



Frailty and social support of the elderly in contexts of social vulnerability

Fragilidade e apoio social de idosos em contextos de vulnerabilidade social

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Objective: to analyze the relationship between of frailty and the family social relationships of the elderly in a context of social vulnerability. **Methods:** a cross-sectional study with elderly people enrolled in five Reference Centers for Social Assistance. Sample for convenience composed of 247 elderly. For data collection, a sociodemographic questionnaire, Edmonton Frailty Scale, Genogram and Eco-maps were used. Social vulnerability characterized according to Social Vulnerability Index. **Results:** of the respondents, 41.7% did not present frailty, 21.5% were apparently vulnerable and 36.8% frail. There was no significant difference between frailty and family relationship. There was significant difference between frailty and external attachment ($p=0.010$), indicating that elderly individuals with frailty at some level had a limited external link. **Conclusion:** elderly people who have a close relationship with family members, did not present frailty, while the majority of the elderly who do not have external ties, presented some level of frailty.

Descriptors: Frail Elderly; Social Support; Social Vulnerability.

Objetivo: analisar a relação entre o nível de fragilidade e as relações familiares e sociais de idosos em contexto de vulnerabilidade social. **Métodos:** estudo transversal, realizado com idosos cadastrados em cinco Centros de Referência de Assistência Social. Amostra por conveniência composta por 247 idosos. Para coleta de dados, utilizou-se questionário sociodemográfico, Escala de Fragilidade de Edmonton, Genograma e Ecomapa. A vulnerabilidade social foi caracterizada segundo Índice de Vulnerabilidade Social. **Resultados:** dos respondentes, 41,7% não apresentaram fragilidade, 21,5% estavam aparentemente vulneráveis e 36,8% estavam frágeis. Não houve diferença significativa entre fragilidade e relação familiar. Houve diferença significativa entre fragilidade e vínculo externo ($p=0,010$), indicando que idosos com algum nível de fragilidade em apresentaram fragilidade, enquanto que a maior parte dos idosos que não possuem vínculos externos, apresentou algum nível de fragilidade.

Descritores: Idoso Fragilizado; Apoio Social; Vulnerabilidade Social.

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Introduction

Aging is a dynamic, progressive, irreversible and universal process characterized by structural and functional changes in the body. In the context of aging, the frailty syndrome stands out, a condition that can affect some elderly people, who become vulnerable and at risk for illness, development of dependency or death, indicating physical, cognitive and social decline⁽¹⁾.

Elderly residents, in contexts of greater social vulnerability, seem to be more affected by the frailty. Social vulnerability reflects the socio-cultural environment of the individual and denotes absence or difficulty of support from social security institutions, which hinders the exercise of social rights of each citizen, affecting the ability to react to adverse situations. In vulnerable settings, the risk of illness and injury to the quality of life and well-being of the elderly is higher⁽²⁾.

Frailty can cause health system and care impacts, as well as affect family members. This situation becomes complex, when demands reflect in the public policy scenario and bring responsibilities to the family⁽³⁾.

The literature shows that the home is a privileged space for care, characterized by concern for the integrality and the uniqueness of the elderly, and for the valorization of the relationship and respect for the other, as long as the family participates and provides the necessary support to these individuals and use of efforts and resources⁽⁴⁾.

It should be emphasized that the frailty can be aggravated by the absence of social support, since the lack of it can affect the body's defense systems, making the individual more susceptible to illness⁽⁵⁾. It is presumed that maintaining family support relationships and social relationships promotes better health conditions for the elderly, favoring resilience in cases of stressful situations⁽⁶⁾.

Given that social support may be crucial in the success of an intervention, it is opportune to know the

frailty and the family and social relationships of elderly people living in a region of social vulnerability⁽⁷⁾. Health and care services can promote mechanisms to ensure risk prevention, lack of social support, and manage strategies to care for the frail elderly.

Frailty studies in a vulnerable context are scarce in the literature. Investigating this scenario can contribute to intervention actions and replanning of care policies for the elderly, with approaches of support for family members. Therefore, the objective was to analyze the relationship between the level of frailty and the family and social relationships of the elderly in a context of social vulnerability.

