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Assessment of the Knowledge of Nursing Students about the Quality of Life of Patients after Stroke

Wiedza studentów kierunku pielęgniarstwa na temat jakości życia chorych po udarze mózgu

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Abstract

Introduction. Brain stroke is a huge social and economic problem. It is the most common cause of deaths and disabilities. He interferes in every sphere of the patient's life. Both in the physical, social and spiritual spheres.

Aim. The aim of this study was to recognize students with the knowledge of nursing in the field of factors affecting the quality of life of patients after brain stroke.

Material and Methods. The sample consisted of 104 students of the 1st and 2nd year of MA studies in Nursing at the State Higher Vocational School in Tarnobrzeg. The original questionnaire was used in this study.

Results. The results of the conducted research showed that the factors determining the quality of life of patients after a stroke are mainly: early rehabilitation, economic factors and relations with the immediate family. Psychological factors are also important — depression and anxiety.

Conclusions. The knowledge of nursing students is up to date, students have the knowledge related to the nature of the stroke. Stroke significantly reduces the quality of life of people affected by this disease. Therefore, conducting research in this field seems to be very important and right. (JNPN 2020;9(4):132–137)

Key Words: knowledge, nurse, quality of life, stroke, student

Streszczenie

Wstęp. Udar mózgu stanowi ogromny problem zarówno społeczny jak i ekonomiczny. Jest on najczęstszą przyczyną zgonów, a także niepełnosprawności. Ingeruje w każdą sferę życia chorego. Zarówno w sferę fizyczną, społeczną, jak i duchową.

Cel. Celem pracy było poznanie wiedzy studentów kierunku pielęgniarstwa na temat czynników wpływających na jakość życia chorych po udarze mózgu.

Materiał i metody. Próba składała się ze 104 studentów I i II roku studiów magisterskich na kierunku Pielęgniarstwo Państwowej Uczelni Zawodowej w Tarnobrzegu. W badaniu wykorzystano oryginalny kwestionariusz.

Wyniki. Badania wykazały, że czynnikami, które determinują jakość życia chorych po udarze mózgu w głównej mierze są: wczesnie rozpoczęta rehabilitacja, czynniki ekonomiczne, oraz relacje z najbliższą rodziną. Istotne są również czynniki psychologiczne — depresja i lęk.

Wnioski. Wiedza studentów kierunku pielęgniarstwa jest aktualna, studenci posiadają wiedzę dotyczącą istoty udaru mózgu. Udar mózgu obniża w dużym stopniu jakość życia osób dotkniętych tą chorobą. A zatem prowadzenie badań w tym kierunku wydaje się bardzo istotne i słuszne. (PNN 2020;9(4):132–137)

Słowa kluczowe: wiedza, pielęgniarka, jakość życia, udar mózgu, student

Introduction

There are over 55 million people worldwide who have suffered a stroke, and in half of them the incident

had a significant impact on the continued functioning of everyday life [1]. A stroke is an emergency, requiring the earliest possible and optimal specific therapy. The sick person unexpectedly loses the ability to independently

fulfill their basic needs. Patients react differently to the situation, so each of them requires an individual approach [2].

According to the definition of the World Health Organization (WHO), a stroke is a sudden focal or generalized disorder of the brain function lasting more than 24 hours or leading to death, caused only by vascular causes. An ischemic stroke is an episode of focal damage to the central nervous system (brain, retina, or spinal cord). In the case of a hemorrhagic stroke, the vessel is ruptured and the blood extends to the brain or the subarachnoid space. Among the neurological diseases, stroke most often causes the longest-lasting state of disability [3], which results in many problems and dysfunctions related to the disease and serious complications.

