









## Assessment of resilience profile and associated factors in community elderly

*Avaliação do perfil da resiliência e fatores associados em idosos comunitários*

*Evaluación del perfil de resiliencia y factores asociados en personas mayores de la comunidad*

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### ABSTRACT

**Objective:** to identify the prevalence of resilience in older community members, and its relationship with social support and life satisfaction. **Method:** in this cross-sectional study of 159 older adults, data were obtained using Resilience, Social Support and Life Satisfaction scales. **Results:** low resilience was found in older adults who were female, older, single, lived alone, could not read and write, did not work, received up to 1 minimum wage, were dissatisfied with life, and had strong social support. Resilience was 4.72 times more likely to be low in dissatisfied older adults. Positive correlations were found between resilience and social support ( $p = 0.022$ ), and between life satisfaction and resilience ( $p = 0.000$ ). **Conclusion:** resilience was related to social support and life satisfaction.

**Descriptors:** Aging; Personal Satisfaction; Social Support; Resilience, Psychological.

### RESUMO

**Objetivo:** identificar a prevalência de resiliência em idosos comunitários e sua relação com o apoio social e a satisfação com a vida. **Método:** estudo transversal, realizado com 159 idosos. Os dados foram obtidos por meio das escalas de Resiliência, Apoio Social e Satisfação com a vida. **Resultados:** apresentaram baixa resiliência os idosos do sexo feminino, com idade mais avançada, que não sabem ler e escrever, solteiros, residem sozinho, não trabalham, recebem até um salário mínimo, estão insatisfeitos com a vida e apresentam alto apoio social. Os idosos insatisfeitos têm 4,72 vezes mais probabilidade de apresentar baixo nível de resiliência. Foram encontradas correlações positivas entre a resiliência e o apoio social ( $p=0,022$ ) e entre satisfação com a vida e a resiliência ( $p=0,000$ ). **Conclusão:** a resiliência esteve relacionada com o apoio social e satisfação com a vida.

**Descritores:** Envelhecimento; Satisfação Pessoal; Apoio Social; Resiliência Psicológica.

### RESUMEN

**Objetivo:** identificar la prevalencia de la resiliencia en los miembros mayores de la comunidad y su relación con el apoyo social y la satisfacción con la vida. **Método:** en este estudio transversal de 159 adultos mayores, los datos se obtuvieron mediante escalas de Resiliencia, Apoyo Social y Satisfacción con la Vida. **Resultados:** se encontró baja resiliencia en adultos mayores que eran mujeres, mayores, solteros, vivían solos, no sabían leer ni escribir, no trabajaban, recibían hasta 1 salario mínimo, estaban insatisfechos con la vida y tenían un fuerte apoyo social. La resiliencia tenía 4,72 veces más probabilidades de ser baja en los adultos mayores insatisfechos. Se encontraron correlaciones positivas entre resiliencia y apoyo social ( $p = 0.022$ ), y entre satisfacción con la vida y resiliencia ( $p = 0.000$ ). **Conclusión:** la resiliencia se relacionó con el apoyo social y la satisfacción con la vida.

**Descriptorios:** Envejecimiento; Satisfacción Personal; Apoyo social; Resiliencia Psicológica.

## INTRODUCTION

The number of older adults in the world population has significantly increased in recent years. These changes in population demographics are noticeable in developed countries and those in development phase, as is the case of Brazil. Currently, in the country, it is estimated that there are nearly 11 million people over the age of 60, and projections indicate that, in 2025, Brazil will occupy the sixth place in the world in the number of people within this age group<sup>1</sup>.

Demographic changes are related to the aging process, which is characterized as a phenomenon that can increase the biological, economic, and social risks and the adversities. Parallel to this, there is a decrease in the personal and social resources that make it possible to control or cope with these changes, this reduction in the elements for handling adverse situations has a negative influence, increasing the chances of developing harms to psychological well-being and to good quality of life<sup>2</sup>.

Advanced age involves changes in social roles and positions, in the need to deal with the loss of people in the family, and in the ability to compensate for the loss of functional skills, looking for adapted ways to carry out daily activities<sup>3</sup>. Changes in physical and mental health, functional capacity, increased fragility and loss of physical mobility

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cause changes in the motivation of the older adults for social contacts, as well as a reduced involvement in social, organizational, educational, productive and leisure activities is directly related to decreased life satisfaction<sup>4</sup>. However, countless older adults maintain good levels of functioning and psychological and physical well-being, which in some cases are incompatible with their financial, social and health conditions<sup>2</sup>.

