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Factors Determining Night Rest and the Quality of Nursing Care for a Patient in a Neurological Ward

Czynniki warunkujące wypoczynek nocny i jakość opieki pielęgniarskiej pacjenta oddziału neurologicznego

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Abstract

Introduction. The duration of hospitalization in a neurological ward depends on the medical diagnosis and the patient's state of health. Because of the variety of symptoms from the nervous system, nurse practitioners provide 24 hours care for their patients, fulfilling their professional duties. The family is also included in the care of the patient during the day. At night, the patient is mainly under the care of a nurse, which on the one hand, is a period of sleep and rest, and on the other hand, the risk of health deficiencies is increased.

Aim. The purpose of this paper is to present the patient's opinion about the factors determining night rest in the ward and the quality of nursing care provided at night.

Material and Methods. A diagnostic survey was the research method, and the survey was the technique applied. The tools applied consisted of: Author Survey Questionnaire and Care Satisfaction Scale (Newcastle). The study was performed in a group of 98 patients of the clinical neurological Clinic in Rzeszów. The study covered the factors negatively affecting the patient's night time rest in hospital and the nurse's assessment of nursing and therapeutic tasks performed during the night. Patients with the score exceeding 6 in the Hodgkinson test 6 were included in the study.

Results. The factors hindering/disrupting the night rest were listed by the patients in the following order: snoring of other patients, pain, uncomfortable bed, morning temperature measurements, medical acts and others. The least disturbing factor was the staff's talks. In assessing the quality of nursing care provided during the night, the highest scores were obtained by the following activities performed by nurses: satisfying needs to create a sense of security, providing medical care at scheduled time and satisfying the need for sleep and rest at night or the opportunity to talk to a nurse.

Conclusions. 1) The discomfort caused by factors affecting the night rest in the assessment of the patient is on the average level. 2) Overall assessment of nursing care by patients in both aspects the "experience" of nursing care and "satisfaction" was high. (JNPN 2017;6(4):143–149)

Key Words: night rest, patient, the quality of care, nurse, neurological nursing

Streszczenie

Wstęp. Czasookres hospitalizacji w oddziale neurologicznym jest uzależniony od rozpoznania lekarskiego oraz stanu zdrowia pacjenta. Ze względu na różnorodność objawów ze strony układu nerwowego pielęgniarki sprawując całodobową opiekę nad pacjentem realizują zadania wynikające z roli zawodowej. W ciągu dnia do opieki nad pacjentem włącza się także rodzina. W porze nocnej pacjent pozostaje głównie pod opieką pielęgniarki, stąd też jest to z jednej strony czas snu i wypoczynku, a z drugiej strony pora zwiększonego ryzyka wystąpienia deficytów w zdrowiu.

Cel. Celem niniejszej pracy jest ukazanie opinii pacjenta na temat czynników warunkujących wypoczynek nocny w oddziale i ocena jakości opieki pielęgniarskiej świadczonej w porze nocnej.

Materiał i metody. Metodą badawczą był sondaż diagnostyczny, techniką ankieta. Narzędziem wykorzystanym w pracy były: Autorski Kwestionariusz Ankiety oraz Skala Zadovolenia z Pielęgniarki (Newcastle). Badanie

przeprowadzono w grupie 98 pacjentów klinik neurologicznych Szpitali Klinicznych miasta Rzeszowa. Przedmiotem badań były czynniki negatywnie wpływające na wypoczynek nocny pacjenta w szpitalu oraz ocena realizacji zadań opiekuńczych i terapeutycznych realizowanych w porze nocnej przez pielęgniarki. Do badań zakwalifikowano pacjentów, którzy w teście Hodgkinsona uzyskali powyżej 6.

Wyniki. Wśród czynników utrudniających/zakłócających wypoczynek nocny pacjenci wymieniali w kolejności: chrapanie innych pacjentów, dolegliwości bólowe, niewygodne łóżko, poranny pomiar temperatury, czynności medyczne i inne. Najmniej zakłócającym czynnikiem były rozmowy personelu. W ocenie jakości opieki pielęgniarskiej świadczonej w porze nocnej najwyższe oceny uzyskiwały takie świadczenia pielęgniarskie jak: zaspokajanie potrzeb w zakresie jedzenia i picia, stworzenie poczucia bezpieczeństwa, realizacja opieki medycznej w zaplanowanym czasie, nocnego zaspokajanie potrzeby snu i wypoczynku nocnego czy też możliwości rozmowy z pielęgniarką.