Methods

This cross-sectional study was carried out with elderly people enrolled in the Centers of Reference of Social Assistance of the Municipality of São Carlos, São Paulo, Brazil, making a total of five Reference Centers.

To identify social vulnerability, the population distribution was analyzed through the São Paulo Index of Social Vulnerability, which classifies the Municipality of São Carlos into six groups of vulnerability, according to the population, 221,950 thousand inhabitants, in: extremely low, very low, low, medium, and high vulnerability⁽⁸⁾. The São Paulo Social Vulnerability Index considers socio economic and demographic dimensions that include education, income and age of the person in charge of the household⁽⁹⁾.

The five Centers of Reference of Social Assistance were identified as I, II, III, IV and V. Centers I, II and III were located in a region with high vulnerability, being I and II in urban area, corresponding to 12.9% of the total population. Center III, situated in the rural area, corresponded to 0.1% of the total population. Center IV covered regions with medium vulnerability and covered 5.7% of the total population and Center V, with very low vulnerability, was 59.0% of the total population⁽⁹⁾.

The convenience sample consisted of 247 elderly people enrolled in the Reference Centers of So-

cial Assistance. Firstly, a data survey was carried out, which consisted of access to all existing medical records on paper, where the families were registered and those with elderly members were selected, of whom 1,451 were registered in all the Centers. In possession of this information, name, age, date of birth and address were verified. It was decided not to perform a sample calculation and to visit the residences of the registered elderly.

679 (46.8%) were not eligible, because they were not found in the registration addresses, because they changed their address or because they resided in areas outside the coverage of the Centers. Of the 772 (53.2%) who were eligible, 447 (57.9%) corresponded to losses due to refusal, death, withdrawal or because the elderly were alone and had no understanding to answer the questions. Seventy-eight of the eligible respondents were caregivers who answered questions about care and overload. In the present study, only the interviews with the elderly were used.

The inclusion criteria were: to be 60 years of age or older, to be enrolled in one of the Centers and to understand the interview questions. The exclusion criterion was: to have a hearing or vision deficit that made it difficult to participate in the research. The interviews were conducted from Monday to Friday, during business hours, from August 2012 to August 2016. Data collection was performed in the households of the elderly, by previously trained evaluators, and started after acceptance and signature of the Free and Informed Consent Form. The average duration of each interview was approximately 45 minutes.

For data collection, the following instruments were used: sociodemographic questionnaire, previously constructed by the researchers, Edmonton Frailty Scale, Genogram and Eco-maps. The sociodemographic questionnaire was used to verify sex, age, schooling, marital status, race, current and previous occupation.

The Edmonton Frailty Scale was used to identify frailty, which is composed of nine domains: cogni-

tion, general health status, functional independence, social support, medication use, nutrition, humor, continence and functional performance, comprising 11 items. The maximum score is 17 points. Individuals who get zero to four points are considered non-frail; from 5 to 6 points, apparently vulnerable; from 7 to 8 present mild frailty; from 9 to 10, moderate frailty; and 11 or more points, severe frailty⁽¹⁰⁾.

The genogram was used to identify the composition of the members residing with the elderly, through the elaboration of the graphical representation, and the type of relationship of the elderly with the member(s), identified by close, distant or conflicting relationships, according to the interviewee's report. The Eco-map was adopted in order to track the number of community sites and/or equipment that were used by the interviewee, represented by a diagram⁽¹¹⁾.

For analysis of the data, a spreadsheet of the Excel program was elaborated and the statistical analysis was carried out with the statistical software Statistical Analysis System version 9.2, in a descriptive and univariate form. In the descriptive statistics, frequencies, means and standard deviation were calculated for categorical variables (gender, race, marital status, education, current occupation, frailty level and social vulnerability). Due to the absence of normal distribution of variables, verified by the Shapiro-Wilk and Kolmogorov-Smirnov tests, we opted for non-parametric tests. The Kruskal-Wallis test was used to estimate the differences between three or more groups of numerical variables. After a significant difference was found, Dunn post-hoc ($p < 0.05$) was used. Spearman's correlation coefficient was used to verify the correlation of frailty with social vulnerability. The level of significance was 5% ($\alpha \leq 0.05$).

The research was approved by the Research Ethics Committee of the Federal University of São Carlos, according to opinion n^o 72182/2012 and CAAE 00867312800005504.

