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## Ocena wpływu wybranych czynników stresogennych na funkcjonowanie zawodowe pielęgniarek w zależności od wieku i stażu pracy

## The influence of the chosen stress-inducing factors on the professional functioning of nurses depending on their age and job seniority

### Streszczenie

**Wstęp.** Działanie czynników stresogennych istotnie wpływa na samopoczucie psychiczne, fizyczne oraz jakość pracy pielęgniarek. Czynnikami stresogennymi są zarówno czynniki psychospołeczne, np. niejasno określony zakres kompetencji, brak współpracy w zespole, konflikty z współpracownikami i pacjentami, przeciążenie pracą, praca dwuzmianowa, jak również warunki fizyczne pracy charakterystyczne dla tego zawodu: stan techniczny pomieszczeń, sprzętu, oświetlenie, czy zagęszczenie przestrzenne.

**Cel.** Celem pracy była ocena występowania wybranych czynników stresogennych w pracy pielęgniarek w zależności od wieku i stażu pracy.

**Metoda.** Badaniem objęto 132 pielęgniarki pracujące w dwóch szpitalach klinicznych Pomorskiej Akademii Medycznej w Szczecinie. Zastosowano autorski kwestionariusz ankiety zawierający 28 pytań zamkniętych, na które badani odpowiadali anonimowo.

**Wyniki.** Analiza uzyskanych wyników wykazała, że pielęgniarki odbierają środowisko pracy jako stresujące niezależnie od stażu pracy czy wieku. Najsilniej odczuwanymi stresorami w grupie badanych pielęgniarek są: zła organizacja pracy (50,8%), niedocenianie przez przełożonych (57,6%) i nadmiar obowiązków (52,7%).

**Wnioski.** Wyodrębnienie najbardziej obciążających stresorów pozwoli na tworzenie programów mających na celu ich eliminowanie, co w efekcie wpłynie na poprawę samopoczucia psychicznego i somatycznego, warunków pracy, efektywności pracy pielęgniarek, a w konsekwencji satysfakcję zarówno pracowników jak i pacjentów.

### Abstract

**Introduction.** Stress-inducing factors considerably affect physical and mental well-being of nurses and quality of their work. They include both physical working conditions such as technical status of equipment, lighting and population density, and psychosocial factors, among them vaguely defined authority, a lack of co-operation in a team, conflicts with other workers and patients, work overload, and a two-shift work system.

**Aim.** The aim of this study was to assess the incidence of the selected stress-inducing factors in nursing work depending on age and job seniority.

**Material and methods.** The study involved 132 female and male nurses employed in two clinical hospitals of the Pomeranian Medical University in Szczecin.

This survey-based study was performed using author's questionnaire consisting of 28 closed questions answered anonymously by respondents.

**Results.** Analysis of the results demonstrated that nurses regarded their working environment as stressful irrespective of their age and job seniority. The greatest strains faced by nurses included bad work organization – 50.8%, being underrated by superiors – 57.6% and too many duties – 52.7%.

**Conclusions.** Isolation of the most tremendous strains could help to develop programmes for their elimination. It would improve nurses' mental and somatic well-being, efficiency, and working conditions, and consequently satisfaction of both employees and patients.

**Słowa kluczowe:** czynniki stresogenne, pielęgniarki, praca.

**Key words:** stress-inducing factors, nurses, work.

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## INTRODUCTION

Nursing is one of the highest stress-inducing jobs. How we react to stress and whether we perceive a particular situation as stressful depends on many factors. Studies whose aim is to define and systematize the most important strains faced by nurses and to create prevention programmes of complications resulting from a lengthy exposure to stress remain an important issue. Unfavourable psychosocial working conditions refer to every situation which affects employees through psychosocial mechanisms and brings negative effects to their health and functioning. If such situations last too long, they may lead to the feeling of fatigue, emaciation, and stress, and consequently numerous diseases [1]. Not only are they an indirect reason for lower efficiency and work performance, but also influence safety at work of nurses and their co-workers, and thus patients in their care. According to experts, stress is responsible for 60-80% of all accidents at work [2].

In literature stress is presented in the aspect of physiology (biology) and in the aspect of human psychology. Biologically, it is an effect of physiological changes in an organism which occur as a reaction to damaging factors. In psychology, stress is defined as changes in psychological regulatory mechanisms of a human being resulting from various difficult and stressful situations [3].

Too lengthy exposure to stress or its excessive escalation together with one's inability to cope with it lead to nervous breakdown and ultimately the destruction of an organism. Disorders may refer both to physical, mental, and social sphere. The processes of thinking, perceiving, motivating, estimating, and remembering are disturbed. Effects of stress can be also seen in the social contact domain [1,3].