Wnioski. 1) Uciążliwość czynników wpływających negatywnie na wypoczynek nocny w ocenie pacjenta jest na poziomie średnim. 2) Całościowa ocena opieki pielęgniarskiej przez pacjentów zarówno w aspekcie „doświadczeń” z opieki pielęgniarskiej jak i „satisfakcji” była wysoka. (PNN 2017;6(4):143–149)

Słowa kluczowe: wypoczynek nocny, pacjent, jakość opieki, pielęgniarka, pielęgniarstwo neurologiczne

Introduction

Health according to the World Health Organization is fully bio-psycho-social-spiritual welfare [1]. One of the definitions of self-assessment is that it is a quality of life determining factors for the health and biopsychosocial well being. That means that the quality of life of a neurological patient is the ability to fully satisfy life's needs and adapt to a new, difficult situation. The appearance of symptoms of neurological disease has a considerable impact on the patient's mental, physical and sociological functioning, achieving balance between cardiovascular disease and mental health. Diseases of the nervous system due to their prevalence, as well as social and economic effects significantly reduce the patient's standard of living.

The most important person who takes care of a neurological patient is the nurse who assists the patient from hospital admission to hospital discharge. Besides being professional, also having good therapeutic approach and contact with the patient and their family is required. Therefore, the nurse provides 24 hour-care throughout day and night. Frequent deterioration of a patient's condition resulting from a primary neurological unit is associated with disturbances in sleep and wakefulness, incoherence, anxiety, irritability, and even hallucinations [2]. The controlled neuropathic pain causes sleep difficulties in 60% of patients [3]. Sleep disorders occur in most neurological diseases (Alzheimer's disease, Parkinson's disease, dementia syndrome, cerebral palsy), Hemorrhagic stroke, Gullian-Barry syndrome) [4]. On the other hand, some sleep disorders have the clinical basis of somatic diseases or largely contribute to their occurrence [5–7]. A neurological disease usually results in a rapid and lasting change in the patient's condition, including not only the physical sphere, but also disturbances of higher nerve function. There is a significant reduction in the efficiency of life and sometimes emotional lability. Usually the patient does not accept the situation and adopts a passive or

demanding attitude. Manifesting dissatisfaction the patient withdraws from the contact with the environment. Therefore, a neurologist must provide the patient with a sense of security throughout the day. The main purpose of nurse's action is to gain the patient's trust by accepting the situation, and the objective criterion for the effectiveness of this action is the return of the patient to active living in the environment and the family.

The aim of the work was to present the factors determining night rest in the neurology ward and evaluate the quality of nursing care at night in neurological clinics based on patients opinion.

The subject of the analysis was the level of factors determining night rest. And the quality of nursing care provided to a patient in a neurological clinic.

Material and Methods

The study was conducted among patients in two clinical hospitals of the City of Rzeszów (Frederic Chopin Clinical Provincial Hospital No. 1 in Rzeszów and Provincial Clinical Hospital No. 2 of Saint Jadwiga the Queen in Rzeszów), neurological clinics within the period of 6 months from March to September 2016. Their participation was voluntary and anonymous. The study population was adults, they agreed to be subject to research, spent at least two nights in the clinic and needed help in self-care during nighttime duty. In the patient's opinion survey a questionnaire survey technique was applied, using two survey questionnaires: the Newcastle Satisfaction with Nursing Scale (NSNS) and the author's questionnaire survey. The original Newcastle Satisfaction with Nursing Scale (NSNS) survey consists of a set of statements in three subskills that ranged from 1 to 7 or 1 to 5. The scale consists of three parts:

— part one — Experienced nurses. It consists of 26 assertions (11 negative, 15 positive), with the possibility of choosing on the 7-level Likert scale.

