

The capacity for resilience and social support in the urban elderly

Edivan Gonçalves da Silva Júnior ¹
Maria do Carmo Eulálio ¹
Rafaella Queiroga Souto ²
Kalina de Lima Santos ¹
Rômulo Lustosa Pimenteira de Melo ³
Adrianna Ribeiro Lacerda ⁴

Abstract Resilience is the human capacity to adapt to adverse life situations; it can be enhanced by the action of various protective factors and one of the most important of these is social support. The objective of this study was to identify associations between resilience and sociodemographic variables (gender, age, income, marital status, housing arrangements and religion), as well as correlations between resilience and social support in a sample of 86 urban elderly people. A sociodemographic questionnaire, the Resilience Scale and the Social Support Scale were used. The mean age was 75.7 years (SD = 5.35), with a predominance of women (72.1%, n = 62). A high level of resilience (M = 134.37, SD = 16.6) and a moderate level of social support (M = 17.36, SD = 2.77) were observed in the elderly people. There was only a significant association between resilience and religion ($\chi^2 = 0.30$; p = 0.027). Only a weak and positive correlation was observed between the factor of independence and determination on the Resilience Scale with social support (p = 0.005). Linear regression analysis revealed that social support was not a predictive variable for the capacity of resilience in the researched group. It is necessary to create new research instruments that permit a more precise study of the protective effects of social support regarding the capacity for resilience in the elderly.

Key words Resilience, Psychological, Social support, Aging

¹ Departamento de Psicologia, Centro de Ciências Biológicas e da Saúde, Universidade Estadual da Paraíba. Av. Baraúnas 351, Bodocongó. 58109-753 Campina Grande PB Brasil. edivangoncalves.junior@gmail.com

² Programa de Pós-Graduação em Enfermagem, Universidade Federal do Rio Grande do Norte. Natal RN Brasil.

³ Programa de Pós-Graduação em Psicologia Social, Universidade Federal da Paraíba. João Pessoa PB Brasil.

⁴ Faculdade de Ciências Médicas de Campina Grande. Campina Grande PB Brasil.

Introduction

Resilience is currently considered to be the ability of an individual to cope with the adversities of life and to be able to successfully respond to such adversities by using the adaptive processes that are required in potentially stressful situations. Thus, undergoing stressful events, which is configured for the individual as a possibility to adapt to and overcome these experiences, is considered to be a fluid/flexible property that is associated with human development¹⁻⁵.

Wiles *et al.*⁶ argue that even in the case of illness and disability, resilience may be present and, consequently, individuals are able to confront the vulnerabilities arising from aging or the social and environmental conditions that impact on this process. Thus, although there are often setbacks and risks to health, some older people can develop successfully, without the occurrence of diverse pathologies or sequelae that seriously compromise their autonomy^{1,7}.

Resilience has been widely discussed as an interactive and multifactorial process that involves individual aspects, the environmental context, the quantity and quality of vital events, and the presence of protective factors⁸. Studies have shown that protective factors are elements that are considered to be indispensable when dealing with resilience because they contribute to minimize negative or dysfunctional effects in events that expose individuals to risk situations; they can also modify the personal responses of such individuals in adverse circumstances^{7,9,10}.

Laranjeira⁹ highlights social support and family support as important protective factors for individuals. However, the aforementioned author warns that the protective or risk character of a factor depends, above all, on the qualitative relational context in which it develops. Thus, although protective factors have, to some extent, been identified by studies they will be peculiar to individuals; they also depend on the context and meaning of each element in the way each factor is perceived by the elderly person.

Social support refers to aspects of interpersonal relationships in the relational sphere of life and it is frequently identified in the literature as such¹¹. It is a means of assessing the level of social integration, or isolation, of elderly people, as well as the nature of the support that they receive¹².

The aging process, which is individual, multidimensional and multi-determined in nature, needs to be evaluated in relation to the positive

aspects that can contribute to healthy aging. The study of resources that are linked to the management of life difficulties by the elderly in their life context is a possible method to devise feasible strategies that can effectively meet the needs arising from the process of human aging. For these reasons, the objective of this study was to identify the associations between resilience and sociodemographic variables (gender, age, income, marital status, housing arrangements and religion), as well as the correlations between resilience and social support.

