Factors associated with clinical-functional vulnerability of elderly people from a Basic Health Unit

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\textbf{Abstract}

\textbf{Introduction:} aging is a natural process that has been occurring at an accelerated pace and that, due to the physiological decline of systems, can lead to the appearance of vulnerabilities in the elderly.

\textbf{Objective:} to verify the socioeconomic factors, health conditions and lifestyle habits associated with the degree of Clinical-Functional Vulnerability of elderly people from the ESF São Vicente in Manhuaçu using the IVCF-20.

\textbf{Method:} cross-sectional, quantitative study, carried out with elderly people enrolled in the ESF São Vicente. For data collection, the IVCF-20 instrument was used for the degree of vulnerability and the data collection form for the general profile, life habits and health conditions. A chi-square test was performed to verify the association of independent variables with clinical and functional vulnerability.

\textbf{Result:} of the 255 seniors evaluated, 60\% had low clinical and functional vulnerability, 22\% moderate vulnerability and 18\% high vulnerability. The mean age was 72 years ± 8 years, mostly female (62.5\%), self-declared white (60\%), married (56\%), do not have a caregiver (89.5\%), are retired (82\%), have chronic diseases (78.5\%), self-rated health as excellent/good (63.5\%), practice religion (87\%), leave home alone (82\%) and 40\% belong to the D/E social class. The variables associated with P >0.05 were low vulnerability, not having a caregiver, being black/brown, not being a pensioner, leaving home alone, not having a chronic disease, having an excellent/good perception of health .

\textbf{Conclusion:} it is of great importance to identify socioeconomic factors, lifestyle habits and vulnerability of the elderly in order to develop effective actions that maintain functionality and quality of life.

\textbf{Keyword:} vulnerability, elderly, family, health strategy, International Classification of Functioning.
INTRODUCTION

Aging is a worldwide reality and was considered one of the greatest social achievements of the 20th century, bringing enormous challenges to governments and society, as this aging is still experienced in unequal ways among the elderly and, for this reason, needs adjustments. In Brazil, the demographic transition took place very quickly and the projections of the Brazilian Institute of Geography and Statistics indicated, in 2018, that the elderly population would double by 2043.

As a result of these demands, the Brazilian government promoted changes that culminated in effective actions, developing a set of legislation aimed at this population. It started in 1988 with the Brazilian Constitution evolving in specification, in 1999 with the National Policy for the Elderly (PNI), in 2003 the Statute of the Elderly (EI) and in 2006 the National Health Policy for the Elderly (PNSPI) guaranteed that the rights acquired by the elderly were fulfilled in the health, social and legal spheres.

Specifically, the PNSPI aims at healthy aging, which means preserving the functional capacity and maintaining the quality of life of the elderly, with its primary purpose being to recover, maintain, and promote the autonomy and independence of the elderly. In this context, the Family Health Strategy (ESF) proved to be a privileged space to receive, support and dedicate itself to the care of the oldest old, as it prioritizes the reorientation of health care, promotion of healthy aging, home care, exchange between family, caregiver and health team, with adequate planning of strategic actions for care not only through drug treatment, but mainly through a prevention process.

This functional capacity, recommended by the PNSPI, is directly related to the independence of the elderly in carrying out daily tasks and, therefore, understands as functional the elderly who are not dependent on such tasks. It can be altered with advancing age and consequent aging of the systems, generating a functional decline in this elderly person.

This functional decline responsible for the appearance of vulnerabilities is linked not only to these physiological processes, but also to living conditions, happiness in living, good assessment of one’s health, independence, reinforcing aging with quality of life in accordance with the precept recommended by the Organization of the United Nations – UN.

