

ORIGINAL ARTICLE

Resilience, functional capacity and social support of people with stroke sequelae

Resiliência, capacidade funcional e apoio social de pessoas com sequelas de acidente vascular encefálico

Raquel Janyne de Lima¹ , Cleane Rosa Ribeiro da Silva² , Tatiana Ferreira da Costa³ , Kaisy Martins de Albuquerque Madruga² , Cláudia Jeane Lopes Pimenta² , Kátia Neyla de Freitas Macedo Costa² 

ABSTRACT

Objective: To investigate the relationship between resilience, functional capacity and social support of people with stroke sequelae. **Method:** Cross-sectional study, conducted with 108 individuals with sequelae of stroke, registered in Family Health Units, of the municipality of João Pessoa, Paraíba, Brazil. The instruments used were: Resilience Scale, Barthel Index and the Social Support Scale. For analysis, descriptive and inferential statistics were used. **Results:** There was a higher frequency of females (57.4%), 60 years old or more (59.2%), with partner (47.2%) and caregiver (76.6%). The participants presented more frequently the level of moderate resilience (64.8%), functional dependence (93.6%) for performing daily activities and medium social support (48.2%). It was verified that the greater the functional capacity and social support, the greater the resilience. **Conclusion:** Functional capacity and social support are predictors of resilience of people with sequelae of stroke.

Descriptors: Nursing; Stroke; Activities of Daily Living; Social Support; Resilience; Rehabilitation.

RESUMO

Objetivo: Investigar a relação entre a resiliência, a capacidade funcional e o apoio social de pessoas com sequelas de acidente vascular encefálico. **Método:** Estudo transversal, realizado com 108 indivíduos com sequelas de acidente vascular encefálico, cadastrados em Unidades de Saúde da Família, do município de João Pessoa, Paraíba, Brasil. Os instrumentos utilizados foram: Escala de Resiliência, Índice de Barthel e Escala de Apoio Social. Para análise, utilizou-se estatística descritiva e inferencial. **Resultados:** Houve maior frequência do sexo feminino (57,4%), 60 anos ou mais (59,2%), com companheiro (47,2%) e cuidador (76,6%). Os participantes apresentaram mais frequentemente o nível de resiliência moderada (64,8%), dependência funcional (93,6%) para realização das atividades diárias e médio apoio social (48,2%). Foi verificado que quanto maior a capacidade funcional e o apoio social, maior a resiliência. **Conclusão:** A capacidade funcional e o apoio social são preditores da resiliência de pessoas com sequelas de acidente vascular encefálico.

Descritores: Enfermagem; Acidente Vascular Cerebral; Atividades Cotidianas; Apoio Social; Resiliência Psicológica; Reabilitação.

¹Brazilian Navy Accounts Audit – João Pessoa (PB), Brazil. E-mail: raqueljanine@hotmail.com

²Federal University of Paraíba – João Pessoa (PB), Brazil. E-mails: cleane_rosas@hotmail.com, kaisyjp@hotmail.com, claudinhajane8@hotmail.com, katiacyla@yahoo.com.br

³Federal University of Pernambuco – Vitória de Santo Antão (PE), Brazil. E-mail: tatxianaferreira@hotmail.com

How to cite this article: Lima RJ, Silva CRR, Costa TF, Madruga KMA, Pimenta CJL, Costa KNFM. Resilience, functional capacity and social support of people with stroke sequelae. Rev. Eletr. Enferm. [Internet]. 2020 [cited on: _____];22:59542. Available at: <https://doi.org/10.5216/ree.v22.59542>.

Received on: 07/17/2019. Accepted on: 08/06/2020. Available on: 09/20/2020.

INTRODUCTION

The rapid demographic and epidemiological transition process has contributed to a change in the profile of disease in the population, generating an increase in chronic diseases. Recent epidemiological data indicate that among these diseases, cerebrovascular diseases, especially stroke, are considered the second largest cause of death in the world, and Brazil is the Latin American country with the highest mortality rates⁽¹⁾.