Immobilization in neurology is one of the main causes of various complications, which include: depression and apathy, communication disorders, bedsores, nappy rash, constipation, bronchopneumonia, chronic urinary tract infections, muscle contractures and atrophy, subluxation in the shoulder joint, pop-puncture syndrome [4]. Other important problems of patients after stroke include: difficulty swallowing, they result from weakening of the muscles of the face, jaw or tongue. Incontinence of urine and faeces, and sensory disturbances — cause perceptual difficulties and loss of sensory discrimination. There are difficulties with touch, sight, hearing, smell, and balance. Psychological and emotional problems — patients often feel depression, anxiety, anxiety, sudden changes of mood, they are related to the process of adapting to a new, completely different situation. They are a kind of natural reaction of the patient to changed conditions. Problems with understanding — i.e. memory impairment, concentration and spatial perception impairment. The social consequences of stroke are an important issue. A person affected by a stroke may begin to isolate themselves from their relatives, friends and relatives. Equally often, the family's financial income drops significantly [5]. Patients after stroke may develop amnesia, aphasia, apraxia, and disorientation in time and space. After a stroke, a patient has to re-learn all activities, which is why long-term exercise is so important in the psychological dimension [4]. Other complications include: pulmonary embolism, deep vein thrombosis or re-stroke — many of them threaten the patient's life and health, requiring immediate hospitalization. There are also other complications that significantly reduce the quality of life, including depression, post-stroke epilepsy, falls and their consequences, pain syndromes of paralysis, edema.

The concept of quality of life means: “all areas of the patient's functioning after a stroke. The assessment of the quality of life is influenced mainly by the consequences of brain damage, but also by other factors, such as the

patient's age, sex, body weight and the time since the onset of stroke” [1]. The economy perceives the quality of life as: meeting the most important social needs, social welfare, as well as protection of the natural environment. It is estimated that “in people after stroke, many factors that determine the subjective assessment of the quality of life coexist. They are diverse and depend not only on the limitation of mobility but also on the presence of cognitive, intellectual and emotional disorders” [6].

The subject of the research was the knowledge of nursing students about the quality of life of patients after stroke.

Material and Methods

On average 104 students of the 1st and 2nd year of MA studies in Nursing at the State Higher Vocational School in Tarnobrzeg were included in the anonymous study. The research was conducted in January 2019 and participation was voluntary.

The compilation of the survey results provided information on the nature of stroke and the factors that determine the quality of life of stroke patients.

The survey questionnaire used consisted of 30 questions and included:

- instruction, the information contained therein concerned the purposefulness, how to complete the survey and the use of information resulting from the research,
- a record, the answers of which provided information about the studied group in terms of: sex, marital status, age group and place of residence,
- my own questions concerning the fundamental research problem: the essence of stroke and factors influencing the quality of life of patients after stroke.

The questionnaire included closed, open and alternative questions concerning the psychological and physical spheres as well as social relations.

Results

Table 1 presents the division of stroke complications, taking into account their influence on the patient's vital activity.

Based on the results of the research, it was found that the most important factors influencing the quality of life after stroke were: anxiety (100.0%), early rehabilitation (99.0%), body weight/BMI (98.1%), treatment of depression (97.1%). In the opinion of 96.2% of people, the quality of life of patients after stroke was significantly influenced by the location of

Table 1. Classification of complications of stroke, taking into account their influence on vital activity

Neurological symptoms	General medical symptoms
Swelling of the brain, the greatest severity of symptoms, occurs within 3–5 days. It is the leading cause of death after suffering a stroke. Its size depends on the location and extent of the infarction, and the patient's age.	Infections — pneumonia, urinary tract infections.
Haemorrhagic transformation, its frequency is estimated at 30–40%. It occurs in patients undergoing thrombolytic therapy. The risk factor is older age, diabetes, arterial hypertension, significant neurological deficit right at the beginning of the onset of the disease, and cardio-embolic etiology.	Thromboembolic complications as a result of patient immobilization.
Seizures occur right after the stroke or later. Early epileptic seizures — occur within 1–2 weeks of stroke, late seizures after this period of time. The frequency of early seizures ranges from 2% to 23% and late seizures from 3% to 67%.	Pressure ulcers, exacerbation of chronic diseases such as diabetes, ischemic heart disease, and circulatory failure.
Dementia is three to six times more common in stroke survivors than in healthy individuals.	Myocardial infarction.

Source: Own study based on [18]

the paresis, and according to 94.2% of people, by economic conditions. The respondents mentioned age (78.8%), place of residence (74.0%), sex (51.9%), time from the onset of stroke (51.0%), and the least (46, 2%) education. These results are presented in Table 2.