The ability to overcome stressful situations that can result from the aging process is known as resilience, which is a positive personality characteristic that regulates the negative effects of stress and promotes adaptation to them, being understood as a good result, despite the problems, or the ability to recover from adversity<sup>5</sup>.

Resilience is structured by elements that can help the autonomy of the older adults, as well as in increasing self-esteem and positive social orientation, promoting coping strategies, these are the elements: "*physiological adaptation, psychological adaptation and habituation, sense of self-efficacy, capacity for behavioral self-regulation and ability to reinterpret negative experiences or to use them as positive learning*"<sup>6:43</sup>.

Another factor that can contribute to emotional balance in the older adult is social support<sup>7</sup>. The promotion of quality of life in older adults includes social support work, both formal and informal. The informal support network is where the sources of emotional nutrition are identified, usually the most sought after by the older adults due to the relationships that are most important to them; the formal support network is usually composed of professional and institutional service bodies. Social support can be affective (close relationships), instrumental (assistance in daily activities), informational (transfer of information and assistance in decision-making) and social interaction<sup>8-10</sup>.

Social support can have beneficial effects on general well-being and life satisfaction<sup>11</sup>. Life satisfaction is an individual assessment of someone that, in general, their life corresponds to their expectations. It is positively associated with the feeling of self-esteem, sociability and well-being<sup>7</sup>.

In view of the above, the present study aimed to identify the prevalence of resilience in community older adults and its correlation with social support and satisfaction with life.

## METHOD

This is a quantitative, descriptive and cross-sectional study; part of a survey entitled "Impact of multidimensional interventions on older adults registered in primary health care and their caregivers" conducted from 2016 to 2017 with users of three teams from a Family Health Unit in the city of Recife, Pernambuco.

In view of a population of 1,209 older adults, the sample was calculated using the finite population formula for epidemiological studies, using a 95% confidence level and an 8% error power. Based on this calculation, the resulting sample consisted of 159 older adults. Sampling was random and of the systematic type. The number of older adults was determined by proportionality across the three teams of the health unit. Out of every five older adults in the list of each team, one was selected and invited to participate in the research. The study included 159 older adults, aged 60 or over, living in the community, and users of an Integrated Family Health Unit in Recife-PE.

The criteria adopted for exclusion were the following: a) people with hearing and sight deficits; b) patients with Alzheimer's disease and Parkinson's disease in a severe stage; and, c) older adults in terminal stages. The criteria were evaluated based on the information reported by the older adult and/or family members about the possible complications that compromised the participation of the older adult in the application of the research with the evaluated variables.

In data collection, a structured questionnaire was used on the sociodemographic conditions (gender, age, marital status and housing) and economic conditions (monthly income, retirement, pension, sufficiency of money for survival). Scales validated for the Brazilian scenario were used to measure resilience<sup>12</sup>, social support<sup>13</sup> and the level of satisfaction with life<sup>14</sup>.

The Resilience Scale is an instrument used to measure levels of individual resilience, considered by these authors as a positive psychosocial adaptation in the face of life events. The instrument consists of 25 items, measured using a 7-point *Likert* scale ranging from 1 (strongly disagree) to 7 (strongly agree). The minimum score for this scale is 25 points, reaching a total of 175 points. High scores are indicative of greater resilience, so that the older adults classified as having low resilience obtained a score of  $\leq 130$  points<sup>12</sup>.

The Social Support Scale (MOS) of the study was developed in the United States, and is called the Social Support Survey of the Medical Outcomes Study (MOS). Consisting of 19 items, for each item, the frequency that considers each type of support available is indicated, reaching a total of 95 points. A 5-point *Likert*-type scale ranging from 1 (without



any social support) to 5 (maximum social support) is used, covering five functional dimensions of social support of the emotional, informational, material, affective, and positive social interaction types. The older adults who obtained 34 points or less were classified as having low social support<sup>13</sup>.

The Satisfaction With Life Scale (SWLS) consists of 5 items, ranging from 1 (strongly disagree) to 7 (strongly agree); thus, the subject is free to complete and evaluate, as they want, the various domains of their life in general, and can be used with adults in all age groups and cultural levels<sup>14</sup>. A cut was made in the median to classify the participants as satisfied and dissatisfied with life, with a cutoff point of 28 points being adopted.

The older adults were approached in their homes by a Community Health Agent and a pair of students. During the visit, they were informed about the objective of the research, and asked about their willingness to participate. Those who agreed to participate in the study signed the Free and Informed Consent Form (FICF); subsequently, the data collection instruments were applied.

