



Implications of self-reported fragility on the quality of life of older adults: a cross-sectional study

Implicações da fragilidade autorreferida na qualidade de vida do idoso: estudo transversal

Implicaciones de la fragilidad auto declarada en la calidad de vida de adultos mayores: estudio transversal

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ABSTRACT

Objective: To analyze the association between self-reported fragility and quality of life in older adults. **Method:** Cross-sectional study carried out with Brazilian older adults between July and October 2020. Three instruments were applied to obtain bio sociodemographic, frailty data and quality of life. Data were analyzed using the Kruskal-Wallis test, Pearson correlation and multivariate linear regression, adopting a 95% confidence interval ($p < 0.05$). **Results:** A total of 662 older adults participated. All facets of quality of life were significantly and negatively correlated with reduced strength, reduced walking speed, low physical activity, and reported fatigue, with the exception of weight loss. In the regression analysis, different frailty components were associated with quality of life, but all had a negative relationship. **Conclusion:** Self-reported frailty has a negative relationship with quality of life, that is, the increase in the frailty scale implies a reduction of different magnitudes in the quality of life of older adults.

DESCRIPTORS

Frail Elderly; Quality of Life; Geriatric Nursing; Health of the Elderly; Family Health Strategy.

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INTRODUCTION

Worldwide, it is estimated that the number of older adults will increase significantly in the coming decades. Epidemiological projections point to growth from 901 million in 2015 to 2.1 billion in 2050 and 3.2 billion in 2100 of people aged over 60 years old. Nevertheless, the number of older adults aged 80 years old and over will increase from 125 million in 2015 to 434 million in 2050 and 944 million in 2100⁽¹⁾.

Therefore, human aging is a natural⁽²⁾ and inevitable⁽³⁾ reality. In old age, a set of pathophysiological changes occurs⁽³⁾ due to the diversity of cellular and molecular damage that occurs in the body over time. As a result, there is an increase in the individual's risk of developing comorbidities, physical and cognitive limitations, dependence and geriatric syndromes⁽²⁾. Therefore, due to the change that has been taking place in the epidemiological and demographic profile, the number of older adults who will live with frailty will also show an increasing behavior⁽¹⁾.

Frailty is defined as a dynamic and multidimensional phenomenon that involves physical, cognitive and social aspects⁽⁴⁾. It is a geriatric syndrome that has been widely studied in recent years, characterized by a reduction or deregulation of various physiological reserves⁽⁵⁾ that interfere with the capacity for homeostatic adaptation⁽³⁾ and lead the individual to a state of vulnerability to stressors⁽⁵⁾.

The prevalence of frailty is directly related to age, being considered a risk factor for falls, hospital admissions, disability and low survival. It is, therefore, a worrying reality, since the world population is in a progressive aging process, and consequently, there will be an increase in the number of frail older adults and at high risk of death⁽⁵⁾, which will lead to the need for health care. For this reason, frailty can be adopted as a potential indicator to organize and manage the health of older adults⁽⁶⁾.

It is estimated that about one in 10 people over 65 years old and between ¼ and half of individuals over 85 years old present some degree of frailty⁽⁷⁾. The exact prevalence of this syndrome varies throughout the world, as it is influenced by several factors such as the definition adopted, type of sample and assessment instruments used⁽⁴⁾. Thus, according to a study⁽⁶⁾, the prevalence of frailty in Brazilian older adults varies between 6.7 and 74.1%.

There are different models in the literature to try to conceptualize frailty and, consequently, reach a reliable and early diagnosis. Among these models, there is the one that considers frailty according to a physical approach and involves the presence of three or more of the following components: unintentional weight loss, self-reported exhaustion, weakness (grip strength), slow walking speed and low physical activity⁽⁸⁾.

Frailty assessments are progressively being implemented in care practices in order to ensure better diagnosis and, consequently, the promotion of care that enhances the Quality of Life (QoL) of older adults living with this syndrome. It is also mentioned that the assessment of QoL is a powerful strategy to estimate the needs of a population

and improve clinical decision-making, in addition to the allocation of resources and policies, becoming the target of people, communities and nations⁽⁷⁾.

In this study, the theoretical framework of QoL proposed by the World Health Organization (WHO) will be adopted, which conceptualizes it as "the individual's perception of their position in life, in the context of the culture and value systems in which they live and in regarding their goals, expectations, standards and concerns"⁽⁹⁾.

Thus, this study is relevant regarding scientifically disclosing the panorama of frailty among Brazilian older adults and its impacts on QoL. It should be remembered that, through epidemiological and sanitary achievements in recent years, it was possible to increase the population's survival rate. However, the years of life achieved can only be considered as something positive when they are lived with quality.

