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The level of mental and physical depletion of nurses working in neurology departments

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Abstract

Introducion. In the nurse profession, contact with another person plays a very important role. In the work environment of nurses there are many factors that are a source of stress, are an increasingly serious problem for working nurses and affect the level of mental and physical exhaustion.

Aim. Determination of the level of mental exhaustion and physical exhaustion of nurses working at the Neurology Departments.

Material and Methods. The research was conducted among 110 respondents, nurses working at the Neurology Departments in hospitals in the city of Lublin. In the research, the method of the diagnostic survey was used, using the author's questionnaire and the "Japanese Questionnaire".

Results. The lowest level of fatigue occurred in people working in an eight-hour one-shift system ($p = 0.049$). The lowest WCWOZ (the incidence rate of fatigue symptoms) was reported in non-child victims (64.0 ± 65.4). The number of children in family has a statistically significant effect on fatigue ($p = 0.034$). The vast majority of respondents (86.4%) considered that the nursing staff was insufficient. The number of hours worked per month significantly determined the assessment of the nursing staff ($p = 0.007$). People employed in Neurology Departments under 5 years rated significantly better chances for promotion ($p = 0.012$) and had higher ambitions to acquire new professional qualifications ($p = 0.00003$).

Conclusions. Physical and mental exhaustion of working nurses on the examined Neurological Wards is very high. Nurses are much more often tired compared to the surveyed nurses and the younger staff with a much lower WCWOZ. Working in more than one place results in an increase in general fatigue

Key words. nurses, work overload, occupational burnout, fatigue

Introduction

In the profession of nurse contacting with another people plays a very important role. Commitment to work and concern for the well-being of the ward is a heavy burden, both mentally and physically. Regardless of the ward, each nurse has its tasks and responsibilities, which require full concentration, great commitment and are associated with full responsibility for the life and human health. Neurological departments, staying patients with different disease entities that require substantial assistance and constant nursing care [1,2]. The arduous work, which affects the physical and mental health, depends on operating conditions, but also the required physicality, mentality, and living with monotony. An important element of the load job it is a psychological burden, which is related to the employee's response to the impact of a number of factors in the working environment. There is no doubt, in the environment that nurses work, there are many sources of stress that affect the severity of physical and mental exhaustion [3].

Material and methods

The study was conducted from February 12th to May 17th in 2018 year in neurology wards in hospitals in Lublin (Provincial Specialist Hospital. Cardinal Stefan Wyszynski; Neuropsychiatric Hospital im. prof. Mieczyslaw Kaczynski SPZOZ in Lublin; Independent Public Provincial Hospital of them. John of God; 1 Military Hospital in Lublinonce in Independent Public Health Care in Lubartów). The study involved 98 women and 12 men. The respondents were ordered to the following age groups: <25 years: 15.5%; 26 - 35 years: 17.3%; 36 - 45 years: 20.9%; 46 - 55 years: 26.4%, and the group> 55 years: 20%.

The main method that was used was diagnostic survey, using the original questionnaire, consisting of 40 questions and the Japanese questionnaire (tool standardized), which contained 30 closed questions regarding motivation, activity, as well as the projection of mental fatigue during performance of activities on work . This method examines the psychological burden on the basis of fatigue, which is a subjective feeling of an employee. Psychological stress in this questionnaire is evaluated based on the 5 - point scale, where employees rate their well-being: 0 points - the answer "definitely not"; 1 point - "rather not"; 2 points - "I can not decide"; 3 points - "rather yes"; 4 points - "definitely yes".

All respondents agreed on testing.

Test results are provided in terms of qualitative information using frequencies and percentage, and the quantitative data mean, median, standard deviation, minimum and maximum. The paper uses a statistical analysis of Shapiro-Wilk test. After determination of the distribution (contrary to normal) was used to compare the two groups of test Mann-Whitney U (Z) and for three or more Kruskal-Wallis test (H) to verify that the variables are statistically significant relationship.Findings, developed and subjected to statistical analysis, were summarized and presented in the form of a table.