The collected data were entered in double entry by independent typists in SPSS version 21.0 and the discrepancies were reviewed and corrected by a data collection coordinator. Subsequently, they were analyzed using descriptive (absolute and relative frequency, measures of central tendency and dispersion) and inferential (Pearson's Chi-square test; Fisher's Exact Test; Spearman's Correlation Test; Multiple Logistic Regression Model) statistics.

According to the Kolmogorov-Smirnov normality test, the variables showed normal distribution; therefore, the correlation test used was the parametric one. The criterion for entering variables in the model was having a p-value < 0.2 in the bivariate analysis. For all the tests, the level of significance was set at 5% (p-value < 0.05).

The resilience scale demonstrated high reliability according to Cronbach's alpha (0.811).

The research was approved by the institution's Ethics and Research Committee (ERC) under opinion number: 1,413,599/2016. The guidelines established for research involving human beings are complied with, according to the ethical aspects recommended by Resolution 466/2012 of the National Health Council.

## RESULTS

The sample under study presented prevalence of male older adults (76.7%; n=122), with a mean age of 79.5 years old (SD=9.19). Most of the older adults know how to read and write (66.7%; n=106), live with someone (86.2%; n=137), are single (66%; n=105), have an income of up to one minimum wage (71.1%; n=113), and do not work (79.2%; n=126).

The mean resilience score was 135.61 (SD=15.6), which shows that most of the respondents have a high level of resilience. When dichotomized, this variable presents a higher frequency of high resilience level (67.9; n=108), compared to the low level of resilience (32.1%; n=51). The investigation of the association between resilience and sociodemographic data is shown in Table 1.

**TABLE 1:** Association between resilience and sociodemographic and economic data (n=159). Recife, Pernambuco, Brazil, 2017.

Variables		Resilience		p-value
		Low n (%)	High n (%)	
Gender	Female	14 (37.8)	23 (62.2)	0.391*
	Male	37 (30.3)	85 (69.7)	
Categorized age	Less than or equal to 70	27 (31.4)	59 (68.6)	0.842*
	Over 70	24 (32.9)	49 (67.1)	
Knows how to read and write	Yes	33 (31.1)	73 (68.9)	0.719*
	No	18 (34.0)	35 (66.0)	
Marital status	Married/Living together	14 (25.9)	40 (74.1)	0.234*
	Single/Widowed/Divorced	37 (35.2)	68 (64.8)	
Housing arrangement	Lives alone	9 (40.9)	13 (59.1)	0.339*
	Lives with someone	42 (30.7)	95 (69.3)	
Categorized income	Up to 1 minimum wage	39 (34.5)	74 (65.5)	0.352*
	More than 1 minimum wage	12 (26.1)	34 (73.9)	
Currently working	Yes	6 (22.2)	21 (77.8)	0.259*
	No	42 (33.3)	84 (66.7)	
Satisfaction with life	Dissatisfied	39 (47.0)	44 (53.0)	<0.001*
	Satisfied	12 (15.8)	64 (84.2)	
Social support	Low	1 (20.0)	4 (80.0)	0.476**
	High	50 (32.9)	102 (67.1)	

Note: \*Pearson's chi-square test; \*\*Fisher's exact test.

The results of the chi-square tests revealed that there was no association between resilience and the sociodemographic and economic data. Low resilience was presented by the female older adults (37.8%; n=14), over 70 years old (32.9%; n = 24), who do not know how to read and write (34.0%; n=18), are single (35.2%; n=37), live alone (40.9%; n=9), do not currently work (33.3%; n=42) and receive up to 1 minimum wage (34.5%; n=39).

Regarding the other variables, it was observed that low resilience prevailed among the older adults dissatisfied with life (47.0%; n=39) and who have high social support (32.9%; n=50). The life satisfaction variable was associated with resilience ( $p < 0.001$ ).

According to the bivariate analysis, variables with a p-value  $< 0.2$  were inserted in the logistic regression model for the low level of resilience. Older adults who are dissatisfied with life are 4.72 times more likely to have a low level of resilience (p-value  $< 0.001$ ).