The “experienced” score is in the range of 0 (the intensity of the experience is so bad that it cannot be worse) to 100 (the intensity of the experience is so good that it can no longer be better),

- part two — examines the level of personal satisfaction. It consists of 19 nursing sites, with the possibility of choosing on the Likert’s pictogram scale. The overall score for “satisfaction” falls within the range of 0 (no satisfaction from all aspects of nursing care) to 100 (the degree of satisfaction with all aspects of nursing care is so great that it can no longer be better),
- part three — examines the patient’s feelings related to the hospital stay and contains questions about the demographic features of the patient [8].

The criteria for inclusion of the patient in the study included: age 18 and over, minimum 2 nights spent in the ward, reading and writing skills, hospital stay in a single ward, lack of consciousness and conscious consent to participate in the study. The questionnaire of the survey contains a set of 11 possible responses in a 5-degree Likert Scale and a short description. The assessed dimensions of night nursing care included the tasks mainly resulting from the care function and therapeutic function. The questions are closed-ended.

A study group of 120 people was selected, among whom interviewers distributed a set of questionnaires. In addition, the Hodgkinson short assessment evaluated mental ability and capability of the patient to complete the questionnaire. In turn 108 were obtained, including 98 filled in and completed questionnaires, which accounted for 81.6% of the respondents.

Results

Among the examined patients more than half were women — 52 (53.1%), and 46 (46.9%) were men. The largest group consisted of respondents aged over sixty — 34 (34.7%).

More than half of the patients live in the city — 52 (53.1%), 46 (46.9%) were people living in the rural area. The most numerous group was 37 (37.8%), slightly smaller was one with higher education (31.6%). Patients who monitor vocational and primary education amount for 30 (30.6%) in the study group. When analysing the respondent’s place of residence, the largest group included 71 (72.4%) married/married patients. The single (widow/widower, single/widow) constituted the total 23 (23.6%) of the respondents. More than half of the respondents were active — 55 (56.1%). The pensioners and the retired accounted for 36 (36.8%) of the patients. The duration of stay in the hospital spread fairly evenly in the three specified range of days. The highest number of people had ben hospitalized for at least 6 days 37

(37.8%), 36 (36.7%) of respondents spent 4–5 nights in hospital. The smallest group consisted of patients staying 2–3 nights in hospital 25 (25.5%) Sponsors of 98 surveyed patients with a difficulty of falling asleep outside the hospital reported 36 (36.7%) (Table 1).

Table 1. Number of nights spent in hospital

| Nights spent in hospital | N | % |
|--------------------------|----|------|
| 2–3 | 25 | 25.5 |
| 4–5 | 36 | 36.7 |
| 6 or more | 37 | 37.8 |

Patients were assigned the rank of the factors that most disrupted night rest. Each factor could receive from 0 points (no disturbance to night care at all) to 10 points (disrupted night care to the highest degree). The table below gives an average estimate of the nuisance of each factor, sorting them from the least to the most burdensome). The range of scores was not very high — the most annoying was the snoring of other patients and pain (average score of 6.02 and 5.65 points respectively). The least burdensome factor was the staff interview (mean nuisance score 4.11 points) (Table 2).

Table 2. Factors negatively influencing nigh time rest in hospital

| Factors influencing night time rest in hospital | \bar{x} |
|---|-----------|
| Snoring of other patients | 6.02 |
| Feeling pain | 5.65 |
| Uncomfortable bed | 5.07 |
| Morning temperature measurement | 4.97 |
| Medical activities | 4.78 |
| Stale air | 4.70 |
| Walking staff and patients | 4.37 |
| Light in the corridor | 4.33 |
| Staff talk | 4.11 |

The quality of night care was also assessed in respect of 11 aspects — the last night spent in hospital before the survey. Results were scored on a 5-point scale, with 1 being the lowest and 5 being the highest. Average assessment of individual elements of night care, ranged from those rated best to those rated the worst. All elements were rated high — at least 4 points on average. The most satisfying of nutritional needs, the lowest issue of delay in night care (Figure).

