

Quality of Life of Elderly People Suffering from Sequelae by Cerebro Vascular Accident

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Abstract:

Objective: To assess the quality of life of elderly patients with sequelae of stroke.

Methods: This is a quantitative and cross-sectional research held at Clinics of Physiotherapy School of private universities of Fortaleza city in Northeastern Brazil. It used the SF-36 instrument and a socio-demographic questionnaire. The data were computed and analyzed by the Software SPSS.

Results: Fifty-two patients were interviewed. Age ranged from 60 to 89 years, 28 (54.0%) were females and 39 (75.0%) were retired or pensioners. Regarding the health profile, 26 interviewees (50.0%) have presented sequelae of stroke for 3 years or more. All of them performed physiotherapy treatment and 51 (98.0%) used medicines. The domains of quality of life concerning health showed better results than the emotional and physical aspects. It was found statistical significance between the age group of 60-65 and: feeling calm or quiet ($p = 0.001$), having good health ($p = 0.004$), performing rigorous activities ($p = 0.013$), lifting or carrying groceries ($p = 0.020$). There was statistical significance between length of physiotherapy of 3 years or more and not feeling pain at work ($p = 0.017$) and feeling vigorous, willing and strong ($p = 0.016$).

Conclusion: The study population considered itself with good quality of life and reported having good health, feeling calm, quiet and healthy, and also without pain interference at work, what may have occurred due to the physiotherapy treatment and the use of medicines.

Keywords: Elderly; Cerebrovascular Accident; Quality of life.

1. INTRODUCTION

Reaching old age is a reality for the world's population, even in developing countries. In Brazil, the number of old people increased from 3 million in 1960 to 7 million in 1975, and over 20 million in 2010 [1], an increase of almost 700% in less than 50 years. Therefore, diseases related to the aging process began to gain greater expression. Brazil is a "young country with white hair," since each year approximately 650,000 new elders are incorporated into the Brazilian population [2].

In less than 40 years the morbidity scenery, once characterized by infectious diseases afflicting young people mainly, has changed to chronic degenerative diseases that are common in countries with aging population. Within this context, population aging occurs with the incidence of complex, disabling and expensive diseases for the healthcare services [2-3].

Among chronic diseases, the cerebrovascular accident (CVA), which is the object of this study, is one of the greatest causes of illness in the elderly population. Literature shows that the incidence of stroke

increases with age, considering that circa two-thirds of all strokes occur in people over 65 years old [3-4]. Additionally, the stroke is the second single most common cause of death in the world causing 6.7 million deaths each year [5].

In most cases, stroke causes sequelae that hinder the individual's functional capacity and disrupts quality of life [3]. This is defined by the World Health Organization Quality of Life Group, Division of Mental Health [6] as "the individual's perception of their position in life in the context of culture and value systems in which they live and in relation to their goals, expectations, standards and concerns." Thus, it is clear that the concept of quality of life is subjective, multidimensional and considers both positive and negative elements of evaluation.

In this sense, assessing the quality of life of elders and also the various diseases brought up by the aging process is of great scientific and social importance for it allows potential interventions by public health policies aimed at the welfare of the aging population. This current study aimed to assess the quality of life of elderly patients with sequelae of stroke.

2. MATERIALS AND METHODS

This is a quantitative and cross-sectional study held at two Clinics of Physiotherapy Schools of Private Colleges in Fortaleza city, Northeastern Brazil, that provide care for patients with stroke and who met the criteria established for the implementation of the research. The research was conducted at the Center for Integrated Medical Attention (NAMI) of the University of Fortaleza and at the Clinic of the Physiotherapy School of Christus College. Both institutions aim at training humanized and technically capable professionals who must be able to face the challenges of contemporary society.

The selection of the clinics was accomplished through active search for patients who: presented sequelae of stroke; were over 60 years old; were able to detect their limitations and functionality and agreed to participate in the study by answering the questions orally. It was defined as elder the person aged 60 and over according to the Brazilian National Health Policy for Older People [7].

During data collection, the clinics were visited on different days and times during April and May 2011 in order to prevent loss of patients that could contribute to the research results. The study population consisted of sixty patients enrolled in these clinics and who performed physiotherapy during the collection period of the study. There was a loss of eight patients who did not attend the physiotherapy treatment during the period of blood collection. Thus, the sample consisted of fifty-two patients. It is worth saying that there was no exclusion of patients and all agreed to participate in the research.

