

Analysis of Functional and Cognitive Status in Older Adults from a Community Health Area

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ABSTRACT

Background: to analyze the functional and cognitive status of the elderly served in a community health area.

Methods: a descriptive, cross-sectional investigation with a quantitative approach was carried out between September 2017 and March 2018.

Results: female sex (54,8 %) between 60-69 years of age (48,4 %) predominated, with a level II of psychoaffectivity (54,8 %) corresponding to the median level of psychological functioning and some degree of depression (32,3 %). To analyze the functional factors, the Katz Index was applied where they were adequate in 54,8 %. The cognitive cause was more frequent, and of these, the memory, the understanding and the affective state.

Conclusion: cognitive and physical deterioration is part of aging, which is why it is vital to create physical and cognitive rehabilitation programs as part of comprehensive care for the elderly.

Keywords: Older adult; Functional state; Cognitive state; Aging

INTRODUCTION

The older adult in Cuba occupies more than 19%, and it is expected that by 2025, one in four Cubans will be older adults. Of this population only one percent is in institutions, 9% live alone and the rest live with family members.¹

The so-called third age, also known in the terms of old age, late or adulthood, has been addressed in the literature in isolation or as a phase of involution and not as an authentic stage of human development. It is located around the age of sixty, associated with the event of occupational retirement.²

The psychological evaluation is carried out with the objective of investigating cognitive and affective alterations that affect or limit the functionality of the older adult. This evaluation of the cognitive and affective aspects is carried out with the psycho-affective scale and the Mini mental test from the beginning of the diagnosis.³

Physical and cognitive rehabilitation consists of restoring the affected function by means of specific interventions, which obey a plan previously established on the basis of the clinical characteristics of the patient in question.

Its ultimate goal is the recovery of functions, so that the patient can meet daily demands with a minimum of efficiency.⁴⁻⁶

In spite of the demographic increase and the high degree of population aging that Cuba exhibits, there are not ample references of research in relation to the geriatric study that measure the cognitive and affective state, however, there are statistical data that have been attended and offered monitoring and special treatment of the psychological well-being of the elderly, precisely in these last five years.⁷⁻¹⁰

The objective of the present investigation was to analyze the functional and cognitive status of elderly people attended from a community health area, between September 2017 and March 2018.

METHODS

A descriptive, cross-sectional study with a quantitative approach was carried out in elderly patients attended from a community health area, from September 2017 to March 2018. The sample was selected through the simple random sampling probabilistic technique and consisted of 31 patients.

EMPIRIC LEVEL

Mini-mental

It allowed to explore all the cognitive processes with the objective of determining the damaged and conserved functions in the patients, which include orientation, memory, attention, language, writing, the viso-spatial, the understanding and evocation.¹¹⁻¹³

Katz Index

It allowed to diagnose the degree of execution of the tasks of daily life, assessing the level of independence or dependence before its realization.

Inclusion approaches

- Patients of both sexes, older adults between 60 to 80 years of age with a deficit in their level of physical and cognitive functioning.
- Elderly patients who give their consent to participate in the investigation.
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Exclusion approaches

V-Patients with a psychiatric history whose psychotic level prevents them from cooperating with the study were excluded.

Exit approaches

VI. Patients that abandon the investigation voluntarily.

COLLECTION OF THE INFORMATION

For the collection of information, a form was designed with the variables that were to be investigated, which included general data, such as age, sex, etiology, extent of cognitive impairment at their level of functioning. In addition, the open interview was conducted, with prior informed consent, to determine compliance with the functional indicators of cognitive rehabilitation and which allowed

psychological evaluation; the Mini-mental test and the Katz index were used.

STATISTICAL ANALYSIS

Once the information was collected, an automated database was created, supported on Windows Microsoft Excel, from which the frequency distributions for the tables and graphs that summarized the primary data were extracted. Descriptive statistics techniques were applied to obtain absolute frequencies and percentages.

