questions. The other 78 corresponded to the survey with caregivers of older people who were unable to answer the survey questions and were not alone in their homes. Here, only interviews with older people were used, making a total of 247.

The sample consisted of older people who met the following inclusion criteria: being 60 years old or more and registered in one of the SARC. The exclusion criteria were, as follows: older adults who were hospitalized or institutionalized at the time of the visit; older people who have either hearing or vision deficits that would impair the understanding of the research. The interview took place at the older adult's residence, over the period from 2012 to 2016, with an approximate duration of one hour.

It was carried out by a team of undergraduates from the Gerontology Graduation Course at *Universidade Federal de São Carlos (UFSCar)*, previously trained, in order to standardize data collection.

A questionnaire was used for the sociodemographic and health assessment, as well as the application of a scale to assess frailty. Sociodemographic and health data were collected through a questionnaire previously formulated by the researchers, with information on gender, age, ethnicity, marital status, religion, current occupation, education and number of reported diseases.

The Edmonton Frail Scale (EFE) was used to identify frailty. Such scale was developed by Rolfson et al. in 2006, then translated and validated in Brazil by Fabrício-Wehbe in 2009. The Scale assesses nine domains: cognition, general health status, functional independence, social support, medication use, nutrition, mood, continence and functional performance, comprising 11 items. The maximum score is 17 points, which represents the highest level of frailty. Individuals who reach zero to four points are considered “Non-frail”, five to six “Apparently Vulnerable”, seven to eight “Mild Frailty”, nine to 10 “Moderate Frailty” and 11 points or more “Severe Frailty”.

The Subjective Evaluation of Health was made up of five questions related to health and activity level: 1. In general, how would you describe your health today? 2. How would you rate your health compared to other people your age? 3. How would you rate your health today compared to a year ago? 4. How would you evaluate the care you dedicate to your health? 5. How would you rate your activity level compared to a year ago? For the following questions, there are five possible answers: very good, good, regular, poor, very poor.<sup>10</sup>

Data analysis took place using the software “The SAS System for Windows” version 9.2. They were treated with descriptive statistics and presented in a frequency table, with absolute values (n) and percentages (%) for categorical variables, and with measures of position and dispersion for continuous variables. Due to the absence of normal distribution of variables, as verified by the Shapiro-Wilk and

Kolmogorov-Smirnov test, non-parametric tests were chosen. The Kruskal-Wallis test was used to estimate the differences between three or more groups of numerical variables and Fisher’s exact test to compare categorical variables. The level of significance adopted was 5% ( $p$ -value  $\leq 0.05$ ).

All ethical precepts were respected as addressed by the Resolution No.466/12 from the National Health Council. The present study was approved by the Research Ethics Committee from the *UFSCar*, under the Legal Opinion No. 72.182/2012, and the *Certificado de Apresentação para Apreciação Ética (CAAE)* [Certificate of Presentation for Ethical Appraisal] No. 00867312.8.0000.5504.

## RESULTS

The sample of this study consisted of 247 older adults registered in five SARC in *São Carlos* city. Fifty-eight percent of respondents’ residents in a region with high vulnerability (n=144), 22.7% (56) with average vulnerability, and 19% (n=47) with very low. Comparing the level of frailty concerning the sociodemographic variables of the present study, it was found that 39.6% of respondents who belonged to the female gender (n=78) had some level of frailty (mild, moderate or severe). Regarding the age group of the participants, most were between 60 and 69 years old and of these 67.0% (n=69) did not show frailty. Observing the participants’ ethnicity, 22.3% (n=55) of the interviewees were white and showed some level of frailty. With regard to the married older adults, 51.5% (n=53) were non-frail. Concerning the religion, the Catholic respondents 24.3% (n=60) showed some level of frailty. As for the retired older adult, 54.4% (n=56) had no frailty. In regard to education, 38.3% (n=51) of the older adult who had between one and four years of study showed frailty. A total of 63.6% (n=7) of the older adults who had one to two diseases showed severely frailty. There was a statistically significant difference between frailty and the number of diseases that the older adult had ( $p < 0.01$ ). **Table 1** shows the comparison of the frailty levels concerning the sociodemographic variables.

