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## FRAILITY, DEPRESSIVE SYMPTOMS AND OVERLOAD OF ELDERLY CAREGIVERS IN A CONTEXT OF HIGH SOCIAL VULNERABILITY<sup>1</sup>

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### ABSTRACT

**Objective:** to analyze the relationship between frailty, depressive symptoms and overload of elderly caregivers in a context of high social vulnerability.

**Method:** correlational, cross-sectional study, with quantitative approach, carried out with 73 elderly primary caregivers of other elderly people enrolled in Family Health Units inserted in contexts of high social vulnerability of a city in the interior of São Paulo (Brazil). The data were collected through an individual interview, using a questionnaire for sociodemographic characterization, the Zarit Overload Inventory, Geriatric Depression Scale and Frailty Assessment, according to the Fried Phenotype.

**Results:** the majority of the elderly caregivers were between 60 and 69 years old; they were female and had one to four years of schooling. Regarding the frailty, 37% were frail, 54.8% pre-frail and 8.2% non-frail. The elderly caregivers presented, in the majority, small overload (68.5%) and absence of indications of depressive symptoms (67.1%). There was a positive correlation and moderate magnitude ( $r=0.460$ ,  $p=0.000$ ) between frailty and depressive symptoms, that is, as the levels of frailty increase, the depressive symptoms become more prevalent.

**Conclusion:** there was a correlation between frailty and depressive symptoms. Therefore, it is necessary to approach the health professionals in order to identify early the frailty and depressive symptoms of elderly caregivers in order to avoid late interventions. Special attention should be given to caregivers inserted in contexts of high social vulnerability.

**DESCRIPTORS:** Caregivers. Frail elderly. Geriatric nursing. Social vulnerability. Family Health.

## FRAGILIDADE, SINTOMAS DEPRESSIVOS E SOBRECARGA DE IDOSOS CUIDADORES EM CONTEXTO DE ALTA VULNERABILIDADE SOCIAL

### RESUMO

**Objetivo:** analisar a relação entre fragilidade, sintomas depressivos e sobrecarga de idosos cuidadores em contexto de alta vulnerabilidade social.

**Método:** estudo correlacional, de corte transversal, com abordagem quantitativa, realizado com 73 idosos cuidadores primários de outros idosos cadastrados em Unidades de Saúde da Família inseridas em contextos de alta vulnerabilidade social de um município do interior paulista (Brasil). Os dados foram coletados por meio de entrevista individual, utilizando-se um questionário para caracterização sociodemográfica, o Inventário de Sobrecarga de Zarit, a Escala de Depressão Geriátrica e avaliação da Fragilidade, segundo o Fenótipo de Fried.

**Resultados:** a maioria dos cuidadores idosos estava inserida na faixa etária de 60 a 69 anos, era do sexo feminino e apresentava de um a quatro anos de escolaridade. Em relação à fragilidade, 37% eram frágeis, 54,8% pré-frágeis e 8,2% não frágeis. Os cuidadores idosos apresentaram, em sua maioria, pequena sobrecarga (68,5%) e ausência de indícios de sintomas depressivos (67,1%). Houve correlação positiva e de moderada magnitude ( $r=0,460$ ,  $p=0,000$ ) entre fragilidade e sintomas depressivos, ou seja, à medida que os níveis de fragilidade aumentam, os sintomas depressivos se tornam mais prevalentes.

**Conclusão:** houve correlação entre fragilidade e sintomas depressivos. Diante disso, faz-se necessária a abordagem dos profissionais de saúde no sentido de identificar precocemente a fragilidade e os sintomas depressivos de cuidadores idosos a fim de evitar intervenções tardias. Atenção especial deve ser dada aos cuidadores inseridos em contextos de alta vulnerabilidade social.

