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RESEARCH

The relationship between the nursing diagnosis and cognition tests performed on elderlies with alzheimer's disease

A relação entre os diagnósticos de enfermagem e testes de cognição realizados em idosos com doença de alzheimer

La relación entre los diagnósticos de enfermería y pruebas de cognición realizados en ancianos con enfermedad de alzheimer

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ABSTRACT

Objectives: to raise the diagnosis of elderly nursing in nursing consultation and relate those diagnostics with the results of neurological test. **Method:** a documental research with 8 elderly of age or older than 60 years old of the program participants of health care of elderly and diagnosed with alzheimer's disease. There were used forms of consultations of nursing, and neurological and cognition tests between may to october 2011; they were statistically treated and with cep no. 0239.0.258.000-11. **Results:** the nursing diagnosis was the chronic confusion with test results for evaluation of immediate memory, incidental and late. Risk of falls was related to the watch test. Poor knowledge was related to recognition of figures and evaluation of learning. Standard prejudiced sleep, risk of solitude and chronic sadness helped to diagnose depression. **Conclusion:** this work allowed establishing relationship between nursing diagnosis with neurology for planning of nursing care. **Descriptors:** Elderly, Dementia, Cognition.

RESUMO

Objetivos: levantar os diagnósticos de enfermagem dos idosos na consulta de enfermagem e relacionar tais diagnósticos com resultados dos testes neurológicos. **Método:** pesquisa documental com 8 idosos com idade igual ou maior a 60 anos, participantes do programa de atenção à saúde do idoso e com diagnóstico de doença de alzheimer. Utilizados formulários das consultas de enfermagem, neurológico e os testes de cognição entre maio à outubro de 2011 tratados estatisticamente com cep nº 0239.0.258.000-11. **Resultados:** os diagnósticos de enfermagem foram confusão crônica com resultados dos testes para avaliação da memória imediata, incidental e tardia. O risco de quedas foi relacionado com o teste do relógio. Conhecimento deficiente foi relacionado com reconhecimento das figuras e avaliação da aprendizagem. Padrão de sono prejudicado, o risco de solidão e tristeza crônica auxiliou no diagnóstico de depressão. **Conclusão:** este trabalho permitiu estabelecer relação entre diagnóstico de enfermagem com a neurologia para planejamento dos cuidados de enfermagem. **Descritores:** Idoso, Demência, Cognição.

RESUMEN

Objetivos: elevar el diagnóstico de enfermería de la tercera edad en la consulta de enfermería y relacionar tales diagnósticos con los resultados de los testes neurológicos. **Método:** investigación documental con 8 ancianos con edad igual o mayores a 60 años, participantes del programa de salud del anciano y diagnóstico de la enfermedad de alzheimer. Los formularios utilizados de las consultas de enfermería, neurológico y pruebas de cognición entre mayo a octubre 2011 tratados estadísticamente con cep no. 0239.0.258.000-11. **Resultados:** los diagnósticos de enfermería fueron la confusión crónica con los resultados para la evaluación de la memoria inmediata, incidental y tardía. El riesgo de caídas fue relacionado con pruebe del reloj. Conocimiento pobre se relaciona el reconocimiento de figuras y evaluación del aprendizaje. El patrón de sueño degradado, el riesgo de la soledad y la tristeza crónica ha asistido en el diagnóstico de depresión. **Conclusión:** este trabajo permitió establecer la relación entre el diagnóstico enfermería con la neurología para planificación de los cuidados de enfermería. **Descriptor:** Anciano, Demência, Cognición.

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INTRODUCTION

Projections IBGE statistics claim that the elderly in Brazil today represent 7,4% of the population, these individuals are considered aged over 65 years old.¹ The aging population and increasing life expectancy may bring as a consequence the onset of chronic degenerative diseases, among which stands out the dementias.²

Alzheimer's disease (AD) is responsible for approximately 65% of all cases of dementia in adults, and is a syndrome characterized by the deterioration of previously acquired intellectual abilities that interfere with social or occupational activity.³

Alzheimer's disease is a degenerative neurological disease, slowly progressive.⁴ The individual affected by it presents progressive disruption of multiple cognitive functions, including memory, attention and learning, thinking, orientation, comprehension, calculation, language and judgment. The impairments of cognitive function are commonly accompanied, and occasionally preceded, by deterioration in emotional control, social behavior or motivation.⁵ These commitments lead to change in the occupational performance of individuals with Alzheimer's disease.⁶

From this fact, some programs have interdisciplinary care for seniors. In this perspective, nursing should be part of the team that makes up projects and programs directed to the care of the elderly, having great importance in this attention because they have as a primary search for alternatives and ways that minimize the impact of this disease on family life/caregiver.⁷

The elderly usually is initially treated by nurses who must raise nursing diagnoses that serve as facilitators of nursing actions, which it directs interventions are necessary to the patient. When it detects cognitive disorders, the elderly are referred to other care professionals, especially the neurologist.