**Table 1** - Comparison of the frailty levels concerning the sociodemographic variables from older adults registered in a SARC. *São Carlos* city, *São Paulo* State, 2016. (n=247)

| Variable                 | Category (n) | NF<br>n (%) | AV<br>n (%) | MdF<br>n (%) | MF<br>n (%) | SF<br>n (%) |
|--------------------------|--------------|-------------|-------------|--------------|-------------|-------------|
| Gender                   |              | 103 (41.7)  | 53 (21.5)   | 50 (20.2)    | 30 (12.1)   | 11 (4.5)    |
|                          | Female (197) | 77 (74.8)   | 42 (79.3)   | 43 (86.0)    | 25 (83.3)   | 10 (90.9)   |
|                          | Male (50)    | 26 (25.2)   | 11 (20.7)   | 7 (14.0)     | 5 (16.7)    | 1 (9.1)     |
| Age group<br>(years old) | 60-69 (169)  | 69 (67.0)   | 38 (71.7)   | 27 (54.0)    | 18 (60.0)   | 8 (72.7)    |
|                          | 70-79 (64)   | 30 (29.1)   | 11 (20.7)   | 15 (30.0)    | 6 (20.0)    | 2 (18.2)    |
|                          | 80-89 (19)   | 4 (3.9)     | 2 (3.8)     | 7 (14.0)     | 5 (16.7)    | 1 (9.1)     |
|                          | ≥ 90 (4)     | 0 (0)       | 2 (3.8)     | 1 (2.0)      | 1 (3.3)     | 0 (0)       |
| Ethnicity                | White (142)  | 58 (56.3)   | 29 (54.7)   | 31 (62.0)    | 16 (53.3)   | 8 (72.7)    |
|                          | Black (69)   | 32 (31.1)   | 13 (24.5)   | 12 (24.0)    | 11 (36.7)   | 1 (9.1)     |
|                          | Brown(35)    | 12 (11.6)   | 11 (20.8)   | 7 (14.0)     | 3 (10.0)    | 2 (18.2)    |
|                          | Yellow (1)   | 1 (1.0)     | 0 (0)       | 0 (0)        | 0 (0)       | 0 (0)       |