**DESCRIPTORIOS:** Cuidadores. Idoso fragilizado. Enfermagem geriátrica. Vulnerabilidade social. Saúde da família.

# FRAGILIDAD, SÍNTOMAS DEPRESIVOS Y SOBRECARGA DE LOS ANCIANOS CUIDADORES EN EL CONTEXTO DE UNA ALTA VULNERABILIDAD SOCIAL

## RESUMEN

**Objetivo:** analizar la relación entre fragilidad, síntomas depresivos y sobrecarga de ancianos cuidadores en un contexto de alta vulnerabilidad social.

**Método:** estudio correlacional, de corte transversal y con abordaje cuantitativo realizado con 73 ancianos cuidadores primarios de otros ancianos registrados en Unidades de Salud de la Familia e insertados en contextos de alta vulnerabilidad social de un municipio del interior paulista (Brasil). Los datos fueron obtenidos por medio de entrevista individual, utilizándose un cuestionario para la caracterización sociodemográfica, el Inventario de Sobrecarga de Zarit, la Escala de Depresión Geriátrica y la evaluación de la Fragilidad según el Fenotipo de Fried.

**Resultados:** la mayoría de los cuidadores ancianos estaba incluida en el grupo de edad de 60 a 69 años, pertenecía al sexo femenino y presentaba de uno a cuatro años de escolaridad. En relación a la fragilidad, 37% eran frágiles, 54,8% prefrágiles y 8,2% no frágiles. Los cuidadores ancianos presentaron, en su mayoría, una pequeña sobrecarga (68,5%) y ausencia de indicios de síntomas depresivos (67,1%). Hubo una correlación positiva y de magnitud moderada ( $r=0,460$ ,  $p=0,000$ ) entre fragilidad y síntomas depresivos, o sea, a medida que los niveles de fragilidad aumentan, los síntomas depresivos se vuelven más prevalentes.

**Conclusión:** hubo una correlación entre fragilidad y síntomas depresivos. Así, es necesario el abordaje de los profesionales de la salud en el sentido de identificar precozmente la fragilidad y los síntomas depresivos de cuidadores ancianos a fin de evitar las intervenciones tardías. Una atención especial debe ser dada a los cuidadores insertados en contextos de alta vulnerabilidad social.

**DESCRIPTORES:** Cuidadores. Anciano fragilizado. Enfermería geriátrica. Vulnerabilidad social. Salud de la familia.

## INTRODUCTION

The increase in the longevity of the population and the higher prevalence of chronic diseases among the elderly may contribute to the impairment in their functional capacity, becoming dependent on a caregiver.<sup>1</sup>

In the Brazilian context, there is an increase in the number of elderly caregivers of other elderly people. Elderly caregivers living in contexts of high social vulnerability may be at risk of becoming ill and having the worsening of preexisting diseases.<sup>2</sup> In addition, they have low schooling, poor financial conditions, poor access to health services, and lack of social support, which leads to a more frail health condition.<sup>3</sup>

Frailty can be defined as a syndrome of multidimensional nature that involves the complex interaction between biological, psychological and social factors in the individual's life course. It culminates in a state of greater vulnerability, associated with an increased risk of adverse outcomes, such as functional decline, falls, hospitalization, institutionalization and death.<sup>4</sup>

The social risk factors, among them the socioeconomic status and the social support, may affect health outcomes in older adults.<sup>5</sup> The social vulnerability is the absence or lack of support from social institutions, compromising the ability to react to adverse situations reflecting the individual's sociocultural environment. In contexts of high social vulnerability, the impairment of the quality of life and well-being of the elderly, as well as the risk of illness are greater.<sup>6</sup>

There are studies in the literature that pointed to insufficient income, low schooling and lack of social support,<sup>7</sup> as well as poverty,<sup>8</sup> as potentiators of frailty. For other authors, the depressive symptoms are factors of a bad prognosis.<sup>9-10</sup> And investigations in the national<sup>11-12</sup> and international literature<sup>13-14</sup> indicate that frailty is associated with depressive symptoms.

It is important to highlight that there were no studies in the literature that investigated the relationship between frailty, depressive symptoms and overload of elderly caregivers, factors that can impair the quality of life and the well-being of these caregivers, contributing to a poorly qualified care.

