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COGNITIVE PROFILE OF ELDERLY IN PRIMARY HEALTH CARE

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ABSTRACT

To investigate the cognitive profile of elderly assisted in Primary Health Care. Descriptive cross-sectional study with a quantitative approach conducted in the city of Campina Grande, in the state of Paraíba (PB), from January to March 2018. The sample consisted of 50 elderly individuals - 10 subjects from each District. An instrument containing questions related to the sociodemographic profile, self-reported health problems and the Mini Mental StateExamination (MMSE) was used. The data obtained was entered and stored in spreadsheets, processed and tabulated in the SPSS program and presented in tables. There was a predominance of females - 38 (76%) - and 24 elderly (48%) self-reported as brown in color. Age ranged from 61 to 96 years, with 70.3 ± 7.91, married (48%), born in a rural area: 30 (60%) and 14 elderly (28%) were illiterate. There was a distribution of the various cognitive functions of 21.37 ± 11.84. The most affected domains were visual construction, attention and calculation, short-term memory and evocation of words (language). One limitation of the study was the small sample size, which reduced the possibility of generalization of its results.It was concluded that sociodemographic aspects can impact cognitive ability.

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INTRODUCTION

Aging is a natural process that we experiencein our lives andthat has assumed a greater importance in recent years because of the aging of the world population. According to the World Health Organization, population aging is the result of considerable changes in the living conditions, and it is a fast-paced process. Thus, there is little time available to reorganize health care to meet emerging demands (OMS, 2015). The dramatic increase in the elderly population poses challenges related to the planning of public policies, sinceaging is associated with organic disordersthat cause loss of homeostasis and several complications to the population. These complications may affect some spheres, such as executive functions, memory, and cognitive loss, impairing the quality of life of older people and increase the specialized demand for health services to this population (Ferreira et al, 2014),(Leonardo et al, 2014). Thus, if the diseases that affect the elderly are controlled, these individuals will be moreindependent, productive and hence enjoy a better quality of life (Dagios et al, 2015). It should be noted that age is a determining factor for cognitive decline, and this usually begins with memory problems. Memory damage affects the amount and quality of personal information that individuals are able to retain over a long period of time. Memory decline can range from temporary episodes of forgetfulness that momentarily keep the individuals from carrying out physical activities to memory declines that prevent the maintenance of social life, and lack of proper care may cause dementia and impair cognitive function (Araújo et al, 2015).Cognitive decline, which is also hampered by the socioeconomic status of the elderly, is a factor that deserves special attention in the

efforts made to ensure healthy aging to older people. Low-income older adults may often lack cognitive stimulation and encouragement to do physical activity because of their poor living conditions and scarce information about the benefits of physical activity to health (Araújo et al, 2015). Cognitive loss can be confused with natural aging processes and hence decline at this stage of life is a major problem, especially in cases of late diagnosis and treatment. Recognizing early signs of cognitive loss is a strategy that can mitigate or delay damage (Nascimento et al, 2015). Primary Health Care (PHC) services favor the establishment of abond between the professional team and the elderly population, with initiatives that involve, among other things, the delivery of care to this population. These services should provide comprehensive and effective care capable of identifying possible damage or risk factors that trigger a significant cognitive loss among the elderly, interfering with their functional capacity.Because of the establishment of a bond between the team of professionals and the elderly patients cognitive impairment can be identified early by PHC services. Therefore, these services play a key role in the prevention of cognitive decline (Wanderbroocke et al, 2015). Thus, in view of the aforementioned, the present study aimed to investigate the cognitive status of the elderly assisted in Primary Health Care.

METHODS

Descriptive, cross-sectional study with a quantitative approach conducted in the city of Campina Grande- PB. Elderly individuals registered and assisted in the Basic Health Units (UBS) were the participants of the study. The sample consisted of 50 elderly - 10 from each of the five health districts (HD-I, HD-II, HD-III, HD-IVand HD-V). The following inclusion criteria were selected: individuals aged 60 years or older living in the health districts, registered in the Family Health Strategy program, with scheduled appointmentsin the Basic Health Units (UBS) and who obtained a score higher than the cutoff point in the Mini Mental State Examination cognitive test (MMSE). Exclusion criteria were lack of cognitive ability and hearing or vision impairment that made communication difficult. Data was collected from January to March 2018. An instrument with questions related to sociodemographic profile and self-reported health problems, and the MMSE, which provides information on mental state and evaluates different cognitive parameters, with questions grouped into seven categories, were used. Each of the questions aims to assess specific cognitive functions: orientation, three-word registration, attention, calculation, memory, language and motor skill. The following scoring was used by the MMSE to classify the educational level of the participants: illiterate - 13 points; 1-8 incomplete years of schooling - 18 points; 8 or more years of schooling - 26 points, from a total of 30 points (Folstein et al, 1975).