In order for it to be properly evaluated, many instruments were developed in order to classify and quantify this functionality, such as the “Who Disability Assessment Schedule” (WHODAS 2.0), “International Classification of Functioning (ICF)” and the “Clinical-Functional Vulnerability Index 20 (IVCF-20)” of the IVCF-20 is a Brazilian questionnaire, developed and validated in 2014 based on a series of other questionnaires for diagnosing frailty in the elderly, with the advantage of being simple, easy to use, and capable of assessing the main determinants of health of the elderly. It has a multidimensional character, has high levels of sensitivity, specificity and reliability. It can be applied by any professional from the health team, with the aim of indicating the priority for health care for this elderly person, previously demonstrating the risk of reduced functionality.

In the literature, there is a limited number of works that used the IVCF-20 due to the short time of its elaboration, however, this is considered an effective instrument for a quick evaluation of the functionality and applicability in primary care.

Thus, the objective is to analyze the socioeconomic factors, health conditions and lifestyle habits associated with the degree of Clinical-Functional Vulnerability of the elderly in the São Vicente Family Health Strategy in Manhuaçu.

METHODS

This is an analytical observational study with a quantitative approach carried out with elderly people assisted by the Family Health Strategy (ESF) in São Vicente. Data were collected between November 2018 and February 2019 and used the elderly registered in November 2018 as a reference. In that month, the ESF had 748 elderly assigned to the unit. From this total number of elderly people registered in the ESF, a sample calculation was performed.
was performed that showed the adopted minimum of 255 elderly people to be evaluated, with a margin of error of 0.05, estimated proportion (p) of 0.5 and confidence level (95%). Only elderly people who agreed to sign the informed consent form and who had the psycho-mental conditions to respond to the questionnaire were considered for the study. This work was approved by the Research Ethics Committee under protocol number 2,851,034.

Data were collected through a semi-structured questionnaire with information referring to the general profile and family arrangement considering the variables: age, sex, ethnicity (white, brown/black), marital status (married, single, widowed, others), if you have a caregiver, retired, pensioner, if you work, schooling (years of study), number of residents in the house and if the residence is multigenerational. To characterize health conditions and lifestyle habits, the following were considered: presence of chronic diseases, which diseases, hospitalization, smoking, alcoholism, physical activity and leisure activities, self-assessment of health, religion (Catholic, Evangelical, other) and religious practice, if you leave the house alone and how often. Socioeconomic conditions, in turn, were evaluated considering: individual and family income in minimum wages and contribution to family income and economic class.

To assess the socioeconomic classes, to which the elderly belonged, a questionnaire developed by the Brazilian Association of Research Companies (ABEP), called the Brazilian Economic Classification Criteria (CCEB) was used. The CCEB evaluates the purchasing power of the public, dividing it in economic classes defined as A, B1, B2, C1, C2 and DE. This questionnaire is based on a point system that varies according to the presence and quantity of goods and services that the respondent has and his/her education level. The interviewed individuals were allocated in economic classes according to the score reached in the questionnaire. The higher your score, the higher (greater economic power) your socioeconomic class. Class A obtained from 45 to 100 points; class B1: 38 to 44 points; class B2: 29 to 37 points; class C2: 17 to 22 points; DE: 0 to 16 points. In this research, for analysis purposes, 3 classes were established: A/B, C, D/E.

Vulnerability was assessed using the Functional Clinical Vulnerability Index-20 (IVCF-20), which was prepared by the Instituto Jenny de Andrade Faria team in 2013 and validated in Brazil in 2014. The instrument is multidimensional, has high levels of sensitivity, specificity and reliability. It consists of eight dimensions considered predictors of functional decline and/or death in the elderly, namely: age, self-perceived health, activities of daily living, cognition, mood, mobility, communication and multiple comorbidities. Its score ranges from 0 to 40 and high scores indicate a greater risk of functional clinical vulnerability. For this study, the following scores will be considered: 0 to 6 points, low risk of vulnerability; 7 to 14 points, moderate risk of vulnerability; and ≥ 15 points, high risk of vulnerability.

Chi-square test was applied to compare the categorical variables between the researched groups. The general profile, health conditions and life habits and socioeconomic conditions were considered as independent variables, while vulnerability was considered a dependent variable.