Given the above, to analyze the relationship between frailty, depressive symptoms and overload of elderly caregivers is essential to instrumentalize health professionals in order to adequately meet the demands of these caregivers, avoiding late interventions. Thus, the elderly caregiver may also offer good quality care and maintain their physical and cognitive health. In addition, studies on the frailty of elderly caregivers in contexts of high social vulnerability are scarce, and there is a gap in the Brazilian literature. Thus, this study aimed at analyzing the relationship between frailty, depressive symptoms and overload of elderly caregivers in a context of high social vulnerability.

## METHOD

This is a correlational cross-sectional study based on the assumptions of quantitative research. It was developed in the coverage context of five

Family Health Units (USF - *Unidades de Saúde da Família*) belonging to a city in the interior of São Paulo (Brazil), the question under the coverage of the Family Health Support Center (NASF - *Núcleo de Apoio à Saúde da Família*).

Initially, contact was made with the USFs. The community health agents provided a list with names and addresses of possible elderly caregivers, which allowed the definition of the residences to be visited. A home visit was performed to the elderly caregivers in the company of the USF community health agent, respecting the determinations of the primary care direction of the city. In the visit, the elderly caregivers were informed about the objectives of the study, the voluntary nature of participation, the secrecy of the data collected and the way data would be returned to the elderly caregivers in the houses visited. Then, the invitation to participate in the study was made. For the caregivers who agreed to participate, the interview was scheduled.

The population was composed of people who were 60 years old or older, registered and residing in the area covered by the Family Health Support Center in the city and caring for the elderly (n=99). All the caregivers who met the following inclusion criteria were interviewed: to be 60 years old or older; to be enrolled in a USF inserted in a context of high and very high social vulnerability, measured by the urban sector; to be the primary caregiver of an elderly person living in the same residence; to understand interview questions; to accept to participate and sign the Free and Informed Consent Term. In order to characterize the context as high vulnerability, the Paulista Social Vulnerability Index (IPVS - *Índice Paulista de Vulnerabilidade Social*) was used, an indicator that classifies the geographic areas of cities in the interior of São Paulo according to the resources that the population has.<sup>15</sup> The IPVS classifies the geographic areas into six different groups on social vulnerability and this survey investigated individuals in group 5 (High vulnerability) and group 6 (Very high vulnerability).

The exclusion criteria used were: to have severe hearing or vision deficits, making communication difficult; to be enrolled in a USF belonging to the rural sector; death; change of address.

A pre-evaluation was carried out to collect information on the performance of basic activities of daily living (BADL) by the Independence Scale in Daily Life Activities - KATZ<sup>16</sup> which evaluated whether the elderly were able or needed assistance in performing tasks such as bathing, dressing, going to the toilet, transfer, continence, feeding, and

the LAWTON's Instrumental Activities Life Scale (IALS)<sup>17</sup> which evaluated the participants in activities related to telephone use, travel, shopping, meals, housework, and medication use.

Of the 99 elderly people who lived with other elderly people, ten refused to participate in the study, four were not found in the residence, seven died and five changed their address. The final sample consisted of 73 elderly caregivers.

It was defined as "caregiver" the elderly who presented independence or partial dependence in the evaluation of activities of daily living, and as "care receiver" the more dependent elderly, according to the results obtained through these scales. In the residences with three or more elderly people, only the most dependent and the most independent were included.

The data were collected at the home of elderly caregivers, individually, in a space provided by the family, from April to November 2014. To collect the data, the following were used: an instrument to characterize the caregiver; the Frailty Phenotype proposed by Fried; the Zarit Overload Inventory, and the Geriatric Depression Scale (GDS).

The sociodemographic data were collected through the instrument of characterization of the caregiver, which was previously constructed by the researchers, with information on: gender, age, marital status, schooling, occupation, number of children, and family income.