The data obtained were typed and stored in spreadsheets in Excel 2013, processed and tabulated with the use of SPSS - version 20.0 and submitted to descriptive analysis through the calculation of the means, standard deviation and absolute and relative frequencies. The study complied with Resolution no 466/12 of the National Health Council, and was approved by the Research Ethics Committee of Hospital Universitário Alcides Carneiro (HUAC). Protocol No 2,380,077 and CAAE 79598117.3.0000.5182.

RESULTS

The study sample consisted of 50 elderly people, predominantly female (38 - 76%) with self-reported brown color (24 - 48%). Table 1 shows a higher prevalenceof young-old individuals aged 60- 69 years old: 28 (56%) followed by individuals aged 70 -79 years: 17 (34%) and over 80 years old: 05 (10%). Age ranged from 61 to 96 years (70.3 ± 7.91). Regarding the marital status of the elderly, 48% (most) were married, and 30%, widowed. As for religion, 33 (66%) were Catholic, and 17 (34%), Evangelicals. Regarding the place of birth 30 (60%) lived in rural area and 20 (40%) in urban areas. Regarding income, most were retired: 43 (86%) seniors said their monthly income was one minimum wage, and seven (14%) earned 1-2 minimum wages. Asked about their current memory performance, 27 (54%) of the study's elderly answered that it was regular (Graph 1). Regarding the current memory performance, compared to that of one year ago, 33 (66%) of the subjects said it remained unchanged (Graph 2).

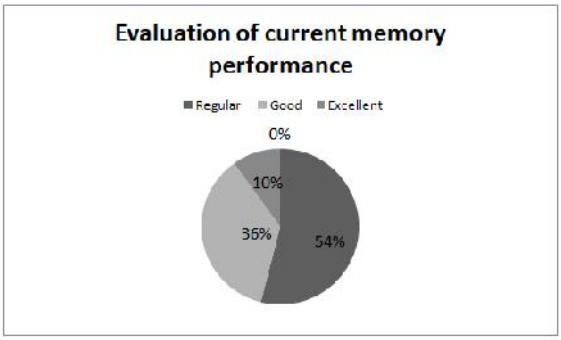
Among the health problems self-reported by the elderly participants in the study, 49 (98%) mentioned diseases of the circulatory system; 43 (86%), musculoskeletal system and connective tissue; 25 (50%) sleep disorders; and 32 (64%), diseases of the eye and adnexa.Graph 3 shows that 41 (82%) of the elderly said they did not practice any kind of physical activity, and only 9 (18%), performed physical exercises; and Graph 4 shows that most elderly were illiterate - 14 (28%). This data may be related to the prevalence of the place of birth, as shown in Table 1. Table 2 shows that the elderly had a varied cognitive function distribution with 21.37 ± 11.84. The most affected domains were visual construction, attention and calculation, short-term memory and evocation of words.

Table 1. Distribution of data on sociodemographic characteristics of the elderly assisted in PHC - Campina Grande, PB, Brazil – 2018

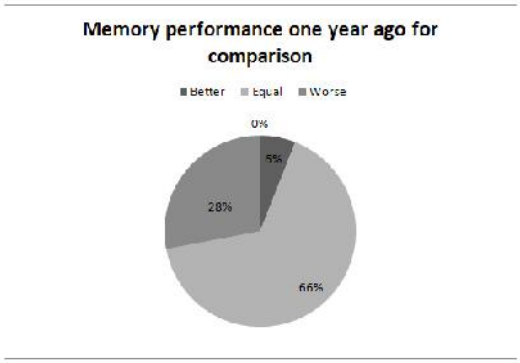
VARIABLES	N	%
Gender		
Male	12	24
Female	38	76
Age		
60-69	28	56
70-79	17	34
80 or above	05	10
Marital status		
Single	06	12
Married	24	48
Separated	05	10
Widowed	15	30
Skin color		
Brown	24	48
Black	11	22
White	13	26
Yellow	02	4
Religion		
Catholic	33	66
Evangelical	17	34
Place of birth		
Urban area	20	40
Rural area	30	60