The level of significance adopted was p < 0.05 and for the variables that showed a significant association, the residual chi-square test was applied, aiming to identify the categories that actually showed an association with the clinical-functional vulnerability and for this analysis they were considered values greater than 1.96.

RESULTS

When verifying the degree of functional clinical vulnerability of the elderly, it was observed that of the 255 interviewees, 60% presented low vulnerability, 22% moderate vulnerability and 18% high vulnerability.

When considering the general profile and family arrangement, it was observed that the average age of the population was 72 years ± 8 years, with the lowest age being 60 years and the highest 97 years. Of the 255 respondents, 62.5% are female, 60% self-declared white, 56% are married, 89.5% do not have a caregiver, 82% are retired, 84.5% are not pensioners, 92.5% are not work and 46.5% studied from 1 to 4 years. Regarding the number of residents in the house, 49.5% have 2 residents in the house and 74% have a multigenerational residence.

With regard to health conditions and life habits, it was observed that 78.5% had chronic diseases, with SAH being the most prevalent, with 61% of the elderly having the disease; 97% did not have hospitalizations, 94% are not smokers, 88.5% are not alcoholics, 70% do not practice physical activity, 62% do not practice leisure activities, 63.5% self-evaluate their health as excellent/good, 80% are Catholics and 87% are practicing, 82% of the elderly leave home alone and of these 75% go out with a frequency of 4 to 5 times a week.

Regarding socioeconomic conditions, it was observed that 65% have an income between 1.1 and 3 minimum wages, 63% have a family income of 1.1 and 3 minimum wages, 90.5% contribute to the income and 40% belong to the D/E social class.

Tables 1, 2 and 3 present, respectively, the general profile, health conditions, life habits and socioeconomic conditions of the elderly assisted by the São Vicente Family Health Strategy in the city of Manhuaçu, Minas Gerais.
**Table 1:** Comparison of the characteristics referring to the general profile of the elderly assisted by the Santo São Vicente Family Health Strategy in the city of Manhuaçu, Minas Gerais with the degree of functional clinical vulnerability.

