COMPARISON BETWEEN SELF-REPORTED FUNCTIONAL CAPACITY OF BRAZILIAN AND JAPANESE INSTITUTIONALIZED ELDERLY

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Abstract

Introduction: Self-reported satisfaction is included in the context of subjective evaluation, is highly influenced by functional capacity and aids to identify differences between sociocultural aspects. Objective: To compare the self-reported functional capacity of institutionalized Brazilian and Japanese elderly. Material and Methods: The sample was chosen intentionally and by convenience and was composed of 70 elderly of both sexes, institutionalized, with a mean age of 75.5 (± 8.8) years, consisting in 53 Brazilian and 17 Japanese elderly. The Sheet of Self-Assessment of Functional Capacity, proposed by Spirdus (1995) was used to evaluate the functional capacity, Data analysis was done using descriptive and inferential statistics, and the significance of $p < 0.05$ was adopted. Results: Japanese elderly perform more Daily Activities (DA) alone and without difficulty. Brazilian elderly accomplish more DA alone but with difficulties and more DA without the ability of carrying them out without help. There was a significant association between the time of institutionalization and functional capacity. Conclusion: It can be concluded that institutionalized Japanese elderly have better functional ability than Brazilian according to their self-perception, and that the longer the duration of institutionalization, the lower is the level of functionality.

Keywords: Physical activity; Aging; Functionality.

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INTRODUCTION

Brazil, like many countries in the world, is rapidly aging. The elderly population is, at present, the population segment with fastest proportional growth, when compared to other segments. This demographic transition accompanied with the change of health profiles brings epidemiological, social and cultural consequences.[1] When it comes to aging aspects, it is extremely important to consider the biological, psychological, social, historical, cultural and, most importantly, educational aspects.[2] Understanding them as an integral part of the being and having them as directly related to the course in life.

Among the cultural and social aspects of aging, we can highlight the process of Japanese immigration into Brazil and the miscegenation of these people in a diatopical hermeneutical process, a dialogue between two or more cultures, which enabled these to come into communion and produce a common horizon of intelligibility[3] a kind of mutual recognition, a cultural translation.

This cultural translation began in 1908 with the arrival of these immigrants from various Japanese cities, in order to work and save as much money as possible and return to their homeland in a position to have a life, in their understanding, that would be more dignified.[2,4] This immigration took place from 1926 through 1935, and in the 1990s the number of immigrants totaled about 240,000. Today, Brazil has the largest Japanese population outside of Japan and expressive culture and health communities.[4,5]

Still regarding this macro biopsychosocial and cultural-historical understanding and isomorphism of these individuals, the education and the difference in its expression between Japanese and Brazilian people stands out as a major factor to be considered for the analysis of functional capacity. Unlike most Brazilians, the Japanese take education effectively as the incompleteness of the being which is known as such, take education as an ongoing process, where women and men become teachable in that they recognize themselves as unfinished and prone to educability.[6]

The authors Ellington[7] and Rossmanith[8] point out that the Japanese education is compulsory from 6 years of age onwards, and it is estimated that 99% of basic schools in the country are public. As for the paid higher schools, including the public ones, and comprise approximately 76% of the subjects in age to higher education.

The schooling profile of Japanese includes the teaching of the mother tongue, social studies, arithmetic and science, paired to other discussions such as moral education, arts, crafts, music, household and industrial work, physical education and English. This allows us to infer that functionality, autonomy, independence and social integration are stimulated from an early age, which in turn can contribute to the quality of life and functional performance.[5]

It is also important to note the changes in family structure and the increasing number of diseases that compromise the autonomy and independence of the elderly, contributing to an increase in the number of individuals in long-stay institutions. National studies show that 0.8% of the elderly population are living in long-term care institutions for the elderly (LTCIFEs). For scholars, institutionalization is not a common practice in Brazil.[9]

Besides this socio-cultural difference, we also highlight the importance of functional capacity in old age, considering that the concept of health in old age is more related to the condition of autonomy and independence than to the presence or absence of diseases.[10,11] The International Classification of Functioning[12] covers the physical, environmental and subjective aspects of the individual and their health. This becomes relevant to identify subjective aspects, focused on the well-being of the elderly, from their perspective, so that the therapeutic approach be directed to the care of their demand in different spheres. Self-reported satisfaction is

included in the context of subjective evaluation and is highly influenced by functional capacity.[10]

Functional assessment can be defined as a systematic attempt to measure, objectively, the levels at which a person is able to perform certain activities or functions in different areas, using several skills to perform the tasks of daily life, for the realization of social interactions in their leisure activities and other behaviors required in their day-to-day.[13] Generally, it is a way to measure whether a person is or is not able to independently perform the activities necessary to take care of oneself and of one's surroundings and, if not, whether that need help is partial (to high or less extent) or total.[13,14]

Based on the above, this study aimed to compare the self-reported functional capacity between Brazilian and Japanese institutionalized elderly.