RESULTS

In the various levels of psychological functioning within the results, level I was first identified, where the state of need of patients with cognitive disorders accompanied by dependence and behavioral disorders is found, with evidence of affective alteration and with socio-family dependence, being an older adult who does not have validity for himself. Level I is understood within an inadequate level of psychological functioning.⁹

Subsequently, level II was identified where geriatric patients with psychological fragility enter, who, although they have cognitive disorders, do not evidence functional dependence, since, although they suffer from chronic diseases, they are compensated and comply with their therapeutic adherence, however, they can stand on their own. Level II is understood within a medium level of psychological functioning.¹⁰

In this way, finally, level III was reached where older adults have an adequate level of functioning, who, although they suffer from chronic diseases, are compensated and have no complications, those who do not have limitations to the activities of daily life and who are conditions of returning to the family environment without functional problems.¹¹

In the studied sample, the female sex predominated (54.8%) and the group from 60 to 69 years with 48.4% (Table 1).

Table1. Distribution of older adults according to age and sex

Sex	Age of Group						Total	
	60-69		70-75		76-80			
	No.	%	No.	%	No.	%	No.	%
Female	9	29,0	6	19,3	2	6,4	17	54,8
Male	6	19,3	5	16,1	3	9,7	14	45,2
Total	15	48.4	11	35.5	5	16.1	31	100.0

Source: Form.

To analyze the functional factors, the Katz Index was applied where they were adequate in 54.8%, only 16.1% was inadequate (table 2). Despite the fact that most of the patients presented a medium level of psychological functioning, they maintained an adequate level of functionality.

Table2. *Distribution of older adults according to functional factors*

Functional factors	No.	%
Appropriate	17	54,8
Fairly appropriate	9	29,0
Inadequate	5	16,1
Total	31	100,0

Source: Form.

From the general data derived from the review of clinical histories and the interrogation, the following information was obtained: 10 single patients, 12 widows without family support, and 7 married. In relation to schooling 14 achieved the sixth grade and 17 of them the ninth.

The increased risk of illness and death in the elderly was evident in the cases studied, where 16 were hypertensive and 10 had heart disease, accompanied by 5 with smoking addiction, which as a risk factor contributes to the state not only physical but mental; in addition to self-medication with harmful effects on cognitive and affective processes in older adults.

The cognitive cause was more frequent, and of these, the memory, the understanding and the affect visio spatial. In relation to the Mini-mental of the total of studied cases, 14 presented difficulties, of them 6 members of the group with sixth grade and 4 with ninth grade, presented greater difficulty with the temporal orientation and to a lesser extent with spatial orientation.

Immediate memory is unfavorable in its entirety. In attention and concentration, people with a sixth grade level made the regression spelled out of the word "world". In the result of the execution achieved zero points, however, patients with a level of ninth grade and baccalaureate reached all points.

In relation to the memory observed in the group with the sixth grade level in a general sense it is not conserved. The total of elders presented difficulties with the task. In the behavior of the language, denomination and repetition were not conserved. In terms of understanding, results similar to the previous one were observed.

Regarding reading and writing; the patients with sixth grade presented some difficulties, unlike

the patients with ninth and bachelor who managed to perform both tasks correctly.

DISCUSSION

The aging process intrinsically involves the reduction of physical capacity and the development of cognitive impairment of an individual however, various pathologies, accidents, life history, genetic load and biopsychosocial aspects can influence the speed and severity of such conditions, reaching even the condition of functional dependence.¹⁴

The aging process is normal and happens despite enjoying good health, healthy and active lifestyle and lack of diseases, which is essential for comprehensive care and health geriatric individual and collective awareness of their own state of biopsychosocial, spiritual and cultural health.¹⁵

Consequently, old age is the inevitable result of organic and mental deterioration, which becomes visible in the middle of life and progresses at an accelerated rate. Aging as a biological process has extensive social and psychological consequences; unfortunately in the world today and especially in the province of Villa Clara the demographic indicators have been growing in an ascending way, which implies that older adults demand integrated actions with the help of professionals and intervention from different sectors to cover the different biological, psychological and social needs.¹⁵

Regarding the degree of independence, this study coincides with that of Marinês Tambara et al,¹⁵ where approximately 85% of the elderly were independent, followed by those with partial dependence (9%).

Sad mood should not be part of normal aging and is not a natural and inevitable accompaniment of the decline of social attitude, several works¹⁶ have shown that depressive symptoms are related to poor health and functional disability, so it is considered as a very important public health problem and its study is an integral part of research on the welfare and health of the elderly.