The clinical manifestations comprise a wide variety of motor, hearing, visual, intellectual and neurological deficits. In addition, these subjects are exposed to physical, psychological and social discomfort related to the sequelae of the stroke, treatment and rehabilitation^(2,3).

When the patient affected by strokes returns home after being discharged from hospital, he or she may be dependent on others to perform daily life activities (DAA). Functional disability portrays various changes in these people's lives, such as difficulty in performing self-care activities, changes in their family role, social and work participation⁽⁴⁾, which can influence adaptation and suitability for their new living conditions.

Studies show that most people affected by strokes become functionally dependent and experience low self-esteem, social isolation, anxiety and depression, which have a negative impact on recovery, quality of life and survival^(4,5). Confronting the adversities imposed by the disease can bring great suffering, however, it is perceived that some people manage to overcome difficulties and are capable of using these events as an instrument for their personal growth^(4,6). This way of acting can be related to resilience.

The term resilience is derived from physics, referring to the properties of a material that returns to its initial form after having suffered an elastic deformation stress⁽⁷⁾. In relation to the human being, the concept of resilience is a construct widely studied by Psychology, being defined as an ability of an individual to adapt positively in the face of adversities, traumas, tragedies or threats⁽⁸⁾.

Resilience is not only discussed as an innate attribute, but as an interactive and multifactorial process involving individual aspects, environmental context and the presence of protective and risk factors⁽⁹⁾. One of the factors that can be considered as risk factors for impaired resilience is the lack of social support, which is understood as a dynamic process aimed at satisfying people's needs and providing resources, and can have as main sources family and health professionals⁽⁷⁾.

The effectiveness of the support network is fundamental for the rehabilitation of the individual who has suffered strokes, since it helps to reduce psychopathological symptoms and acts to promote autonomy, independence, coping capacity and adaptation to the limitations arising from the disease⁽¹⁰⁾. In this sense, it is evident that the individual's resilience is

directly influenced by the provision of a support network and support for overcoming adversity⁽⁶⁾.

Considering the increased incidence of strokes and the prevalence of disabilities resulting from this bill of review⁽⁵⁾, it is important to know the elements that provide a better living condition for these people, such as resilience. This construct has become the focus of research in national and international scientific production in the area of health and nursing^(2,9). However, there is a lack of studies addressing resilience in this population, mainly related to functional capacity and social support.

Evidence of this relationship can contribute to improving the quality of care by identifying factors that influence the ability of patients with stroke sequelae to cope with adversity. Thus, it will be possible for health professionals, among them the nurse, to direct the development of a care plan considering not only the biological aspects, but also the psychosocial ones, which can favor recovery and rehabilitation.

In view of the above, the aim is to investigate the relationship between resilience, functional capacity and social support of people with sequelae of brain stroke.

METHOD

This is a cross-sectional study, conducted with people who had sequels of strokes, registered in Family Health Units (USF), in the municipality of João Pessoa, PB, Brazil, between April and October 2016. The health care network of this municipality is composed of 194 USF, managed in an organizational manner, through five Health Districts. The selection of units was made at random, being raffled 10 from each Sanitary District, totaling 50 units.

The population of the study was made up of people affected by strokes who lived in João Pessoa/PB. The sample was calculated from the total number of hospital admissions in the last six months prior to collection, using data from the Department of Information Technology of the Single Health System⁽¹¹⁾, corresponding to 149 hospital admissions.

The inclusion criteria were: to be 18 years of age or older, to be registered in a USF and to have at least one type of sequel from the stroke, reported by the patient or caregiver himself. It was decided to investigate adults and the elderly, since the number of strokes in young people has increased over the years. The exclusion criteria were: to have some dementia, cognitive retardation or mental illness diagnosed and to show alterations in communication, hearing or memory, reported by a relative or caregiver, since these conditions could compromise the collection of data.

The sample size was defined using the calculation for finite populations with known proportions, based on an error margin of 5% (Error=0.05) with 95% reliability ($\alpha=0.05$,

which provides $Z_{0.05/2}=1.96$) and considering a participant proportion of 50% ($p=0.5$), totaling 108 individuals.