Furthermore, this study can be a tool for planning health care for older adults, especially in Primary Care, where health promotion and protection actions must be developed with a view to maintaining the QoL of this population. Therefore, the objective of this study was to analyze the association between self-reported frailty and quality of life in older adults.

METHOD

TYPE OF STUDY

This is a quantitative, cross-sectional study developed according to the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) tool and with theoretical foundations for the frailty phenotype⁽⁸⁾ and QoL⁽⁹⁾.

SETTING

This study was developed exclusively online through the Social Network Facebook. Therefore, there was no place for face-to-face meetings between participants and researchers, as participants filled out the instruments in their respective homes through internet access and an active account on that social network.

SAMPLE DEFINITION

All participants were selected using the consecutive non-probabilistic technique until reaching the intended sample size. The sample size was obtained considering an infinite population, $\alpha = 0.05\%$ and 95%CI ($z\alpha/2 = 1.96$), which evidenced the need for at least 385 participants. However, considering possible difficulties in accessing the internet, losses and incomplete answers to the instruments, it was decided to add a percentage greater than 50% ($n = 277$) to the sample, which resulted in a final sample of 662 Brazilian older adults.

Inclusion criteria were: people aged ≥ 60 years old; married, in a stable relationship or with a regular partner; living in any Brazilian territory; with access to the internet and an active account on the Social Network Facebook; and without sex restrictions (male, female and others).

The option “others” refers to people who do not identify with any gender stratification. Exclusion criteria were dependent older adults living in long-term care facilities, because they have the necessary skills to actively interact in social networks, in addition to handling technological resources that give access to these networks, the application of instruments to assess cognitive status was dispensed with.

DATA COLLECTION

The period of data collection comprised the months between July and October 2020. The authors created a virtual page on Facebook with the aim of developing collections of scientific research and disseminating information relevant to the health of older adults. On this page, the authors published a poster inviting seniors to participate in the study. This poster was accompanied by the title of the study; the inclusion criteria; the institution and responsible authors; telephone number and email for contact, considering possible doubts and/or clarifications that might arise during the development of the study, in addition to the hyperlink that directed participants directly to the questionnaire organized on Google Forms.

This questionnaire was structured with three self-administered instruments. On the first page of the questionnaire, it was mandatory to insert a valid e-mail in a specific field so that later the authors could track a possible multiplicity of responses by the same participant and reduce the chances of bias and maintain data quality.

The first instrument was developed by the researchers themselves in order to know the profile of the participants and contained the following bio sociodemographic information: gender, age, age group, marital status, time living with the partner, religion, sexual orientation, Brazilian region where they live, if they live with their children, education and ethnicity.

The second instrument is called the Frailty Self-Reported Instrument, constructed and psychometrically validated for the Brazilian population, with sensitivity and specificity, respectively, of 89.7% and 24.3% for the identification of pre-frail people and 63.2% and 71.6% for the fragile ones. In the factor analysis, there was 56.3% of the total variance, indicating that the instrument's components are interrelated, proving to be valid and reliable for its application in primary care⁽¹⁰⁾.

The Frailty Self-Reported Instrument consists of six items that assess the five frailty components proposed by Fried⁽⁸⁾: weight loss, reduced strength, reduced walking speed, low physical activity and reported fatigue. Participants were classified as non-frail (those that did not present any of the components), pre-frail (those that presented between 1 and 2 components) and fragile (those with three or more components)⁽¹⁰⁾. This self-reported instrument was chosen because there is evidence that there is a need to investigate frailty through simpler methods that facilitate its use in the care environment^(3,6), in addition to the fact that the self-perception of frailty by the older adults enables early diagnosis and allows the expansion of tracking⁽¹⁰⁾.

The third instrument is called the World Health Organization Quality of Life – Old (WHOQOL-Old), specific for older adults population and validated for the Brazilian population, presenting adjustments in the following parameters: internal consistency (Cronbach's α between 0.71 to 0.88), discriminant validity ($p < 0.01$), concurrent validity (correlations ranging from -0.61 to -0.50) and test-retest reliability (correlations ranging from 0.58 to 0.82)⁽¹¹⁾.