Methods

This is a descriptive, cross-sectional quantitative study. This study is linked to a longitudinal study entitled "The profile of fragility and quality of life in elderly residents in Campina Grande, PB", which was funded by the SUS Research Program (PPSUS). The collection sites for the data were census sectors in the municipality of Campina Grande, PB, Brazil.

This research was approved by the Research Ethics Committee (CEP) of the State University of Paraíba. The established guidelines for research involving human beings were met, in accordance with Resolution 466/2012 of the National Health Council¹³.

A total of 86 elderly people living in Campina Grande, PB were selected from the database of the FIBRA Study (an acronym for The Fragility of Brazilian Elderly People) to participate in the study. This multicentric study was carried out in 2009 and it aimed to identify the conditions of fragility in urban elderly people, aged 65 or over, who were recruited from the community.

The 86 participants in this study were drawn from a sample of 249 elderly individuals without cognitive impairment who participated in the FIBRA study; these individuals were evaluated according to the Mini Mental State Examination (MEEM). The 249 elderly people were contacted and 119 agreed to participate in the study. Of these, only 86 scored above the established cut-off points and the MEEM was re-applied five years after the first application.

The exclusion criteria were the same as those adopted in the FIBRA study and were as follows: elderly people with severe cognitive impairment who were using wheelchairs and/or who were, either temporarily or permanently, bedridden; those with severe sequelae related to strokes;

those with severe or unstable Parkinson's disease; those with severe hearing or vision deficits; and those who were in the terminal stage of life. The criteria were evaluated through reports from the elderly person themselves or their relatives regarding the possible complications that might compromise their participation in the application of the set of variables that were studied.

Instruments and measurements

For the data collection, a structured questionnaire was used regarding the following sociodemographic conditions: gender; age; marital status; education; religion; housing arrangements (whether living alone, with a partner, children or grandchildren); and economic factors (monthly income, pension, sufficiency of monthly income for survival and family leadership).

The MEEM was used to perform the cognitive screening of the elderly people who were surveyed. The MEEM was developed by Folstein et al.¹⁴ and is composed of 30 items, whose total score ranges from 0 to 30 points. The scores that are obtained are weighted according to the level of education of the participants and there are established cut-off points¹⁵. Thus, considering these assumptions, the following cut-off points were adopted: 17 for the illiterate; 22 for elderly people with education between one and four years; 24 for those with education between five and eight years; and 26 for those with nine or more years of education.

The resilience scale created by Wagnild and Young⁴ was also used. This scale measures levels of individual resilience, which is considered by the aforementioned authors as being a positive psychosocial adaptation in the face of life events. The scale consists of 25 items that are measured by a seven-point Likert scale ranging from 1 (totally disagree) to 7 (totally agree). The minimum score for this scale is 25 points and the maximum is 175 points. High scores are indicative of greater resilience. In this study, validation by Pesce et al.¹⁶ was used. The latter developed a cross-cultural adaptation and psychometric evaluation of the Wagnild and Young⁴ scale for the Brazilian population.

The measurement of social support can be defined as the perception of individuals regarding the quality, frequency and adequacy of the support that is provided, considering their needs¹⁷. In this study, a reduced version of the Interpersonal Support Evaluation List (ISEL) was used.

In its original English version, this instrument comprises 40 items and has an internal reliability of 0.88¹⁸. The five-item version (items 5, 7, 18, 22 and 38) is responded to by a four-point Likert-type scale (1 - never; 2 - sometimes; 3 - mostly; 4 - always). The scoring varies from 5 to 20 points and the evaluation, from division into quartiles, results in the following intensities of perceived social support: 5-15 (low level of social support); 16-17 (moderate level of social support); 18-19 (high level of social support); and 20 points (very high level of social support)¹⁹.

Procedures for collecting and analyzing data

The data collection was conducted by 14 trained students who were distributed among the courses of psychology ($n = 11$) and physiotherapy ($n = 3$). The elderly people were visited in their homes, advised about the objectives of the research, and questioned about their willingness to participate in the study. After the elderly person agreed to participate in the study and signed the informed consent form (TCLE), the instruments of data collection were applied.