For the selection of participants, the nurses of each USF were contacted, and a list of patients who suffered strokes and had sequelae was requested. It should be noted that the interview was conducted in the participant's own home because the study population had physical limitations, making locomotion difficult.

The data collection was carried out by the researcher and two previously trained scientific initiation students. Initially, the community health agent (CSA) scheduled with the participant the best day and time for the visit. On the scheduled day, the research team was accompanied by the ACS to provide guidance on the objectives of the study, request participation by signing or fingerprinting the Informed Consent Term and conduct the interview. There were no refusals to participate in the study and seven individuals were excluded.

The interviews took place with 108 patients who suffered some stroke sequel, using four instruments: sociodemographic data (gender, age group, presence of partner, schooling and presence of caregiver), Resilience Scale, the Barthel Index and Social Support Scale. The socio-demographic data used in the study were defined on the basis of a search in the literature in order to identify the main elements for the characterization of the population with sequelae of strokes.

The Resilience Scale adapted and validated for Brazil by Pesce et al.⁽¹²⁾, which has 25 items, whose answers range from 1 (I totally disagree) to 7 (I totally agree), was used and divided into three factors: Resolution of actions and values (15 items), Independence and determination (4 items) and Self-confidence and ability to adapt to situations (6 items)⁽¹²⁾.

The final results range from 25 to 175 points, however, as a result of the scale not presenting a specific ranking for the resilience scores, describing only that a score equal to or higher than 147 indicated high resilience, it was decided to distribute the values in the form of quartiles. Thus, Low Resilience was defined as the values up to 111, Moderate Resilience from 112 to 146 and High Resilience greater than or equal to 147⁽¹²⁾.

The Barthel Index was chosen because it is comprehensive, easy to apply, validated in Brazil⁽¹³⁾, and the most widely used worldwide to assess functional capacity through AVD. The scores range from 0 to 20, distributed as follows: 0 to 4 (very severe dependent), 5 to 9 (severe dependent), 10 to 14 (moderate dependent), 15 to 19 (mild dependent) and 20 (independent)⁽¹³⁾.

For the evaluation of Social Support, the Medical Outcomes Study scale was used, adapted to the Brazilian reality and validated⁽¹⁴⁾, composed of five dimensions: material, affective, emotional, information and social interaction, with 19 questions in total. There are five answers for each question:

1 (never), 2 (rarely), 3 (sometimes), 4 (almost always) and 5 (always), the final results range from 19 to 95 points⁽¹⁴⁾.

Due to the fact that the scale does not present a specific classification for social support, in this study the minimum and maximum values shown by the participants were used (39 and 95 points, respectively) and distributed in quartiles. In this type of calculation, the values are divided into three quartiles with four equal parts of 25%, where quartile 1 (Q1) corresponds to the lower 25%, quartile 2 (Q2) delimits the 50% of the values and quartile 3 (Q3) covers the higher 25%. Thus, scores of up to 67 points correspond to low social support (Q1); between 68 and 90 points, medium social support (Q2); and higher or equal to 91 points, high social support (Q3).

The data was stored in a spreadsheet structured in the Microsoft Excel Program with double typing, in order to ensure reliability in its compilation. Later, they were imported into the *Statistical Package for the Social Sciences* (SPSS) version 22.0 software and analyzed by means of descriptive and inferential statistics, with a 5% significance level ($p\leq 0.05$). Resilience was considered as a dependent variable and functional capacity, social support and its dimensions as independent.

The Kolmogorov-Smirnov test was used to check the normality of the variables. The Spearman correlation test was performed between resilience and quantitative independent variables, as they were not normally distributed. Considering the variables that presented $p\leq 0.10$ in the Spearman correlation test, a multiple linear regression analysis was performed to determine the predictors associated with resilience. The variables with $p\leq 0.05$ were considered and retained in the final model.

The research was developed in accordance with the ethical aspects involving human beings, recommended by Resolution No. 466/2012 of the National Health Council. There was approval by the Research Ethics Committee of the Health Sciences Center of the Federal University of Paraíba, under CAAE No. 51438115.9.0000.5188 and opinion No. 1.418.615 of 2016. The participants were duly informed about the justification of the research, its purpose, risks and benefits, procedures to be performed, guarantee of secrecy and confidentiality of the information provided and signed the Free and Informed Consent Term.