Based on the answers to the questionnaire, the level of knowledge concerning the issues of stroke was assessed. Correct answers were assigned 1 point and erroneous 0 points. The sum of the points could be in the range of 0–14 points, therefore the obtained results were divided into two groups, assuming that the satisfactory level of knowledge is indicated by obtaining correct answers at the level of at least 60%. It was shown that the majority of the respondents (N=74, ie 71.2%) had a satisfactory level of knowledge about stroke, while an insufficient level of knowledge about stroke issues was shared by 28.8% of students (N=30). Single students (82.9%) more often had a satisfactory level of knowledge about strokes than in married couples (63.5%). The differences

were statistically significant. In the course of the research, it was not found that the age of the respondents significantly differentiated the level of knowledge about issues related to stroke. The analysis showed that a satisfactory level of knowledge about stroke was more common among urban residents (76.4%) than rural residents (59.4%). The observed differences slightly exceeded the threshold of statistical significance. The occurrence of a family history of ischemic stroke has not been found to significantly affect the level of knowledge in this field.

In the group of factors influencing the quality of life of patients after stroke, students most often mentioned economic conditions (51.9%), family relations (40.4%) and rehabilitation (29.8%).

All students to a greater (42.3%) or less (57.7%) degree admitted that the feeling of anxiety influences the quality of life in patients after stroke.

Table 2. Factors significantly affecting the quality of life in patients after ischemic stroke

Variable	Important		Negligible	
	N	%	N	%
Bow	104	100.0	0	0.0
Early rehabilitation	103	99.0	1	1.0
Body weight/BMI	102	98.1	2	1.9
Treatment of depression	101	97.1	3	2.9
Localization of paresis	100	96.2	4	3.8
Economic conditions	98	94.2	6	5.8
Age	82	78.8	22	21.2
Place of residence	77	74.0	27	26.0
Gender	54	51.9	50	48.1
Time since the stroke occurred	53	51.0	51	49.0
Education	48	46.2	56	53.8

Source: Own research

Economic reasons were indicated by 94.2% of students as a factor influencing the treatment and rehabilitation of patients after a stroke, including 33.7% of students who considered it very important, and 60.6% of respondents as slightly less important. The test results are summarized in Table 3.

Discussion

The aim of the research was to find out about the knowledge of nursing students about the factors influencing and determining the quality of life of patients after stroke. According to the respondents, the most important factors influencing the quality of life of patients after stroke include: economic conditions, rehabilitation, and relationships with loved ones. Psychological factors — anxiety and depression — are very important factors.

The results of the analysis conducted for the purposes of this study, as well as the analysis of the research conducted by Dębińska et al. Indicate that socioeconomic conditions affect the quality of life of patients, and the same applies to spiritual and psychological predispositions. Dębińska et al. Pay attention to the fact that it is the sick people who require psychological support and motivation that will allow them to assess their ability to return to independence and duties [7]. The similarity of the reports from observations proves that satisfaction in the spiritual and psychological sphere increases the importance of health.

The help and support of the family is an extremely important fact. The authors of their research, Tasiemski et al. Also emphasize this fact, proving in their research that the highest rated aspect was family life, and thus support from relatives and partners, which contributes to a faster recovery process [8].

Jaracz and Kozubski, in their research, also recognized relationships with their partners and family life as the highest rated areas of life. Satisfaction with family life is a positive fact, because stroke patients recover faster thanks to the support and their quality of life improves [9]. Similar conclusions were drawn on the basis of research conducted by Mikołajewska. He proves that proper care, as well as friendly relations with family members, are of great importance for the proper rehabilitation process, well-being of patients, and for the prevention of complications, which in turn has an impact on the increase in the quality of life [10]. Early rehabilitation is an equally important element influencing the quality of life. It is similar in the studies conducted by Bejer et al., in which they prove that as a result of early rehabilitation, the quality of life improves significantly. Along with the improvement of the