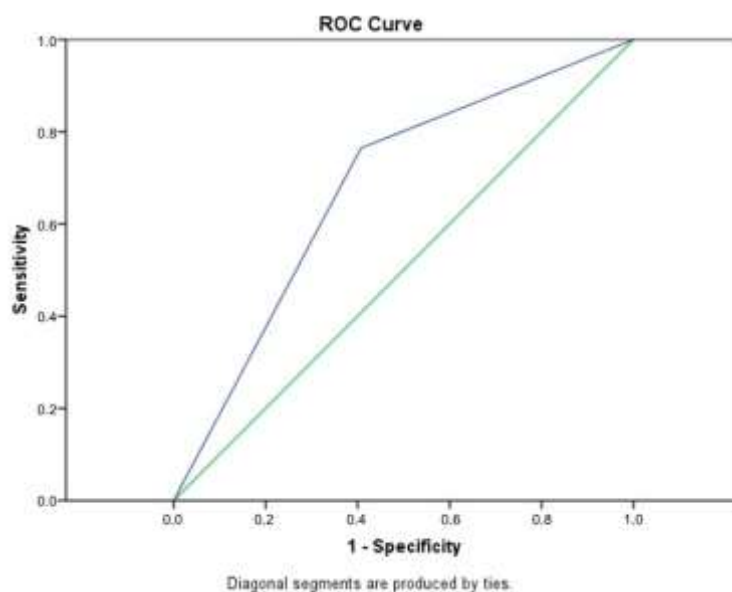
The correlation between resilience and other variables is shown in Table 2 and in Figure 1.

**TABLE 2:** Variables associated with low resilience through logistic regression (n=159). Recife, Pernambuco, Brazil, 2017.

Variables	OR	CI	p-value*
<b>Satisfaction with life</b>			
Dissatisfied	4.72	[2.22-10.03]	<0.001
Satisfied	1	-	-

Adjusted R<sup>2</sup>: 0.153

Note: OR = Odds Ratio; CI = Confidence Interval; \*Significance of the test.



**FIGURE 1:** Receiver Operating Characteristics curve according to the regression model for the low level of resilience among community older adults. Recife, Pernambuco, Brazil, 2017.

The area of the Receiver Operating Characteristics (ROC) of the logistic regression model was analyzed. The area value was 0.67 (CI=0.59-0.76; p-value  $< 0.001$ ) for the low level of resilience.

Correlations between resilience and the sociodemographic and economic data (age, number of children, monthly income, social support and life satisfaction) were analyzed, as showed in Table 3.



**TABLE 3:** Correlation between resilience and sociodemographic, economic, social support and life satisfaction data. Recife, Pernambuco, Brazil, 2017.

Variables	Resilience score	
	Correlation coefficient	p-value*
Age	-0.60	0.460
No. of children	0.089	0.269
Monthly income	0.031	0.701
Social support	0.184	0.022
Satisfaction with life	0.445	0.00

**Note:** \*Pearson's correlation test.

There was a correlation between social support and resilience ( $r=0.184$ ;  $p=0.022$ ), and between resilience and satisfaction with life ( $r=0.445$ ;  $p=0.00$ ).

## DISCUSSION

Scores above 146 on the resilience scale indicate people with a high level of resilience<sup>12</sup>. According to the results presented by the study, the older adults surveyed presented this profile. Such results suggest that these individuals adapt well to changes in life and health. This does not mean that they do not suffer during the aging process, but that they face adversity in a positive way by developing successful aging<sup>15-16</sup>.

Thus, the aging process must be seen beyond old age because, in order for it to be successful, it is necessary that the older adult remains active and healthy. The ability to remain active and to not develop depressive symptoms in the face of adversity, in addition to assisting in adaptive coping and social integration, is a characteristic factor for assessing depression, physical health, life satisfaction, functional disability and apathy<sup>17</sup>.

The development of resilience in aging promotes opportunities to seek well-being and to win over the challenges imposed by age, in addition to obtaining resources that improve their quality of life. In this process, there is a strengthening of positive traits and of the relationship of the older adults in the community and/or in the social group in which they live<sup>18</sup>.

With regard to gender and age, male older adults aged less than or equal to 70 years old have higher concentration of the level of resilience. In contrast, a study carried out with 164 older adult women who either practiced physical activity or not also demonstrated a high resilience score in female older adults<sup>19</sup>. A review study pointed out that resilience is not always associated with gender; however, older adult women are generally more resistant than men, and longer-lived older women than younger women, soon after the loss of a partner<sup>20</sup>.

A study carried out in Parnaíba-PI, São Paulo-SP, Campinas-SP, and Ivoti-RS, with 1,451 older adults without cognitive impairment suggestive of dementia, showed greater participation of older adults aged 65 to 74 years old and of women, suggesting that, in addition to women being more participative and adhering more to self-care and health proposals, men could be working or participating in leisure activities outside the house<sup>10</sup>.