RESULTS

Of the 108 participants, the majority were women (57.4%), aged 60 or over (59.2%), married or in a stable union (47.2%), with one to eight years of study (44.4%), practicing the Catholic religion (65.7%), retired (69.2%), received up to R\$ 880 monthly (48.6%), were responsible for the main income of the house (63.9%), reported that the

income was not sufficient to meet the needs (57.9%), lived with family members (86.1%) and had a caregiver (76.6%), this being a family member (91.5%).

A greater presence of people who smoked or consumed alcoholic beverages (86.1 and 91.5%, respectively), did not engage in physical activity (83.2%) and did not participate in leisure activities (61.7%), perceived their own health as regular (60.2%), who suffered the stroke more than a year ago (77.8%), used some device to aid locomotion (60.2%), and had as main sequels of the disease motor changes (37.2%) and muscle weakness (36.8%).

In relation to the assessment of functional capacity, there was a predominance of individuals with severe to very severe functional dependence (93.6%) (20.4%). It was observed that most patients had medium (48.2%) and low (25.9%) social support. The participants in this survey presented more frequently the level of moderate resilience (64.8%), followed by low (28.7%) and high (6.5%).

Resilience showed a positive and statistically significant correlation with functional capacity ($r=0.317$; $p<0.001$), total social support ($r=0.285$; $p=0.003$) and emotional support dimensions ($r=0.347$; $p=0.001$) and information ($r=0.305$; $p=0.001$) (Table 1).

Multiple linear regression analysis showed that functional capacity, general social support and emotional and information dimensions maintained a significant association with the total score of resilience. It was shown that an extra point in the functional capacity score increases resilience by an average of 34.3% and in social support it increases resilience by 32.3%. Analyzing resilience with the dimensions of social support separately, it was identified that an extra point in the emotional dimension increases

resilience on average by 32.8%, and in the information dimension by 36.3% (Table 2).

DISCUSSION

In the performance of AVD's, a predominance of addicted individuals was observed, which may be justified by the impairment caused by the sequelae of the CVA, such as hemiplegia, dysphagia, facial paralysis, muscle weakness, sensitivity deficits, visual alterations, aphasia, oral dyspraxia and speech dyspraxia, dysarthria and cognitive deficit⁽⁴⁾. In this aspect, the importance of the nurse in the planning of discharge still in the hospital environment and the continuity

Table 1. Correlation of resilience between functional capacity and social support in people with sequelae of brain stroke. João Pessoa, PB, 2016.

	Resilience	
	r	p-value
Functional capacity	0.317	<0.001
Total social support	0.285	0.003
Material dimension	0.006	0.095
Affective dimension	0.182	0.052
Emotional dimension	0.347	0.001
Information dimension	0.305	0.001
Social interaction dimension	0.181	0.061

Source: survey data, 2016.

Table 2. Multiple linear regression between resilience with functional capacity and social support in people with brain stroke sequelae. João Pessoa, PB, 2016.

Variable	Average (SD)	Beta	Error standard	CI95%	p-value
Functional capacity	13.30 (5.09)	0.343	0.147	0.599–1.932	0.000
Social support	77.08 (15.64)	0.323	0.141	0.182–0.592	0.000
Material dimension	94.72 (9.94)	-0.152	0.003	0.224–0.646	0.100
Affective dimension	81.29 (22.11)	-0.086	0.036	-12.399–0.978	0.478
Emotional dimension	81.71 (23.10)	0.328	0.186	2.379–8.295	0.001
Information dimension	78.56 (26.14)	0.363	0.207	2.641–7.797	0.001
Social interaction dimension	69.44 (28.92)	0.211	0.173	0.300–3.190	0.593

Source: research data, 2016.

95%CI: 95% confidence interval.

of home care, adapting him to the situation of dependence, with the removal of architectural barriers and guidance to health care and rehabilitation⁽⁴⁾ are pointed out.