| Variable                 | Category (n)       | NF<br>n (%) | AV<br>n (%) | MdF<br>n (%) | MF<br>n (%) | SF<br>n (%) |
|--------------------------|--------------------|-------------|-------------|--------------|-------------|-------------|
| <b>Marital status</b>    | Married (109)      | 53 (51.5)   | 22 (41.5)   | 16 (32.0)    | 13 (43.3)   | 5 (45.4)    |
|                          | Single (6)         | 2 (1.9)     | 2 (3.8)     | 1 (2.0)      | 0 (0)       | 1 (9.1)     |
|                          | Widow (94)         | 33 (32.0)   | 19 (35.9)   | 24 (48.0)    | 14 (46.7)   | 4 (36.4)    |
|                          | Separated (20)     | 8 (7.8)     | 5 (9.4)     | 5 (10.0)     | 1 (3.3)     | 1 (9.1)     |
|                          | Divorced (18)      | 7 (6.8)     | 5 (9.4)     | 4 (8.0)      | 2 (6.7)     | 0 (0)       |
| <b>Religion</b>          | Catholic (151)     | 59 (57.3)   | 32 (60.3)   | 33 (66.0)    | 18 (60.0)   | 9 (81.8)    |
|                          | Evang.(74)         | 31 (30.1)   | 18 (34.0)   | 15 (30.0)    | 10 (33.3)   | 0 (0)       |
|                          | Jehovah's wit. (5) | 1 (1.0)     | 1 (1.9)     | 1 (2.0)      | 2 (6.7)     | 0 (0)       |
|                          | Spiritist (6)      | 4 (3.9)     | 0 (0)       | 0 (0)        | 0 (0)       | 2 (18.2)    |
|                          | Others (5)         | 2 (1.9)     | 2 (3.8)     | 1 (2.0)      | 0 (0)       | 0 (0)       |
|                          | Do not believe (6) | 6 (5.8)     | 0 (0)       | 0 (0)        | 0 (0)       | 0 (0)       |
| <b>Retired</b>           | Yes (137)          | 56 (54.4)   | 29 (54.7)   | 26 (52.0)    | 21 (70.0)   | 5 (45.4)    |
|                          | No (110)           | 47 (45.6)   | 24 (45.3)   | 24 (48.0)    | 9 (30.0)    | 6 (54.6)    |
| <b>Education (years)</b> | Illiterate (45)    | 15 (14.6)   | 12 (22.6)   | 10 (20.0)    | 5 (16.7)    | 3 (27.3)    |
|                          | Literate (23)      | 10 (9.7)    | 3 (5.7)     | 5 (10.0)     | 3 (10.0)    | 2 (18.2)    |
|                          | 1 to 4 (133)       | 50 (48.5)   | 32 (60.3)   | 28 (56.0)    | 18 (60.0)   | 5 (45.4)    |
|                          | 5 to 8 (35)        | 24 (23.3)   | 3 (5.7)     | 5 (10.0)     | 3 (10.0)    | 0 (0)       |
|                          | ≥ 9 (11)           | 4 (3.9)     | 3 (5.7)     | 2 (4.0)      | 1 (3.3)     | 1 (9.1)     |
| <b>Related diseases*</b> | 0 (14)             | 12 (11.7)   | 2 (3.8)     | 0 (0)        | 0 (0)       | 0 (0)       |
|                          | 1 a 2 (133)        | 65 (63.1)   | 33 (62.3)   | 19 (38.0)    | 9 (30.0)    | 7 (63.6)    |
|                          | ≥ 3 (100)          | 26 (25.2)   | 18 (33.9)   | 31 (62.0)    | 21 (70.0)   | 4 (36.4)    |

Note: NF – Non-frail; AV – Apparently Vulnerable; MdF – Mild Frailty; MF – Moderate Frailty; SF – Severe Frailty.

According to Fisher's Exact test, there was a statistically significant difference between four of the five questions of subjective evaluation of health in relation to levels of frailty. Older adults with severe frailty see their health as "poor" or "very poor", unlike non-frail older adults who considered their health as "good" or "very good". **Table 2** shows the comparison of the frailty levels concerning the Subjective Evaluation of Health from older adults registered in a SARC.

**Table 2** - Comparison of the frailty levels concerning the Subjective Evaluation of Health from older adults registered in a SARC. São Carlos city, São Paulo State, 2016. (n=247)