It consists of 24 questions that are distributed into six facets: sensory skills; autonomy; past, present and future activities; social participation; death and dying and intimacy⁽¹²⁾. Before proceeding with the analysis of the WHOQOL-Old, the recoding of the items was performed: (old_01; old_02; old_06; old_7; old_8; old_9 and old_10). As recommended, the recoding obeyed the following rule: (1 = 5; 2 = 4; 3 = 3; 4 = 2 and 5 = 1)⁽¹³⁾. There is no cutoff point for this instrument. The final score, which ranges from 24 to 100 points, is interpreted from the perspective that the higher/lower the score, the better/worse will be the interviewees' QoL⁽¹²⁾.

It should be remembered that just publishing the study invitation on the Facebook page was not enough to recruit participants. As a result, the authors hired the post boosting service, which allowed them to increase engagement in the publication of the research and, consequently, expand the dissemination of the study throughout the Brazilian territory and for all registered profiles that met the inclusion criteria previously informed in the boost field. The promotion was carried out monthly, maintaining the same inclusion criteria until reaching the intended sample.

DATA ANALYSIS

Data were tabulated, analyzed and stored in the IBM SPSS® version 25 statistical software. Initially, the distribution of quantitative data was analyzed using the Kolmogorov – Smirnov test, by which abnormal distributions were identified ($p < 0.05$). Due to this characteristic, non-parametric statistics were used through the Kruskal-Wallis H test with application of the Bonferroni correction, when necessary, to evaluate the quantitative variables that were presented through mean, median (Md) and interquartile range (IR). All analysis were performed considering a 95% confidence interval ($p < 0.05$).

The relationship between the facets of QoL and the components of frailty were tested using Pearson's correlation analysis (r) and the results expressed through the correlation coefficients and p -value. Subsequently, the variables that presented $p < 0.05$ were inserted into a multivariate linear regression model, considering for each one of the facets of QoL, with the adequacy of the models attested by the Durbin Watson test. Finally, the results were expressed through the β coefficients (standardized and non-standardized); Root-Mean-Square Error (RootMSE); 95% Confidence Interval (95%CI), coefficient of determination (R^2) and p -value.

ETHICAL ASPECTS

This study is part of a thematic cut of a larger project that complied with all the ethical and bioethical recommendations that govern the development of scientific research with human beings, as recommended by Resolution No. 466, of December 12, 2012 of the National Health Council. All participants received detailed information about the study regarding the objective, relevance, risks and benefits, in addition to having read and signed the Informed Consent Form (ICF) online. This study was approved in 2020 by the Research Ethics Committee of the Ribeirao Preto School of Nursing protocol #4319644.

RESULTS

Regarding the bio sociodemographic characteristics, there was a predominance of older adults aged between 60 and 64 years old (n = 318; 48.8%), male (n = 383; 57.9%), married (n = 420; 63.4%), who live with their partner for more than 20 years (n = 418; 63.1%), with higher education (n = 276; 41.7%), self-declared white (n = 447; 67.5%), living in the Southeast region (n = 297; 44.9%), adherents to Catholicism (n = 360; 54.4%), heterosexuals (n = 575; 86.9%) and who do not live with their children (n = 449; 67.8%).

Regarding frailty, this study identified a prevalence of 85.2% (n = 564) of older adults in the frailty process (pre-frail and frail), with 45.2% (n = 299) being classified as frail, 40.0% (n = 265) as pre-frail and 14.8% (n = 98) as non-frail. Table 1 shows the distribution of bio sociodemographic variables according to the degree of frailty.

Table 2 shows the comparison between the bio sociodemographic variables and the QoL of older adults using the Kruskal-Wallis H test. Note that women have a better perception of QoL in the sensory abilities facet (362.74; p = 0.002).

Older adults in a stable relationship differed statistically from the married ones, showing better QoL in sensory abilities (p = 0.002) and those with a regular partner showed better QoL in the intimacy facet (p = 0.010) when compared to the married ones. Finally, it was observed that religion was the variable that was most associated with the QoL of the investigated, in which it is observed that there were statistically significant differences between the Spiritism, Catholic and Protestant older adults, with the followers of Spiritism having the highest ranks and better QoL in all facets except for the death and dying facet.

As shown in Table 3, all facets of QoL were significantly associated with the degrees of frailty, indicating that non-frail older adults have a better QoL compared to the ones in the process of frailty (p < 0.001). However, it is worth mentioning that the social participation of non-frail older adults had the same median as that of pre-frail ones. Nevertheless, all older adults had the same scores in the intimacy facet. It is also noted that non-frail, pre-frail and frail people had better QoL in the sensory abilities facet.