The data were tabulated and analyzed using version 18 of the SPSS statistical program. Descriptive analyses (relative and absolute frequencies, mean, standard deviation, minimum and maximum) and inferential analyses (chi-square test, Pearson's correlation and linear regression) were performed. The chi-square test was used to verify the association between resilience levels with the sociodemographic and economic data (gender, age, marital status, housing arrangements, sufficiency of monthly income to survive, family leadership and religion) and with levels of social support. Pearson's correlations were performed in relation to the resilience score and age, and also between the social support score and the factors of resolution of action and values, and self-confidence and the ability to adapt to situations. Spearman's correlations were performed between the resilience score, social support and family income; and between the factor of independence and determination with social support.

Finally, linear regression analysis was performed between the total resilience score and the total social support score. Linear regression analysis was also performed between the mean of the three factors of the resilience scale and the total social support score. The significance level adopted for the statistical tests was 5% ($p < 0.05$).

Results

In the sample of the elderly people that were studied ($n = 86$), the mean age was 75.5 years ($SD = 5.35$, $Min = 70$, $Max = 97$) and women were the majority (72.1%, $n = 62$). The majority of the elderly people were married (48.8%, $n = 42$), with 76.7% ($n = 66$) retired and 40.7% ($n = 35$) having attended elementary school. The majority claimed to believe in some type of religion (87.2%, $n = 75$).

The evaluation of the resilience scores suggests a high level of this resource in the elderly people who were studied ($M = 134.37$; $SD = 16.6$), with factor 1 (resolution of actions and values) being highlighted ($M = 5.57$; $SD = 0.70$). A moderate level of social support was found in the studied sample ($M = 17.36$, $SD = 2.77$). The analyses of the frequency of the data revealed a satisfactory evaluation of the indices of resilience and social support by the participants, as shown in Table 1.

The results of the chi-square tests revealed a significant association between resilience and the variable of religion (believed in a religion). No statistically significant associations were found between resilience and the other sociodemographic and economic data, as shown in Table 2.

The correlations between the total score of the resilience scale and the variables of age, total

income, and total score for social support were analyzed and are they set out in Table 3. No significant correlations between these variables were found. When correlating the factors of the resilience scale with the total social support score, a weak and positive correlation between the independence and determination factor and the total social support score ($r = 0.298$; $p = 0.005$) was found.

The results obtained from the linear regression analyses showed that the total social support score did not contribute significantly to explain the variations in the total resilience score, not even among the three factors of the resilience scale that were evaluated, as can be observed in Table 4.

Discussion

This study found a high resilience index in the elderly people that were surveyed, which confirms that individuals can maintain an adapted form of aging. Other research has found similar results with respect to the evaluation of resilience indices in the elderly^{7,20-25}.

A study of resilience in a group of 176 Chilean elderly people who were considered to be functionally independent revealed that 84.4% of the participants had high levels of resilience²⁴. The authors attributed some characteristics of the participants' lifestyle (sexual activity, recreational activities and mood) to the fact that they were related to higher levels of resilience.

Considering the maintenance of the capacity for resilience, it is possible to see this as a positive coping process, in which the elderly do not succumb to biological, socioeconomic and psychosocial risk factors but maintain regenerative conditions that help them to face the process of decline involved in the aging process^{1,8}. Such assumptions corroborate reports in the literature that define aging as an adaptive process that depends on the interaction of genetic, biological and socio-cultural factors²⁶.

The fact that in the present study there was no association between resilience and the socio-demographic and economic variables, with the exception of the variable of religion, highlights the need to investigate living conditions that can interfere in the development of adapted aging, with particular attention to the structural aspects in which the elderly live, such as socioeconomic and environmental measures, as well as inexorable aspects such as gender and age.

Table 1. Distribution of means and standard deviation (continuous variables), frequencies and percentages (categorical variables) of scales of resilience and social support. Campina Grande, PB, 2014. ($N = 86$).

Variables	M	SD
Resilience	134.37	16.6
Resilience factors		
Resolution of actions and values	5.57	0.70
Self-confidence and ability to adapt to situations	5.33	0.80
Independence and determination	5.13	1.76
Social support (total score)	17.36	2.77
	n	%
Levels of resilience		
Low	0	0
Moderate	24	27,9
High	62	72,1
Levels of social support		
Low	16	18.6
Moderate	19	22.1
High	26	30.2
Very high	25	29.1

Source: research data, Campina Grande, 2014.