<table>
<thead>
<tr>
<th>General profile and family arrangement</th>
<th>Low risk</th>
<th>Moderate Risk</th>
<th>High risk</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>n (%)</td>
<td>n (%)</td>
<td>n (%)</td>
<td>p</td>
<td></td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masculine</td>
<td>63 (41.2)</td>
<td>19 (33.9)</td>
<td>14 (30.4)</td>
<td>0.339¹</td>
</tr>
<tr>
<td>Feminine</td>
<td>90 (58.8)</td>
<td>37 (66.1)</td>
<td>32 (69.6)</td>
<td></td>
</tr>
<tr>
<td><strong>ethnicity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>83 (54.2)</td>
<td>42² (75.0)</td>
<td>28 (60.9)</td>
<td>0.025¹</td>
</tr>
<tr>
<td>brown/black</td>
<td>70² (45.8)</td>
<td>14 (25.0)</td>
<td>18 (39.1)</td>
<td></td>
</tr>
<tr>
<td><strong>marital status</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>94 (61.4)</td>
<td>27 (48.2)</td>
<td>22 (47.8)</td>
<td>0.477¹</td>
</tr>
<tr>
<td>Single</td>
<td>14 (9.2)</td>
<td>7 (12.5)</td>
<td>5 (10.9)</td>
<td></td>
</tr>
<tr>
<td>Widower</td>
<td>36 (23.5)</td>
<td>18 (32.1)</td>
<td>17 (37.0)</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>9 (5.9)</td>
<td>4 (7.1)</td>
<td>2 (4.3)</td>
<td></td>
</tr>
<tr>
<td><strong>caregiver</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>146² (95.4)</td>
<td>52 (92.9)</td>
<td>30 (65.2)</td>
<td>&lt; 0.001¹</td>
</tr>
<tr>
<td>Yes</td>
<td>7 (4.6)</td>
<td>4 (7.1)</td>
<td>16² (34.8)</td>
<td></td>
</tr>
<tr>
<td><strong>Retirer</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>28 (18.3)</td>
<td>7 (12.5)</td>
<td>10 (21.7)</td>
<td>0.450¹</td>
</tr>
<tr>
<td>Yes</td>
<td>125 (81.7)</td>
<td>49 (87.5)</td>
<td>36 (78.3)</td>
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</tr>
<tr>
<td><strong>Pensioner</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>136² (88.9)</td>
<td>44 (78.6)</td>
<td>35 (76.1)</td>
<td>0.046¹</td>
</tr>
<tr>
<td>Yes</td>
<td>17 (11.1)</td>
<td>12 (21.4)</td>
<td>11 (23.9)</td>
<td></td>
</tr>
<tr>
<td><strong>it works</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>139 (90.8)</td>
<td>52 (92.9)</td>
<td>45 (97.8)</td>
<td>0.286¹</td>
</tr>
<tr>
<td>Yes</td>
<td>14 (9.2)</td>
<td>4 (7.1)</td>
<td>1 (2.2)</td>
<td></td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 years</td>
<td>30 (19.6)</td>
<td>6 (10.7)</td>
<td>10 (21.7)</td>
<td>0.073¹</td>
</tr>
<tr>
<td>0 to 4 years</td>
<td>69 (45.1)</td>
<td>22 (39.3)</td>
<td>27 (58.7)</td>
<td></td>
</tr>
<tr>
<td>4 to 8 years</td>
<td>26 (17.0)</td>
<td>14 (25.0)</td>
<td>5 (10.9)</td>
<td></td>
</tr>
<tr>
<td>9 to 13 years</td>
<td>13 (8.5)</td>
<td>3 (5.4)</td>
<td>2 (4.3)</td>
<td></td>
</tr>
<tr>
<td>More than 13 years</td>
<td>15 (9.8)</td>
<td>11 (19.6)</td>
<td>2 (4.3)</td>
<td></td>
</tr>
<tr>
<td><strong>number of residents</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a resident</td>
<td>27 (17.6)</td>
<td>9 (16.1)</td>
<td>4 (8.7)</td>
<td>0.753¹</td>
</tr>
<tr>
<td>two residents</td>
<td>75 (49.0)</td>
<td>26 (46.4)</td>
<td>25 (54.3)</td>
<td></td>
</tr>
<tr>
<td>three residents</td>
<td>30 (19.6)</td>
<td>13 (23.2)</td>
<td>8 (17.4)</td>
<td></td>
</tr>
<tr>
<td>four or more residents</td>
<td>21 (13.7)</td>
<td>8 (14.3)</td>
<td>9 (19.6)</td>
<td></td>
</tr>
<tr>
<td><strong>multigenerational</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>45 (29.4)</td>
<td>14 (25.0)</td>
<td>8 (17.4)</td>
<td>0.259¹</td>
</tr>
<tr>
<td>Yes</td>
<td>108 (70.6)</td>
<td>42 (75.0)</td>
<td>38 (82.6)</td>
<td></td>
</tr>
</tbody>
</table>

Source: elaboration by the authors.

Caption: ¹ Pearson's chi-square test (X²); ² Chi-square residual with values greater than 1.96.
Table 2: Comparison of health conditions and lifestyle habits of elderly people assisted by the Santo São Vicente Family Health Strategy in the city of Manhuaçu, Minas Gerais with the degree of functional clinical vulnerability.