The frailty was measured using the Fried's Phenotype, which includes five elements in the operational definition of the phenotype: unintentional weight loss, fatigue, low palmar grip strength, slow gait, and low caloric expenditure. The unintentional weight loss was assessed by the question, "In the last 12 months, do you think you have lost weight without going on a diet?" Fatigue was assessed by self-report evoked by two questions: "How often in the last week did you feel that everything you did required a lot of effort?" and "How often in the last week did you feel like you could not get things going?" The low palmar grip strength was verified by the average of three consecutive measurements of the dominant hand grip strength, in kilograms strength, by means of a hydraulic dynamometer, of the Jamar type, Model SH5001, from the SAEHAN<sup>®</sup> manufacturer. The slow gait was indicated by the average of three consecutive measures of the time spent by the elderly caregiver to cover 4.6 m on the flat floor. The low rate of caloric expenditure was established by the question: "Do you think you have less physical activity than twelve months ago?" According to

Fried et al. (2001), the presence of three or more of the five characteristics of the phenotype indicates a frail elderly, one or two means that the elderly is in the pre-frailty state, and none of these characteristics indicates a robust elderly or not frail.<sup>18</sup>

In order to evaluate the caregiver's overload on physical and emotional health, the Zarit Overload Inventory was used, it was elaborated in 1987<sup>19</sup> and translated, adapted and validated for Brazil in 2002.<sup>20</sup> It is composed by 22 questions, with the following (Likert type) response questions: "Never", "Rarely", "Sometimes", "Often" and "Always". The score on each answer ranges from zero to four. The total of the scale is obtained by the sum of all the items, and it can vary from zero to 88. The higher the score, the greater the perceived overload of the caregiver. The cut-off scores were defined according to a study with Portuguese caregivers: small overload (0-20 points); moderate overload (21-41 points); moderate to severe overload (41-60 points); and severe overload (61-88 points). The inventory has reliability indexes of 0.87 using the Cronbach's alpha coefficient.<sup>20</sup>

For the evaluation of depressive symptoms, the Geriatric Depression Scale (GDS), developed in 1983 was used.<sup>21</sup> It is an instrument to track depressive symptoms. The acronym GDS is derived from English, meaning "Geriatric Depression Scale". The Brazilian version has 15 questions, with "yes" or "no" answers (0 or 1). At the end, the sum of the scores is obtained, being that from zero to five points there is no evidence of depressive symptoms, that are present when the result from six to 15 points is obtained.<sup>22</sup> The scale has reliability indexes of 0.8, using the Cronbach's alpha coefficient.<sup>22</sup>

A database was created in the Epidata 3.1 software. Two typists independently and blindly entered the data. After validating the double entry, the data was exported to the Stata 10® application for Windows system.

In order to describe the profile of the sample, descriptive statistics were performed, with position and dispersion measurements (mean, standard deviation, minimum and maximum values, median) for continuous variables. Frequency tables with absolute values (n) and percentages (%) were made for the categorical variables.

Due to non-adherence to the normal distribution of the variables, as verified by the Shapiro-Wilk's test, non-parametric tests were chosen. The Spearman's Correlation Test and the Mann Whitney's Test were used to compare the independent samples. The level of significance adopted was 5% ( $p \leq 0.05$ ).

All the ethical precepts that govern research with human beings were observed and respected, according to the Resolution 466/2012, regulated by the National Health Council. This study was approved by the Ethics in Research with Human Beings of the Federal University of São Carlos (UFSCar), under the opinion No. 517,182, CAAE26567214.8.0000.5504. All the participants were clarified regarding the research content, they have signed and received a copy of the Free and Informed Consent Term.

## RESULTS

The sample of this study consisted of 73 elderly caregivers, of whom 37% were frail ( $n=27$ ), 54.8% pre-frail ( $n=40$ ) and 8.2% ( $n=6$ ) non-frail. The frail elderly caregivers were on average 71.27 ( $\pm 7.18$ ) years old, 43.8% of them were women. Among the pre-frail ones, the mean age was 63.00 ( $\pm 2.52$ ) years old, with 6.8% of women; and among the non-frail, the mean age was 70.62 ( $\pm 10.37$ ) years old, in which 30.1% were women.

Table 1 shows the distribution of elderly caregivers according to sociodemographic variables.