Whereas the implication arising from the process of caring for an elderly demented involves complex issues, since the completion of care to the emotional and physical commitment of those who take on this task, it is important to pay attention to the need to obtain information about the disease, as well as know your limitations and insecurities when providing care.⁸

In interdisciplinary, one of the reasons is to affirm, confirm and draw a careful jointly with diagnoses that have been raised so that professionals have conduct consistent regarding the procedures that will adopt. The most well-known notion of interdisciplinarity is the interaction between two or more disciplines to overcome the fragmentation of knowledge, implying an exchange between experts from various fields, in the discussion of a subject and in solving a problem, focusing on better understanding of reality.⁹ Thus, it is essential that practitioners know the diagnosis of the other so they can act from what has already been raised, providing opportunities for other findings.

This paper aims to characterize the profile and raise the nursing diagnoses of the elderly in nursing consultation and relate them to the results of neurological tests performed by neurology.

METHOD

This study is part of the extension project "Nursing in the health care of the elderly and their caregivers" (EASIC), Federal Fluminense University - UFF, registered and approved by the university in 1997, with an extension project of the Department of Fundamentals Nursing at the School of Nursing Aurora de Afonso Costa (EEAAC-UFF). It is located in Niterói (Rio de Janeiro), and serves the Metropolitan Region II includes the cities of Niterói, São Gonçalo, Maricá, Itaboraí, Silva Jardim and Rio Bonito.

It aims to provide health care to the elderly healthy and/or chronic degenerative diseases (highlighting the dementias), support and guide their caregivers. Serves approximately 200 seniors in nursing consultations, and home visits for those with restricted ambulation, calls for all caregivers of the elderly with dementia, health education activities individually and in groups, students receive the undergraduate nursing, post-undergraduate and master's degree from the School of Nursing Aurora de Afonso Costa - EEAAC / UFF.

This is a documentary research conducted with eight elderly diagnosed with Alzheimer's disease. It was used as an eligibility criterion aged 60 years, who are residents of the metropolitan region II, regular participants in the outreach program, and diagnosed with Alzheimer's disease. As instruments of data collection were used forms of nursing and neurological consultations, which have all the relevant information extracted through physical examination and semi-structured interview, contained in the medical records of patients, and the results of tests of cognition. The data were collected between May to October 2011, which have been thoroughly analyzed and statistically processed data in percentage.

In nursing consultations were prepared nursing diagnoses by North American Nursing Diagnosis Association (NANDA), which aims to promote a standardized language for nursing staff, determining their diagnosis through clinical reasoning, and the forms of neurology, were taken from the results of cognitive testing, for assessing the performance of cognitive functions verifying the presence of dementing disorders, in addition to being a tool to monitor the clinical disease. After these procedures were related both to verify the similarity or other findings which were not detected.

This research was submitted and approved under paragraph n. 0239.0.258.000-11 by the Ethics in Research Committee of the Faculty of Medicine/University Hospital Antonio Pedro.

RESULTS

It is noteworthy that for some questions asked to the elderly, they were unanswered because, as we know, the elderly with dementia have memory deficits and could not answer due to cognitive impairment.

The socio-demographic profile raised in the records of the elderly: four (4) elderly female and four (4) males.

Regarding marital status, there was an abstention of 25% (2 people). Of the 6 respondents, there was equality between married and widowed elderly, with 3 people.

Regarding age, 2 people were between 60-69 years old, 5 people between 70-79 years old, and one person was between 80-89 years old.

Regarding schooling, 87,5% of respondents, 3 people have completed basic education, 1 person has completed secondary school, 1 person has not completed secondary school, and 2 people were not literate.