Results

Most respondents were married (51.8%), while the free state was 27.3%. More than 40.0% of the respondents had 1-2 children; 34.5% of respondents did not have children. Almost half of those questioned (46.0%) have declared the possession of a degree in nursing; 30.9% - BCs had Nursing, while 22.7% of the respondents were university diplomas.

Seniority under 5 years posiadało- 22.7% of the surveyed nurses; 21.8% of subjects showed seniority over 25 years; 19.1% had an internship between 21 - 25 years of work.

Nearly 44.0% of the respondents declared that nurses work at more than one position.

The level of mental and physical exhaustion of nurses who work in the Departments of Neurology is high. WCWOZ reached an average value of 69.3± 68.33. The highest value is reached 118.33, the lowest - 16.56.Test nurse achieved higher percentage than WCWOZ nurses (70.3 ± 69.2 vs. 62.0 ± 62.5) ($p > 0.05$).

The age of nurse staffing working in the Department of Neurology affects the incidence of symptoms of fatigue. The highest level of fatigue has occurred in the age group 46 - 55 years (73.3 ± 74.2), while the lowest rate of fatigue occurred in persons under 25 years of age (63.8 ± 67.5) ($p > 0.05$).

Among the respondents were the most tired person with 21 years of service - 25 years (74.2 ± 74.2). Slightly less tired were nurses who worked above 25 years of age (71.6 ± 67.9). There was no statistically significant relationship with respect parsed placement on the relevant branch ($p > 0.05$).

Number of children by nursing staff working in the Department of Neurology, has been significantly associated with the incidence of symptoms of fatigue: $p = 0.034$. Analyzing the rate of fatigue in relation to the number of children that subjects who had more than four children, were the most tired (86.6 ± 88.3), while the lowest rate was observed in WCWOZ people without children (64.0 ± 65.4) . Table 1

Table 1. Characteristics of the test group

		M	SD	Me	Min	Max
All	WCWOZ	69,37	68,33	30	16,56	118,33
Sex	woman	70,3	69,2	30	17	118,3
	man	62	62,5	35	10,8	75,8
Age	<25 lat	63,8	67,5	30	14,7	82,5
	26-35lat	68,5	65,8	42,5	15,7	102,5
	36-45lat	69,2	69,2	30	17,9	104,2
	46-55lat	73,3	74,2	33,3	16,9	118,3
	>55 lat	69,5	67,9	30	16,9	103,3
Place of residence	City	70,1	69,2	30	15,5	106,7
	Village	68,2	67,1	30	18,2	118,3
Number of children	0w	64	65,4	30	16	102,5
	1-2	69,8	67,5	30	16,6	106,7
	3-4	75,9	74,6	55	14,8	118,3
	>4	83,6	88,3	65,8	15,9	96,7
Education	Registered nurse	73,3	74,2	30	19,8	118,3
	Bachelor degree	66,6	67,1	30	14,1	104,2
	Master degree	69,3	67,5	30	16,3	106,7
Seniority w	<5 years	63,7	65,8	30	13,7	82,5
	6-10 years	64,1	64,2	49,2	14,1	102,5
	11-15 years	71,5	71,7	35	16,4	102,5
	16-20 years	70,5	70,4	30	18,9	104,2
	21-25 years	74,2	74,2	55	12,1	106,7
	>25 years	71,6	67,9	30	20,8	118,3

The work and its form of work nurse practitioners in the Department of Neurology has been significantly associated with the incidence of symptoms of fatigue. Most respondents were tired of working in multiple shifts (70.9 ± 70.0) were significantly less tired people working in 12-hour shift system (62.8 ± 64.6). The lowest level of fatigue occurred in persons practicing in an 8 hour shift system (62.4 ± 65.4). There was a statistically significant relationship between the level of fatigue, and the type of system of work ($p = 0.049$).Respondents working in more than one position were more tired than working on one-time (73.9 ± 72.9 vs 65.9 ± 67.1); $p = 0.047$. Table 2