Two instruments were used to identify patients' socio-demographic conditions and quality of life. Initially, a structured questionnaire with twenty multiple-choice questions was applied, addressing age, gender, marital status, education, income, presence of chronic diseases, length of physiotherapy treatment and use of medicines by patients. Then, the SF-36 instrument [5], validated in Brazil by Cicconelli et al. [8], was applied to assess patient's knowledge of their quality of life. This instrument consists of thirty-six items divided into eight domains, i.e., groups that assess functional capacity, physical aspects, pain, general health, vitality, social and emotional aspects and individual's mental health.

The results were tabulated and statistically analyzed using the software "Statistical Package for Social Sciences" SPSS, version 17 (SPSS Co., Chicago, USA). The chi-square test (χ^2) was applied to analyze the correlation between socio-demographic data (age, sex and length of therapy) and the SF-36 domains, adopting a level of significance of 5%.

The research was conducted according to the ethical principles of Resolution 196/96 which rules the research with human beings [9]. The research was approved by the Ethics and Research Committee of the University of Fortaleza under Protocol No. 046/2011 and by the Ethics and Research Committee of Christus College under Protocol No. 090/2010.

3. RESULTS

In all, 52 elderly patients with sequelae of stroke who underwent physiotherapy treatment at clinics of physiotherapy schools were interviewed. There was a prevalence of women 28 (53.8%) and age ranged between 60-89 years with a mean of 67.8 years and standard deviation of 6.5.

Regarding professional status, 25 patients (48.0%) were freelance professionals before suffering a stroke and 29 (55.8%) lived in neighborhoods ruled by the Regional Executive Office VI in Fortaleza

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city. A total of 39 patients (75.0%) lived in their own home while 49 (94%) lived with their family and 25 (48.0%) were married. Regarding education and income, 21 interviewees (40.4%) completed high school, 39 (75.0%) were retired or pensioners and 38 (73.0%) had an individual monthly income of less than or equal to 1 minimum wage (\pm US\$ 292) and family income between 1 and 2 minimum wages.

Concerning the elders' health profile, 26 (50.0%) presented sequelae of stroke for 3 years or more and 25 (48.0%) had been performing physiotherapy for at least 3 years. A total of 48 (92.3%) elders had chronic diseases, mostly neurological and heart diseases.

In all, 51 patients (98.0%) used medicines and 24 (46.1%) got the medicines in the basic healthcare units and popular drugstores. They also reported the constant "lack" of these medicines. Regarding medical consultations, 27 interviewees (51.9%) visited the doctor every three months and 38 (73.0%) were assisted by the Brazilian National Healthcare System (the Unified Health System - SUS).

Table1. SF36- Domains related to health of 52 elders with sequelae of stroke. Fortaleza-CE, 2011

GENERAL HEALTH SECTION			
Question	Answers	N	%
Good health?	Excellent	03	5.8
	Very good	05	9.6
	Good	33	63.4
	Bad	11	21.2
General Health compared to one year ago	Much better	20	38.5
	A little better	19	36.6
	Almost the same	06	11.5
	A little worse	05	9.6
	Much worse	02	3.8
Gets sick more often than other people	Definitely true	03	5.8
	Mostly true	08	15.4
	Mostly false	05	9.6
	Definitely false	36	69.2
As healthy as anyone else	Definitely true	39	75.0
	Mostly true	04	7.7
	I don't know	04	7.7
	Mostly false	04	7.7
	Definitely false	01	1.9
Thinks his/her health Will get worse	Definitely true	12	23.1
	Mostly true	01	1.9
	I don't know	11	21.2
	Mostly false	08	15.3
	Definitely false	20	38.5
Health is excellent	Definitely true	36	69.2
	Mostly true	07	13.4
	I don't know	04	7.7
	Mostly false	07	13.4
	Definitely false	01	1.9
Pain in the body in the last 4 weeks?	None	16	30.7
	Very slightly	03	5.8
	Slightly	17	32.7
	Moderately	12	23.1
	Strong	03	5.8
	Very strong	01	1.9
Pain in the body in the last 4 weeks has interfered in the normal work	No way	24	46.2
	Slightly	07	13.4
	Moderately	09	17.3
	A lot	08	15.4
	Extremely	04	7.7

Table 1 shows the results of the SF-36 concerning the domains related to health in which most patients (75.0%) considered themselves as healthy as anyone else.

Table 2 shows the results related to functionality, with a predominance of physical difficulties for the performance of simple activities such as carrying groceries, kneeling, bending or folding up and climbing stairs and taking short.