Regarding the age group of 87,5% (7 people) who responded, the onset was between 60-69 years old (3 persons), 70-79 years old (3 persons) and 80-89 years old (1 person). We see, then, that between 60 and 79 are predominant in the onset of the disease.

The mode of onset was progressive mode (100%), with no reports of acute mode installation.

With 75% of the responses (6 people), the main complaint that led them to seek neurology was forgetting. Of these, 33,33% (2 people) complained about difficulties, 33,33% (2 people) of temporal disorientation, and 83,33% (5 people) spatial disorientation; were not reported disturbances in attention, language, learning, judgment and calculation.

When asked about mood change 50% (4) responded. All reported sadness; there were no reports of mania and/or apathy.

Regarding sleep disorders, of 62,5% (5 people) who responded 40% (2 people) reported insomnia, 40% (2 people) daytime sleepiness, 20% (1 person) wandering, no patient showed continued drowsiness.

These items are shown in Table 1 below:

Quadro 1- Dados percentuais sócio-demográficos e de doença dos oito idosos estudados

Sexo	Frequência Absoluta (n)	Frequência Relativa (%)
Feminino	4	50%
Masculino	4	50%
Idade (em anos)		
Entre 60 e 69 anos	2	25%
Entre 70 e 79 anos	5	62,5%
Entre 80 e 89 anos	1	12,5%
Estado civil		
Casado	3	50%
Viúvo	3	50%
Grau de instrução		
Analfabeto	2	28,57%
Ensino fundamental completo	3	42,85%
Ensino médio completo	1	14,29%
Ensino médio incompleto	1	
Confirmação da doença		
Entre 60 e 69 anos	3	42,85%
Entre 70 e 79 anos	3	42,85%
Entre 80 e 89 anos	1	14,29%
Modo de instalação		
Progressivo	6	100%
Agudo	0	0
Queixa principal		
Esquecimento	6	75%
Dificuldade de compreensão	2	33,33%
Desorientação temporal	2	33,33%
Desorientação espacial	5	83,33%
Alterações de humor		
Tristeza	4	50%
Apatia	0	0
Mania	0	0
Alterações de sono		
Insônia	5	40%
Sonolência diurna	2	40%
Perambulação	1	20%
Sonolência contínua	0	0

Fonte- Elaborado pelos autores

According to the necessity and cognitive impairment, the following tests were performed by specific Neurology:

- Identification of 10 figures (Seniors): Of the 87,5% who took the test, 28,57% matched, and 71,43% did not matched the figures.
- Memory incidental (MIN): Of the 75% who took the test, 50% had 7 points, 16,66% 9 points, 16,66% had 2 points, and 16,66% had 3 points. The average was 5.83 points.
- Immediate Memory (me): Of the 87,5% who took the test, 28,6% had 6 points, 14,3% had 2 points, 3 points made 14,3%, 14,3% had 4 points, 8 points made 14,3%, and 14,3% had 9 points. The average was 5:43 points.
- Learning (A): Of the 87,5% who took the test, 28,6% had 3 points, 28,6% had 9 points, 14,3% had 1 point, 14,3% had 7 points, 14,3% had 8 points. The average was 5.7 points.
- Memory late (ML): Of the 87,5% who take the test, 28,6% had 1 point, 28,6% had 9 points, 14,3% had 2 points, 14,3% had 6 points, 14,3% had 10 points. The average was 5.43 points.
- Recognition (R): Of the 87,5% who take the test, 14,3% had 4 points, 14,3% had 7 points, 42,9% had 8 points, 28,6% had 10 points. The average was 7.71 points.

- MMSE (mini mental state examination): Of the 66,5% who took the test, 20% had 12 points, 20% had 16 points, 20% had 28 points, 20% had 29 points, 20% had 30 points. The average was 23 points.

- Test Clock (TC): the 100% who took the test, 12,5% did points, 25% had 1 point, 12,5% had 2 points, 37,5% had 5 points. The average was 2.4 points.

Quadro 2: Distribuição pontual dos testes de cognição realizado pelos idosos

Idosos	MIn	MIm	A	MT	R	MEEM	TR
I1	7	6	3	1	4	12	0
I2	9	2	-	1	7	16	1
I3	7	3	8	9	8	28	0
I4	2	6	7	2	10	-	5
I5	7	4	3	9	8	29	2
I6	-	8	9	6	8	-	5
I7	3	9	1	10	-	30	5
I8	3	-	9	-	10	-	1

Fonte: Elaborado pelos autores

Nota: MIn- memória incidental, MIm- memória imediata, A- aprendizado, MT- memória tardia, R- reconhecimento, MEEM- mini exame do estado mental, TR- teste do relógio.