1. The overall nursing care assessment was based on the Newcastle questionnaire, based on which two measures of nursing quality have been identified

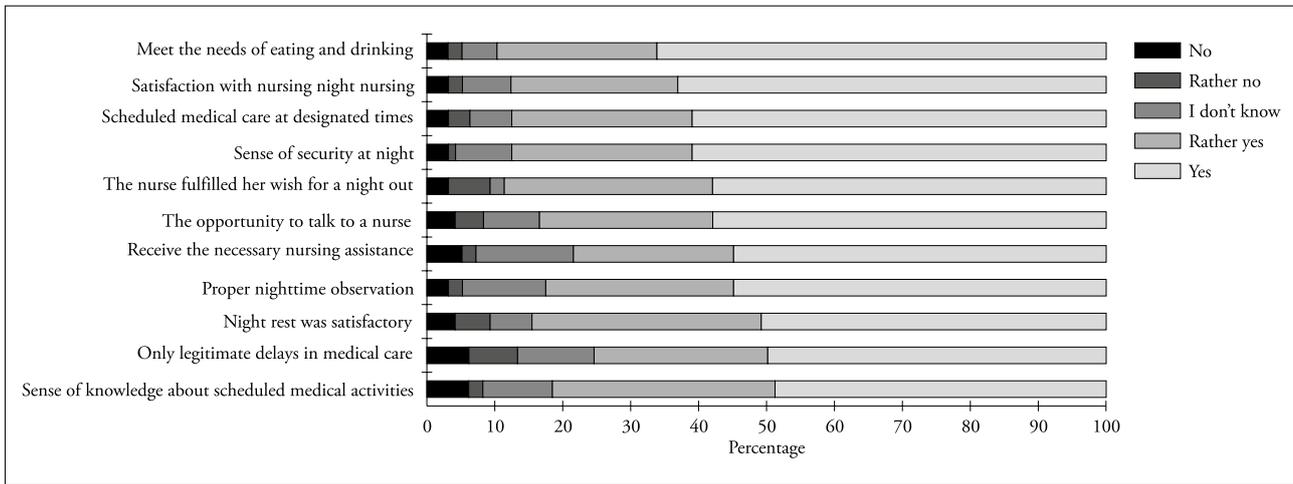


Figure. Positive assessment of the last night spent in hospital

— their data are presented in the table below for descriptive statistics and in the form of histograms.

- Both measures are normalized to a range of 0–100 points, with lower values for worse patient ratings. As it can be seen from the table below, nursing care ratings in both categories (experience and satisfaction) were rather high, about 70 points. The value of the “nursing care experience” measure has much less variation in results — the standard deviation was about 10 points against 26 points for the second measure. Thus, in this first issue there was greater among the surveyed patients (Table 3).

As part of the additional analysis, it was examined whether the assessment of the discomfort experienced during night time rest in the hospital is differentiated by

such factors as age, sex or difficulty with falling asleep in everyday life. The tables show the mean values of the nuisance ratings of individual factors, and the significance of the relationship was assessed using the Mann-Whitney test (for the two compared groups) or the Kruskal-Wallis test (for three or more comparable groups). Only in the case of the influence of age on the assessment of the nuisance of the individual factors, Spearman’s correlation analysis was used. Sex and difficulty in falling asleep outside the hospital did not differentiate the severity of the individual factors at night (Table 4 and 5).

Age also did not differentiate the assessment of factors disturbing the night’s rest in the neurology ward/clinic — no statistically significant correlation was found. Only — although this correlation is weak and only close

Table 3. Evaluation of night nursing care based on the Newcastle Scale

| Evaluation of night nursing care based on the Newcastle Scale | \bar{x} | Me | SD | Min | Max |
|---|-----------|------|------|------|-------|
| Experience with nursing care | 67.0 | 68.3 | 10.8 | 39.7 | 83.3 |
| Satisfaction with nursing care | 73.2 | 77.6 | 26.0 | 0.0 | 100.0 |