Table 2. The level of fatigue and the number of children / the system of work

Number of children	**M**	**SD**	**Me**	**Min**	**Max**	**H / *p***
0	64	65,4	30	16	102,5	8,682
1-2	69,8	67,5	30	16,6	106,7	p=0,034
3-4	75,9	74,6	55	14,8	118,3	
>4	83,6	88,3	65,8	15,9	96,7	
Work system	**M**	**SD**	**Me**	**Min**	**Max**	**H/ *p***
One shift -8 hours	62,4	65,4	49,2	9,2	74,2	6,051
One shift – 12hours	62,8	64,6	45,8	10,4	75	p=0,049
Multi-shifts	70,9	70	30	17,4	118,3	

Respondents assessed whether sufficient care is bestowed upon themt. The vast majority (86.4%) indicated that it is not sufficient. The number of hours worked in the month significantly determined the evaluation of nurse staffing on the branches of the respondents. The respondents worked 250 hours and more often than the others believed that cast care is not sufficient (p = 0.007). Table.3

Table 3. . Is the nursing staff in the ward sufficient?

The nursing staff in the ward is enoug?	**Razem**	**Working time at the Neurology Department [years]**						The number of hours worked per month			
		<5	06.paź	lis.15	16-20	21-25	>25	<170	170-200	201-249	≥250
Yes	15	6	3	1	3	2	0	2	5	2	6
	13,60%	18,20%	16,70%	5,90%	17,70%	13,30%	0,00%	5,70%	13,50%	8,30%	42,90%
No	95	27	15	16	14	13	10	33	32	22	8
	86,40%	81,80%	83,30%	94,10%	82,40%	86,70%	100%	94,30%	86,50%	91,70%	57,10%
All	110	33	18	17	17	15	10	35	37	24	14
Stat (Chi^2), p	-	p=0,639						p=0,007			

The study showed correlations between the number of years of work and stress as an integral part of the work of the statistical study group of nurses (p = 0.007). Respondents

working less than 5 years (51.5%) and from 6 to 10 years (44.4%) argued significantly more often than others that stress is often an integral part of their work. In contrast, 31.8% of respondents indicated in the answer that stress stimulates and they can perform professional duties better .

Research shows that more than 1/3 of respondents zauważały at home a rare occurrence of irritability and lack of patience during the work. Almost 1/4 of the respondents were people who had never at home zauważały negative emotions in relation to patients.

Almost 13.0% of respondents always felt sleep-related problems. Nearly 31.0% of the respondents indicated the difficulties associated with frequent night waking, waking up the morning, or falling asleep.In contrast, 40.0% of respondents said that they are accompanied by fatigue and mental exhaustion after work.

The study showed statistical study group of nurses significant correlations between the number of hours worked per month, and the frequency of appearance of thoughts on this abandon their work ($p = 0.036$).

The respondents were asked about the occurrence of somatic symptoms that occur in connection with work. The vast majority (74.5%) pointed to the back pain. In contrast, nearly 10.0% of the respondents suffer from symptoms associated with gastrointestinal disturbances - intestinal or stomach pains.

Respondents asked about the feeling of the need for qualification for the profession in the vast majority (58.2%) answered that they feel the need. Respondents working on data units over 25 years, significantly more than the others showed disapproval regarding the tendency of deepening professional knowledge. The collected data also made it possible to verify that persons employed on neurology wards under 5 assessed much higher ambitions to acquire new professional skills ($p = 0.00003$).

Discussion

IN working nurses takes himself under attention not only physical exertion but mental, which are conditioned by many factors. According to G. and Dębskaet al., there are many factors that affect not only the exhaustion of the body, but also on the level of mental workload and burnout. The authors draw attention to the fact that the work performed by nurses is so burdened by fatigue, so that by doing it for a long time, greatly reduces the efficiency of the work. [3].