**Table 1 - Distribution of elderly caregivers according to sociodemographic variables. São Carlos, SP, Brazil, 2014. (n=73)**

Variables	Categories	n	%	Mean (sd*)	Median	[Min-Max]
Gender	Female	59	80.8			
	Male	14	19.2			
Age (years)	60 to 69	38	52.1			
	70 to 79	25	34.2			
	80 or more	10	13.7	70.3 (8.5)	68	60-98
Marital status	Married	64	87.7			
	Single	2	2.7			
	Divorced	1	1.4			
	Widow(er)	6	8.2			
Schooling	Illiterate	26	35.6			
	1 to 4 years	40	54.8	2.3 (2.7)	2	0-14
	5 to 9 years	5	6.8			
	10 years or more	2	2.8			
Retired	Yes	54	74.0			
	No	19	26.0			
Number of children	0	3	4.1			
	1 to 5	39	53.4	5.5 (3.5)	5	0-17
	6 to 10	24	32.9			
	11 or more	7	9.6			
Family income (minimum wage)†	Up to 1	57	80.3	679 (390.3)	724	0-2000
	2 or more	14	19.7			

\*SD: standard deviation; † The minimum wage in force at the time of data collection was R\$724.00.

There was a predominance of elderly female caregivers (80.8%), between the ages of 60 and 69 (52.1%), married (87.7%), with one to four years of schooling (54.8% %), retired (74.0%), with one to five children (53.4%), and who had a family

income of up to a minimum wage (80.3%), as shown in table 1.

The evaluation of the overload and the depressive symptoms according to the levels of frailty of the elderly caregivers is presented in table 2.

**Table 2 - Distribution of frailty levels according to the overload and depressive symptoms of elderly caregivers. São Carlos, SP, Brazil, 2014. (n=73)**

Variables	Frail		Pre-Frail		Non-Frail		Total		Comparative analysis p-value*
	n	%	n	%	n	%	n	%	
Overload									0.000
Small	17	63.0	28	70.0	5	83.3	50	68.5	
Moderate	8	29.6	9	22.5	-	-	17	23.3	
Severe	2	7.4	3	7.5	1	16.7	6	8.2	
Total	27	100.0	40	100.0	6	100.0	73	100.0	
Depressive symptoms									0.002
Absent	14	51.1	29	72.5	6	100.0	49	67.1	
Mild	12	44.4	10	25.0	-	-	22	30.1	
Severe	1	3.7	1	2.5	-	-	2	2.8	
Total	27	100.0	40	100.0	6	100.0	73	100.0	

\*Statistical test: Mann Whitney's Test

Most of the elderly caregivers had a small overload (68.5%) and no evidence of depressive symptoms (67.1%). The percentage of depressive symptoms, whether mild or severe, was higher among the frail elderly (48.1%), followed by the pre-frail (27.5%). There was an association between frailty, overload and depressive symptoms (Table 2).

Regarding the correlation between frailty, depressive symptoms and overload, there was a positive correlation, of moderate magnitude, with statistical significance, between frailty and depressive symptoms ( $r=0.460$ ,  $p=0.000$ ). As the levels of frailty increase, the depressive symptoms become more prevalent. Regarding the relationship between frailty and overload, no statistically significant correlation was observed ( $r=0.042$ ,  $p=0.727$ ).

## DISCUSSION

Most of the elderly caregivers of the present study were female (80.8%). The national<sup>23-24</sup> and international literature<sup>25-26</sup> also corroborate that women are the main source of care. Historically, the sociocultural role of women in the Western context is marked by care, whether they are wives or daughters.<sup>1</sup>

There was a predominance of elderly caregivers in the age range of 60 to 69 years old (52.1%), that is, young elderly. Researchers claim that the predominance of young elderly caregivers is due

to the fact that these individuals have more energy to care for when compared to older individuals.<sup>1</sup>