| Question  | Answer    | Frailty Level |             |             |              |             |             |
|---|-----------|---------------|-------------|-------------|--------------|-------------|-------------|
|   |           | Total         | NF<br>n (%) | AV<br>n (%) | MdF<br>n (%) | MF<br>n (%) | SF<br>n (%) |
| 1 - In general, how would you describe your health today? <b>p&lt;0,001</b>             | Very good | 24            | 13 (12.8)   | 4 (7.5)     | 5 (10.0)     | 2 (6.7)     | 0(0)        |
|   | Good      | 61            | 36 (35.3)   | 15 (28.3)   | 7 (14.0)     | 3 (10.0)    | 0(0)        |
|   | Regular   | 120           | 46 (45.1)   | 30 (56.6)   | 27 (54.0)    | 13 (43.3)   | 4 (36.4)    |
|   | Poor      | 20            | 4 (3.9)     | 3 (5.7)     | 6 (12.0)     | 5 (16.7)    | 2 (18.2)    |
|   | Very poor | 21            | 3 (2.9)     | 1 (1.9)     | 5 (10.0)     | 7 (23.3)    | 5 (45.4)    |
| 2 - How would you rate your health compared to other people your age? <b>p&lt;0,001</b> | Better    | 34            | 8 (7.8)     | 5 (9.4)     | 9 (18.0)     | 10 (33.3)   | 2 (18.2)    |
|   | Same      | 49            | 13 (12.6)   | 8 (15.1)    | 16 (32.0)    | 7 (23.3)    | 5 (45.4)    |
|   | Worse     | 164           | 82 (79.6)   | 40 (75.5)   | 25 (50.0)    | 13 (43.4)   | 4 (36.4)    |
| 3 - How would you rate your health today compared to a year ago?                        | Better    | 74            | 35 (34.0)   | 15 (28.3)   | 18 (36.0)    | 5 (16.7)    | 1 (9.1)     |
|   | Same      | 72            | 35 (34.0)   | 15 (28.3)   | 10 (20.0)    | 10 (33.3)   | 2 (18.2)    |
|   | Worse     | 101           | 33 (32.0)   | 23 (43.4)   | 22 (44.0)    | 15 (50.0)   | 8 (72.7)    |

| Question   | Answer    | Total | NF        | AV        | MdF       | MF        | SF       |
|--|-----------|-------|-----------|-----------|-----------|-----------|----------|
|  |           |       | n (%)     | n (%)     | n (%)     | n (%)     | n (%)    |
|  |           |       | 103       | 53        | 50        | 30        | 11       |
| 4 - How would you evaluate the care you dedicate to your health?<br><b>p=0,002</b>   | Very good | 52    | 29 (28.4) | 5 (9.4)   | 10 (20.0) | 7 (23.3)  | 1 (9.1)  |
|  | Good      | 89    | 39 (38.2) | 29 (54.7) | 10 (20.0) | 6 (20.0)  | 5 (45.4) |
|  | Regular   | 83    | 28 (27.5) | 15 (28.3) | 26 (52.0) | 11 (36.7) | 3 (27.3) |
|  | Poor      | 8     | 2 (2.0)   | 1 (1.9)   | 2 (4.0)   | 3 (10.0)  | 0 (0)    |
|  | Very poor | 14    | 4 (3.9)   | 3 (5.66)  | 2 (4.0)   | 3 (10.0)  | 2 (18.2) |
| 5 - How would you rate your activity level compared to a year ago?<br><b>p=0,019</b> | Better    | 70    | 38 (36.9) | 17 (32.1) | 9 (18.0)  | 4 (13.3)  | 2 (18.2) |
|  | Same      | 94    | 40 (38.8) | 21 (39.6) | 20 (40.0) | 11 (36.7) | 2 (18.2) |
|  | Worse     | 83    | 25 (24.3) | 15 (28.3) | 21 (42.0) | 15 (50.0) | 7 (63.6) |

Note: NF – Non-frail; AV – Apparently Vulnerable; MdF – Mild Frailty; MF – Moderate Frailty; SF – Severe Frailty.

## DISCUSSION

Here in, there was a preponderance of female older adults, within the age group from 60 to 69 years old, white, married, with low education level and retired. These data are similar to other studies carried out with the older adults in the national context.<sup>11-13</sup> The prevalence of the female gender corroborates the concept of feminization of old age and this phenomenon can be explained. Women have lower rates of mortality from external causes, less exposure to occupational risks, and less consumption of tobacco and alcohol compared to men. Furthermore, given the problems that affect them, there is a higher demand for social and health services when compared to men.<sup>14</sup>