Table 2. Distribution of resilience levels according to sociodemographic and economic variables. Campina Grande, 2014 (N = 86).

	Resilience		χ^2	P
	Moderate n (%)	High n (%)		
Gender				
Male	07 (29,2)	17 (70.8)	0.26	0.871
Female	17 (27.4)	45 (72.6)		
Marital status				
Married	13 (31)	29 (69)	0.378	0.538
**Single	11 (25)	33 (75)		
Religious				
Yes	24 (32)	51 (68)	*0.30	0.027
No	0 (0)	11 (100)		
Attend a religious center				
Yes	22 (32,4)	46 (67.6)	3.19	0.074
No	2 (11.1)	16 (88.9)		
Religious belief				
Slightly religious	7 (36.8)	12 (63.2)	0.548	0.760
Religious	11 (28.2)	28 (71.8)		
Very religious	6 (35.3)	11 (64.7)		
Live alone				
Yes	02 (25)	06 (75)	*1.00	0.847
No	22 (28.2)	56 (71.8)		
Live with children				
Yes	18 (27,7)	47 (72.3)	0.006	0.938
No	06 (28,6)	15 (71.4)		
Live with grandchildren				
Yes	13 (31.7)	28 (68.3)	0.562	0.453
No	11 (24.4)	34 (75.6)		
Main person responsible for supporting family				
Yes	17 (25.4)	50 (74.6)	0.968	0.325
No	07 (36.8)	12 (63.2)		
Have enough income to support daily life				
Yes	11 (26.2)	31 (73.8)	0.120	0.729
No	13 (29.5)	31 (70.5)		

Note: *Fisher's exact test; **the single, widowed and divorced elderly people were grouped together to perform the analyses.

Source: research data, Campina Grande, 2014.

Table 3. Resilience in relation to sociodemographic and social support variables. Campina Grande, 2014 (N = 86).

Correlations	Age	p value	Total income	p value	Total social support	p value
Total resilience	0.60*	0.582	-0.01**	0.919	0.167**	0.124
Age	-		0,35**	0.747	0.065**	0.553
Total income			-		0,080**	0,466
Resolution of action and values	0.087*	0.427	-0.054**	0.623	0.99**	0.365
Independence and determination	-0.092**	0.399	0.089**	0.413	0.298**	0.005
Self-confidence and ability to adapt to situations	0.057*	0.604	0.113**	0.298	0.107**	0.329

Note: * Pearson's correlation; **Spearman's correlation.

Source: research data, Campina Grande, 2014.

Table 4. Linear regression of resilience and social support. Campina Grande, 2014 (N = 86).

	VD	B	β	F	R ²	p value
Total social support	Total resilience	122.607	0.113	1.087	0.013	0.300
	Resolution of action and values	5.364	0.48	0.193	0.002	0.661
	Independence and determination	2.868	0.205	3.698	0.042	0.058
	Self-confidence and ability to adapt to situations	4.839	0.098	0.821	0.010	0.368

Source: research data, Campina Grande, 2014.

Reports in the literature present some inconsistencies regarding the evaluation of socio-demographic variables in groups of elderly individuals considered as having high or low levels of resilience capacity^{20,22,23,25} and such studies have emphasized the fact that evaluation measures should be re-thought so that it is possible to better understand this construct and its determinants.

In the present study, a significant association was found between resilience and the variable of religion, in which a greater number of elderly people with a high resilience capacity were found among those who believed in some form of religion. In a study of elderly women²⁷, a significant association between spirituality/religiosity and high levels of resilience was observed. The authors of the aforementioned study discuss the potential role of spirituality/religiosity in promoting successful aging. Another study²⁸, which involved Mexican elderly people, highlighted spiritual and religious beliefs as being coping strategies in relation to suffering and the latter were also associated with better perceptions of health.

Vieira³ argues that religion, spirituality and resilience can be considered as closely interrelated domains in view of their relationship with conditions that are bound up with coping with the adversities of life. These domains may also be connected to each other by the idea of having a meaning and a greater purpose in life, which is why they appear as possibilities for people to overcome the difficulties and challenges that they experience.