The participants presented a medium to low level of social support, which represents a worrying situation, since the support perceived as available and satisfactory contributes significantly to the maintenance and physical and psychological integrity of the individual⁽¹⁵⁾. The family is the main source of support, however, unpreparedness is often observed to face the patient's dependence and to establish an effective intervention plan, which may overload the caregiver and bring harm to physical, emotional and social aspects⁽¹⁶⁾.

A study conducted with stroke survivors in the interior of northeastern Brazil showed the presence of care fragilities in hospital care during the clinical changes of the disease, which was potentialized in the return to the home and community context, especially due to the lack of health guidance and the lack of support/support⁽¹⁷⁾. In view of this, the existence of flaws in the health system and the fragmentation of care provided by professionals, with the offer of assistance focused solely on the disease rather than on the vulnerabilities of the individual and his or her family^(16,17), can be perceived.

Most of the participants showed a moderate level of resilience, which could be related to the fact that they are older people, who, to the detriment of their past experience, attribute a different meaning to adversities, trying to positively assess the challenges imposed, by seeking and maintaining pleasurable activities, adopting effective coping strategies and using the available social support⁽⁸⁾.

Resilience is an important factor in coping with difficulties related to chronic diseases and their treatment. In this sense, it is perceived that the mechanisms that form resilience are fundamental for the daily life of stroke survivors, as they need continuous care for the rehabilitation of sequelae, with the performance of physiotherapy, speech therapy, nutritional control, drug treatment, among others^(3,18), aiming at minimizing complications and preventing the occurrence of a new event.

With regard to the occurrence of an AVE, there are many factors involved from the moment of the event to the continuity of care in the home that can influence the capacity of the affected individual to confront, such as the functionality and acceptance of the family, the financial resources, the level of education of those involved, spiritual beliefs and the availability of health services and information⁽⁴⁾.

A research conducted with 120 patients with cardiovascular diseases in the state of São Paulo showed a lower resilience among individuals with lower self-esteem and higher levels of depression and anxiety⁽¹⁹⁾. For people with sequelae from strokes, low resilience may interfere in the motivation to

adhere to drug treatment, physiotherapy, changes in eating habits, and the performance of leisure and social activities.

It is worth pointing out that the term resilience has been incorporated in the Systematization of Nursing Care, being inserted in three diagnoses of the NANDA 2018–2020 Classification of Nursing Diagnostics: Impaired Resilience, Impaired Resilience Risk and Improved Resilience Disposition, which are part of the Confrontation/Tolerance to Stress Domain⁽²⁰⁾. Therefore, it is essential that the nurse identifies these diagnoses when carrying out the care of the patient with sequelae of strokes, as it makes it possible to carry out an assistance planning according to the specificities of each one and his/her family.

Functional capacity was a predictor of the resilience of people with EVA sequelae, which demonstrates that the greater the independence, the greater the resilience, fundamental to maintaining functionality and subjective well-being⁽⁸⁾. Corroborating this statement, a study carried out in Korea, in which a physical exercise program was implemented in individuals with chronic hemiplegia due to strokes in a rehabilitation hospital, found that after eight weeks, the participants presented, in addition to functional improvements, higher levels of resilience⁽²¹⁾. Thus, it is understood that the capacity to carry out daily activities has repercussions on the process of confrontation, and therefore multi professional actions are essential to provide activities that favor the independence of this population.

This study also showed that perceived social support predisposed resilience, especially the offer of support in the emotional dimension. This shows that providing support after the stroke is fundamental for the rehabilitation and consequent increase in resilience of these individuals, preventing mental illnesses that are commonly associated with depression⁽³⁾.

In a hospital in China, resilience and social support were linked to better coping with women with infertility⁽²²⁾, as well as in a study conducted in the same country, which confirmed that providing support and higher levels of resilience were associated with improving the quality of life of adults and older people with cancer⁽²³⁾.

Social support is related to the development of resilience through behavioral and psychological mechanisms such as increased self-esteem, motivation to adopt healthy habits, the use of effective strategies to confront a stressful event, and increased management of emotions⁽²⁴⁾. Moreover, the support of close relatives also favors resilience, as the relationships established in the home environment act as a stimulus to overcome vulnerability and fragility in the face of negative feelings, strengthening the construction of resilience^(22,23).