DISCUSSION

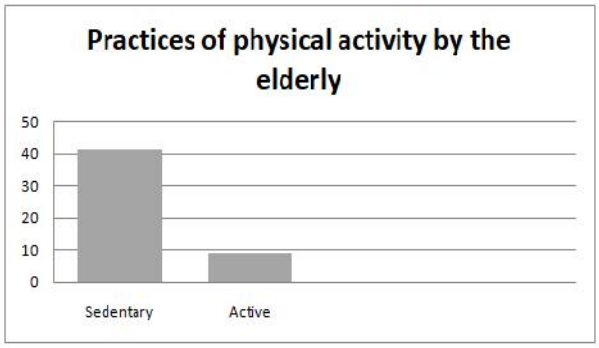
The present study found that women avoid exposing themselves to life-long risk factors and care more about their health than men.



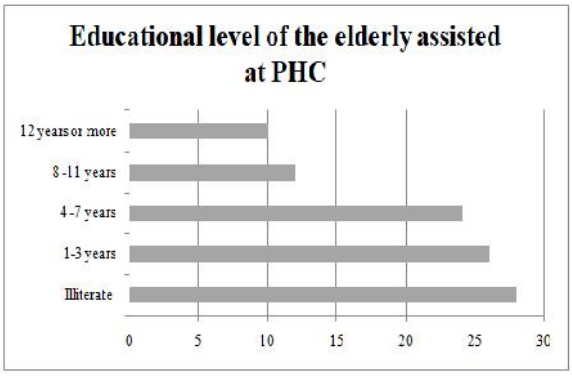
Graph 1. Data on self-assessment of current memory performance of the elderly assisted at PHC - Campina Grande, PB, Brazil – 2018



Graph 2. Data on self-rated memory of older people compared with memory performance a year ago - Campina Grande, PB, Brazil – 2018



Graph 3 –Data on the practice of physical activity by the elderly assisted at PHC - Campina Grande, PB, Brazil – 2018



Graph 4 – Data on the educational level of the elderly assisted at PHC - Campina Grande, PB, Brazil - 2018

Table 2 – Distribution of the cognitive functions assessed by the MMSE - Campina Grande, PB, Brazil - 2018

Functions	Mean	Standard deviation
Temporal orientation	3.92	1.95
Spatial orientation	4.81	1.31
Short-term memory	1.89	1.37
Attention and calculation	1;56	2.98
Evocation of words	1.96	1.44
Language	6.98	2.24
Visual construction ability	0.25	0.55
Total	21.37	11.84

Source: Research data - 2018

They are more aware of signs and symptoms of diseases and therefore live longer (ZIMMERMANN*et al.*, 2015). In this study, participants' ages ranged from 60 to 69 years. One study found a greater cognitive decline in older people over 80 years. However, there is no heterogeneity regarding aging (NASCIMENTO*et al.*, 2015),and although longevity was associated with greater cognitive loss, it was not considered a determining factor for such decline. It is rather the presence of senility with nervous system disorders that causes deficit in cognitive performance, which is also influenced by other factors such as physical health conditions, social life, religious service attendance, self-care, family life, physical activities and other factors that condition and promote cognitive stimuli (ZIMMERMANN *et al.*, 2015). Most elderly said they were Catholic and married. Not having a spouse or partner may be related to the decline in cognitive status of the elderly, and the presence contributes to performing joint activities that improve performance and stimulate cognition. Of the elderly interviewed, 15 (30%) were widowed (TAVARES *et al.*, 2017). Major emotional impacts, such as the loss of a loved one, for example, canhave a negative impact on older people's cognition and overall health (CRUZ *et al*., 2015).