<table>
<thead>
<tr>
<th>Health Conditions and Lifestyles</th>
<th>Low risk</th>
<th>Moderate Risk</th>
<th>High risk</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n (%)</td>
<td>n (%)</td>
<td>n (%)</td>
<td></td>
</tr>
<tr>
<td>Chronic diseases</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>41² (26.8)</td>
<td>7 (12.5)</td>
<td>7 (15.2)</td>
<td>0.043¹</td>
</tr>
<tr>
<td>Yes</td>
<td>112 (73.2)</td>
<td>49 (87.5)</td>
<td>39 (84.8)</td>
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<tr>
<td>SAH</td>
<td>71 (64.0)</td>
<td>31 (63.3)</td>
<td>19 (48.7)</td>
<td>0.557¹</td>
</tr>
<tr>
<td>SAH and diabetes</td>
<td>26 (23.4)</td>
<td>11 (22.4)</td>
<td>15 (38.5)</td>
<td></td>
</tr>
<tr>
<td>Diabetes</td>
<td>4 (3.6)</td>
<td>3 (6.1)</td>
<td>1 (2.6)</td>
<td></td>
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<tr>
<td>Others</td>
<td>10 (9.0)</td>
<td>4 (8.2)</td>
<td>4 (10.3)</td>
<td></td>
</tr>
<tr>
<td>Hospital internment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>151 (98.7)</td>
<td>53 (94.6)</td>
<td>43 (93.5)</td>
<td>0.115¹</td>
</tr>
<tr>
<td>Yes</td>
<td>2 (1.3)</td>
<td>3 (5.4)</td>
<td>3 (6.5)</td>
<td></td>
</tr>
<tr>
<td>smoking</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>146 (95.4)</td>
<td>51 (91.1)</td>
<td>42 (91.3)</td>
<td>0.391¹</td>
</tr>
<tr>
<td>Yes</td>
<td>7 (4.6)</td>
<td>5 (8.9)</td>
<td>4 (8.7)</td>
<td></td>
</tr>
<tr>
<td>Alcoholism</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>137 (89.5)</td>
<td>51 (91.1)</td>
<td>38 (82.6)</td>
<td>0.348¹</td>
</tr>
<tr>
<td>Yes</td>
<td>16 (10.5)</td>
<td>5 (8.9)</td>
<td>8 (17.4)</td>
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<tr>
<td>Physical activity</td>
<td></td>
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</tr>
<tr>
<td>No</td>
<td>106 (69.3)</td>
<td>40 (71.4)</td>
<td>33 (71.7)</td>
<td>0.926¹</td>
</tr>
<tr>
<td>Yes</td>
<td>47 (30.7)</td>
<td>16 (28.6)</td>
<td>13 (28.3)</td>
<td></td>
</tr>
<tr>
<td>leisure activity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>100 (65.4)</td>
<td>31 (55.4)</td>
<td>27 (58.7)</td>
<td>0.369¹</td>
</tr>
<tr>
<td>Yes</td>
<td>53 (34.6)</td>
<td>25 (44.6)</td>
<td>19 (41.3)</td>
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<tr>
<td>Self-Assessment of Health</td>
<td></td>
<td></td>
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<tr>
<td>great/good</td>
<td>114² (74.5)</td>
<td>27 (48.2)</td>
<td>21 (45.7)</td>
<td>&lt; 0.001¹</td>
</tr>
<tr>
<td>Reasonable</td>
<td>30 (19.6)</td>
<td>26² (46.4)</td>
<td>18 (39.1)</td>
<td></td>
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<tr>
<td>bad/terrible</td>
<td>9 (5.9)</td>
<td>3 (5.4)</td>
<td>7² (15.2)</td>
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<tr>
<td>Religion</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>catholic</td>
<td>119 (77.8)</td>
<td>40 (71.4)</td>
<td>37 (80.4)</td>
<td>0.573¹</td>
</tr>
<tr>
<td>Evangelical</td>
<td>32 (20.9)</td>
<td>16 (28.6)</td>
<td>9 (19.6)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>2 (1.3)</td>
<td>0 (0.0)</td>
<td>0 (0.0)</td>
<td></td>
</tr>
<tr>
<td>Practitioner</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>15 (9.8)</td>
<td>7 (12.5)</td>
<td>11² (23.9)</td>
<td>0.044¹</td>
</tr>
<tr>
<td>Yes</td>
<td>138 (90.2)</td>
<td>49 (87.5)</td>
<td>35 (76.1)</td>
<td></td>
</tr>
<tr>
<td>leave home alone</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>3 (2.0)</td>
<td>13 (23.2)</td>
<td>30² (65.2)</td>
<td>&lt; 0.001¹</td>
</tr>
<tr>
<td>Yes</td>
<td>150² (98.0)</td>
<td>43 (76.8)</td>
<td>16 (34.8)</td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1 to 3 times a week</td>
<td>37 (24.5)</td>
<td>10 (23.3)</td>
<td>6 (37.5)</td>
<td>0.495¹</td>
</tr>
<tr>
<td>4 to 5 times a week</td>
<td>114 (75.5)</td>
<td>33 (76.7)</td>
<td>10 (62.5)</td>
<td></td>
</tr>
</tbody>
</table>