It should be noted that such support needs to be offered by the various existing networks (family, friends, health professionals and/or religious institutions) in order to improve the health of this group. Among the strategies that favor this

factor, one can mention the increased intensity of contact between patients and their relatives, friends and professionals, permanent evaluation and counseling⁽¹⁶⁾.

In relation to the dimensions of social support, those that had a statistically significant correlation with the levels of resilience were emotional and information. The emotional support dimension concerns receiving demonstrations of trust, empathy, affection, love, listening and interest, the information support being the availability of advice, suggestions and information⁽¹⁴⁾.

There is evidence that emotional support is an important factor in health recovery⁽²⁵⁾, with the family playing a key role in this, as its protection and support reduce social isolation and contribute to a better quality of life. As for information support, it can be considered as a mechanism of participation and citizenship, offering this population the knowledge of rights, assisting the decision-making strategies for choosing and evaluating treatment and rehabilitation^(15,16).

Social support contributes to well-being by reducing vulnerability to difficult^(10,15,16) and often unexpected situations. Thus, it is possible to perceive the importance of social support for the development and/or strengthening of resilience in people who have suffered EVA, contributing significantly to the process of overcoming barriers and divergent events throughout life.

It is essential to involve health professionals, highlighting the nurse, throughout the care process, from hospitalization to home follow-up, in order to assess the patient and the risk factors for impaired resilience⁽⁷⁾, drawing up a care plan that involves the patient, the family and the community, in order to promote recovery, minimize disabilities and foster social integration^(3,16). Therefore, this study has important implications for nursing practice and research, as it points out ways to improve the approach to people with stroke sequelae.

The limitations of this study refer to the cross-sectional design, and long-term monitoring is not possible to assess resilience, functional capacity and social support at each stage in the rehabilitation process of the sequelae of the disease. Another restriction is with regard to the resilience instrument used in the research, since it only assesses individual characteristics, not portraying environmental aspects.

CONCLUSION

The results of this survey have shown that functional independence and social support are predictors of higher averages of resilience. When analyzing resilience with the dimensions of social support separately, it was observed that resilience was associated with the emotional and information dimensions. Faced with the need for strategies that favor the adaptive process inherent in the changes brought about by AVE, the construction of resilience

appears as a possibility, in addition to improving the living conditions of this population.

The repercussion of the study for nursing care is based on the relevance of functional capacity, social support and resilience for the well-being and quality of life of the AVE survivor, which should be investigated during hospitalization and monitored after discharge. In this sense, it is essential to evaluate at an early stage the functional losses resulting from the sequelae of the stroke, identify the support network available, analyze the effectiveness of the support offered and measure the level of resilience presented, in order to establish an appropriate care plan for the life and health condition of each patient.

REFERENCES

1. Avezum A, Costa-Filho FF, Pieri A, Martins SO, Marin-Neto JA. Stroke in Latin America: burden of disease and opportunities for prevention. *Glob Heart* [Internet]. 2015 [access at: Dec 01, 2018];10(4):323-31. Available at: [https://linkinghub.elsevier.com/retrieve/pii/S2211-8160\(14\)00018-0](https://linkinghub.elsevier.com/retrieve/pii/S2211-8160(14)00018-0)
2. Sadler E, Sarre S, Tinker A, Bhalla A, McKevitt C. Developing a novel peer support intervention to promote resilience after stroke. *Health Soc Care Community* [Internet]. 2017 [access at: Dec 09, 2018];25(5):1590-600. Available at: <https://onlinelibrary.wiley.com/doi/full/10.1111/hsc.12336>
3. Villain M, Sibon I, Renou P, Poli M, Swendsen J. Very early social support following mild stroke is associated with emotional and behavioral outcomes three months later. *Clin Rehabil* [Internet]. 2017 [access at: Dec 29, 2018];31(1):135-41. Available at: https://journals.sagepub.com/doi/full/10.1177/0269215515623600?url_ver=Z39.88-2003&rft_id=ori:rid:crossref.org&rft_dat=cr_pub%3dpubmed
4. Faria ACA, Martins MMFPS, Schoeller SD, Matos LO. Care path of person with stroke: from onset to rehabilitation. *Rev Bras Enferm* [Internet]. 2017 [access at: Dec 02, 2018];70(3):520-8. Available at: <http://www.scielo.br/pdf/reben/v70n3/0034-7167-reben-70-03-0495.pdf>
5. Stein LA, Goldmann E, Zamzam A, Luciano JM, Messé SR, Cucchiara BL, et al. Association between anxiety, depression, and post-traumatic stress disorder and outcomes after ischemic stroke. *Front Neurol* [Internet]. 2018 [access at: Dec 09, 2018];9(890):1-9. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6224432/pdf/fneur-09-00890.pdf>
6. Böell JEW, Silva DMGV, Hegadooren KM. Sociodemographic factors and health conditions associated with the resilience of people with chronic

