Cognitive Condition of Seniors Living in Long-Stay Institutions

Karla Fernandes de Albuquerque[1], Iris do Céu Clara Costa[2], Jiovana de Souza Santos[3*], Marcella Costa Souto Duarte[3], Anna Cláudia Freire de Araújo Patrício[4], Karoline de Lima Alves[3] and Vera Lúcia de Almeida Becerra Pérez[7]

[1]Universidade Federal do Rio Grande do Norte-UFRN, Universitário de João Pessoa/PB, Brazil

[2]Department of Health Sciences, Federal University of Rio Grande do Norte-UFRN, Natal-Rio Grande do Norte, Brazil

[3]Federal University of Paraiba, João Pessoa-Paraíba, Brazil

[4]Federal University of Rio Grande do Norte, João Pessoa-Paraíba, Brazil

[5]Federal University of Rio de Janeiro, João Pessoa-Paraíba, Brazil

*****Correspondence:** Jiovana de Souza Santos, Rua Doutor Efigênio Barbosa, 480. Bairro: Jardim Cidade Universitária Cep, João Pessoa-Paraíba, Brasil, Tel: (83) 98860-9405; E-mail: jiovana_santos@hotmail.com

Abstract

Objective: Investigate the cognitive conditions of seniors living in long-stay Institutions.

Method: This is a descriptive, quantitative research, cross character, being selected 122 elderlies, long-stay institutions in the municipality of João Pessoa, Paraíba-Brazil. As data collection instrument was used to cognitive assessment scale Mini-Mental State examination. The data were processed with the aid of the SPSS computer package. 16.0, through descriptive statistics, presented in charts and tables for characterization and comparison of sample data and analysis of significance with the Boxplot.

Results: It was observed that 67.2% (n=82) are female, aged 79 ± 10 years; 30.3% (n=37) 68 (55.7%) illiterate elderly showed cognitive deficit. It is also noted in one of the institutions, significantly lower results, with respect to the memory of Evocation. The instrument used in the study, proved effective in cognitive tracking, in addition to detect mild cognitive impairment, since the parameter that best predicts this disorder is the memory of evocation.

Conclusion: The results are suggestive to use another psychometric scale, in the short term and routinely in these institutions, as a means to confirm the findings and implement measures to prevent the harms to health, considering that these deficits are capable of causing damage in the everyday life of the aged, and may interfere in the quality of life, being thus possible indications for treatment and interventions.

Keywords: Elderly; Cognition; Long-stay institution

Introduction

Aging is a natural process, dynamic, progressive and irreversible that occurs from birth and follows each of us throughout our lives, culminating in death by natural causes, or biological fact, own of every living thing [1], for the World Health Organization (who) [2] old age begins officially to 65 years, while in the Brazil, according to the National Policy of the Elder, [3] the senescence begins at 60 years, although some feel very young at that age and others start to feel certain wear well before.

Epidemiological studies on aging and dementia have shown that the use of criteria for classification of dementia leads to the emergence of three subject groups: those that are demenciados, those who are not demenciados and a third group of individuals who cannot be classified as normal or demenciados, although they have cognitive impairment [4], compromising the ability to feel, think, remember Since cognition is related to intelligence and our mental functions such as memory, attention, sense of time, space, calculation, writing, reading, language, abstract reasoning, perception, and executive functions.

It is known that the aging process involves biological, psychosocial and cultural aspects, and as such, everyone will go through this stage of life that leads to a decline in physical ability, with great cognitive, social and psychological repercussions. In this perspective are admitted to the world which brings two forms of aging: usual or common and successful or healthy [1].

The decline accompanying the elderly and extremely variable progression begins, depending on educational, health factors and personality, as well as the overall intellectual level and mental capacities specific to individual [5], however, the elderly are encouraged to maintain an active ageing, inserted into family, and not in institutions of long permanence (ILPI).