Sources of stress at work are varied. They involve such factors as too exhausting or too complex task, uncertainty, conflicts, little choice, and insufficient rewards. Serious contributors to stress may include working conditions, work overload, the role one plays in the organization, interpersonal relationships with a superior, a subordinate or co-workers, the lack of interest in mutual support, indifference to problems of other staff members, professional development problems, no feeling of affiliation, and inefficient information-flow [4,5].

## AIM

The aim of this study was to assess the incidence of the selected stress-inducing factors in nursing work with regard to age and job seniority. The influence of working environment on nursing performance is a very complex phenomenon, however it can be analyzed „in parts” i.e. through concentrating on its particular features. Therefore, the authors of this study focused on the analysis of the selected stressors in the working environment of nurses.

## MATERIAL AND METHODS

The study included 132 nurses employed in two clinical hospitals of the Pomeranian Medical University in Szczecin.

They were hospitals with high reference levels and highly-qualified staff, whose expertise covered virtually all specialties and allowed to perform highly specialist medical procedures. The clinics were fully equipped with advanced diagnostic and therapeutic equipment.

This survey-based study was performed using the author's questionnaire consisting of 28 closed questions answered anonymously by respondents. Descriptive statistics was used to elaborate data, which were next subjected to statistical analysis and presented in tables and figures. Qualitative variables of the whole group (n=132) with regard to age and job seniority were characterized by the number and proportion of each category. The nonparametric independence Chi-squared test with the Yates correction was used in the analysis. The accepted significance level was  $\alpha=0.05$ .

## RESULTS

The group description was presented in Table 1.

**TABLE 1. Description of the group of nurses.**

Description of the group (n=132)						
age (years)		20-35	36-50	>50		
number	n	51	65	16		132
	%	38.6	49.2	12.1		100
job seniority (years)		< 5	6-15	16-25	26-35	>35
number	n	14	39	52	25	2
	%	10.6	29.5	39.4	18.9	1.5
marital status		single		married		
number	n	42		90		
	%	31.8		68.2		

The most numerous groups consisted of nurses aged 36-50 years (49.2%) and nurses aged 20-35 years (38.6%). Some 39.4% of nurses were professionally active for 16-25 years, and 29.5% for 6-15 years. The least numerous group included nurses working more than 36 years (1.5%) and older than 50 years (12.1%).

About 68.2% of respondents were married, and 31.8% were single.

The incidence of stress-inducing factors was analysed with regard to age of respondents (Tab.2).

**TABLE 2. Analysis of an increase in the incidence of stress-inducing factors with regard to age.**

Group	1		2		3		p
Age (years)	20-35		36-50		>50		
Very often or often	n	%	n	%	n	%	>0.05
	21	41.2	38	43.1	6	37.5	
Seldom, I do not know or never	30	58.8	37	56.9	10	62.5	>0.05
Total	51	100.0	65	100.0	16	100.0	

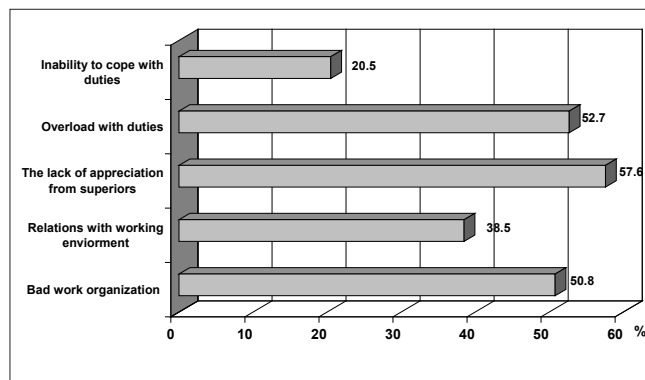
Statistical analysis of the results did not prove significant differences between age groups ( $p>0.05$ ).

Also analysis of the incidence of stress-inducing factors with regard to job seniority did not demonstrate any statistically significant differences (Tab.3).

**TABLE 3. Analysis of an increase in the incidence of stress-inducing factors with regard to job seniority.**

Group	1		2		3		4		p
Job seniority (years)	≤5		6-15		16-25		26-35		
	n	%	n	%	n	%	n	%	
Very often or often	5	35.7	17	43.6	25	48.1	10	40.0	>0.05
Seldom, I do not know or never	9	64.3	22	56.4	27	51.9	15	60.0	>0.05
Total	14	100.0	39	100.0	52	100.0	25	100.0	

The selected stressors were analysed in the group of nurses (Fig. 1).

**FIGURE 1. Analysis of the selected stress-inducing factors.**

The majority of the surveyed nurses (57.6%) mentioned the lack of appreciation for their work from their superiors as the most stressful factor. The next in turn was overload with duties (52.7%), bad work organization (50.8%) and relations in working environment (38.5%).