- diseases: a cross sectional study. *Rev Latino-Am Enfermagem* [Internet]. 2016 [access at: Apr 25, 2018];24:e2786. Available at: <https://www.scielo.br/pdf/rlae/v24/0104-1169-rlae-24-02786.pdf>
7. Araújo CLO, Faro ACM. Estudo sobre la resiliência en ancianas del Valle do Paraíba, São Paulo, Brasil. *Enfermería Global* [Internet]. 2016 [access at: Apr 23, 2018];42:81-98. Available at: <http://scielo.isciii.es/pdf/eg/v15n42/clinica4.pdf>
 8. Fontes AP, Neri AL. Resilience in aging: literature review. *Ciênc Saúde Coletiva* [Internet]. 2015 [access at: Jan 11, 2018];20(5):1475-95. Available at: <http://www.scielo.br/pdf/csc/v20n5/1413-8123-csc-20-05-01475.pdf>
 9. Carvalho VD, Teodoro MLM, Borges LO. Escala de Resiliência para Adultos: aplicação entre servidores públicos. *Aval Psicol* [Internet]. 2014 [access at: Dec 02, 2018];13(2):287-95. Disponível em: <http://pepsic.bvsalud.org/pdf/avp/v13n2/v13n2a16.pdf>
 10. Lima RJ, Pimenta CJL, Frazão MCLO, Ferreira GRS, Costa TF, Viana LRC et al. Functional capacity and social support to people affected by cerebrovascular accident. *Rev Bras Enferm* [Internet]. 2019 [access at: Apr 14, 2020];72(4):917-23. Available at: <https://www.scielo.br/pdf/reben/v72n4/0034-7167-reben-72-04-0868.pdf>
 11. Brasil. Ministério da Saúde. Departamento de Informática do SUS. Base de dados das Informações de Saúde: Morbidade hospitalar do SUS - por local de internação – Brasil [Internet]. 2016 [access at: Jan 02, 2019]. Disponível em: <http://tabnet.datasus.gov.br/cgi/deftohtm.exe?sih/cnv/mibr.def>
 12. Pesce RP, Assis SG, Avanci JQ, Santos NC, Malaquias JV, Carvalhaes R. Cross-cultural adaptation, reliability and validity of the resilience scale. *Cad Saúde Pública* [Internet]. 2005 [access at: Jan 19, 2019];21(2):436-48. Available at: <http://www.scielo.br/pdf/csp/v21n2/10.pdf>
 13. Minosso JSM, Amendola F, Alvarenga MRM, Oliveira MAC. Validation of the Barthel Index in elderly patients attended in outpatient clinics, in Brazil. *Acta Paul Enferm* [Internet]. 2010 [access at: Jan 19, 2019];23(2):218-23. Available at: http://www.scielo.br/pdf/ape/v23n2/en_11.pdf
 14. Griep RH, Chor D, Faerstein E, Werneck GL, Lopes CS. Validade de constructo de escala de apoio social do Medical Outcomes Study adaptada para o português no Estudo Pró-Saúde. *Cad Saúde Pública* [Internet]. 2005 [access at: Jan 21, 2019];21(3):703-14. Available at: <http://www.scielo.br/pdf/csp/v21n3/04.pdf>
 15. Elias HC, Marzola TS, Molina NPFM, Assunção LM, Rodrigues LR, Tavares DMS. Relation between Family functionality and the household arrangements of the elderly. *Rev Bras Geriatr Gerontol* [Internet]. 2018 [access at: Jan 11, 2019];21(5):562-9. Available at: <http://www.scielo.br/pdf/rbgg/v21n5/1809-9823-rbgg-21-05-00562.pdf>