Results

The sociodemographic characteristics of the 247 elderly participants in the study are presented in Table 1. Of the interviewees, 197 (79.8%) were females with an average age of 68.5 (standard deviation = 7.3) years. 152 (57.5%) were white, 109 (44.1%) were married, 151 (61.1%) were Catholics, 133 (53.85%) had 1 to 4 years of schooling and 137 (55%) were retired. Regarding the frailty, 103 (41.7%) did not present frailty and 161 (65.2%) participants lived in regions with high social vulnerability.

As to the evaluation of the composition of family arrangements, 48.1% of the elderly lived with first-generation relatives, 23.5% lived with third-generation relatives, 46.1% lived with multi-parental families and 1.2% with one-parent family.

When analyzing the frailty of the elderly and the type of relationship between people living under the same roof and having consanguineous ties, it was verified that 127 (49.5%) reported a “close” relationship, 49 (38, 6%) of them were frail. Regarding the relationship with the members in the same household without a blood relationship (spouse, daughter-in-law, son-in-law, step-son or stepchild), the majority (61.1%) reported a close relationship, 55 (36.4%) at some level, as presented in Table 2.

According to the Kruskal-Wallis test, there was no significant difference ($p=0.060$) between the level of frailty and the type of relationship between the relatives.

According to the Kruskal-Wallis test, there was a statistically significant difference between level of frailty and number of external links ($p=0.010$). According to Dunn’s *post-hoc* test, only the non-frail ($p=0.007$) difference was observed. In the other groups, apparently vulnerable and those with frailty at some level, no statistical difference was observed ($p<0.05$). It can be seen in Table 3 that the majority of the elderly with some level of frailty had no external links. Older people with three or more external links were apparently vulnerable.

Table 1 – Distribution of sociodemographic characteristics and level of frailty of the elderly enrolled in Reference Centers of Social Assistance

Variables	n (%)
Gender	
Female	197 (79.8)
Male	50 (20.2)
Age group (years)	
60-69	160 (64.8)
70-79	64 (25.9)
80-89	19 (7.7)
≥ 90	4 (1.6)
Ethnic group	
White	142 (57.5)
Black	69 (27.9)
Colored	35 (14.2)
Yellow	1 (0.4)
Marital status	
Married	109 (44.1)
Widower	94 (38.1)
Separated/Divorced	38 (15.4)
Not married	6 (2.4)
Religion	
Catholic	151 (61.1)
Evangelical	74 (29.6)
Others	16 (6.47)
Current Occupation	
Retired	137 (55.5)
Not retired	110 (44.5)
Schooling (years)	
Illiterate	45 (18.2)
1 to 4	133 (53.8)
5 to 8	35 (14.1)
>9	11 (4.4)
Frailty	
Not frail	103 (41.7)
Apparently vulnerable	53 (21.5)
Frail	91 (36.8)
Social vulnerability	
High (RCSA* I, II e III)	161 (65.2)
Average (RCSA IV)	56 (22.7)
Very Low (RCSA V)	30 (12.1)

*RCSA: Reference Center for Social Assistance

Table 2 – Distribution of the level of frailty of the elderly registered in the Centers of Reference of Social Assistance as to the type of relation existing between the people who lived under the same roof

Relationship Type	Levels of frailty					Total n (%)
	Not frail n (%)	Apparently vulnerable n (%)	Light n (%)	Moderate n (%)	Severe n (%)	
With blood bond	103(41.7)	53(21.4)	50(20.2)	30(12.1)	11(4.4)	247(100.0)
Not reported	48(46.6)	20(37.7)	24(48.0)	10(33.3)	2(18.2)	104 (42.1)
Near	51(49.5)	27(50.9)	26(52.0)	15(50.0)	8(72.7)	127
Close	1(1.0)	1(1.9)	-	-	-	2
Conflicting	2(1.9)	3(5.7)	-	5(16.7)	1(9.1)	11
More than a relationship	1(1.0)	2(3.8)	-	-	-	3
No blood relationship	48(46.6)	20(37.7)	24(48.0)	10(33.3)	2(18.2)	104 (42.1)
Not reported	36(34.9)	18(34.0)	18(36.0)	11(36.7)	3(27.3)	86(34.8)
Normal	-	-	-	-	1(9.1)	1(9.1)
Next	62(60.2)	34(64.1)	31(62.0)	17(56.7)	7(63.6)	151(61.1)
Close	-	1(1.9)	-	-	-	1(0.4)
Distant	1(1.0)	-	-	1(3.3)	-	2(4.3)
Conflicting	1(1.0)	-	-	1(3.3)	-	2(4.3)
More than a relationship	3(2.9)	-	1(2.0)	-	-	4(4.9)