## DISCUSSION

The obtained results confirmed the presence of stress-inducing factors in the working environment of nurses. However, differences in the intensification of factors perceived as stressful with regard to age and job seniority were not found.

In the whole world nurses face a high risk of professional stress, which was proved by numerous studies. Attempts were made to identify the greatest strains experienced by working nurses. It was noticed that in nursing job there was no element of competition for periodic promotion and positions of nurses in the hierarchy usually remained the same for the whole period of their professional life. Andruszkiewicz reported on similar results in her study conducted in hospitals in Bydgoszcz. She emphasized negative aspects of nursing profession such as low salaries and the lack of prospects for promotion or professional development. Remuneration may be thought of as reflecting prestige, social position and appreciation for work. It is also a measure of the social value of work. While promotion is, next to money, the most important reward that employers have for their workers, getting a promotion in nursing is very improbable because of an ineffective system [5].

The research from 2005 carried out within the project „Nurses' Early Exit Study" (NEXT) showed that Polish nurses obtained the lowest results concerning satisfaction with work comparing to other countries of the European

Union, and demonstrated very low satisfaction with professional prospects [5,6].

Nurses perform numerous and diverse tasks. Division of duties which does not correspond with nurses' skills and abilities, the lack of adequate requirements, or conversely, excessive demands, which are difficult to meet may be causes of stress. Having too many duties, nurses are often unable to cope with them. As a result they either remiss in some of duties or provide low quality services [4].

For its specificity, nursing requires team work. Studies conducted among nurses at the paediatric ward suggested that professional groups did not co-operate and the superiors did not provide sufficient support [4]. Both involvement and responsibility, empathy and respect are necessary in care of a patient. There is a belief that showing negative feelings and neglecting duties disagree with the common image of a nurse. Professions related to provision of help, such as nursing, entail generating and experiencing both positive and negative emotional states, often very intensive. Nurses are convinced that showing feelings and emotions is in contradiction to the social image of their profession and negatively affects their relations with patients. Therefore, it evokes their feeling of guilt and shame [7].

In this study, the authors focused on nurses' duties, organization of their work, and appreciation of the superiors for their work. Authors of the research conducted in four hospitals among Iranian nurses analyzed stress associated with work at night shift. They proved that it was a very stressful factor which had an influence on nurses' health. However, they made a notion that working at night had also a positive aspect as it developed professional experience [8]. As it was noticed in the studies conducted in five towns in the area of south-east Poland, the two-shift work system and especially night duties interfere with the diurnal cycle of bodily and mental functions, disorganize family and social life, and evoke many unfavourable reactions of an organism [9].

In the study on Croatian nurses, six main stress-inducing factors were selected. The authors concentrated on the organization of work, interpersonal contacts, salaries, social criticism, risks in the place of work, the shift work system and intellectual demands made on representatives of this profession. The obtained results showed that education affected perception of stress-inducing factors. Nurses with secondary education identified risks at work and the shift work system as stronger strains, than nurses with higher education [10].

Similar to our results, hard work, the lack of support and inadequate preparation turned to be the most tremendous strains faced by surgical nurses in Hong Kong. Effective strategies of handling with stress, and especially positive effect of confrontation and optimism were recognized as optimal method of stress reduction [11].

As it results from the study conducted in four hospitals in the USA, stress can be reduced by improvement of working conditions e.g. ventilation, acoustics and lighting [12]. Stressors related to working conditions were also analyzed in the study conducted by Perek in the paediatric wards. Out of all physical working conditions, 3/4 of respondents mentioned health risk of infection with HIV, viral hepatitis type B and C, cytomegaly and infectious diseases typical of children's age as stressful [4].

The results of the study on stress-inducing factors in nursing work can be used to plan and implement mental health promotion programmes for nurses. It is necessary to continue research, especially among nurses employed in smaller hospitals and in smaller towns, where studies of this type are carried out only occasionally. The nurses included in this study perceived their work as stressful but they were not prepared to handle with stress constructively. Literature shows that in difficult situations nurses usually ask for help their relatives instead of using professional help [1]. It seems necessary to provide professionally active nurses with training on stress reduction, assertiveness, and the use of relaxation methods. This type of workshops should be included in education programmes for future nurses. Working nurses should receive regular trainings for the whole period of their professional activity.

## CONCLUSIONS

1. The place of nurses' work is perceived as stressful environment.
2. The greatest strains faced by nurses included bad work organization, the lack of appreciation from superiors, and overload with duties.
3. No statistically significant differences were found in the selected stressors depending on age and job seniority.
4. It seems reasonable to conduct cyclic research to isolate the most tremendous strains faced by nurses. It could help to develop programmes for their elimination, which in turn would improve nurses' mental and somatic well-being, efficiency, and consequently satisfaction of both employees and patients.

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