Table 4. Interaction between factors influencing negatively for night rest in hospital and the sex of the respondents

| Factors affecting negatively a night rest hospital | Gender | | P |
|--|--------|------|--------|
| | Woman | Man | |
| Snoring of other people | 6.12 | 5.91 | 0.5337 |
| Stale air | 4.84 | 4.54 | 0.5674 |
| Uncomfortable bed | 5.35 | 4.76 | 0.2416 |
| Light in the corridor | 4.43 | 4.22 | 0.7164 |
| Feeling pain | 5.96 | 5.30 | 0.2416 |
| Staff talk | 4.51 | 3.67 | 0.1381 |
| Walking staff and patients | 4.59 | 4.13 | 0.3511 |
| Medical procedures | 4.67 | 4.91 | 0.6273 |
| Morning temperature measurement | 5.18 | 4.74 | 0.4740 |

Table 5. Interaction between factors influencing negatively night rest in hospital and the difficulties with falling asleep outside the hospital

| Factors affecting negatively the night rest in hospital | Difficulty with falling asleep outside the hospital | | | | p |
|---|---|------------|-----------|------|--------|
| | Yes | Rather yes | Rather no | No | |
| Snoring of other people | 6.16 | 5.50 | 6.06 | 6.17 | 0.7307 |
| Stale air | 4.21 | 5.06 | 5.09 | 4.40 | 0.3980 |
| Uncomfortable bed | 5.26 | 4.75 | 4.53 | 5.70 | 0.2293 |
| Light in the corridor | 4.37 | 4.94 | 3.72 | 4.63 | 0.3719 |
| Feeling pain | 6.68 | 4.69 | 5.19 | 6.00 | 0.3802 |
| Staff talk | 3.47 | 3.00 | 4.94 | 4.23 | 0.0980 |
| Walking staff and patients | 4.47 | 3.06 | 4.75 | 4.60 | 0.1273 |
| Medical procedures | 5.16 | 4.00 | 4.34 | 5.43 | 0.2003 |
| Morning temperature measurement | 5.11 | 4.75 | 4.88 | 5.10 | 0.9716 |

to the level of statistical significance — one person. Older people are more likely to emphasize the negative impact of pain on the quality of night life (Table 6).

Table 6. Interaction between factors influencing negatively night rest in hospital and the age of the respondents

| Factors affecting negatively a rest night in hospital | Age [in years] |
|---|------------------|
| Snoring of other people | 0.06 (p=0.5313) |
| Stale air | -0.06 (p=0.5664) |
| Uncomfortable bed | -0.06 (p=0.5335) |
| Light in the corridor | -0.06 (p=0.5528) |
| Feeling pain | 0.19 (p=0.0563) |
| Staff talk | -0.03 (p=0.7650) |
| Walking staff and patients | -0.01 (p=0.9141) |
| Medical activities | 0.08 (p=0.4178) |
| Morning temperature measurement | 0.04 (p=0.6705) |

Discussion

The purpose of this study was to analyse the factors determining night rest and the quality of nursing care based on the opinion of a neurologist. The results obtained in the course of the study were largely similar to those reported in the study on night time quality of work as well as factors influencing this process. By analysing the collected literature of the subject and the results of reports on the quality of nursing care at night, consideration was given to the patient’s/client’s opinion. The main task of neurological staff during the night time is to “promote sleep”. Through the use of various forms of activity during the day, there is a greater likelihood of peaceful sleep at night. There is not enough scientific research or guidance focused on the

implementation of night time services. It should be stressed that night care consists in giving not only physical and emotional support, but also in a psychological and social support. The need to understand the “other”, difficult situations accompanying neurological illness, sleep and restfulness control, control of pain and neurological deficit, nutritional needs, incontinence and stool. The night is often a period of restless anxiety for the patient or a result of growing pain or anxiety [9].

Self-reported studies have shown that out of 98 patients surveyed, approximately one third (36.7%) reported sleep discomfort. According to the surveyed patients, factors were interfering with their night.