Table 1 – Comparison of bio sociodemographic characteristics with frailty – Ribeirao Preto, SP, Brazil, 2020.

| Variables | FRAILITY | | | | | |
|-----------------------------------|-----------|------|-----------|------|-------|------|
| | Non-frail | | Pre-frail | | Frail | |
| | N | % | n | % | n | % |
| Gender | | | | | | |
| Male | 66 | 17.2 | 159 | 41.5 | 158 | 41.3 |
| Female | 32 | 11.6 | 106 | 38.3 | 139 | 50.2 |
| Other | 0 | 0.0 | 0 | 0.0 | 2 | 100 |
| Marital status | | | | | | |
| Married | 63 | 15.0 | 168 | 40.0 | 189 | 45.0 |
| Stable union | 17 | 14.5 | 47 | 40.2 | 53 | 45.3 |
| Regular partner | 18 | 14.4 | 50 | 40.0 | 57 | 45.6 |
| Religion | | | | | | |
| Catholic | 56 | 15.6 | 146 | 40.6 | 158 | 43.9 |
| Protestant | 10 | 11.2 | 34 | 38.2 | 45 | 50.6 |
| Spiritism | 15 | 18.8 | 34 | 42.5 | 31 | 38.8 |
| African origins | 2 | 16.7 | 2 | 16.7 | 8 | 66.7 |
| No religion | 9 | 14.5 | 31 | 50.0 | 22 | 35.5 |
| Others | 6 | 10.2 | 18 | 30.5 | 35 | 59.3 |
| Living with their children | | | | | | |
| Yes | 19 | 10.7 | 68 | 38.2 | 91 | 51.1 |
| No | 73 | 16.3 | 185 | 41.2 | 191 | 42.5 |
| Have no children | 6 | 17.1 | 12 | 34.3 | 17 | 48.6 |
| Ethnicity | | | | | | |
| White | 65 | 14.5 | 186 | 41.6 | 196 | 43.8 |
| Yellow | 3 | 21.4 | 3 | 21.4 | 8 | 57.1 |
| Black | 4 | 12.5 | 11 | 34.4 | 17 | 53.1 |
| Brown | 25 | 15.8 | 61 | 38.6 | 72 | 45.6 |
| Indigenous | 1 | 16.7 | 3 | 50.0 | 2 | 33.3 |
| Does not know | 0 | 0.0 | 1 | 20.0 | 4 | 80.0 |
| Brazilian region | | | | | | |
| North | 3 | 9.4 | 16 | 50.0 | 13 | 40.6 |
| Northeast | 22 | 18.0 | 47 | 38.5 | 53 | 43.4 |
| Midwest | 8 | 17.0 | 18 | 38.3 | 21 | 44.7 |
| Southeast | 45 | 15.2 | 117 | 39.4 | 135 | 45.5 |
| South | 20 | 12.1 | 67 | 40.9 | 77 | 47.0 |
| Education | | | | | | |
| Primary | 2 | 3.6 | 20 | 36.4 | 33 | 60.0 |
| Elementary I | 8 | 15.4 | 19 | 36.5 | 25 | 48.1 |
| Elementary II | 5 | 14.3 | 16 | 45.7 | 14 | 40.0 |
| High school | 42 | 17.3 | 88 | 36.2 | 113 | 46.5 |
| Higher education | 41 | 14.9 | 122 | 44.2 | 113 | 40.9 |
| No education | 0 | 0.0 | 0 | 0.0 | 1 | 100 |

Table 2 – Comparison of bio sociodemographic characteristics with QoL – Ribeirao Preto, SP, Brazil, 2020.

| | QUALITY OF LIFE | | | | | | |
|-----------------------|---------------------|-----------------------|-----------------------|---------------|--------|-----------------------|-----------------------|
| | SS | AUT | PPFA | SP | DD | INT | GQoL |
| Medium posts | | | | | | | |
| Gender | | | | | | | |
| Male | 308.99 [†] | 335.65 | 331.13 | 330.01 | 343.98 | 334.87 | 331.29 |
| Female | 362.74 [†] | 327.46 | 333.51 | 334.76 | 314.40 | 327.88 | 332.51 |
| Other | 314.50 | 96.25 | 124.50 | 166.25 | 309.00 | 187.75 | 231.75 |
| p value | 0.002* | 0.184 | 0.300 | 0.444 | 0.142 | 0.497 | 0.759 |
| Marital status | | | | | | | |
| Married | 312.59 [†] | 318.52 | 329.49 | 323.64 | 329.76 | 314.82 [†] | 316.78 |
| Stable union | 374.92 [†] | 351.95 | 334.19 | 344.97 | 344.02 | 358.01 | 359.11 |
| Regular partner | 354.41 | 355.96 | 335.73 | 345.32 | 325.62 | 362.74 [†] | 355.11 |
| p value | 0.002* | 0.067 | 0.936 | 0.373 | 0.719 | 0.010* | 0.033* |
| Religion | | | | | | | |
| Catholic | 328.41 | 326.00 [†] | 323.46 [†] | 327.04 | 322.48 | 316.22 [†] | 319.89 [†] |
| Protestant | 295.21 | 291.21 [†] | 307.39 [†] | 330.26 | 345.15 | 317.12 [†] | 307.16 [†] |
| Spiritism | 363.01 | 402.77 ^{†,‡} | 401.24 ^{†,‡} | 391.86 | 341.82 | 405.80 ^{†,‡} | 410.89 ^{†,‡} |
| African origins | 276.00 | 315.63 | 279.71 | 261.54 | 302.63 | 338.67 | 276.92 |
| Others | 319.13 | 321.57 | 364.89 | 318.37 | 355.09 | 342.03 | 340.75 |
| No religion | 383.38 | 341.83 | 301.04 | 307.32 | 334.09 | 333.59 | 333.16 |
| p value | 0.043* | 0.007* | 0.004* | 0.047* | 0.747 | 0.008* | 0.003* |