Table2. SF36- Physical functioning section (n=52 elders). Fortaleza-CE, 2011

PHYSICAL FUNCTIONING SECTION			
Question	Answer	N	%
Difficulty at vigorous activities (running, lifting weights and playing sports)	Yes. Very difficult.	43	82.7
	Yes. A little difficult.	06	11.5
	No. Not any difficult.	03	5.8
Difficulty at moderate activities (moving a table, vacuuming, playing soccer)?	Yes. Very difficult.	37	71.1
	Yes. A little difficult.	13	25.0
	No. Not any difficult.	02	3.9
Difficulty at lifting or carrying groceries?	Yes. Very difficult.	39	75.0
	Yes. A little difficult.	10	19.2
	No. Not any difficult.	03	5.8
Difficulty at climbing several staircases?	Yes. Very difficult.	28	53.8
	Yes. A little difficult.	20	38.5
	No. Not any difficult.	04	7.7
Difficulty at climbing one staircase?	Yes. Very difficult.	27	51.9
	Yes. A little difficult.	22	42.3
	No. Not any difficult.	03	5.8
Difficulty at activities such as bending down or kneeling?	Yes. Very difficult.	39	75.0
	Yes. A little difficult.	11	21.2
	No. Not any difficult.	02	3.8
Difficulty at walking more than 1 km?	Yes. Very difficult.	35	67.3
	Yes. A little difficult.	12	23.1
	No. Not any difficult.	05	9.6
Difficulty at walking several blocks?	Yes. Very difficult.	35	67.3
	Yes. A little difficult.	12	23.1
	No. Not any difficult.	05	9.6
Difficulty at walking one block?	Yes. Very difficult.	34	65.4
	Yes. A little difficult.	12	23.1
	No. Not any difficult.	06	11.5
Difficulty at taking a shower or getting dressed	Yes. Very difficult.	23	44.2
	Yes. A little difficult.	14	26.9
	No. Not any difficult.	15	28.9

Table3. Correlation of socio-demographic data and SF36 (n = 52 elders).

Subdivision items of SF 36	Subdivision items of Socio-demographic		Value of p<0.05
	N	%	
	Age 60 – 65 years		
	N	%	
Calm and quiet all the time	13	25.0	0.001
Good health	18	34.6	0.004
Much difficulty at performing rigorous activities	17	32.7	0.013
Much difficulty at lifting or carrying food	18	34.6	0.020
	Length of physiotherapy treatment–3or more years		
	N	%	
Feels in the mood, vigorous and strong most of the time	08	15.4	0.016
Pain has not interfered anyway in the work (in the last 4 weeks)	17	32.7	0.017

Concerning the sections related to emotional functioning: 16 patients (30.8%) felt in the mood, vigorous and strong and were never upset or disappointed; 20 (38.4%) had enough energy most of the time; 21 (40.4%) were calm and quiet all the time, and 17 (32.7%) people were happy most of the time. Concerning nervousness, fatigue and depression: 22 interviewees (42.3%) appeared to be exhausted in a small part of time; 24 (46.1%) got tired in a small part of time; 23 (44.2%) never felt nervous and 14 (26.9%) never got depressed.

Considering the chi-square (χ^2) test, the value of "p" presented in Table 3 shows significance between the items in the subdivisions (socio-demographic and treatment) and age and length of therapy.

4. DISCUSSION

The prevalence of elders who had incomplete primary education and received one minimum wage confirms the data from the Brazilian Institute of Geography and Statistics (*Instituto Brasileiro de Geografia e Estatística – IBGE*), portraying the difficult socio-economic status of the interviewees, a condition that characterizes them as a low-income population [1]. However, Kalache and Veras [10, 11] emphasize that in Brazil, the population aging has been intensified by the speed of the demographic and epidemiological transition process, making it less difficult to grow old in today's Brazil because there is much more social recognition. Furthermore, since it is not a young country anymore, its policies for the elderly population have become sustainable and more equitable.

Regarding the results obtained in this research by the SF-36 indicating that elderly patients with sequelae of stroke showed good results in the sections related to health, such as the fact that 38.5% of patients reported that their health is much better when compared to one year ago, can be the result of both medical and physiotherapy treatment. In this study, all participants performed physiotherapy and 51 of them (98.0%) used medicines.

These findings are corroborated by Mota e Silva [12], when they demonstrate that in all patients undergoing physical therapy showed muscle strength gains and decreased pain in the affected limb.

It is worth saying that both treatments are essential for the recovery of the patient with stroke sequelae and that the medication acts in addition to physiotherapy, often improving and / or controlling muscle and joint changes such as spasticity, decreased joint mobility, diffuse pain and sensory disabilities.