The present study found a higher percentage of elderly married caregivers (87.7%), an aspect that is present in the literature.<sup>27-28</sup> A descriptive and transversal analysis, carried out in the city of São Carlos (SP) with 40 elderly caregivers, aimed to characterize elderly caregivers who care for other elderly people in a context of high social vulnerability. As a result, it was found that most of these caregivers were married women.<sup>29</sup> A study was conducted in Mexico with 92 elderly caregivers belonging to the age group of 70 years old and over. The authors found that most of these caregivers were female and married.<sup>27</sup>

Changes in family arrangements and the insertion of women into the labor market may reduce the availability of some family members to the task of caring for the elderly, making their spouses perhaps the only option. In addition, married women are more responsible and have more experience in the home regarding the care of their beloved ones when compared to single women.<sup>30</sup>

The elderly in this study live in the community and the Family Health Units (FHU) are fundamental to the care of this population. The formation of the interdisciplinary health team is essential, due to the demand for care provided to the elderly; identifying conflicts within the family and social context; making interventions in teaching, research and care

offered to this population; respecting individual capacities and differences; seeking to promote health and prevention of diseases, such as depression and frailty symptoms.

The present study found that elderly caregivers had one to four years of study (54.8%). These data are similar to those found in a study carried out in Ribeirão Preto (SP) with 124 caregivers, being the majority female, mean of 76.6 years old, with low schooling and income.<sup>23</sup> Other studies also indicated low schooling among caregivers.<sup>24,31-32</sup>

The small number of years of study reflects one of the aspects of social inequality in the country, mainly because they are elderly caregivers living in a context of poverty. In addition, there is also the influence of cultural factors, since at the beginning of the twentieth century, parents privileged the frequency of male children in school.<sup>23</sup> Thus, the care provided may not be of good quality, since the low caregiver's education may lead to difficulties in understanding the pathological process and limited access to information and health services.<sup>32</sup> Given that, a barrier in the process of health education can cause health professionals to have increased attention when guiding them with the most differentiated resources in order to achieve the desired goal and to avoid possible misunderstandings.<sup>31</sup>

It was found that the elderly caregivers were mostly retired (74.0%) and received a monthly income of up to a minimum wage (80.3%). The retirement allowance is often the only source of income for the elderly caregiver because they are unable to exercise paid work outside their home, since there is often no other person to take over the care.<sup>2</sup> The precarious financial situation exposes the elderly to great social vulnerability, to the risk of becoming ill or aggravating their preexisting diseases.<sup>2,32</sup> In this sense, elderly caregivers may demonstrate a more frail health.<sup>3</sup>

In relation to the frailty, the majority of elderly caregivers were pre-frail (54.8%), followed by frail (37.0%). The predominance of pre-frailty was also found in the study (Frailty in Brazilian Elderly (FIBRA))<sup>33</sup> and in the study (Health, Well-being and Aging (SABE)).<sup>34</sup> The hegemony of pre-frail elderly people confirms the need for early interventions to delay the progression of the syndrome. This attitude would avoid the advance of pre-frailty to frailty and the occurrence of adverse outcomes, improving the quality of life of these elderly caregivers.<sup>35</sup>

However, data on the prevalence of frailty differ from national<sup>11,35</sup> and international studies,<sup>36</sup> which found lower percentages of frailty when

compared to the present study, which can be explained by the fact that they are individuals in a context of poverty.

Elderly caregivers living in contexts of high social vulnerability experienced lifetime disadvantages, which added to the losses associated with aging.<sup>33</sup> In this sense, they are more exposed to the risk of illness, aggravation of preexisting diseases and of being afflicted by the frailty syndrome.<sup>2</sup>

As to the overload, the elderly caregivers presented a small overload (68.5%), which differs from the data found in a Brazilian investigation<sup>31</sup> and in an North-American investigation<sup>37</sup> - in which caregivers showed moderate to high overload -, and an international study that sought to identify the prevalence of frailty of 168 low socioeconomic elderly living in rural areas of Turkey and their associated factors. As a result, they obtained that 7.1% of the elderly were frail, 47.3% pre-frail and 45.6% non-frail. The frailty of the elderly was associated with the caregiver's overload.<sup>38</sup>

The cultural and social values present among the elderly caregivers of this study may explain the predominance of the small overload. For some caregivers, care should be performed within the family environment, which is not seen as a heavy task, but rather the duty of the spouse, the primary caregiver found in this study.