Brown color was self-reported by most participants who, added to the black individuals, made up most of the study sample (70%). According to one study, despite the lack of evidence associating ethnicity and cognitive decline, one factor contributes to this correlation, namelythe fact that skin color is associated with lower levels of education, and thus, there is an indirect relationship between higher rates of cognitive problems and this population (HOLZ *et al*., 2013). Regarding origin and place of birth, most of the elderly lived in the rural area (60%). This was also reported in another study, in which 47.27% of the elderly had less than three years of formal education. This data is associated with the low level of education of this population, which is related to the difficulties faced by this population in previous decades when access to education was difficult (Martin et al, 2016). The place of origin can be related to past habits, when women performed domestic activities and men performed activities that required physical strength, and formal education was not a priority (TAVARES*et al.*, 2017). This study also showed that 100% of the participants had a monthly income ranging from one and two minimum wages and that retirement was the main source of income for 86% of the elderly.Another study showed an association between cognitive loss and exposure to stressors such as low income, which exacerbates cognitive decline (NASCIMENTO *et al.*, 2015).Moreover, another study found that 81% of the elderly subjects reported earning a monthly income of one to two minimum wages. There was a correlation between low income and higher risk of cognitive impairment, which is possibly associated witha poor diet, difficulty in accessing health services, medicines and other factors that

impact the health of elderly individuals (Garden *et al*., 2017). The aging process raises concerns about memory loss. In this study, 54% of the elderly said that their current memory performance was regular, and 66% said that it remained unchanged compared to one year ago. Memory decline, whether or not accompanied by pathological processes, can impair the performance of daily living activities, self-esteem and self-efficacy and the quality of life of this population (Wanderbroocke *et al*., 2015). Self-reported health problems included circulatory system diseases, mentioned by 49 (98%) respondents, especially systemic arterial hypertension (SH), reported by 43 (86%). SAH is considered to be a relevant risk factor for various diseases and is associated with decrease in cognitive performance. Elderly hypertensive patients are more likely to show slow response and declining memory and executive functioning compared with elderly normotensive patients, and cognitive decline is higher among hypertensive patients who do not adhere properly to treatment than in those with treated hypertension (MATOSO *et al*., 2013). Insomnia, considered a sleep disorder, was reported by half of the elderly participants in the study.Sleep deprivationmay influence the homeostatic balance and the immune system, impact behavior, mood, psychological function and the cognitive performance of older individuals, since changes in sleep/rest patterns interfere with cognitive performance (ZIMMERMANN *et al*., 2015). It was found that 41 (82%) elderly did not practice physical activity. This practice is associated with lower risk of cognitive decline (DIAS *et al.*, 2014) and in another study it was considered a behavior that effectively reduces cognitive decline. Currently, the practice of physical activity is conceived as animportant factor of protection and neutralization of dementia in the elderly (LINI *et al*., 2016).In menopausal women, an active lifestyle reduces aging-related cognitive decline and contributes to improve performance of this function.

Regarding education, 28% of the elderly interviewed were illiterate, and 26% had completed less than three years of education. Thus, the population assisted at PHC services has a low education level and is more vulnerable to health problems and therapies, and have poor adherence to prescribed medication. Low educational level is related to cognitive impairment (ZIMMERMANN *et al*., 2015). Regarding the educational level, 54% of the elderly said they had completed less than three years of education. Elderly people with low levels of formal education are more likely to perform poorly in MMSE, as this is a screening tool that requires abilities like reading, writing, calculation, attention and performing various tasks that require different levels of education. Moreover, in this context, low educational level is a consequence of the difficulties faced by past generations regarding access to formal education, especially for women and economically disadvantaged individuals. Also, since educational level is a variable that stimulates cognitive functions and a protective factor for these functions, it isstrongly associated with cognitive performance (GARDEN *et al.*, 2017). A good cognitive performance is vital for a better quality of life of older people. Thus, health education contributes to the promotion of physical, mental and emotional health and stimulatesthe elderly population by offering them technical and scientific knowledge that favors the improvement and maintenance of the cognitive abilities of these individuals (CASEMIRO *et al.*, 2018). The small sample size was one limitation of this study, as it made it difficult to generalize the results.

Final Considerations

The present study made it possible to investigate the cognitive profile of the elderly assisted in Primary Health Care and found that sociodemographic aspects are factors that may influence their cognitive ability. Thus, it is suggested that these aspects are considered in the development of strategies for nursing care and other members of the PHC team. Thus, given the scarce number of studies on this topic, which made it difficult to make comparative analyzes, further studiesare recommended.

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