A low level of education was found in the older population considered here. This result might be due to the precarious living conditions, which perhaps reflect difficulties in accessing school. Formal education was not valued at that time. Evidence points out that the level of education is a predictive factor for adverse effects on the health of the older adult, since worse lifestyle habits can be adopted and, often, there is no awareness of the importance of health promotion and the prevention of diseases, who do not seek health services at an early age.<sup>15</sup> Moreover, older adult people with low schooling may have mental health problems, chronic conditions, and frailty, in addition to social exclusion, less access to information, and unfavorable socioeconomic conditions.<sup>16</sup>

There was a predominance of retired older adult in the present study. Retirement, pensions, and government benefits are the main sources of income and support for the older adult population in Brazil, which confirms the findings of the present study.<sup>17</sup> Scarce financial resources can place the older adult in a condition of social vulnerability. So, they are more exposed to the risk of becoming ill and of having their diseases aggravated.<sup>18</sup>

The literature points out that the concept of socioeconomic status among the older adult is somewhat broad and includes factors such as education, occupation, income, wealth, and deprivation. Income in turn affects the health status of those who have limited access to services.<sup>19</sup> A study carried out with

the older adult to assess the relationship of frailty with income in Europe, found that in countries with higher income the prevalence of frailty is lower and those who are considered frailty also live more.<sup>20</sup>

Regarding the frailty of the older adults that were interviewed, 41.7% showed no frailty, 21.5% were apparently vulnerable and 36.5% showed some level of frailty (mild, moderate, or severe). Similar data corroborate the findings of this work.<sup>21,22</sup> A study carried out with 128 older adults treated at a primary health care in a countryside municipality from the *São Paulo* State found that 21.4% of these older adults were vulnerable and 30.1% showed some level of frailty, according to the EFE.<sup>27</sup> A study was carried out with 50 community older adult aiming to verify the prevalence of frailty through the EFE. The results showed that 24% of respondents were apparently vulnerable. Frailty was more prevalent among women and individuals with low education level.<sup>22</sup>

These differences in relation to the prevalence of frailty in the various studies make the influence of regional heterogeneities robust. The social context can affect health, which generates inequalities in exposures and vulnerabilities.<sup>23</sup> Furthermore, the lack of a consensual definition about the frailty syndrome and the use of different methodologies can also explain this divergence.

Here, there was a statistically significant difference between frailty and the number of diseases. Older adults bearing three or more diseases showed some level of frailty. The prevalence of chronic and non-communicable diseases is an epidemiological panorama common to the aging population. The increase in longevity brings older adults to live with these diseases for a long period, which interact with physiological changes related to aging, contributing to the installation of the frailty syndrome due to homeostatic imbalance.<sup>14</sup>

Authors state that the high number of diseases increases vulnerability in the face of stressors. Thus, there is a decline in various organic systems, impairment of homeostasis, causing this older person to become frailty.<sup>25</sup> The literature points out that chronic diseases are underlying to the condition of

frailty, as they share risk factors and pathophysiological mechanisms. Nevertheless, there is still insufficient evidence to confirm this relationship. Generally, comorbidities are present among frail older adult people. So, older adult people are more likely to develop sequelae or disabilities. In both cases, there is a greater need for care and use of health services, resulting in increased health costs, in addition to a decrease in the quality of life of the older adult and their family caregivers.<sup>25</sup> Hence, frailty can be considered a public health issue and can be reversible when treated early, as well as prevented.

Concerning the Subjective Evaluation of Health, 48.5% of the older adults rated their health as “regular” and, compared to the health of other people of the same age, 66.3% considered their health as “worse”. Similar data were found in the literature.<sup>15,26</sup> A cross-sectional research performed with 85 older adults from the *Jequié* city, *Bahia* State, with an average age of 73 years old, sought to analyze the interviewees’ self-perceived health. As a result, they found that 55.3% of the older adult had a negative self-perception of their health.<sup>15</sup>