* Statistical significance by Kruskal-Wallis H test (p < 0.05).

†,‡ Bonferroni Post-hoc Test.

SS: sensory skills; AUT: autonomy; PPFA: past, present and future activities; SP: social participation; DD: death and dying; INT: intimacy; GQoL: general quality of life.

Table 3 – Assessment of QoL according to the degree of frailty – Ribeirao Preto, SP, Brazil, 2020.

| QoL facets | Frailty | | | H | p value |
|------------|---------------------|---------------------|---------------------|--------|-------------------|
| | Non-frail | Pre-frail | Frail | | |
| | M _d (IQ) | M _d (IQ) | M _d (IQ) | | |
| SS | 93.75 (75.00–95.31) | 81.25 (75.00–93.75) | 75.00 (56.25–87.50) | 70.154 | <0.001* |
| AUT | 75.00 (62.50–82.81) | 68.75 (56.25–75.00) | 62.50 (50.00–75.00) | 40.469 | <0.001* |
| PPFA | 75.00 (62.50–81.25) | 68.75 (56.25–81.25) | 62.50 (50.00–75.00) | 33.299 | <0.001* |
| SP | 75.00 (68.75–81.25) | 75.00 (62.50–81.25) | 65.20 (50.00–75.00) | 51.061 | <0.001* |
| DD | 81.25 (56.25–93.75) | 75.00 (56.25–81.25) | 68.75 (43.75–81.25) | 26.126 | <0.001* |
| INT | 75.00 (75.00–87.50) | 75.00 (68.75–81.25) | 75.00 (56.25–75.00) | 29.909 | <0.001* |
| GQoL | 77.08 (70.57–83.59) | 72.91 (56.54–80.20) | 64.58 (55.20–73.95) | 85.622 | <0.001* |

* Statistical significance by Kruskal-Wallis H test (p < 0,05).

SS: sensory skills; AUT: autonomy; PPFA: past, present and future activities; SP: social participation; DD: death and dying; INT: intimacy; GQoL: general quality of life.

Table 4 – Correlation coefficients between frailty and QoL domains – Ribeirao Preto, SP, Brazil, 2020.

| | SS | AUT | PPFA | SP | DD | INT |
|-------------------------|---------|---------|---------|---------|---------|---------|
| Weight loss | 0.039 | 0.015 | -0.027 | -0.018 | -0.017 | -0.016 |
| Force reduction | -0.319* | -0.177* | -0.219* | -0.262* | -0.176* | -0.194* |
| Walking speed reduction | -0.275* | -0.209* | -0.169* | -0.193* | -0.142* | -0.187* |
| Low physical activity | -0.156* | -0.162* | -0.120* | -0.176* | -0.073* | -0.121* |
| Reported fatigue 1 | -0.246* | -0.179* | -0.200* | -0.220* | -0.164* | -0.163* |
| Reported fatigue 2 | -0.259* | -0.183* | -0.201* | -0.185* | -0.207* | -0.165* |
| Total frailty | -0.357* | -0.261* | -0.261* | -0.304* | -0.220* | -0.239* |

* Statistical significance for Pearson correlation ($p < 0,01$).

SS: sensory skills; AUT: autonomy; PPFA: past, present and future activities; SP: social participation; DD: death and dying; INT: intimacy.

The correlation analysis between QoL and frailty domains showed significant coefficients ($p < 0.01$) for all tested relationships, except for the weight loss component, as observed in Table 4.