METHODOLOGY

This is an observational and cross-sectional study approved by the Research Ethics Committee of the University Center Cesumar (UNICESUMAR) through the protocol number 055/2008, according to Resolution 196/96 of the National Health Council, which sets the rules for research with human beings. After approval, the responsible institutions were consulted about the research and then, those that agreed to participate, signed a Informed Consent form (IC).

The study sample consisted of 70 elderly (aged at 60 and older), of both sexes, belonging to three public long-term care institutions for the elderly (LTCIFEs) located in Maringá-PR. Two of the institutions had Brazilian elderly (n = 53), and one had Japanese elderly (n = 17). Elderly that were not registered as residents in one of the institutions studied were excluded from the sample, as well as bedridden elderly and wheelchair users with cerebral palsy or severe cognitive impairment (according to information of health professionals working in institutions), which prevented the completion of the questionnaires, also those with old and serious sequelae of stroke, epilepsy, elderly patients with severe hearing loss, aphasia, with difficulty to speak and express. The study included individuals aged at 60 years and older, residents registered in the evaluated institutions and with full capacity of expression, speech and understanding.

A semi-structured questionnaire was used by the researchers with the socio-demographic questions and about health of the elderly (age, sex, time of institutionalization, presence of chronic diseases). To evaluate the functionality, the "Sheet for Self-Assessment of Functional Capacity", consisting of 18 items to assess the individual's ability to perform certain daily tasks. The 18 daily activities (DA) analyzed are categorized into: 1) performs the activity easily and without help, 2) performs the activity with some degree difficulty, but without help or 3) performs the activity with help or depend on others to perform it. Subsequently, the scores were analyzed and summed. The result could be: low functional capacity (performso to 9 activities in category 1); moderate functional capacity (performs 10 to 17 activities classified in category 1) and advanced functional capacity (performs 18 activities in category 1).[15]

Data collection was performed by the researcher who made oral questions to the elderly and received as answer one of the alternatives offered in the questionnaire. This explains the need for the exclusion of elderly who were not impaired for hearing, speech and understanding.

For data analysis, the frequency and percentage for categorical variables were used. Normality of data was checked through *Kolmogorov-Smirnov* test in the case of numeric variables. Because data did not show normal distribution were used the median (Md) and quartiles (Q1, Q3) to describe results. Comparing the groups (Brazilian versus Japanese), we used the Mann-Whitney "U" test. The chi-square test and Pearson test (X^2) were used to detect the possible associations between the nationality of the elderly (Brazilian and Japanese) and the time of institutionalization and functional capacity. The significance level adopted was $p < 0.05$.

RESULTS

The average age of 70 elderly was 75.5 (± 8.8) years, the average of Brazilian elderly was 75.09 (± 8.7) years and the average of Japanese was 76.6 (± 9.5) years. Regarding gender, 22 out of the 53 Brazilian elderly were female and 31 male. Seven out of the 17 elderly Japanese were female and 10 were male.

Significant difference were found (table 1) in the number of DA that elderly perform alone without difficulties (p = 0.001), the number of DA that the elderly perform alone but with difficulty (p = 0.010) and the number of DA that the elderly do not perform alone (p = 0.030). It is noteworthy that the Japanese elderly perform more DA alone and without difficulty (Md = 15.0) compared to Brazilian elderly (Md = 8.0). Brazilian elderly perform more DA with difficulty (Md = 3.0) and more DA where they do not have the ability to do without help (Md = 6.0) than the Japanese elderly (Md = 1.0 and Md = 3.0, respectively). There was no significant difference (p = 0.316) between the ages of older people of both nationalities.

Table 1 - Comparison of age, number of DA that the elderly perform alone and without difficulty, number of DA that the elderly perform alone but with difficulty and number of DA that the elderly do not perform alone, according to Brazilian and Japanese elderly

Variables	Brazilian (n = 53)	Japanese (n = 17)	p
	Md (Q1;Q3)	Md (Q1;Q3)	
Age	73.0 (69.0; 82.0)	79.0 (72.5; 82.0)	0.316
DA that the elderly perform alone and without difficulty	8.0 (2.0; 12.5)	15.0 (11.0; 17.0)	**0.001 ***
DA that the elderly perform alone but with difficulty	3.0 (0.0, 7.0)	1.0 (0.0; 2.0)	**0.010 ***
DA that the elderly do not perform alone	6.0 (2.0; 9.5)	3.0 (0.5; 5.0)	**0.030***

* Significant difference: p <0.05 – "U" *Mann-Whitney* Test.

Md: median; Q1 and Q3: quartiles.