Source: elaboration by the authors.
Caption: ¹ Pearson’s chi-square test (X²); ² Chi-square residual with values greater than 1.96.
Table 3: Comparison of the socioeconomic conditions of elderly people assisted by the Santo São Vicente Family Health Strategy in the city of Manhuaçu, Minas Gerais with the degree of functional clinical vulnerability

<table>
<thead>
<tr>
<th>Socioeconomic conditions</th>
<th>Low risk</th>
<th>Moderate Risk</th>
<th>High risk</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Income</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(At minimum wages)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 1</td>
<td>21 (13.7)</td>
<td>6 (10.7)</td>
<td>8 (17.4)</td>
<td>0.825¹</td>
</tr>
<tr>
<td>1.1 to 3</td>
<td>101 (66.0)</td>
<td>36 (64.3)</td>
<td>29 (63.0)</td>
<td></td>
</tr>
<tr>
<td>3.1 to 5</td>
<td>13 (8.5)</td>
<td>7 (12.5)</td>
<td>3 (6.5)</td>
<td></td>
</tr>
<tr>
<td>more than 5</td>
<td>5 (3.3)</td>
<td>2 (3.6)</td>
<td>0 (0.0)</td>
<td></td>
</tr>
<tr>
<td>Did not answer</td>
<td>13 (8.5)</td>
<td>5 (8.9)</td>
<td>6 (13.0)</td>
<td></td>
</tr>
<tr>
<td>Family income</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(At minimum wages)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 1</td>
<td>4 (2.6)</td>
<td>1 (1.8)</td>
<td>2 (4.3)</td>
<td>0.199¹</td>
</tr>
<tr>
<td>1.1 to 3</td>
<td>103 (67.3)</td>
<td>33 (58.9)</td>
<td>25 (54.3)</td>
<td></td>
</tr>
<tr>
<td>3.1 to 5</td>
<td>23 (15.0)</td>
<td>10 (17.9)</td>
<td>8 (17.4)</td>
<td></td>
</tr>
<tr>
<td>Greater than 5</td>
<td>11 (7.2)</td>
<td>8 (14.3)</td>
<td>2 (4.3)</td>
<td></td>
</tr>
<tr>
<td>Did not answer</td>
<td>12 (7.8)</td>
<td>4 (7.1)</td>
<td>9 (19.6)</td>
<td></td>
</tr>
<tr>
<td>Contribution to Family Income</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>12 (7.8)</td>
<td>7 (12.5)</td>
<td>5 (10.9)</td>
<td>0.554¹</td>
</tr>
<tr>
<td>Yes</td>
<td>141 (92.2)</td>
<td>49 (87.5)</td>
<td>41 (89.1)</td>
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</tr>
<tr>
<td>Social class</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A/B</td>
<td>32 (20.9)</td>
<td>17 (30.4)</td>
<td>9 (19.6)</td>
<td>0.187¹</td>
</tr>
<tr>
<td>W</td>
<td>52 (34.0)</td>
<td>21 (37.5)</td>
<td>22 (47.8)</td>
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</tr>
<tr>
<td>IN</td>
<td>69 (45.1)</td>
<td>18 (32.1)</td>
<td>15 (32.6)</td>
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Source: elaboration by the authors.
Caption: ¹Pearson’s chi-square test (Χ²); ² Chi-square residual with values greater than 1.96.