In our study, the nurses have reached a higher percentage rate of incidence of fatigue symptoms than men (70.3 ± 69.2 vs 62.0 ± 62.5). The highest level of strain age group obtained in the range 46 - 55 years (73.3 ± 74.2). In subjects who had more than four children observed the highest rate of fatigue (86.6 ± 88.3). In addition, the staff nursing a higher professional experience is far more tired when compared to young staff (74.2 ± 74.2 vs. 65.0 ± 67.5).

Also Ogińska et al. Relate to the burden on nurses' job responsibilities and work fatigue among nurses working in neurological departments. These studies showed that work overload cause high voltage, and the symptoms of this condition was mainly the fatigue [4].

Kovalchuk et al. point to the fact that in their research that more than half of the nurses working in the stationary health care in the province. Podlaskie not feel of satisfaction with the work, and 72.6% of the respondents were exposed to stress in the paper [6]. Also in the studyPietraszek A. et al., 56.1% of nurses claimed that daily exposed to stress professional [7].

In the article byXie Z., Wang, A., B. Chen, the occurrence of stress as a factor of physical and mental exhaustion. The study showed that as many as 76.0% of surveyed nurses showed high levels of mental exhaustion, which was significantly associated with stress during performance of professional duties. Occurring stress was also associated with the performance of shift work [8].Prolonged stress can lead to the emergence of burnout, which in their study mentioned Lewandowska A. and B. Litvin. Additionally, the symptoms most frequently exchanged nurses, in that study were fatigue and exhaustion (79%), and back pain. [9]

On the other hand, in research and R. J. Oginska ŻURALSKI among the most frequently reported complaints by nurses were back pain (95.5%), headache (89.3%), as well as general fatigue (93.7%) [5]. Our results confirm that stress was an integral part in the fulfillment of professional duties. Statistical studies performed have also shown that stress accompanied often younger frame-working less than five years in the trade (51.5%) and between 6 and 10 years (44.4%).

Stryjewskii PJ et al state that the work shift not only does affect the overall fatigue of an organism but also causes gastrointestinal disorders, and there are a number of negative health aspects, ie. Cardiovascular disease [10]. Our study confirmed the negative impact of

shift work on the general fatigue of the body, which is confirmed (by the data obtained) to relate to the WCWOZ percentage (70.9 ± 70.0), with the lowest level of fatigue occurred in people practicing an eight-hour shift system (± 62.4 65.4), which indicated the occurrence of statistically significant correlation between the level of fatigue of the system and the type of work performed ($p = 0.049$).

Many research results point to the fact the majority of Polish nurses brave exhaustion due to factors such as shift work; reduced stocking roster, too large a number of patients assigned to one nurse; excess documentation necessary to complete, and prolonged stress. Continuous psychophysical exhaustion can lay foundations to burnout. The analyzes carried out constitute the basis for planning further research in this area.

Conclusions

Based on the survey and analysis of the following conclusions:

1. Nurses are much more tired compared to the surveyed nurses and junior staff who have a much lower WCWOZ.
2. Among nurses with children, there was an increased fatigue. It has also been established that people working in multi-shift are more tired than those working eight hours per day in a single shift. Working for more than one position leads to a higher level of general fatigue.
3. The most common symptom of somatic work-related career was back pain (74.5%). Those working more than 200 hours per month, often thought of giving up or changing profession.
4. The study shows that young staff (work experience of less than 5 years), significantly more likely to exhibit high ambitions relating to the professional knowledge deepened.

Recommendations for nursing practice

Physical exhaustion and mental health nurses surveyed the Departments of Neurological is very high. Despite the fatigue nurses are very hard-working, kind and willing to help patients. The occurrence of mental and physical exhaustion can affect nursing care,

which is why employers should pay special attention to the issue. The study should be an important prelude to the subsequent analysis. The information obtained will help in assessing the level of mental and physical exhaustion, take appropriate action to reduce them, and thus preventing burnout. The results of the research will allow to take appropriate steps to reduce overall fatigue of nurses / s, as well as improve their general well-being, and working conditions.

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