The ILPI are governmental or non-governmental bodies, residential character, for the collective residence people aged

60 years or more, with or without family support, in condition of freedom, dignity and citizenship [6,7]. However, in Brazil, there is no consensus on what a ILPI. These originated primarily addressed to the needy population in need of shelter, fruits of Christian charity, on the absence of public policies. This justifies the financial shortage and homelessness are among the most important reasons for the wide institutionalization of elderly Brazilians [6,8].

In the aging process, the elderly has to live with the psychological or mental changes, biological, social, physical and spiritual, which begins at birth and has its end with death.

Faced with the reality of elderly dependents, institutionalized, currently discussed in society the use of resources called assistive technologies, which provide this population group, functional skills that promote inclusion, performing basic activities of daily life, in addition to an independent life.

Thus, this study aimed to investigate the cognitive conditions of seniors living in long-stay Institutions.

Methods

It is a field research, descriptive, transversal, with quantitative approach. The survey was conducted in three long-stay Institutions for elderly people, located in the municipality of João Pessoa, Paraíba-Brazil.

122 elderlies were selected, with inclusion criteria: have 60 years or more; be able to communicate and have understanding sufficient to answer the questions; and as exclusion criteria: elderly people who were not with preserved cognitive capacity, and/or with any disability.

It was used for data collection the cognitive assessment scale Mini Mental State examination MMSE (Mini-mental State Examination-MMS) translated in Brazil by Bertolucci et al. [9], which provides information on various cognitive parameters, containing questions grouped into seven categories, each one designed to assess cognitive functions specifies how the temporal orientation (5 points), spatial orientation (5 points), three words (3 points), attention and calculation (5 points), remembrance of three words (3 points), language (8 points) and constructive visual capacity (1 point). The research protocol consisted also of socialdemographics data produced by own researcher (age, gender, education).

The MMSE is therefore composed of 30 categorical issues, and the punctuation occurs as follows: 30 to 26 points (cognitive function preserved); 26 to 24 points (change is not suggestive of deficit) and 23 points or fewer (suggestive of cognitive deficit).For some authors the cutting point 23/24 has shown high capacity of discrimination of individuals cognitively changed [8,9].

The participants before being interviewed, agreed and signed an informed consent (TFCC), which was clearly and objectively clarifying the procedures, and that participation could be interrupted if one of the parties thought necessary.

The collected data were analyzed with the help of SPSS computer package. 16.0 under the number: 9791805, contemplating the socialdemographics variables by descriptive statistics, mean and standard deviation. Student's t-test was performed to verify the statistical difference between variables. Significant p<considered 0.05. These procedures were carried out with the aid of the program SPSS version 19.0 for Windows.

The research was approvedby the ethics on Research Committee of the Centro Universitário de João Pessoa – UNIPÊ, obeying the resolution 196/96 of the National Health Council (CNS), at the time in force in the country. Maintained the anonymity of ILPI styling them: ILPI I, II and III as ILPI recommends the above-mentioned resolution.

Results

The results of the study, showed that 67.2% of research participants is female and 32.8% male, demonstrated a greater number of women residing in these institutions.

The most frequent age group of seniors surveyed are between 79.1 ± 7.1 years of age. With respect to the level of education, 27.9% of older people are literate and 30.3% illiterate.

It is observed in **Table 1** that 55.7% (68) of respondents did not achieve the score set by MEEM before the classification of schooling, being inappropriate.

Table 1 Data on the classification of the subject through the score of MMSE. João Pessoa/PB, Brazil.

Classification	% (N)
Inappropriate	55.7% (n=68)
Suitable	19.25% (n=11)
Above	44.55% (n=40)
Not responded	2.5% (n=3)
Source: field research, 2013.	

In **Table 2** displays the mean and standard deviation of the results on the temporal Orientation, spatial orientation, Immediate Memory, memory of evocation, of subjects belonging to three ILPI's, for the respective variables of MEEM.