DISCUSSION

The results of the present research showed that most of the elderly evaluated presented a low degree of vulnerability. In addition, the presence/absence of a caregiver, ethnicity, pensioner, leaving home alone, chronic diseases and self-perception of health were found as factors associated with the vulnerability of the elderly.

Studies carried out by Freitas and Soares and Alexandrino and collaborators showed results similar to those of the present study, when it is shown that most elderly people have low functional clinical vulnerability, measured through the IVCF-20, being 43% in a population residing in Pombal/PB and 40.9 in Cuité/PB. Divergent to this, a study that investigated vulnerability through other instruments found that 49% of the elderly were vulnerable, and the highest prevalence of vulnerability was associated with dependence on instrumental activities of daily living, presenting depressive symptoms and being in the age group aged 80 and over. This prevalence was considered high compared to other studies carried out with elderly people in the community.

Aging, a natural stage of life that leads to old age, is determined by physiological processes that lead to a decrease in the individual’s functional capacity and, consequently, make the individual more favorable for the development of chronic diseases, disabilities, hospitalization and death. People are affected by this process in a more or less accentuated way depending on socioeconomic conditions, life habits and health conditions, variables that influence health and can increase the vulnerability of the elderly.

In the present study, some factors were associated with this low risk of vulnerability for the elderly assisted by the ESF studied. Among them, there is the absence of a caregiver, who is defined as the one who helps the elderly in their activities that are no longer carried out independently. The presence of a caregiver is increasingly necessary due to the longevity of the elderly, which increases day by day, and consequently, they become more vulnerable with the loss of functionality. Another study associated the presence of a caregiver with a decrease in the functionality of the elderly, a fact that is closely related to the increased vulnerability of this population.

The presence of a caregiver is related to the presence of decline in functionality and disability, considering that the increase in frailty entails the presence of a caregiver,
as the elderly need help in carrying out their ADLs. It is noteworthy that when loss of functionality is present and dependence is established, the responsibility for care falls on the family, which justifies the result of the present research, which found that the caregiver is more present among those elderly people who have some dependence.

Another factor associated with low vulnerability in the present study was the fact that the elderly leave the house alone 4 to 5 times a week, which makes us assume that an active life, characterized by frequent walks and good socialization, is essential for maintaining physical and psychological functionality of the elderly. In this research, carrying out basic activities of daily living, both basic and instrumental, such as going to the market, going to the bank, taking and picking up grandchildren from school, is carried out systematically and routinely. Similar results were observed in a study carried out in Pelotas where 820 elderly people from the rural area were evaluated and of these 81.8% carried out the basic activities of life and 54.6% carried out the instrumental activities of daily life, some still worked as farmers and second the authors, due to this, their functional capacity and preserved autonomy keep them independent.

It was observed that ethnicity was associated with the vulnerability of the elderly and about this fact some authors claim that being black is a condition of vulnerability because in general they get sick more and have more chronic diseases. However, it was observed in this research that people who declared themselves to be black or brown had a low risk of vulnerability. This finding is possibly due to the fact that the population of the present study worked largely on coffee plantations and had to carry out daily activities, normally, without help from others, thus maintaining their independence and functionality and, consequently, presenting themselves less vulnerable.

In this study, an association was observed between religious practice and low vulnerability. Authors related religious practice to gains in quality of life, corroborated by improvement in self-perception of health, in physical health, through healthy behaviors, emotional stimuli and social support.

The quality of life of the elderly, as well as the degree of vulnerability, can be affected by the number of existing chronic diseases. It was observed in this study that although 78.5% of the elderly had at least one chronic disease, with high blood pressure being the most common, most showed low vulnerability, which reinforces the argument defended by some authors that the person can be considered healthy, even if they have a chronic disease, if they have a good functional capacity and thus are able to carry out their activities independently and autonomously.