In the department/clinic of Neurology it was primarily: snoring of other patients and pain disorders (mean of nuisance score of 6.02 and 5.65 points respectively). The least cumbersome was the staff interview (average nuisance rating of 4.11 points. The research conducted in Australia by McClean and Higginbotham has confirmed that 28% of the respondents were experiencing pain 24 hours a day. [10] Morrison and Siu, however, confirmed that despite regular medication administration in dementia patients, 42% of respondents were still experiencing acute pain [11]. Gellerstedt et al. in their study have shown that the main source of sleep disturbances was noise (for 34% of respondents caused by other patients, 26% for noise from other patients, and 19% for phone callers) [12]. Similar results were obtained by other researchers. Schnelle et al. have shown that 50% of patients wake up for more than four minutes due to noise [13,14]. Nicolás also confirm that noise is a major contributor to night time rest and sleep disorders, which was reported by about 18% of respondents, whereas other discomforts include: pain, detection of the nurse presence and procedures, light or excessive temperature in the room [15]. Different results from his own research were obtained by Fiorentino and Ancoli-Israel, who has shown

that the main problem of insomnia or difficulty in falling asleep in the clinic resulted from loud conversation of staff and the sound of equipment or activities [16]. All elements were rated high — on average at least 4 points. In patients' own studies, the patients assessed the quality of services provided by nurses at night time. Evaluating various aspects of nursing care resulting from care and therapeutic functions and providing night time care to patients it is most important to meet the needs of eating and drinking, creating a sense of security, providing timely medical care, meeting the patient's wishes for night time rest, talking to the nurse, and least important reasons for delay in medical care at night time. A similar opinion was expressed by the respondents in the study Larrabee patients indicated caregiving tasks as the most important and characteristic of nurses' work [17]. Other researchers have also confirmed this relationship [18–21]. Furtak-Niczyporuk together analyse the results of their research showing that respondents were most concerned about the punctuality of nurses when giving medications to patients. For 63% of respondents, strictly observing the time spent by nursing staff is a very important element. The analysis of these studies also allowed to assess the rate of response of nurses to the pain reported by the patient. 58% of the respondents rated nursing staff very well. In the same study, 92% of the patients declared satisfaction with nursing care at night time. In the opinion of the respondents, the availability of nurses at night duty was the most important [22]. In own research, nursing care was assessed on the basis of the Newcastle questionnaire in both categories (experience and satisfaction). The results obtained oscillated at 70 points. Interviewed on "experience from nursing care" they were practically unanimous, indicating bit lower-rated satisfaction. From nursing care (26 standard deviation points). The overall quality assessment of nursing care, as measured by the mean value in the Bączyk study it was 60.84, and in the study carried out by Jaracz this result was 58.51 [23,24].

The assessment of night nursing based on own research was significantly higher, at an average level of around 70 pts. Our own studies have confirmed that the assessment of the discomfort experienced during nighttime resting in a neurology ward/clinic did not differ according to age, sex or difficulty with falling asleep in everyday life. Studies conducted by Chen et al. the patients' gender, occupation, age and place of residence differentiated the level of satisfaction from care [25]. Jakubek, presenting the results of the research on nursing staff assessment, demonstrated that both the age and the education of patients differed in the level of care. With increasing age, patients rated nursing work much higher ($p < 0.001$, $N = 784$) [26]. Kozimala and Putowski proved that age and the education of patients were not statistically significant and did not differentiate

the level of satisfaction and satisfaction from the services provided by nurses at night [27].

Currently, analysing the quality of nursing care services performed at night in hospitals in Poland can only be found in fragmentary studies [28–30]. Satisfaction of the patient means the degree of satisfaction with the offered services and the care the patient accepts (according to their expectations and needs) [31]. The analysis of the data obtained and the research carried out in this field confirm that nurses have a major impact on quality assessment. Providing professional care requires understanding the way of life, the customs and communication. Functioning of neurology departments/clinics gives new nurses the opportunity to gain new skills. The research methods used in this study were a source of information that allowed patients to know the level of nursing care performed in clinics/clinics of neurology of clinical hospitals in Rzeszów.

Conclusions

1. The discomfort of factors affecting the night rest in the assessment of the patient is at the average level.
2. Overall assessment of nursing care by patients in terms of "nursing care" and "satisfaction" is high.

Implications for Nursing Practice

Measures need to be taken to monitor and document the factors determining night rest and assess the quality of nursing care for a neurologist. This will allow a professional nurse to prevent night time disturbances and thus improve the quality of life for the patient.

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