For the elderly spouse caregivers, there is a sense of marital duty to care for your partner, given the commitment to be together forever and to have a life together.<sup>31</sup>

Approximately 39.2% of the elderly caregivers have had depressive symptoms. The presence of these symptoms is higher when compared to other studies with caregivers.<sup>39</sup> A possible explanation for this phenomenon is related to the context of great difficulties in which these elderly caregivers live.

Elderly caregivers have less time to engage in leisure activities because of the care they provide, which can lead to depressive feelings and a negative impact on their quality of life.<sup>30</sup> The results of an international investigation have shown that elderly caregivers present more depressive symptoms and lower life satisfaction when compared to non-caregivers and adult caregivers.<sup>40</sup>

In the present research, the percentage of depressive symptoms, whether mild or severe, was higher among the frail elderly (48.1%), followed by the pre-frail (27.5%). Similar results were found in a North-American study,<sup>41</sup> in a Dutch study<sup>42</sup> and in a Brazilian study conducted in Uberaba (MG).<sup>43</sup>

A search conducted in Mexico with 1,933 elderly people sought to estimate the prevalence of frailty and its associated factors. As results, the authors found that 15.7% of the elderly were frail, 33.3% pre-frail and 51.0% non-frail. Frailty was associated with depressive symptoms (OR=11.23; CI=10.89-11.58).<sup>44</sup> A cross-sectional study with 958 elderly people in Uberaba (MG) found that frail elderly individuals presented an 80% greater chance of developing depressive symptoms when compared to non-frail elderly.<sup>12</sup>

Researchers claim that frailty is associated with depressive symptoms.<sup>13</sup> However, the two-way causal nature remains unknown. Depressive symptoms evidenced by behavioral changes in social activities and appointments contribute to the functional decline and frailty. On the other hand, the early manifestation of frailty can be represented by the worsening of mood.<sup>45</sup>

An English longitudinal study with 4,077 subjects over 60 years old pointed out that depressive symptoms are considered a risk factor for the gait speed component in older residents.<sup>46</sup>

Limitations were detected in the present study. The cross-sectional method does not allow the establishment of causality between the variables frailty and depressive symptoms. Such findings should be considered preliminary because of the small sample, which may limit the generalization and reduce the power of analysis. In addition, the design of this study was not a sample of the population, a fact that may lead to an underestimation of the prevalence of frailty and depressive symptoms. In addition, the scarcity of studies focused on elderly caregivers made some aspects of the discussion of the results of this investigation difficult.

On the other hand, the strengths were identified: elderly residents in the community participated and were not selected based on the state of frailty or the presence of depressive symptoms; the validated frailty measures were the same as those used by Linda Fried.

Longitudinal studies must be performed in order to attribute causality among the variables of interest. In addition, it is suggested the investment in investigations that take into account the frailty and the depressive symptoms of elderly caregivers inserted in the context of high social vulnerability, since they are scarce in the literature.

## CONCLUSION

There was a positive correlation of moderate magnitude with statistical significance between

frailty and depressive symptoms. There was no statistically significant correlation between frailty and the overload of elderly caregivers.

The great challenge for the public health is to provide adequate and quality care for the elderly caregivers, since most of them are inserted in contexts of high social vulnerability.

These results will contribute to the implementation of activities aimed at the elderly caregiver within the scope of the Family Health Strategy. When thinking about the practical implications of these findings, it is important to emphasize the need for health professionals to carry out an in-depth evaluation of the elderly caregivers who look for health services, in order to early detect the problems that afflict them and develop interventions capable of minimizing their complaints, reversing the frailty syndrome and avoiding the appearance of adverse outcomes. It is essential that health services organize themselves to meet the demand of these caregivers, and that health professionals provide proper support and follow up to these individuals, contributing to the improvement of their quality life.

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