In order to standardize the language of the diagnoses was a handbook by NANDA, in which the actual diagnoses and risk are listed with their defining characteristics and related factors, establishing an agreement on the rules for the use of certain terms.¹⁰ The main nursing diagnoses were:

- Chronic confusion defined by irreversible deterioration, prolonged and/or progressive intellect and personality related to Alzheimer's disease, characterized by old memory impaired recent memory impaired, progressive cognitive impairment.

- disturbed sleep pattern defined by the interruptions of the quantity and quality of sleep limited by the time resulting from external factors, characterized by changes in the normal pattern of sleep and related lack of control of sleep.

- Chronic sadness defined by standard clinical, recurrent and potentially progressive disseminated sadness, experienced in response to the ongoing loss along the trajectory of an illness or disability, related the experience of chronic illness (physical or mental).

- Deficient knowledge defined by the absence or deficiency of cognitive information, related to a lack of ability to recall and cognitive limitations, characterized by inadequate performance in a test, inadequate follow-up instruction.

- Risk of falls defined by increased susceptibility to falls those can cause physical harm, related to diminished mental state.

- Risk of loneliness defined by risk of discomfort associated with a desire or need for greater contact with others, related to physical isolation and lack of emotional energy.

DISCUSSION

The Law of the professional exercise n.º 7498, of June 25, 1986, article 11, section I, paragraph "i", legitimizes the nurse to the full exercise of nursing consultation with the individual, family and community, is under hospital, outpatient, home or in private practice. Thus, care programs for the elderly with cognitive disorders are increasing in the country, advocating and enhancing nursing diagnoses raised by nurses in nursing consultations.

Nursing consultation is an independent activity, performed by the nurse, whose goal is providing conditions for the quality of life through a contextualized approach and participatory, in this case, the elderly with AD and their caregivers. In addition to technical competence, the nurse must demonstrate interest in humans and their way of life, from the reflexive awareness of its relationship with the individual, family and community. For the interaction does occur, it is necessary to develop the refined skill of communication, for the exercise of listening and dialogic action. It is known that the authentic care is given according to the style of each one, taking into consideration the circumstances and needs of each person who needs care.¹¹

The main complaint of the elderly that did seek and/or referred for nursing and neurology was forgetting. These elderly after being treated by nurses in nursing consultations were raised nursing diagnoses, being referred for neurological care with these diagnoses have raised, to conduct neurologic tests. After the two procedures was made a relationship between nursing diagnoses assessed by the neurology.

It is considered that the nursing diagnoses when raised, enable effective interventions and positive outcomes in nursing care for elderly patients with AD and also helps with other professionals confirming underlain and/or refuting some other diagnoses. Thus, it is essential to interdisciplinary among professionals who care for elderly people with dementia, mainly.

Cognitive screening tests are tests that do not allow brief diagnosis clear, however, indicate that the elderly require further evaluation by presenting a cognitive decline. They are:

- Identification of 10 figures: This test includes the assessment of visual perception and naming, and consists of ten figures presenting the patient and asks what, who must recognize and identify. When the patient confuses the object is classified as a misperception; identifies when the figure without thinking of the word is wrong appointment. It is expected that patients get 10 points when there are more than one error is suggestive of agnosia, or more often naming disorder.

- Incidental memory: A sheet figures should be turned inside out and must ask the patient which had figures on the sheet. The score of the test is measured from 0 to 10 points, and the expected healthy individuals are 5 points or more.

- **Immediate Memory:** Figures are shown again for 30 seconds and should alert the patient to pay attention and try to memorize them. Then hides again and ask yourself what were the figures. The score of the test is measured from 0 to 10 points, and the expected healthy individuals are at least 7 points, 5 points below indicates impaired attention.

- **Learning:** show up again the figures for 30 seconds and should alert the patient to pay attention and try to memorize them. The score of this test is measured from 0 to 10 points, and expected in healthy individuals is at least 7 points; below that indicates dementia or cognitive impairment.