Through the results of this research, it is proposed that actions to encourage socialization should be a constant within the FHS teams. Among these stimuli are incentives and guidelines for developing the practice of activities of daily living, regular physical exercise, holding groups in the ESFs to control chronic diseases, guidelines for dietary changes and lifestyle habits and the use of appropriate medication. Therefore, keeping the elderly active, socialized, inserted in the community and family are simple practices, but with great results in reducing vulnerability, consequently reducing functional decline, isolation, sedentary lifestyle and polypharmacy.

In this sense, care for the elderly finds essential support in the ESF, as it is an ideal space for welcoming and developing actions aimed at providing answers to questions related not only to organic health but also to the social and psychological conditions of this elderly person. And so global attention is provided by a multidisciplinary team interacting for the quality of life of this elderly person and family.

This research found as a limitation the fact that it was carried out in a single municipality and, therefore, it was not possible to generalize the results found to the entire target population. However, from the discussion of the results, it was possible to conclude that other authors who also studied vulnerability in the elderly population found similar results, which reinforces the findings of the present research as relevant to the study of this population.

CONCLUSIONS

Most seniors evaluated by the IVCF-20 instrument showed a low degree of vulnerability and there was no association with social class. Stands out for membership positive to bearish vulnerability us seniors who have religious practice, leave home alone, keep themselves busy, carrying out basic and instrumental ADLs, staying physically and psychologically assets.

Author Contributions

All authors participated in the preparation of this manuscript. Cecilia Sanglard: Participated in the study design, data collection and analysis, statistical analysis and writing of the text, discussion of the results and final version of the text. Maria Carolina Pereira e Silva: Participated in the study design, data analysis, statistical analysis and writing of the text, discussion of the results and final version of the text. Gracielle Pampolim: Participated in the general orientation of the research, definition of the study design and final version of the text. Luciana Carrupt Machado Sogame: Participated in the general orientation of the research, definition of the study design and final version of the text.

Acknowledgments

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Conflicts of Interest

The authors report no conflicts of interest.
REFERENCES


Resumo

Introdução: o envelhecimento é um processo natural que vem ocorrendo de maneira acelerada e que, pelo declínio fisiológico dos sistemas, pode propiciar ao aparecimento de vulnerabilidades no idoso.

Objetivo: verificar os fatores socioeconômicos, condições de saúde e hábitos de vida associados ao grau de Vulnerabilidade Clínico-funcional de idosos da ESF São Vicente em Manhuaçu utilizando o IVCF-20.

Método: estudo transversal, quantitativo, realizado com idosos cadastrados na ESF São Vicente. Para coleta de dados foi empregado o instrumento IVCF-20 para o grau de vulnerabilidade e a ficha de coleta de dados para o perfil geral, hábitos de vida e condições de saúde. Realizou-se teste do qui-quadrado para verificar associação das variáveis independentes à vulnerabilidade clínico funcional.

Resultado: dos 255 idosos avaliados, 60% apresentaram baixa vulnerabilidade clínico funcional, 22% moderada vulnerabilidade e 18% alta vulnerabilidade. A média de idade foi de 72 anos ± 8 anos, em sua maioria, sexo feminino (62,5%), autodeclaram brancos (60%), casados (56%), não possuem cuidador (89,5%), são aposentados (82%), possuem doenças crônicas (78,5%), auto avaliam a saúde como ótima/bom (63,5%), a prática religiosa (87%), saem de casa sozinhos (82%) e 40% pertencem a classe social D/E. Comportaram-se como variáveis associadas p < 0,05 a baixa vulnerabilidade, não ter cuidador, ser negro/pardo, não ser pensionista, sair de casa sozinho, não ser doença crônica, ter uma ótima/boa percepção de saúde.

Conclusão: é de grande importância a identificação dos fatores socioeconômicos, hábitos de vida e vulnerabilidade dos idosos para elaboração de ações efetivas que mantenham a funcionalidade e qualidade de vida.

Palavras-chave: vulnerabilidade, idoso, família, estratégia de saúde, classificação internacional de funcionalidade.