It was noted that the subject of ILPI III, present a greater temporal orientation score with 4 ± 1.4 points. By analyzing the significance of data detected that ILPI I presents statistical difference between institutions, however ILPI II and III do not have significance among themselves. Thereby the scrinnig at ILPI I resulted in a smaller number of seniors to participate in studies about the assistive technologies, as noted a greater commitment of this group with respect to temporal orientation.

As the spatial orientation of the subject, it was observed that ILPI III presents a higher average. The significance of ILPI data I present statistical difference between ILPI II and ILPI III,

while the latter two do not show significance. Points out that the majority of the residents of ILPI I elderly illiterate scores are associated with the level of education and social class of their elderly.

Table 2 Information on the average and standard deviation of the subject of ILPI's searched as temporal, spatial orientation, immediate, evocation. João Pessoa/PB, Brazil.

Variables	Average			Standard Deviation		
	ILPI I	ILPI II	ILPI III	ILPI I	ILP I II	ILP I III
Temporal Orientation	*1.72	3.97	4	1.76	1.56	1.4
Spatial Orientation	*2	4.3	4.6	1.9	1.1	1.1
Immediate Memory	1.3	2.7	2.6	0.9	0.4	0.8
Memory of Evocation	1.7	2.3	1.5	1.22	1	1.2
Overall Score	*14.9	*22.5	20	6.1	5.4	6
Source: field research, 2013.						

The corresponding data immediate memories show that there was no significance between the scores of seniors-related institutions, the elderly are at the same level with respect to short-term memory.

The elderly of the institutions present statistical difference in respect to the memory of evocation, in which the ILPI I has significant difference compared to ILPI II and III in relation to ILPI II.

Emphasizes that the General score presents significant difference between ILPI I and the other institutions. The result of ILPI is suggestive of cognitive deficit. It is consistent with the number of elderly illiterate. It was noticed during the collection of data on ILPI I, activities directed to cognitive, physical and psychomotor stimuli are not significant.

Discussion

The low level of schooling was prevalent in this study. According to some authors [2], the low level of education and illiteracy are increasing the risks of disability and death during the aging process, because education can help develop skills and confidence they need to adapt and remain independent as they age.

The cognitive condition and general condition of the elderly residents preserved ILP II, allowed a screening with a more expressive number, proving that when the behavioral and environmental risk factors for chronic disease and functional decline are kept low, people remain healthy and able to take care of your own life as you get older, the health, participation and security constitute the three pillars of the political structure to the active ageing [2]. Reason the ILPI shall promote the exercise of human rights, political, economic, social, cultural and individual residents, ensuring the full service and support necessary to the well-being of this clientele.

This result corroborates with studies already carried out [10,11] in which the same claim that aging doesn't necessarily comes with cognitive impairment and decline and new learning experiences and activities can occur until the end of his life. Because it is known that the chronological age has little relationship to the reality of aging for an elderly person, that is, every age according to your own schema and life story [12].

Given this scenario, researchers [11] feature the stimulation as a way of promoting cognitive health, example of studies on the relationship between the physical and cognitive activities, and the reduced incidence of cognitive impairment among the elderly. These results are consistent with studies of cognitive stimulation, showing that weekly exercises, such as tasks to solve problems and memory games, increase the psychological well-being of those who practice it. Corroborating with the affirmative that the average life expectancy at birth, should reach 90 years in 2050 [2].

In this context, it refers to the acquired skills or retention of information and in everyday situations, adults, especially the elderly, may have some difficulties in memory retrieval. Even being a consequence of aging, decreased memory efficiency is also influenced by issues such as genetics, environmental factors, experiences, habits, character and personality [12].

With the memory of older data related evocation of the life of the elderly person, calls attention to the commitment of that memory. In this scenario, it is understandable that to conceptualize if an elderly person is healthy or not, take into account factors of their daily life, where they will be observed its conditions to develop their activities of daily living. Those who are independent and carry out their activities are classified as healthy, while those who for some reason feature any kinds of losses are reported sick [13].

