

Assessing the Risk of Dementia among the Elderly in Nursing Care

Ocena ryzyka demencji wśród osób starszych w praktyce pielęgniarstwa

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Abstract

Introduction. Among the elderly, a high number of patients suffer from diseases related to their age increase. Currently extended life expectancy allows us to predict that dementia will intensify due to the increase in the number of elderly people.

Aim. The aim of the study was to determine the risk of dementia in a group of seniors residing in the home environment.

Material and Methods. The research was conducted amongst 518 elderly people covered by long-term home care in the Lubelskie and Mazowieckie voivodships. The research employed the Nurses' Observation Scale for Geriatric Patients.

Results. When assessing the respondents using the NOSGER scale, their overall evaluation amounted to 80.64 ± 22.39 points. The respondents functioned best in the field of disturbing behavior (8.67 ± 3.04 points), whereas the IADL was rated the lowest (17.41 ± 4.75 points).

Conclusions. The examined respondents presented reduced functional efficiency. Simultaneously, they were characterized by a low risk of dementia. Moreover, education significantly differentiated the functional efficiency of examined seniors. (JNNS 2022;11(1):27-30)

Key Words: dementia, elderly, NOSGER scale.

Streszczenie

Wstęp. Wśród osób starszych wzrasta liczba pacjentów chorujących na schorzenia których ryzyko wzrasta wraz z wiekiem. Aktualnie zachodzące procesy demograficzne pozwalają przewidywać, że częstość występowania otępienia będzie wzrastać wraz ze wzrostem liczby osób starszych.

Cel. Celem badań było określenie ryzyka demencji w grupie seniorów przebywających w środowisku domowym.

Materiał i metody. Badania przeprowadzono w grupie 518 osób w podeszłym wieku, objętych domową opieką długoterminową, na terenie województwa lubelskiego i mazowieckiego. Badania przeprowadzono za pomocą skali NOSGER.

Wyniki. Dokonując oceny badanych skalą NOSGER stwierdzono, że wynik oceny kształtował się na poziomie średniej $80,64 \pm 22,39$ pkt. Badani najlepiej funkcjonowali w zakresie zachowań zakłócających ($8,67 \pm 3,04$ pkt.), a najgorzej oceniono IADL ($17,41 \pm 4,75$ pkt.).

Wnioski. Badana grupa osób w podeszłym wieku wykazywała obniżoną sprawność funkcjonalną. Jednocześnie występowało u nich niewielkie ryzyko zaburzeń o charakterze demencyjnym. Wykształcenie istotnie różnicowało sprawność funkcjonalną seniorów. (PNN 2022;11(1):27-30)

Słowa kluczowe: demencja, osoby starsze, skala NOSGER.

Introduction

Among the elderly, a high number of patients suffer from diseases related to their age increase. The current demographic processes allow us to predict that dementia will intensify due to the increase in the number of elderly people [1].

Dementia constitutes a heterogeneous problem in its causes and course. Statistically, the most common cause of dementia is Alzheimer's disease, accounting for over 60% of all cases. A level of suffering in case of dementia in an affected person depends on brain changes, which worsens memory and cognitive disorders and causes more and more difficulties in learning about the surrounding reality [2].

A comprehensive geriatric assessment (CGA), also known as a holistic assessment, is a multi-dimensional, integrated diagnostic process that aims to determine the extent of mental and physical health disorders, medical problems, and the action potential of the elderly. Results of CGA provide varied data, from the decreasing clarity of the symptomatology of diseases in the course of aging, multiple diseases, the prevalence of nutritional deficiencies, the consequences of polypharmacy, as well as the coexistence of medical, environmental and social diseases and their effects on the functional state, and thus evaluate the quality of life concerning older people. CGA assessment should be conducted by each member of the therapeutic team in cooperation with the family [3].

The aim of the study was to determine the risk of dementia in a group of seniors remaining in the home environment.

Material and Methods

The research was conducted among 518 seniors covered by long-term home care in the Lubelskie and Mazowieckie voivodships. The respondents provided informed and voluntary consent to participate in the research. The group comprised 65% of women and 35% of men. Table 1 presents the sociodemographic characteristics of seniors.

The research material was collected using the NOSGER tool (Nurses' Observation Scale for Geriatric Patients). This questionnaire enables professional and non-professional senior caregivers to assess the physical, mental, and social condition of the patient quickly and easily. The scale consists of 30 questions and covers six dimensions:

1. Memory.
2. Instrumental activities of daily living (IADL).
3. Activities of daily living (ADL).
4. Mood.

Table 1. Characteristics of the study group

Variable	%
Gender	
Women	65.00
Men	35.00
Age	
65–69 years	34.90
70–79 years	56.90
80–89 years	8.20
Marital status	
Single	20.80
In a relationship	14.90
Widow/widower	64.30
Education	
Primary	80.00
Vocational	10.80
High school	7.30
Higher	1.90

5. Social behavior.

6. Disturbing behavior.

Scale values are specified by numbers: from 1 (always) to 5 (never). A patient can receive a minimum of 30 points, a maximum of 150 points. In each of the individual areas of the scale, the patient can gather between 5 to 25 points. The greater the number of points obtained in the observation; the worse the patient's condition is [4–8].