In addition to investigating resilience indices, the present study evaluated social support and social networks based on the intensity of social support and measurements of the housing arrangements of the elderly participants, respectively. Such factors are a way of ascertaining social support as a potentially protective factor in relation to the capacity for resilience in the elderly. No significant associations were found between the data regarding housing arrangements (living

with partners, children and grandchildren) and the resilience indices. However, the data highlighted the large proportion of elderly people living with their families, a situation that has also been observed in surveys that have studied the growth of multigenerational households^{17,29-32}.

To complement this data, the prevalence of elderly people with a high level of resilience capacity distributed among those who did not live alone and lived with their children should also be highlighted. As Reis et al.³³ point out, cohabitation is a strategy that can benefit the elderly; however, in order to affirm the association between this type of family arrangement and the resilience of the elderly it is also necessary to consider the quality of the relationships that are established among family members who live with the elderly in order to evaluate the effects of such support on their well-being¹⁷.

According to Witter and Camilo³², the family is a resource that is increasingly present and necessary in the lives of the elderly; it is capable of providing a scenario that promotes well-being in old age. On the other hand, the large proportion of multi-generational households found in the present study were also characterized by a majority of participants who considered themselves as being primarily responsible for the household's livelihood.

Regarding this phenomenon, the demographer Amélia Camarano³⁰ observes that such households are "nests that are filled with children and grandchildren" in which the income of the elderly assumes an important role in terms of family support because a large number of elderly people maintain the household, even after their children marry. Therefore, it is necessary to reflect on the extent to which the presence of children and other family members is a potential protective factor for the elderly, or if, alternatively, what is at stake is simply the offer of material support to children and grandchildren without due reciprocity between established relationships^{17,34}.

The distribution of the scale of social support, based on the intensity of the responses to the items, revealed a higher concentration of a high level of social support. The results were similar to the average level of social support found in relation to participants of a multicentric study of Brazilian elderly people, most of whom mentioned a high level of social support³⁵. Such conditions may be related to the fact that a large majority of the elderly people who were surveyed shared their residence with relatives (spouses, children and grandchildren) and, consequently, were more likely to receive support in relation to affective, instrumental and informational needs, for example.

Obtaining satisfactory levels of perceived social support may reveal a favorable situation for the elderly people who were surveyed who, although they managed their homes and divided the responsibility for rearing their grandchildren, achieved a positive evaluation of their relational sphere of life. Thus, it is believed that the perception of a good level of intensity of social support indicates a positive situation for the elderly population^{6,12,17,23,34-37}.

Differently from other reports in the literature, no correlation was found between social support and resilience indices in the elderly people who were surveyed in the present study. However, the perspectives that defend a dynamic and procedural character regarding the capacity for resilience indicate social support as an important protective factor which is capable of helping to maintain adapted aging^{6,8,38,39}. Couto et al.⁴⁰ point out that, faced with the adversities of life, the quality of the support network is relevant in boosting resilience and maintaining well-being in old age.

Only a weak and positive correlation was observed between the independence and determination factor and the score for total social support in the present study. At this point, it is necessary to stress the importance of having a certain level of reciprocity in the exchange of relationships so that elderly people feel independent and motivated to pursue their own activities and also play an active role in providing support to others. As Serbim et al.⁴¹ argue out, there is more reciprocity in this process when the elderly person is able to reciprocate, to a certain extent, the support that can be offered, to a large extent, by family members. According to Pelcastre-Villafuerte et al.³⁷, elderly people with the best health conditions are able to perceive more positively the exchange of support that occurs in contact

with their relatives. On the other hand, when this exchange of support is hampered by conditions related to health, functionality and dependency, or even the scarce resources available to the elderly, they may be more affected by feelings of depression and sadness.

The relationship between the elderly and their family group is of great emotional complexity and it is associated with their physical and mental health. For different generations to have a healthy relationship they need to have a spirit of solidarity. Rabelo and Neri⁴² stress that it is essential for the elderly to be aware of their conditions and to have their families as a point of support considering the fact that age-related losses require much more care.

Batistoni et al.¹⁷ argue that the study of perceived social support and social networks is related to the types of home arrangements of the elderly. Regarding the configuration of household arrangements, determinants of socio-demographic and economic nature, as well as health indicators, will influence the structure of established relationships and the roles of members within these arrangements⁴³. Even though currently there are a greater proportion of elderly people sharing homes with their children, grandchildren, sons-in-law and daughters-in-law etc, no type of domestic arrangement will automatically guarantee the quantity and quality of social support that is required by elderly people¹⁷.