The fact of 33 (63.4%) elders considering themselves with good health (Table 1) implies that they were overcoming difficulties arising from stroke with the help of the medical and physiotherapy treatment. When relating the pain felt in the last four weeks, 24 (46.2%) elders stated that the pain had not interfered in any ways at their work. This fact reinforces the possible relation between medical treatment and physiotherapy treatment, since the exercises performed can cause relaxation through regular active movement and thus relieve pain [13]. In this sense, one can say that when health is considered in a holistic way, it focuses on the possibility of living without diseases and overcoming difficulties and also morbidity conditions [14].

The results showed divergence when comparing health (Table 1) and functionality (Table 2) sections. Most elders self-reported having a good health but presented important functional limitations with a lot of difficulty to perform rigorous and moderate activities needed to perform basic daily-living activities. This divergence heats up the issue about how difficult it is to evaluate the subjectivity of the patient regarding the quality of life, especially when relating it to functional capacity. However, authors claim [8], in the study of validation of the questionnaire for assessing quality of life - SF-36, that this instrument is efficient in assessing the ability of individuals to perform certain physical and functional activities and how do they feel when performing them.

Elders who are more active present a better functional capacity [15]. However, the ability to maintain the position, postural adjustments for performing voluntary movements and balance reactions are reduced and cause limitations in the performance of activities of daily living in patients with sequelae of stroke and hemiparesis installation [16]. This is quite important to understand why elders with sequelae of stroke and functional limitations consider themselves with good health and participative in their activities even though they have large motor difficulties. It can be observed in the emotional sections that vigor, energy, tranquility, depression, fatigue and happiness, as well as physical health and emotional changes may interfere with the performance of activities of daily living and influence on the lives of participants by limiting their work or other activities.

The emotional factor and physical health appear significantly when 44.2% of respondents reported interference in their social activities, 46.2% reported fatigue and 42.3% reported feeling exhausted in a small part of the time. These results are corroborated by the study of Castro et al. [17] on quality of life of patients with chronic renal failure, which concluded that the presence of a chronic disease is associated with poorer quality of life of a population and that the feeling of hopelessness, lack of energy and the reduction in the performance of activities of daily living are common symptoms in these patients.

Statistical significance relative to subdivisions of the SF-36 between the age group 60-65 years in the items "feel calm or quiet the whole time" ($p = 0.001$) and "good health" ($p = 0.004$) may relate to actions developed in physiotherapy. In this physiotherapy activity, the socialization is emphasized by the fact that many patients realize their abilities even in the universe of "plegia", considering that the relaxation apparently promotes greater balance, security and tranquility. There are reports that the therapy, especially in a group, prevents patients from feeling isolated and as the only one having problems. Thus, that the patient learns to accept, more appropriately, the social stimuli and use them constructively [18].

The significant relationship between the age group 60-65 years and the ability to perform rigorous activities and lifting or carrying groceries may be associated with the physical consequences of stroke and / or physical limitations of the age group itself. It is known that all patients performed physiotherapy and among these 33% felt a lot of difficulty at performing rigorous activities and while 35% had difficulties at lifting or carrying groceries. These results agree with the study of Castro et al. [17] on quality of life of patients with chronic renal failure that observed a correlation between ages, dimensions of functional capacity and physical aspects that lead the authors to conclude that elderly patients with chronic diseases have greater physical and functional impairment.

The statistical significance between the length of physiotherapy treatment (three years or more) and the fact that the patient "does not feel pain in any ways" are results that provide the physiotherapy treatment with benefits on pain control, especially in patients who suffered stroke. However, the prolonged physiotherapy treatment may not favor the correlation with "feeling vigorous, willing and strong all the time." In this context, the authors [17] reported that even with the advances of technology in healthcare, the indefinite time of treatment can affect the quality of life of patients

5. CONCLUSION

As a research instrument, the SF-36 was suitable for the assessment of quality of life in the study sample, being able to clarify that the stroke in old age causes negative functional impact on the quality of life of patients, although they consider themselves with a good health.

Although having functional limitations most elderly patients with sequelae of stroke consider themselves, through the SF-36, with good health and feeling calm, peaceful, and healthy, and without pain interference in labor activities.

It is assumed that drug treatment and ongoing physiotherapy may have provided elders with a better quality of life.

Through its results, this study aims to contribute to the public health policies on targeting specific programs for the prevention and treatment of functional disabilities that encourage positive emotional aspects of elders with stroke sequelae, making them more independent and providing them with a better quality of life.

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