Another important factor presented in the results was the high rate of literate older adults, despite not being related to resilience, which reveals that, to be resilient, the older adult does not need to have a higher level of education. A study conducted with 540 older adults reported those who had a low level of education had a negative impact on health-related phenomena, and increased frailty<sup>21</sup>, consequently impairing their quality of life.

Married older adults presented a low level of resilience compared to those who are single; these results are opposed to what is stated in the literature, which reports the presence of a partner associated with positive mental health outcomes, increased self-esteem and greater possibility to face adversity<sup>22</sup>. In this context, the older adults' self-esteem is stimulated through social coexistence, be it at work, leisure, or in community life. This social involvement contributes to good psychological health and is a protective factor against negative feelings, depression, stress, and physical and cognitive limitations<sup>23-24</sup>.

No association was found between resilience and housing arrangement, but the data indicates that most of the older adults interviewed live with their family members and children, showing a probability of receiving affective support. In the present study, the older adults who live with someone had a high level of resilience.



Regarding monthly income, current work and resilience, no association was found between monthly income and the level of resilience among the older adults, and no association either between the older adults who currently work and the level of resilience. In this context, most of the retired older adults have a monthly income of up to one minimum wage. This result points out that the level of resilience can be a characteristic of older adults with both high and low economic conditions. There are not many studies relating resilience and monthly income, since they use economic and mental health indicators<sup>25</sup>.

During the aging process, satisfaction with life depends mainly on social support; in this context, it is necessary that the individual feels inserted in a family, as well as socially involved with other people participating in activities and other resources that facilitate their adaptation in this process of coping<sup>23-24</sup>.

A directly proportional and positive correlation was found between social support and resilience. A survey conducted with 247 older adults, 101 men and 146 women, enrolled at the Health Center in the Guarda district, most of whom were married and with a mean age of 76.74 years old, showed that 59.5% of the older adults interviewed (n=147) stated that they did not need social support<sup>9</sup>.

The social/emotional contact of the older adult is not only restricted to peripheral contacts; it can also occur with close people, which further contributes to an improvement in the health condition and well-being<sup>24</sup>. Thus, the older adults who have strong and effective social ties tend to enjoy better physical and mental health, evaluating support in a highly positive way. However, men participate less in social activities and generally restrict social contacts to their partner and other close family members, while women have a broader social network and offer more support than men<sup>10</sup>.

Most of the older adults were satisfied with their life; a study carried out with older adults in China also found similar results, and determined some factors correlated with this satisfaction, such as: gender, schooling, place of residence, self-assessment of the patient, mental state, instrumental activities of daily living, regular physical examination, perceived economic condition, housing arrangement, and the number of social services available in the community<sup>26</sup>. As in a study carried out with older adults from Piauí<sup>2</sup>, this research recorded a statistically significant association between satisfaction with life and resilience, finding that older adults with greater capacity for resilience are also more satisfied with their life.

Regarding the health assessment of the older adult, it is necessary to focus carefully on social involvement, analyzing the health conditions and functional incapacity (limitations in daily activities) that affect the older adults and which can contribute to social isolation, restricting them to the domestic environment, thus reducing their chances of enjoying the advantages of participating in social activities, which is associated with an increased risk for mortality, morbidity, physical and cognitive disability and depression<sup>4</sup>.

The research instrument developed to assess the level of resilience obtained high levels of reliability. It is concluded that the evaluated items have a degree of confidence regarding the real opinion of the older adults interviewed related to the items of the resilience scale under study.

As collection occurred in only one capital of the Northeast, data cannot be generalized across the country, resulting in the need to develop new studies on resilience in the older adults, analyzing the family and social context in which they are inserted, individual potentialities in spite of age, comparing with groups of institutionalized older adults, and using longitudinal approaches. The cross-sectional study does not allow us to state which variable influenced the other, only that they are related.

The results of this research contribute to the knowledge about the phenomenon of resilience in the older adult, improving the assistance of nursing professionals to this population. It also favors the development of future actions to promote health and maintain the quality of life of these individuals, and the provision of care in an individualized way taking into account the singularities of each human being.

## CONCLUSION

The older adults surveyed showed a high level of resilience and social support, and most of them also stated that they are satisfied with life. The correlation between resilience and factors such as satisfaction with life and social support was directly proportional, that is, despite the losses and suffering of the aging process, the older adults are able to remain resilient and overcome the adversities of this stage of life to the extent that they have good levels of social support and satisfaction with life.



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