DA: Daily activities

When analyzing the association between nationality (Brazilian and Japanese descendants) with time of institutionalization and functional capacity of the elderly in the city of Maringa-PR (table 2), significant association was found between time of institutionalization (p = 0.008) and functional capacity (p <0.001), indicating a difference in the proportions of Brazilian individuals and Japanese descendants in relation to time of institutionalization and functional capacity. It is noteworthy that there is a higher proportion of Japanese elderly with time of institutionalization of more than five years (64.7%) and moderate/advanced functional capacity (88.2%). There was no significant association with sex (p = 0.872).

Table 2 - Association of nationality (Brazilian and Japanese) with time of institutionalization and functional capacity of the elderly

VARIABLES	Elderly		X^2	P
	Brazilian (n = 53)	Japanese (n = 17)		
	f (%)	*f* (%)		
Gender				
Male	30 (56.6)	10 (58.8)	0.026	0.872
Female	23 (43.4)	7 (41.2)		
Time of institutionalization				
3 months to 1 year	20 (37.7)	1 (5.9)		
1.1 to 5 years	15 (28.3)	5 (29.4)	7,090	**0.008***
More than 5 years	18 (34.0)	11 (64.7)		
Funcional capacity				
Low	34 (64.2)	2 (11.8)	14.141	**<0.001***
Moderate/Advanced	19 (35.8)	15 (88.2)		

* Significant association: p <0.05 - Chi-square test.

f: frequency; n: sample size; X^2:

DISCUSSION

Incapacity affects nearly a quarter of the elderly. To identify and treat these patients is extremely important to keep them healthier and independent within the therapeutic possibilities. It is noteworthy that other Brazilian transcultural studies on self-reported functional capacity in the elderly were not found. The findings of this study show that the Japanese elderly perform more DA alone and without difficulty compared to the Brazilians.

The issue of aging has become very serious in all countries, and in the case of aging and ethnicity, the seniors that belong to the minority face a "double vulnerability"[16] because they are victims of discrimination and exclusion due to the situation of the elderly members of minorities is satisfactory and of greater social interaction, as family relationships and the support of the ethnic community tend to be more intense.[4,16] Modification of residential patterns is a clue to understanding the transformation of social relations between generations.[17]

Brazilian elderly accomplish more DA alone but with difficulties and more DA without the ability of carrying them out without help than Japanese elderly. This is mainly due to the cultural fact that the aging process is something new in Brazil[18] compared to other countries such as Japan, and because we have more difficulty in accessibility and environmental adaptation especially for physical, visual and hearing impairments.

The time of institutionalization and the functionality of the elderly (Brazilian and Japanese) were associated with the time of institutionalization and with functional capacity, that is, the longer the time of institutionalization, the more dependent were the elderly. Pamoukdjian[19] say that physical frailty increases with advancing age and is an important risk factor for addiction, institutionalization, disability and mortality in older people.

Disability is a multifactorial condition that varies in relation to: causes, nature, form of onset, rate and social and cultural implications, such as the nationality of the elderly. This consists in a process rather than in a static state[20] what, hypothetically,

justifies the difference of functional ability observed between Brazilian and Japanese elderly.

This study also found that there is a higher proportion of Japanese elderly with time of institutionalization of more than five years and with moderate/advanced functionality, than Brazilian elderly, who, in the case of those with more time of institutionalization, have low functional capacity.

In Brazil, institutionalization, in most cases, is not culturally seen as something beneficial, but as abandonment by family members. Usually families only take their relatives there when they are very advanced in physical or cognitive impairment. Even if the institution meets the basic needs of the elderly, such place is not seen as the most suitable environment for them to grow old because they become limited to living among elderly, no longer sharing in the society in its political, productive and cultural entirety.

Matsubayashi[21] conducted a study in 5,207 cities in Japan and reported that one of the important aspects for a successful aging was to maintain the capacity of self-care as far as moments near to death. These are research data with Japanese populations but from different location and region of the present study, while this is proven not applied to all individuals of Japanese ethnicity.

As a limitation of the present study, there is a difference in the number of elderly people in each group (53 and 17), as well as the data trace in three LTCIFEs only, factors that may cause limitation in different measurements. But even with these limitations, this study will provide important knowledge to health professionals working in LTCIFEs about the differences in functionality among the elderly and other aspects of health, especially in relation to sociocultural factors. It also points to the importance of the need to implement interventions related to activity and exercise in order to reduce the discrepancy of functionality between the elderly.

We suggest further studies with larger samples as well as older people of other nationalities in order to make comparisons between sociocultural factors.

CONCLUSION

The analysis of results led us to conclude that institutionalized Japanese elderly have better functional ability than Brazilian elderly, according to their self-perception, and that the longer the institutionalization, the lower is the level of functionality. Furthermore, functional capacity can also be associated with issues such as a good education and a process of schooling that encourages good habits of life as early as in childhood, with the practice of a training curriculum and an education concerned with health, good feeding habits, exercise and life in society.

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