Therefore, propose commitment of researchers and other segments of society to intervene by the institutionalized elderly population share, since there is a great demand of ILPI for decades to come. This demand, linked to the reality experienced in these institutions, requires forms of improvement and quality of life for the elderly maintaining health education, as a plurality of actions for health promotion and teaching strategies that transform individuals socially inserted in the world, expanding its ability to understand the complexity of the determinants of health [14].

Conclusion

On the results it was noticed that the research was useful not only to track down elderly with cognitive conditions, but also enabled the completion of the analysis of significance of some situations related to Temporal, Spatial Orientation and memory of evocation and can be justified by the lack of stimuli, physical activities, and the way of living of the elderly in the respective ILPI, that directly or indirectly contribute to the evolution or decline of the health of the elderly.

The MMSE was effective in cognitive tracking in addition to detect mild cognitive impairment (TCL), since the parameter that best predicts the TCL in this test is the memory of

evocation. In this context it is suggested to use another psychometric scale, in the short term and routinely at ILPI, to confirm the findings and implement measures to prevent the harms to health, considering that such deficits can cause losses in daily life of the elderly, and possible indications for treatment and interventions.

Based on published studies, infers that future research should turn to the development of specific interventions for each institution, as well as the implementation of protocols that evaluate different aspects: activities of daily living, quality of life, offered activities, actions to promote health among others. In this context, the benefits should be assessed in the short and long term by means of appropriate evolutionary steps.

References

1. Papaléo NM (2006) The study of old age: historical, field definition and basic terms. In: Freitas et al. (ed) Treaty of Geriatrics and Gerontology (2 edtn), Rio de Janeiro: Guanabara Koogan, 2006: 2-12.

2. World Health Organization (WHO) (2005). Active aging: a health policy. Brasília (DF): Ministry of Health.

3. Law No. 8842 (1994) Provides for the elderly national policy, creates the Council. National Elderly and other measures, Brazil.

4. Stein LM, Argimon IL (2005) Cognitive abilities in older adults: a longitudinal study. Public Health 21: 17- 22.

5. Pereira LSM, Goretti LC, Oliveira DLC (2006) The performance of institutionalized elderly with cognitive impairment in activities of daily living and mobility: a pilot study. Braz J Phys Ther 10: 91-97.

6. ANVISA (2005) Resolution of the Board of Directors.

7. Camarono AAK, Ansos S (2010) Long-term care facilities for the elderly in Brasil Rev Bras Estud Popul 27: 232-235.

8. Bertolucci PH, Brucki SM, Campacci SR, Juliano Y (1994) The Mini-Mental State Examination in a general Population: impact of educational status. Arc Neuropsychiatric 52: 1 -7.

9. Almeida OP (1998) Mini mental state examination and the diagnosis of dementia in Brazil. Arc Neuropsychiatric 56: 605-612.

10. Silver MH, Jilinskaia E, Perl's TT (2001) Cognitive functional status of age-confirmed centenarians in a population-based study. J Gerontol B Psychol Sc Soc Sci 56: 134-140.

11. Born T, Boechat NS (2006) The quality of care to the elderly Institutionalized. In the Treaty of Geriatrics and Gerontology. Rio de Janeiro: Guanabara Koogan 2006: 768-777.

12. Encyclopaedia Barsa (2002) Barsa Planeta Internacional Ltda. 7: 14.

13. Potter PA (2009) Nursing Fundamentals. (7th eds), Translation:. Maria Ines Correa Nascimento. Rio de Janeiro, Elsevier.

14. Sousa LB, Torres CA, Pinheiro PNC, Pinheiro AKB (2010) Health Education Practices in Brazil: The Practice of Nursing. Rev Nursing 18: 55-60.