Table 3. The level of knowledge about stroke issues among the surveyed students

Variable	Disappointing		Satisfactory		P
	N	%	N	%	
Gender					
Women	28	29.2	68	70.8	0.8026
Men	2	25.0	6	75.0	
Marital status					
Married	23	36.5	40	63.5	0.0325
Single	7	17.1	34	82.9	
Age					
19–24 years	6	30.0	14	70.0	0.8992
25 years and more	24	28.6	60	71.4	
Place of residence					
City	17	23.6	55	76.4	0.0771
Village	13	40.6	19	59.4	
Family history of ischemic stroke					
Yes	7	25.9	20	74.1	0.8804
No	21	30.4	48	30.4	
I don't know	2	25.0	6	75.0	

p — level of significance
Source: Own research

functional state, the quality of life of patients increases [11]. These results fully correspond to the results of the own research. Psychological factors — anxiety, depression — are very important in the recovery process. The analysis of the literature shows that depression is an important factor in deteriorating the quality of life. The same results were obtained in the studies conducted by Bejer et al. [11]. The results of the conducted research indicate the need to raise awareness and explore the described issue in a more detailed and multifaceted way.

Conclusions

To sum up, it should be stated that: the conducted research allows to determine the level of knowledge of the surveyed students about the quality of life of patients after stroke; they can also constitute the basis for further diagnostic tests and monitoring of the patient's socio-medical and care problems. The most important conclusions are:

1. The knowledge of nursing students regarding the factors influencing the quality of life after a stroke is up-to-date and fully satisfactory.
2. The knowledge of nursing students on the issues of stroke is satisfactory.

3. The most important factors influencing the quality of life after a stroke, nursing students mainly included: economic conditions, family relations and rehabilitation.
4. Nursing students are aware of the significant influence of psychological factors on the quality of life after a stroke.
5. According to the majority of students, economic considerations are an important aspect in the treatment and rehabilitation of stroke patients.

Implications for Nursing Practice

In modern medicine, as well as in nursing, the aim is to provide holistic care to all patients in order to restore disturbed body functions, and to achieve such a state and adaptation of patients, so that they can achieve maximum efficiency, independence and self-reliance [12]. The priority goal of nursing care for a patient after a stroke is to minimize discomfort in complications and to provide the patient with help in their ailments and to prevent increasing disability [13]. Epidemiological studies show that late complications of stroke are the main problem in proper long-term care [14].

Early rehabilitation is very important. Activating the muscle pump prevents the formation of blood clots and emboli, and the correct positioning of the patient protects against the formation of a pathological pattern of contractions. What is important are passive exercises, general fitness exercises, vascular exercises, as well as standing upright to reduce blood retention [15]. It is believed that: “more and more attention and interest are devoted to human fitness and its ability to fulfill social roles. They can only be performed when, in their own opinion, the patients are fit, efficient and feel satisfied with their health and life” [1]. Having a stroke is a very difficult experience, completely changing the life plans of a sick person and their quality of life [16].

It is extremely important for the sick person to accept the situation resulting from the disease, but most of all, disability (if any). An objective determinant of disability acceptance is the return to active life in the family and environment [4].

To achieve the best results, therapeutic and rehabilitation procedures should be individually adapted to the patient. Proper care for patients after stroke is of great importance for the proper course of the rehabilitation process, as well as in the prevention of complications, and thus contributes to an increase in the quality of life and well-being of patients [10].

The path of restoring health to the patient requires the medical staff to make a joint effort, to create therapeutic teams, where the measure of success is to maintain or restore the patient's ability to live

independently [13]. In 2019, the website of the Ministry of Health published “Good Practices of Handling a Patient with Suspected Stroke”. It is a collection of recommendations for medical dispatchers, emergency medical teams and hospital emergency departments. The document, prepared by an expert team created by members of the Department of Medical Rescue and Defense, consists of 7 pages of guidelines [17]. The document presents, step by step, the rules of collecting the dispatcher's interview, the conduct of emergency medical teams at the scene of the incident, as well as the algorithm for notifying stroke units and transporting the patient to the reference unit.

The latest research shows that the assessment of the patient's health condition, in a holistic concept, takes into account emotional experiences, well-being and the ability to function in the face of the disease, bringing much greater benefits and thus better results. Modern medicine puts the main emphasis on extending the patient's life in the biological sense. It is equally important to bring the patient's quality of life closer to the pre-disease state. Medical personnel should make every effort to ensure a sense of security and support for both the patient and his family members through their care, education and care [18].

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