The interest for the lifestyle adjusted to the cognitive, affective and physical functioning in the elderly, means that through follow-up and assistance with the help of the various professionals involved in the direct work in rehabilitation, they achieve an adequate active or successful aging. Primary process that

involves gradual and unavoidable age-related changes that appear in all members of a species. 17,18

It is stated in the literature that there is a relationship between the degree of schooling and the cognitive status of older adults. Elderly people with a low level of education have a difficult time understanding and performing cognitive tests at the time of assimilation. ¹⁹

CONCLUSION

Older adults from a community health area, when analyzed, present affectations in the functional systems that commit attention to their duration, stability and concentration; to verbal fluency; to sequencing (analytical-synthetic); to the function of evocation: mnemonic, spatial vision; to spontaneous verbal memory and keys. Functional systems related to orientation with oneself and with other people; the simple arithmetic calculation and the recognition of objects are even better preserved. It is vital to create physical and cognitive rehabilitation programs as part of comprehensive care for the elderly.

REFERENCES

- [1] Álvarez, R. Evolución del envejecimiento en la población cubana. Temas de MGI. Editorial Ciencias Médicas [Internet]. 2013 [citado 2017 22 Mar]; Volumen I, 167-168 p. Disponible en: <http://files.sld.cu/gericuba/files/2018/01/Tabaquismo.pdf>.
- [2] Orosa, T. La tercera edad y la familia. Editorial Félix Varela. La Habana [Internet]. 2012 [citado 2017 22 Mar]; Disponible en: <https://studyres.es/doc/3457371/versi%C3%B3n-para-imprimir---convenci%C3%B3n-internacional-virtual-de-Ciencias-Morfológicas>.
- [3] Luria, AR. Fundamentos de Neuropsicología. Fontanella, Barcelona [Internet]. 1973 [citado 2017 22 Mar]; Disponible en: <https://books.google.com/cu/books?isbn=8497882830>.
- [4] Vigotsky, LS. Historia del desarrollo de las funciones psíquicas superiores. La Habana, Ed. Científico Técnica [Internet]. 1985 [citado 2017 22 Mar]. Disponible en: https://edisciplinas.usp.br/pluginfile.php/289941/mod_folder/.../Tomo%203.pdf.
- [5] Cuetos, F. Neuropsicología cognitiva del lenguaje. En: De Vega, M., Cuetos, F., eds. Psicolingüística del español. Madrid: Trota [Internet]. 2013 [citado 2017 22 Mar]; 535-69 p. Disponible en: <https://www.uv.es/gotor/psicologos/programa.html>.
- [6] Luria, AR. Las funciones corticales superiores en el hombre. La Habana: Editorial Científico-Técnica [Internet]. 2009. [citado 2017 22 Mar]. Disponible en: <https://www.redalyc.org/articulo.oa?id=141131696002>.
- [7] Buendía, J. Gerontología y salud. Perspectivas actuales. Madrid. Biblioteca nueva [Internet]. 2012 [citado 2017 22 Mar]. Disponible en: <https://www.agapea.com/.../Gerontologia-y-salud-Perspectivas-actuales-97884703041>.
- [8] Yessavage JA, Brink TL, Rose TL. Development and validation of a geriatric depression screening scale: Apreliminary report. J Psychiatr Res [Internet]. 2013 [citado 2017 22 Mar]; 17: 37-49p. Disponible en: <https://www.Researchgat.net/.../240845786> Version española del cuestionario de yessavage.
- [9] Madruga F, Castellote FJ, Serrano F, Pizarro A, Luengo C, Jiménez EF. Índice de Katz y escala de Barthel como indicadores de respuesta funcional en el anciano. Rev Esp Geriatr Gerontol [Internet]. 2013 [citado 2017 22 Mar]; 27(8): 130 p. Disponible en: <http://psicologia.librosytest.blogspot.com/2014/01/test-katz-indice-de-katz-de-actividades.html>.
- [10] Hernández P, Benítez MA, Barreto J, Rodríguez H, Torres A, Marco T. Despistaje en el anciano de dependencia funcional y riesgo de institucionalización. Aten Primaria [Internet]. 2014 [citado 2017 22 Mar]; 10(8): 140 p. Disponible en: <http://psicologialibrosytest.blogspot.com/2014/01/test-katz-indice-de-katz-de-actividades>.
- [11] Valderrama E, Pérez del Molino J. Una visión crítica de las escalas de valoración funcional traducidas al castellano. Rev Esp Geriatr Gerontol [Internet]. 2014 [citado 2017 22 Mar]; 32(5): 297-306 p. Disponible en: <http://www.elsevier.es/es-revista-revista-espanola-geriatria-gerontologia-124-articulo-calidad-de-los-instrumentos-de-valoracion-funcional-en-geriatria>.
- [12] Salva A, Vellar B, Albareda JC. Evaluación gerontológica. Primeros resultados de una unidad de evaluación geriátrica. Rev Gerontol [Internet]. 2013 [citado 2017 22 Mar]; 4: 174-9 p. Disponible en: <http://psicologia.librosytest.blogspot.com/2014/01/test-katz-indice-de-katz-de-actividades.html>.
- [13] Abanto JJ, Martínez T. La ayuda a domicilio en Zaragoza: Valoración cualitativa y cuantitativa. Rev Esp Geriatr Gerontol [Internet]. 2013 [citado 2017 22 Mar]; 26: 197-202 p. Disponible en: <http://psicologia.librosytest.blogspot.com/2014/01/test-katz-indice-de-katz-de-actividades.html>.
- [14] Guzmán Olea E, Pimentel Pérez BM, Salas Casas A, Armenta Carrasco AI, Oliver González LB, Agis Juárez RA. Prevención a la dependencia física y al deterioro cognitivo mediante la implementación de un programa de rehabilitación temprana en adultos mayores institucionalizados. Acta univ [Internet]. 2016 [citado 2017 22 Mar]; 26(6): aprox. 7 p.