Table 3 – Distribution of the level of frailty in relation to the number of external links of the elderly enrolled in Reference Centers of Social Assistance

Number of external links	Not frail n (%)	Apparently vulnerable n (%)	Light n (%)	Moderate n (%)	Severe n (%)	Total n (%)
None	5(4.8)	2(3.8)	8(16.0)	5(16.7)	5(45.4)	25(10.1)
1 to 2	53(51.5)	27(50.9)	28(56.0)	16(53.3)	2(18.2)	126(51.0)
>3	45(43.7)	24(45.3)	14(28.0)	9(30.0)	4(36.4)	96(38.8)
Total	103(41.7)	53(21.4)	50(20.2)	30(12.1)	11(4.4)	247(100.0)

As for the analysis of the relationship between the level of frailty and the amount of external links, the elderly who were apparently vulnerable had more external links. This relation was statistically significant ($p=0.007$).

Discussion

The present study presents some limitations, since the sample size may limit the generalization of the results, due to the fact that it included only the elderly enrolled in social assistance reference centers. New studies are suggested in vulnerable areas with frail elderly people to verify the type of social support received by them.

In the present study, the majority of the elderly belonged to the female gender. In fact, women have longer life expectancies, lower mortality rates due to external causes, less exposure to occupational hazards, consume less tobacco and alcohol, and seek more for social and health services when compared to men⁽¹²⁾. The greater prevalence of frailty in women stems from the fact that they live longer. Moreover, they are more economically dependent, are influenced by conditions

marked by sexual issues and have restricted social life⁽¹³⁾. There was a predominance of elderly people with low educational level, an indicator of risk to negatively impact the health of the elderly and cause adverse effects. Evidence indicates that low schooling may present mental health problems, chronic conditions and, consequently, be an end to frailty, in addition to social exclusion, less access to information and unfavorable socioeconomic conditions⁽⁵⁾.

Regarding the occupation, there was a predominance of retired elderly people. Retirements, pensions and benefits of the Brazilian government are the main sources of income and support for the elderly in the Brazilian population, which confirms the findings of the present study. In vulnerable settings, the elderly represents the source of income of the family nucleus. The literature points out that the concept of socioeconomic status among the elderly is broad and includes other factors, such as occupation, income, wealth and place of residence⁽¹⁴⁾. A study carried out with elderly individuals to assess the relationship of frailty with income in Europe found that the elderly with higher income had lower prevalence of frailty⁽¹⁵⁾.

This study evidenced that investigations with elderly people in situations of vulnerability amplify the evidence regarding the social problems that involve the linkage of income with the health condition and social well-being of the elderly. In this study, it could be noticed that the elderly users of the Reference Centers did not indicate the equipment as an external support link. Regarding the practical implications, the research findings can be adopted as a protection measure by professionals working in social assistance centers for the early identification of risks and health problems of the elderly, as a result of social vulnerability, based on a global assessment. In addition, the results can guide the redirection of public policies to protect the elderly that contemplate preventive actions and active participation in basic social care services.

Regarding the evaluation of frailty, similar data were found in the national and international literatu-

re, in which frailty in the elderly has a prevalence of approximately 33.0%⁽¹⁶⁾. A study carried out with elderly people attending basic care equipment in the interior of São Paulo interviewed 363 elderly people, of whom 27.3% presented frailty at some level⁽¹⁷⁾. Another study carried out with 247 elderly in the community in the interior of São Paulo obtained that 36.8% were frail, and the majority were married women⁽¹³⁾.