 16. Costa TF, Gomes TM, Viana LRC, Martins KP, Macêdo-Costa, KNF. Stroke: patient characteristics and quality of life of caregivers. *Rev Bras Enferm* [Internet]. 2016 [access at: Dec 02, 2018];69(5):933-9. Available at: http://www.scielo.br/pdf/reben/v69n5/en_0034-7167-reben-69-05-0933.pdf
 17. Silva JK, Vila VSC, Ribeiro MFM, Vandenberghe L. Survivors' perspective of life after stroke. *Rev Eletr Enf* [Internet]. 2016 [access at: Jul 08, 2020];18:e1148. Available at: <https://revistas.ufg.br/fen/article/view/34620/21190>
 18. Nishio I, Chujo M. Qualitative analysis of the resilience of adult Japanese patients with type 1 diabetes. *Acta Med* [Internet]. 2016 [access at: Apr 27, 2020];59(3):196-203. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5050268/>
 19. Carvalho IG, Bertolli ES, Paiva L, Rossi LA, Dantas RAS, Pompeo DA. Anxiety, depression, resilience and self-esteem in individuals with cardiovascular diseases. *Rev Latino-Am Enfermagem* [Internet]. 2016 [access at: Dec 02, 2018];24:e2836. Available at: <http://www.scielo.br/pdf/rlae/v24/0104-1169-rlae-24-02836.pdf>
 20. Herdman TH, Kamitsuru S. Diagnósticos de Enfermagem da NANDA-I: Definições e Classificação 2018-2020 [Internet]. 11. ed. Porto Alegre: Artmed; 2018 [access at: Jan 02, 2019].
 21. Lee Y-C, Yi E-S, Choi W-H, Lee B-M, Cho S-B, Kim J-Y. A study on the effect of self bedside exercise program on resilience and activities of daily living for patients with hemiplegia. *J Exerc Rehabil* [Internet]. 2015 [access at: Jan 19, 2019];11(1):30-5. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4378346/pdf/jer-11-1-30.pdf>
 22. Yu Y, Peng L, Chen L, Long L, He W, Li M, et al. Resilience and social support promote posttraumatic growth of women with infertility: the mediating role of positive coping. *Psychiatry Res* [Internet]. 2014 [access at: Dec 27, 2018];215(2):401-5. Available at: [https://linkinghub.elsevier.com/retrieve/pii/S0165-1781\(13\)00683-5](https://linkinghub.elsevier.com/retrieve/pii/S0165-1781(13)00683-5)
 23. Li MY, Yang YL, Liu L, Wang L. Effects of social support, hope and resilience on quality of life among Chinese bladder cancer patients: a cross-sectional study. *Health Qual Life Outcomes* [Internet]. 2016 [access at: Dec 21, 2018];6:14-73. Available at: <https://hqlo.biomedcentral.com/articles/10.1186/s12955-016-0481-z>

24. Southwick SM, L Sippel, Krystal J, Charney D, Mayes L, Pietrzak R. Why are some individuals more resilient than others: the role of social support. *World Psychiatry* [Internet]. 2016 [access at: Dec 02, 2018];15(1):77-9. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4780285/pdf/WPS-15-77.pdf>
25. Doussoulin A, Najum J, Saiz JL, Molina F. Impacto de la rehabilitación através de la terapia de restricción inducida modificada en la mejora del apoyo social en usuarios con ataque cerebro vascular. *Rev Chil Neuro-Psiquiatr* [Internet]. 2016 [access at: Dec 12, 2018];54(3):187-97. Available at: <https://scielo.conicyt.cl/pdf/rchnp/v54n3/art03.pdf>