- Disponible en: <http://www.scielo.org.mx/pdf/au/v26n6/2007-9621-au-26-06-00053.pdf>.
- [15] Marinês Tambara L, Castioni D, Kirchner RM, Hildebrandt LM. Capacidad funcional y nivel cognitivo de adultos mayores residentes en una comunidad en el sur de Brasil. *Enferm Glob* [Internet]. 2015 [citado 2017 22 Mar]; 14(37): aprox. 11 p. Disponible en: <http://scielo.isciii.es/pdf/eg/v14n37/clinica1.pdf>.
- [16] Rodríguez Blanco L, Sotolongo Arró O, Luberta Noy G, Calvo Rodríguez M. Comportamiento de la depresión en el adulto mayor del policlínico "Cristóbal Labra". *Rev Cub Med Gen Integr* [Internet]. 2013 [citado 2017 22 Mar]; 29(1): 64-75 p. Disponible en: http://scielo.sld.cu/pdf/mgi/v29n1/mgi09_113.pdf.
- [17] Clemente F. Reducción de la ansiedad, la depresión geriátrica y la preocupación en una muestra de adultos mayores a través de un programa de entrenamiento en mindfulness. *Ter Psicol* [Internet]. 2013 [citado 2017 22 Mar]; 35(1): 71-79 p. Disponible en: <https://scielo.conicyt.cl/pdf/terpsicol/v35n1/art07.pdf>.
- [18] Segura Cardona A, Cardona Arango D, Segura Cardona A, Garzón Duque M. Riesgo de depresión y factores asociados en adultos mayores. Antioquia, Colombia-2012. *Rev Salud Pública* [Internet]. 2015 [citado 2017 22 Mar]; 17(2): 184-194 p. Disponible en: <http://www.scielo.org.co/pdf/rsap/v17n2/v17n2a03.pdf>.
- [19] Giacomani C, Funes D, Guzmán L, Montiel T. Depresión y escolaridad en adultos mayores. *Dialogoseducacion* [Internet]. 2015 [citado 2017 22 Mar]; 1(2): aprox. 12 p. Disponible en: http://www.researchgate.net/publication/320310732_Depresion_y_escolaridad_en_adultos_mayores.

Citation: Jesús Cuéllar Álvarez, *Analysis of Functional and Cognitive Status in Older Adults from a Community Health Area. International Journal of Research Studies in Medical and Health Sciences*. 2018; 3(3):29-33.

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