It should be emphasized that, although the influence of social support is discussed in the evaluation of resilience indices, a lack of correlation between these variables was found in a study by Ferreira et al.⁷, who observed only moderate and positive correlations between resilience and self-esteem. In a study of 84 institutionalized and non-institutionalized elderly people, Henriqueto²³ found positive correlations between resilience and social support; however, after analyzing the linear regression of the data the latter author concluded that social support in the sample in question did not present statistical evidence regarding the correlation between social support and the capacity for resilience. Based on this, Henriqueto²³ argues that resilience is linked to a diversity of protective factors, which, taken together, contribute to balancing the action of risk factors. We will now discuss the need to improve the measurements that are used to assess resilience and social support in the elderly.

This issue is related to the complexity that surrounds the measurement of resilience. As Reppold et al.⁴⁴ point out, the ability to actually

measure resilience remains a controversial issue. Furthermore, Rutter⁴⁵ argues that some elements can temporarily act as protective factors in certain risky situations, or have a neutral or negative effect when there are no situational risks.

Regarding the sample of the present study, it should be noted that those who participated did not present serious health conditions with significant impairments of functionality (such as not being bedridden, not being wheelchair-bound, not having severe cognitive impairment, or severely impaired vision or hearing for example), which might have been expected to result in satisfactory assessments of resilience. Thus, it is considered that the lack of a particular circumstance of risk or specific health outcomes in the studied group may have hampered relations between the domains of social support and resilience, in the sense that no situations were mentioned that could lead the elderly people to direct their current life context to certain needs that arise in adverse contexts and which supposedly contribute to the need for the evaluation of resilience and social support. This limitation in the present study indicates that, as well as measuring resilience, variables should also be measured that make it possible to infer the states of health or life contexts in circumstances of a good capacity for resilience, or even due to the deficiency of this capacity in the elderly, in order to measure levels of social support and social networks.

The cross-sectional approach adopted in this research limited the study of inferences about the studied phenomena. Furthermore, the size of the sample restricted the development and the analyses that were performed.

Conclusions

There was a high capacity for resilience in the elderly people who were studied, which can be interpreted as a successful method of confronting the adversities of the aging process.

Religion was the only variable among the sociodemographic data used in this study which

showed a significant association with resilience. It is therefore necessary to take into account the fact that this resource is extremely important in coping with the adversities of life and, together with resilience, it can result in a sense of adjustment and balance in old age.

The assessment of perceived social support revealed that the elderly people reported a high level of this resource. This may have been because the majority of those who participated in the study lived in multigenerational households in which it is possible to obtain greater sources of support and interaction with family members.

Most of the participants in this study considered themselves as being the main person responsible for the sustenance of the homes in which they lived, which reveals a certain autonomy of the elderly in terms of their support for their children, grandchildren or other relatives with whom they lived. However, this issue requires further study because it is known that in the process of contributing with their limited resources to support other family members, some elderly people may overlook factors which are essential for their own health care.

Social support did not prove to be a predictive variable regarding variations in the resilience capacity of the elderly people who were surveyed. This made it difficult to confirm the theoretical assumptions in the literature that repeatedly highlight the direct effects of social support and social networks in the promotion and empowerment of resilience. This is a failing that is still present in national and international studies and it means that more precise tools need to be developed to help to tackle the factors of social support and resilience, which are highly interrelated. It is also necessary to carry out qualitative research in order to provide a deeper analysis of the issues dealt with in this study. More precise results regarding the relationship between these variables will make it possible to develop intervention strategies that can affect the relational spheres of individuals and thereby facilitate the processes of psychosocial adaptation in old age.

Collaborations

EG Silva Júnior collaborated in the conception and analysis of the article, interpretation of data and writing of the article. AR Lacerda collaborated in research and methodology. KL Santos and RLP Melo contributed to the writing of the article and interpretation of the data. MC Eulálio and RQ Souto were responsible for the critical revision of the intellectual content and final approval of the version to be published, as a guarantee of the accuracy and integrity of any part of the work.

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