A study carried out with 1,432 community older adult from the *Campinas* city, *São Paulo* State, with an average age of 69.5 years old, obtained a higher prevalence of negative self-perceived health and was observed among the older adult with low income and low education level.<sup>26</sup> There are indications in the literature that researching the perception of health has been an important marker of well-being and quality of life, as the way in which people deal with their health can determine their choices, behaviors, and lifestyles, which can be a predictor of frailty and consequently to death.<sup>27</sup>

Negative evaluations vis-à-vis their own health address older adults who tend not to perform self-care, to seek fewer health services, social isolation, and do not adopt healthy lifestyle habits. Thus, they are more exposed to the risks of developing frailty syndrome.<sup>28</sup>

In this study, there was a significant association between frailty and subjective evaluation of health. Older adults with severe frailty rated their health as “very poor”, unlike non-frail older adults who rated their health as “very good”. Similar data were found in the literature.<sup>14,29,30</sup> A cross-sectional study that was carried out with 150 older adults from a countryside municipality from the *São Paulo* State, aimed to assess the relationship between self-perceived health and frailty. The results showed that 56.0% of the older adult were frailty, 50.0% rated their own health as of intermediate quality. The frail older adult had worse self-rated health compared to other older adult people of the same age.<sup>29</sup>

Frail older adults have comorbidities and are more likely to develop disabilities. Therefore, consequences such as the limitation in activities of daily living make the older adults assess their health with a negative approach.<sup>30</sup> Authors affirm that wide fluctuations in health status and high risk of complications can occur in frail individuals. This can negatively impact the functionality of these older adults and

make them have a negative view of their own health.<sup>14</sup> It is noteworthy that the presence of frailty does not necessarily mean that the older person will be dependent on activities of daily living.

Investigating frailty and the sociodemographic profile in a context of social vulnerability reinforces the importance of considering the multidimensionality of this phenomenon, because in addition to social factors - low income, low education level, the possible absence of support - it can aggravate the frailty. Since health or social systems are responsible for an increasing proportion of the population, particularly those with multiple and interactive problems, it is important to investigate the possible factors that would cause the syndrome, as it would help policymakers and their teams to redesign their actions to supporting the population.<sup>15</sup>

Studies covering the relationship among frailty, reported diseases, and subjective evaluation of health should be carried out, given that they are few in both national and international literature. It is suggested that the context of social vulnerability in which these older adults are inserted must be considered.

Limitations were identified in the present study: the cross-sectional design does not allow establishing causality between the explanatory variables and outcome, only formulating hypotheses. The sample size can limit the generalization of the results; nonetheless, a high number of refusals is expected in surveys that use the active search of participants. Difficulty of access to those registered in the SARC due to the following social issues: violence, drug trafficking, and unhealthy living conditions of older people. It is hoped that the results of this research can provide support for primary health care services when planning quality care.

## CONCLUSION

Herein, there was found a statistically significant difference between frailty and the number of reported diseases. Older adults bearing three or more diseases showed some level of frailty. There was also a statistically significant difference between frailty and subjective evaluation of health. Older adults with severe frailty see their health as “poor” or “very poor”, unlike non-frail older adult people who consider their health as “good” or “very good”.

It is essential for professionals working in primary health care and protection network to provide adequate support to frail older adults and other actors involved in the aging process. Strategic actions must be taken, integrating social assistance and health care services, in order to reverse the syndrome and avoid adverse outcomes that can negatively impact the quality of life, in addition to increasing the costs of high complexity services.

Bearing the aforementioned in mind, special attention should be given to older adults bearing comorbidities and

negative self-perception of their health. Support groups composed of a multidisciplinary team can be implemented in order to ensure the monitoring of these older adults, meet their demands, and improve their quality of life. Changes in the status of frailty should be considered when planning health care for older adults, since the changes might indicate an accelerated decline in health conditions and be a risk factor for greater vulnerability to adverse events. It is evident the need for public services to readjust the care management towards the older adult community in order to better understand both socio and health-related factors, especially for those with multiple and interactive problems originated from vulnerable backgrounds.

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