In the multivariate linear regression analysis for each of the QoL domains, different frailty components were associated, but all with a negative relationship, that is, the increase in the frailty scale implied a reduction of different magnitudes in the QoL domains, as shown in Table 5.

DISCUSSION

This study identified a prevalence of 85.2% of older adults in the frailty process, with 45.2% being classified as frail, 40.0% as pre-frail and 14.8% as non-frail. It is reported that similar prevalence of older adults in the frailty process were found in other studies that used the same assessment instrument in the state of Rio Grande do Sul (80.5%)⁽³⁾, Tocantins (81,5%)⁽²⁾ and Sao Paulo, ranging between (82,9%)⁽¹⁰⁾ and (83,9%)⁽¹⁴⁾.

These results called the attention of the entire society. First, health professionals and managers are expected to direct urgent actions to prevent and control the progression of frailty. Second, it is expected that the entire society, including young people and adults, become aware of these results and start to adopt health protection behaviors, so that the impacts of an unhealthy lifestyle are mitigated when they reach old age.

As measures capable of preventing frailty, the suspension of smoking and drinking habits is cited; dietary control and adequate adherence to comorbidity therapy⁽³⁾. It should be remembered that frailty promotes undesirable impacts on individual, family and social life, as it is a predictor of adverse health events, in addition to being associated with the increased use of social and health services, with a consequent increase in the burden financial⁽¹⁰⁾.

Thus, it is also necessary that health professionals implement interventions with direct impacts on factors associated with frailty in older adults, such as cognitive deficit, physical inactivity, poor or very poor self-perceived health, obesity, in addition to low socioeconomic and educational status⁽³⁾.

Regarding marital status, older adults in a stable relationship differed statistically from the married older adults, with better QoL in sensory abilities. This facet assesses the impact generated by the loss of these skills on the individual's ability to interact with other people and in activities of daily living, becoming an aspect that is considered in the assessment of the older adults' QoL⁽¹⁵⁾. Sensory skills, also called sensory functioning, involve the assessment of the senses: smell, touch, taste, sight and hearing⁽¹⁶⁾.

Furthermore, participants with a regular partner showed better QoL in the intimacy facet when compared to married ones. This facet assesses the older adults' ability to have intimate and personal relationships⁽¹⁵⁾. In this study, older adults with a regular partnership refer to those who are not married and do not live together with their respective partners, but who have a regular person to satisfy affective and sexual desires without marital commitment.

Therefore, married older adults were expected to have better QoL in the facet that assesses intimacy, especially due to the longtime of living together, which could be a factor in deepening relationships and, consequently, intimacy, especially because in this study there was greater expressiveness of older adults who live with their partner for more than 20 years ($n = 418$; 63.1%).

With regard to religion, there were statistically significant differences between Spiritism older adults, Catholics and Protestants, and the followers of Spiritism had better QoL in most aspects of QoL.

The results of a Brazilian study⁽¹⁷⁾ reveal that older adults attribute to spirituality an operational and transcendental meaning, which is configured, respectively, as an efficient strategy for coping with adversity and as something that gives meaning to life, through faith and belief in the existence of God. It is also noteworthy that older adults reported that religion and some spiritual practices have a positive impact on their QoL and, even those who did not assiduously practice any religious aspect, revealed a feeling of well-being when participating in prayer groups and religious activities⁽¹⁷⁾.

Table 5 – Final linear regression models for factors (fragility components) and attributes (QoL facets) – Ribeirao Preto, SP, Brazil, 2020.