The obtained results were analyzed statistically. A significance level of $p < 0.05$ was adopted, indicating the existence of statistically significant differences or relationships.

Results

When assessing the respondents using the NOSGER scale, it was found that the mean score was 80.64 ± 22.39 points. In addition, the respondents functioned best in the field of disturbing behavior (8.67 ± 3.04 points), whereas the IADL was rated the worst (17.41 ± 4.75 points). Table 2 presents the results of the NOSGER scale assessment.

Table 3 summarizes the NOSGER scale assessment depending on the analyzed sociodemographic variables. The table reveals that both women and men were characterized by a similar level of points received (80.79 vs. 80.35 points).

When analyzing the fitness of seniors in relation to age, it was found that the best fitness was a characteristic of youngest respondents (78.35 points). With age, the

Table 2. NOSGER scale assessment

NOSGER Scale	Mean	SD
Memory	11.91	4.75
IADL	17.41	4.75
ADL	14.27	5.24
Mood	12.85	4.34
Social behavior	15.50	5.02
Disturbing behavior	8.67	3.04
NOSGER	80.64	22.39

Table 3. Average values of the evaluation with the NOSGER Scale and sociodemographic variables

Variable	Mean	SD	Statistical analysis
Gender			
Women	80.79	22.07	Z=0.015
Men	80.35	23.02	p=0.987
Age			
65–69 years	78.35	21.87	H=2.79 p=0.353
70–79 years	81.33	22.74	
80–89 years	81.94	21.80	
Marital status			
Single	76.81	23.72	H=4.976 p=0.17
In a relationship	78.60	21.62	
Widow/widower	82.29	19.99	
Education			
Primary	81.60	22.88	H=7.554 p=0.02
Vocational	74.41	16.21	
High school	73.10	22.29	
Higher	72.00	24.29	

H — Kruskal–Wallis test; Z — Mann–Whitney U test

fitness deteriorated, and in the oldest seniors, it was on the average level of 81.94 points.

Single respondents possessed the lowest deficits in terms of functional fitness (76.81 points). The respondents who were married performed slightly worse (78.60 points). The most significant deficits were found amongst widowed seniors (82.29 points).

The research results indicated that with the increase in education, the functional efficiency of the respondents was assessed better. People with higher education (72.00 points) exhibited the highest functional efficiency, and the lowest respondents with primary education (81.60 points). This difference was statistically significant.

Discussion

In addition to the classic subjective and physical examination, a comprehensive geriatric assessment (CGA) always includes an analysis of functional fitness in terms of basic and complex life activities. The elements of this assessment are also: assessment of mental functions, assessment of the risk of falls and malnutrition [9].

CGA should be performed on every elderly patient. The complexity of this assessment means that even a geriatrician is not able to conduct CGA without a support of other health professionals. Therefore, CGA requires the involvement of the entire interdisciplinary team. The core of this team should consist of the attending physician; a nurse trained to tend to an elderly patient, a physiotherapist, an occupational therapist, or a psychologist. The whole group should work with the social department. Each member assesses the patient using certain job-specific methods. The CGA also requires the patient's family to participate in the assessment process [9].

The performed assessment of seniors allowed the authors' to identify deficits in terms of functional fitness. However, found deficits manifested mainly in physical functioning. However, to a lesser extent, these were deficits in dementia-related changes. This outcome proves good mental efficiency of the studied group of seniors. Also, other studies have found that the elderly have not exhibited a high risk of developing dementia. In the respondents, the most significant deficits usually occurred in the field of everyday activities [10–12].

The author's research found that the functional efficiency of men and women was at a similar level. In the research on nursing homes patients, the authors found that males displayed slightly better performance on the NOSGER scale [10]. However, divergent results were obtained in studies of neurogeriatric patients, where the women showed better functional efficiency [13].

The aging process naturally affects the functioning of the elderly. Advanced age is one of the most characteristic and constant factors differentiating the functional efficiency of seniors [14]. The authors' research revealed that seniors' functional efficiency deteriorates with age. This fact has been confirmed by reports from the literature, which say that the number of dementia increases with age from approx. 1% after 65 to approx. 40% after 90 years of age. The prevalence of dementia doubles approximately every five years [15,16]. The authors' research is consistent with the results obtained by other researchers [17,18].

Another analyzed issue was concerned with respondents' education. The results allowed the authors to conclude that with the increase in the level of education, the efficiency, and the degree of independence of the elderly were improved. This relationship has been

confirmed by Głowacka et al. [19]. In their research, a large variation in the assessment concerning the condition of seniors was obtained. The respondents with higher education were rated better on the NOSGER scale, whereas people with primary education showed deficits in functional fitness. Research on seniors living in social welfare homes has also shown similar results [11].

Conclusions

The examined group of elderly people presented reduced functional efficiency. At the same time, the research participants exhibited a low risk of dementia disorders. In addition, education significantly differentiated the functional efficiency amongst the seniors.

Implications for Nursing Practice

Comprehensive geriatric assessment, including the presence of dementia symptoms, should be implemented in the daily nursing practice concerning the elderly. This process would enable quick diagnosis of the patient's condition and essential therapeutic and care interventions.

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