It was verified that the elderly had close relationship with the people who lived with them. As for the multigenerational family arrangement, a study shows that this type of family structure is currently a characteristic organization of the poorest Brazilian elderly population, being composed of children and grandchildren⁽¹⁸⁾. Investigations with elderly people enrolled in primary care services and different contexts of social vulnerability, found correlation with children and grandchildren, followed by spouses and friends, findings similar to those found in this study, households with multigenerational family arrangements⁽¹⁹⁾.

As for external linkages, in this study, most elderly people who did not have any links, presented some level of frailty, the elderly with three or more external links were not frail or apparently vulnerable. These data reflect the importance of mapping the families that need to be strengthened and oriented to provide support to the elderly, according to peculiarities. Thus, there is a need to expand and diversify the relational field of the elderly, since the greater the level of frailty, the greater the need for the links to be extended, when it comes to care issues⁽¹⁹⁾.

Social support refers to the various sources of help and resources obtained through social relationships, such as family, friends and other caregivers. On the other hand, external links are represented by the participation of the elderly in social, occupational or group activities^(2,13). Systematic review aimed at verifying the relationship between the social environment - network, support, social participation, subjective neighborhood experience and neighborhood cha-

racteristics - for the prevention or reduction of frailty, the relationship of social networks was presented as a way of reducing the level of frailty⁽²⁰⁾.

Through this study, the need for redirection of actions of Social Assistance Reference Centers for elderly and potential family caregivers, focusing on family support and support, is evidenced. In this context, the possibility of orientation and education for all the actors involved in the process of aging and frailty stands out. The family, because it is expressive social support, must maintain close relations, especially when the elderly person is frail. Generally, when the elderly do not have family support, the same seeks support in the external network as public services of health or care, religious institutions or the community itself.

It is necessary that the assistance teams become familiar with the conditions of aging and consider the offer of social support to the elderly, among them the care. Emphasis is given to the importance of recognizing the different dimensions of frailty and vulnerability, not only undermining health and social policies but being seen through other intersectoral policies and services, such as culture, sports, leisure, respecting the elderly and the ruling laws.

Conclusion

Elderly who have close relations with relatives did not present frailty. The majority of the elderly who do not have external ties presented some level of frailty.

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Collaborations

Jesus ITM and Zazzetta MS contributed in the design, analysis and interpretation of data. Orlandi AAS contributed to the relevant critical review of the intellectual content and approval of the final version to be published.

References

1. Cesari M, Landi F, Vellas B, Bernabei R, Marzetti E. Sarcopenia and physical frailty: two sides of the same coin. *Front Aging Neurosci.* 2014; 6:192. doi: <https://doi.org/10.3389/fnagi.2014.00192>
2. Andrew MK. Frailty and social vulnerability. *Interdiscip Top Gerontol Geriatr.* 2015; 41(1):186-95. doi: <https://doi.org/10.1159/000381236>
3. Cordeiro LM, Lima Paulino J, Bessa MEP, Borges CL, Leite SFP. Quality of life of frail and institutionalized elderly. *Acta Paul Enferm.* 2015; 28(4):361-6. doi: <http://dx.doi.org/10.1590/1982-0194201500061>
4. Vidigal FC, Ferrari RFR, Rodrigues DMMR, Marcon SS, Baldissera VDA, Carreira L. Satisfaction in caring for older adults with Alzheimer's: perceptions of the family caregivers. *Cogitare Enferm.* 2014; 19(4):708-15. doi: <http://dx.doi.org/10.5380/ce.v19i4.36739>
5. Santos-Orlandi AA, Brito TRA, Ottaviani AC, Rossetti ES, Zazzetta MS, Pavarini SCI. Elderly who take care of elderly: a study on the Frailty Syndrome. *Esc Anna Nery.* 2017; 21(1):e20170013. doi: <dx.doi.org/10.1590/0034-7167-2016-0474>
6. Hoogendijk EO, Suanet B, Dent E, Deeg DJ, Aartsen MJ. Adverse effects of frailty on social functioning in older adults: results from the Longitudinal Aging Study Amsterdam. *Maturitas.* 2016; 83:45-50. doi: <https://doi.org/10.1016/j.maturitas.2015.09.002>
7. Amendola F, Alvarenga MRM, Latorre MDRDD, Oliveira MADC. Family vulnerability index to disability and dependence (FVI-DD), by social and health conditions. *Ciênc Saúde Coletiva.* 2017; 22(6):2063-71. doi: <https://doi.org/10.1590/1413-81232017226.03432016>