| | β non-standard | β standard | 95%CI | p | Durbin-Watson | R ² | RootMSE* |
|--|-------------------------|---------------------|--------------|-------|---------------|----------------|----------|
| SENSORY SKILLS | | | | | | | |
| Force reduction | -7.07 | -0.18 | -9.89—3.50 | <0.01 | | | |
| Walking speed reduction | -4.68 | -0.12 | -7.84—1.60 | <0.01 | | | |
| Reported fatigue 1 | -4.72 | -0.10 | -8.55—1.17 | <0.01 | 1.92 | 0.16 | 17.20 |
| Reported fatigue 2 | -6.20 | -0.14 | -9.73—2.68 | <0.01 | | | |
| AUTONOMY | | | | | | | |
| Walking speed reduction | -4.73 | -0.13 | -7.72—1.75 | <0.01 | | | |
| Low physical activity | -3.32 | -0.08 | -6.27—0.222 | 0.03 | | | |
| Reported fatigue 1 | -4.21 | -0.09 | -7.97—0.45 | 0.03 | 1.84 | 0.07 | 17.73 |
| Reported fatigue 2 | -4.36 | -0.10 | -7.97—0.746 | 0.02 | | | |
| PAST, PRESENT AND FUTURE ACTIVITIES | | | | | | | |
| Force reduction | -6.06 | -0.16 | -8.92—3.21 | <0.01 | | | |
| Reported fatigue 1 | -4.36 | -0.10 | -8.07—0.58 | 0.02 | 2.01 | 0.08 | 17.48 |
| Reported fatigue 2 | -4.7 | -0.11 | -8.25—1.15 | 0.01 | | | |
| SOCIAL PARTICIPATION | | | | | | | |
| Force reduction | -6.33 | -0.16 | -9.53—3.21 | <0.01 | | | |
| Low physical activity | -4.46 | -0.11 | -7.66—1.26 | <0.01 | | | |
| Reported fatigue 1 | -5.64 | -0.12 | -9.68—1.61 | <0.01 | 1.95 | 0.10 | 18.76 |
| Reported fatigue 2 | -3.87 | -0.08 | -7.680—0.054 | 0.05 | | | |
| DEATH AND DYING | | | | | | | |
| Force reduction | -5.43 | -0.11 | -9.33—1.54 | <0.01 | | | |
| Reported fatigue 2 | -8.70 | -0.15 | -13.54—3.86 | <0.01 | 2.05 | 0.06 | 23.84 |
| INTIMACY | | | | | | | |
| Force reduction | -4.34 | -0.12 | -7.659—1.023 | <0.01 | | | |
| Low physical activity | -4.15 | -0.11 | -7.447—0.866 | <0.01 | | | |
| Reported fatigue 2 | -4.79 | -0.11 | -8.229—1.370 | <0.01 | 1.94 | 0.06 | 18.19 |

* RootMSE: root-mean-square error.

The fact is that religion and spirituality exert positive effects on the QoL of older adults, whether those living in the community⁽¹⁸⁾ or in long-term institutions⁽¹⁷⁾. However, although this evidence is found, the approach of these two dimensions is still little explored in clinical practices and the development of new investigations on this theme are necessary, especially those that point to intervention strategies in this field of knowledge⁽¹⁸⁾.

It was observed in this study that all facets of QoL were significantly associated with the degrees of frailty, indicating that non-frail older adults have a better QoL compared to the ones in the frailty process. There are no studies prior to ours that investigate these two variables with the same assessment instruments. Even so, these results corroborate studies that used other instruments such as the Edmonton Frailty Scale (EFE), Whoqol-Bref and Whoqol-old⁽¹⁶⁾; Tilburg Frailty Indicator (TFI) and Whoqol-Bref⁽⁴⁾; Comprehensive Frailty

Assessment Instrument (CFAI) and Whoqol-Bref⁽¹⁹⁾ in addition to TFI and Whoqol-old⁽²⁰⁾.

This evidence reinforces that, regardless of the instrument used, frailty is always associated with reduced QoL in old age, found once again in this study, in which significant and negative coefficients were evidenced for all the tested relationships between frailty and QoL, with except for the weight loss component, which had no statistical significance.

Another important finding to be mentioned is that all older adults, regardless of the degree of frailty, had a better perception of QoL in the sensory abilities facet. In fact, the loss of meaning can have repercussions with undesirable events in daily life, participation in social interactions, in addition to making older adults dependent, which constitutes a risk factor for frailty⁽¹⁶⁾.

It should be remembered that frailty conditions, especially pre-frailty, should be at the center of the planning and

operationalization of the health of older adults, due to their high prediction of disabilities and dysfunctions⁽²¹⁾, which can interfere unsatisfactorily in the QoL of this age group.

The QoL of older adults is directly influenced by a multifactorial context such as the level of functionality, good mood, sexuality, financial security, physical and mental health, productivity, personal achievements, social capacity, spirituality, physical appearance, satisfaction with life and existence of a meaning to live, among other aspects that also strongly influence QoL in old age⁽²²⁾.

Thus, a study⁽⁴⁾ developed in Chile used the TFI instruments to assess frailty and the Whoqol-Bref to assess the QoL of 538 older adults, in which it was identified that frailty was associated with a lower QoL of participants and worse scores in various assessment instruments in geriatrics.

It should be considered that frailty in older adults has a dynamic character, with possibilities of aggravation and even prevention if there is adequate diagnosis and care. Thus, it is essential to plan individual care with a view to the prevention and rehabilitation of older adults according to their singularities⁽³⁾, in addition to research that identify causal relationships between frailty and the constructs of QoL and which aspects of QoL are more important for frail older adults⁽⁷⁾.