- **Memory late:** Expected to five minutes after showing the figures and ask yourself what were the patient. The score of this test is measured from 0 to 20 points, and expected in healthy individuals is at least 6 points; below that indicates dementia or cognitive impairment.

- **Recognition:** Mix the figures already shown with new figures and asks if the patient which are seen before. The score of this test is measured from 0 to 20 points, and expected in healthy individuals is 9 or 10 points.

- **MMSE:** Mini - Mental State Examination was designed to be a clinical practice change in cognitive status in Geriatric patients.¹² examines temporal and spatial orientation, short-term memory (or immediate attention), recall, calculation, praxis, language skills, and visuospatial, cannot be used to diagnose dementia.¹³ The score of this test is measured from 0 to 30 points, and the lower the score the greater the degree of cognitive impairment.

- **Test Clock:** It is a quick test that reflects the pattern of temporal-parietal and frontal functioning. Is to ask the patient to draw the face of a clock with the hands indicating a particular time; assesses the ability to draw what was asked, the presence or absence of numbers and pointers if they are inside or outside of the dial distribution and order of numbers, and if the requested time is correct. The score of this test is measured 0-5 points; executive dysfunction may precede the memory disturbances in dementia.

Some nursing diagnoses were confirmed in consultation neurological, chronic confusion as being related to the results of tests to evaluate the immediate memory, and delayed incidental, confirming one cognitive deficit.¹⁴

The risk of falls were related to the clock test, as this review points out that when the elderly presents low scores may be susceptible to falls, needing referral for physiotherapy assessment and your caregiver should guide and prompted so you can eliminate or minimize the architectural barriers and dangers in the home of this elderly.¹⁵⁻¹⁶

The diagnosis of knowledge deficit has a close relationship with the neurological tests that verified the various memory impairments by neurology mainly the recognition of figures and assessment of learning.

The remaining diagnoses assessed by nurses were also taken into account by neurology, as standard disturbed sleep, risk of chronic loneliness and sadness, helping neurology pointing the possible diagnosis of depression in the elderly, who should be studied in depth by the psychologist and other professionals involved in the field.

Considering the interdisciplinary approach that occurs in the program, neurology suggested monitoring of nursing to all seniors and 75% (6 people) were referred to other specialties, such as nutritional assessment (4); evaluation with speech therapy (2); functional assessment (1); comprehensive neuropsychological assessment (2) and social worker (1).

In general, the profile of the elderly assisted by nursing and neurology is represented by equality between male and female, with a predominance of being married and widowed, aged between 70-79 years with complete primary education. Predominantly, the age confirmation of the disease occurred between 60 and 79 years. With respect to mood swings, all subjects reported sadness; regarding sleep disturbances, insomnia and prevailed up daytime sleepiness. It pointed to the possible diagnosis of depression by neurology.

Among the complaints were found mostly forgotten (memory was the main cognitive impairment shown), and apathy, drowsiness, depression, fainting and dizziness. The main nursing diagnoses were: chronic confusion, impaired sleep patterns, chronic sadness, and poor knowledge, risk of falls and risk of loneliness. These diagnoses were related to cognitive screening tests, confirming them and being taken into account, those who needed further clarification were referred for evaluation of other professionals.

Tests for cognitive assessment were performed: identification of 10 figures, which were obtained more hits than misses, incidental memory, averaging 5.83 points, immediate memory, averaging 5:43 points; learning, averaging 5.7 points; delayed memory , averaging 5:43 points, recognition, averaging 7.71 points; MMSE, averaging 23 points and the clock drawing test, averaging 2.4 points.

CONCLUSION

The development work has allowed us a clear view of the profile of the customers served by neurology and nursing, as well as enable us to correlate nursing diagnoses with neurology.

Despite the limitations of the study and the small number of sample, nursing diagnoses were affirmed and deserved assessment of other professionals, confirming the need for interdisciplinary quality of care provided to the elderly with dementia and their caregivers being essential the monitoring and later consultations to these customers.

Once related nursing diagnoses and neurology, it is suggested that the study be performed to evaluate the impact of nursing diagnosis in the lives of these seniors and their caregivers.

It is important to continue to carry out research in this subject and at the same time invest in the development of research directed to clinical and social consequences for the progression of Alzheimer's disease, contributing to a better preparation of health

professionals who work with a view to systematization of nursing care using the nursing diagnosis.

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