8. Instituto Brasileiro de Geografia e Estatística. Indicadores sociais do município de São Carlos [Internet]. 2017 [citado 2018 jun 17]. Disponível em: <https://cidades.ibge.gov.br/brasil/sp/sao-carlos/panorama>
9. Fundação Sistema Educacional de Análise de Dados. Distribuição da população, segundo grupos do Índice Paulista de Vulnerabilidade Social (IPVS) [Internet]. 2010 [citado 2018 jun 17]. Disponível em: <http://www.iprs.seade.gov.br/ipvs2010/view/index.php>
10. Fabrício-Wehbe SC, Schiaveto FV, Vendrusculo TR, Haas VJ, Dantas RA, Rodrigues RA. Cross-cultural adaptation and validity of the "Edmonton Frail Scale-EFS" in a Brazilian elderly sample. *Rev Latino-am Enfermagem*. 2009; 17(6):1043-9. doi: 10.1590/S0104-11692009000600018
11. Wright LM, Leahey M. *Enfermeiros e famílias: guia para avaliação e intervenção na família*. São Paulo: Roca; 2012.
12. Wendt CJK, Aires M, Paz AA, Fengler FL, Paskulin LMG. Elderly families of South of Brazil in the Health Strategy. *Rev Bras Enferm* 2015; 64(3):406-13. doi: <http://dx.doi.org/10.1590/0034-7167.2015680305i>
13. Jesus ITM, Orlandi AAS, Grazziano ES, Zazzetta MS. Frailty of the socially vulnerable elderly. *Acta Paul Enferm*. 2017; 30(6):614-20. doi: <http://dx.doi.org/10.1590/1982-0194201700088>
14. Andrew MK. Frailty and social vulnerability. In: Rockwood K, Theou O, organizadores. *J frailty in aging*. Halifax: Karger; 2015. p.186-95.
15. Wallace LM, Theou O, Pena F, Rockwood K, Andrew MK. Social vulnerability as a predictor of mortality and disability: cross-country differences in the survey of health, aging, and retirement in Europe (SHARE). *Aging Clin Exp Res*. 2015; 27(3):365-72. doi: <https://doi.org/10.1007/s40520-014-0271-6>
16. Mata FAF, Pereira PPS, Andrade KRC, Figueiredo ACMG, Silva MT, Pereira MG. Prevalence of frailty in Latin America and the Caribbean: a systematic review and meta-analysis. *PLoS One*. 2016; 11(8):e0160019. doi: <https://doi.org/10.1371/journal.pone.0160019>
17. Zazzetta MS, Gomes GAO, Orlandi FS, Gratão ACM, Vasilceac FA, Gramani-Say K. Identifying frailty levels and associated factors in a population living in the context of poverty and social vulnerability. *J Frailty Aging*. 2017; 6(1):29-32. doi: 6.2016. jfa/14283.10/org.doi.dx://http
18. Browne-Yung K, Ziersh A, Baum F. 'Faking til you make it': social capital accumulation of individuals on low incomes living in contrasting socio-economic neighbourhoods and its implications for health and wellbeing. *Soc Sci Med*. 2013; 85:9-17. doi: <https://doi.org/10.1016/j.socscimed.2013.02.026>
19. Souza RA, Alvarenga MRM, Amendola F, Silva TMR, Yamashita CH, Oliveira MAC. Vulnerability of families of elderly citizens cared for by the Family Health Strategy. *Rev Bras Enferm*. 2015; 68(2):244-52. doi: 10.1590/0034-7167.2015680209i
19. Luchesi BM, Brito TRP, Costa RS, Pavarini SCI. Social support and intergenerational contact: studying elderly patients with cognitive alterations. *Rev Eletr Enf*. 2015; 17(3):1-8. doi: <http://dx.doi.org/10.5216/ree.v17i3.25597>
20. Duppen D, Van der Elst MC, Dury S, Lamotte D, Donder L. The social environment's relationship with frailty. *J Appl Gerontol*. 2016; 1:733464816688310. doi: <https://doi.org/10.1177/0733464816688310>