It is also noteworthy that in the short and medium term, the status of frailty can be changed in such a way that it overloads public health services. Therefore, it is required that there is readjustment of the primary care equipment responsible for assisting vulnerable individuals, in order to improve the QoL of this population⁽¹⁶⁾.

In this perspective, interventions can be implemented to promote the health of frail older adults or at risk of frailty, such as programs for health maintenance, physical and cognitive training, home care visits and programs, group meetings with a multidisciplinary team for the development of educational activities, nutritional assessment and supplementation, adoption of assistive technology devices, among other interventions for geriatric rehabilitation⁽²¹⁾.

Due to the non-probabilistic characteristic of the study, the results may not represent the general population and compromise the external validity. However, due to the online collection, the participants included in the study may have been restricted to older adults with high education and socioeconomic conditions, characteristics that diverge from most older adults who have a greater degree of vulnerability. Finally, as a last limitation, it is reported that, due to the self-reported characteristic of the frailty instrument, they may have undervalued or overvalued some of the assessment components.

However, our results do not become invalid, since the individual's perception must be considered for directing health promotion and protection actions. Furthermore, this study can serve as a tool for planning health care for older adults, especially in the Family Health Strategy, in which professionals must recognize the impacts of frailty on the QoL of older adults and plan interventions that alleviate physical-biopsychosocial suffering resulting from this syndrome to add better quality to the additional years of life of this age group.

CONCLUSION

This study showed that all facets of quality of life were significantly and negatively correlated with reduced strength, reduced walking speed, low physical activity and reported fatigue, except for weight loss. Therefore, it is concluded that frailty has a negative relationship with QoL, that is, the increase in the frailty scale implies a reduction of different magnitudes in the QoL of older adults. Finally, it is noteworthy that the comparison of our results should only be performed with studies that used the same instrument and adopted the same cutoff point, as the results of self-reported instruments may differ considerably from other assessment instruments.

RESUMO

Objetivo: Analisar a associação entre fragilidade autorreferida e qualidade de vida de idosos. **Método:** Estudo transversal realizado com idosos brasileiros entre julho e outubro de 2020. Foram aplicados três instrumentos para obtenção dos dados biosociodemográficos, de fragilidade e qualidade de vida. Os dados foram analisados com o teste de *Kruskal-Wallis*, correlação de *Pearson* e regressão linear multivariada, adotando intervalo de confiança de 95% ($p < 0,05$). **Resultados:** Participaram 662 idosos. Todas as facetas da qualidade de vida estiveram correlacionadas significativamente e negativamente com redução da força, redução da velocidade de caminhada, baixa atividade física e fadiga relatada, com exceção da perda de peso. Na análise de regressão, diferentes componentes da fragilidade foram associados à qualidade de vida, porém, todas com relação negativa. **Conclusão:** A fragilidade autorreferida possui relação negativa com a qualidade de vida, ou seja, a majoração da escala de fragilidade implica redução de diferentes magnitudes na qualidade de vida dos idosos.

DESCRITORES

Idoso Fragilizado; Qualidade de Vida; Enfermagem Geriátrica; Saúde do Idoso; Estratégia Saúde da Família.

RESUMEN

Objetivo: Analizar la asociación entre fragilidad auto declarada y calidad de vida de adultos mayores. **Método:** Se trata de un estudio transversal realizado con adultos mayores brasileños entre julio y octubre de 2020. Se aplicaron tres instrumentos para la obtención de los datos *biosociodemográficos*, de fragilidad y calidad de vida. Los datos se analizaron con la Prueba de *Kruskal-Wallis*, correlación de *Pearson* y regresión lineal multivariada, adoptando el intervalo de confianza del 95% ($p < 0,05$). **Resultados:** Participaron 662 adultos mayores. Todas las facetas de la calidad de vida se correlacionaron significativa y negativamente con la disminución de la fuerza, la reducción de la velocidad de la marcha, la escasa actividad física y la fatiga declarada, a excepción de la pérdida de peso. En el análisis de regresión, diferentes componentes de la fragilidad estaban asociados con la calidad de vida, aunque con relación negativa. **Conclusión:** La fragilidad auto declarada tiene una relación negativa con la calidad de vida, es decir, la mayor acción de la escala de fragilidad implica la reducción de diferentes magnitudes en la calidad de vida de los adultos mayores.

DESCRIPTORES

Anciano Frágil; Calidad de Vida; Enfermería Geriátrica; Salud del Anciano; Estrategia de Salud Familiar.

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