

## Perception of the psychosocial working conditions in a group of nurses working in hospitals and primary health care

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### ABSTRACT

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**Introduction:** In the nurses group, it is required to have great psychosocial skills, guaranteeing the high quality of professional services.

**Purpose:** To assess the psychosocial working conditions of nurses, depending on their place of employment.

**Material and methods:** The study involved 570 randomly selected nurses. It was based on a diagnostic survey using a standardised questionnaire of Psychosocial Working Conditions (PWC).

**Results:** Correlation factors between the overall and average level of satisfaction with the work were quite high – exceed 0.30 and even 0.40. The greater was the need for change, the lower was the job satisfaction. High sense of self-control at work, social support, or wellbeing was linked with better ratings. Psychophysical requirements were assessed as the worst, and the least frequent were the additional requirements resulting from the conflict

nature of the job and overload. Nurses from voivodeship hospitals rated their work lower in the category of intellectual demands, and nurses from the Primary Health Care - in the category of requirements resulting from the conflict nature of the job and overload. Behavioural control and the need for change were different for PHC and the other two hospitals. Psychological wellbeing in district hospitals was worse than in the other two types of medical institutions.

**Conclusions:** The larger was the sense of work control, or sense of social support, the higher was the job satisfaction. The higher the level of requirements and the need for change, the lower was the satisfaction of the assessed aspects of work. There were clear differences in the assessment of the psychosocial working conditions of nurses from hospitals and nurses from PHC.

**Key words:** Nurse, place of work, psychosocial conditions

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## INTRODUCTION

Nurses are one of the occupational groups that are exposed to a series of occupational hazards, which is related to their daily duties, risk of contact with harmful factors, as well as numerous psychosocial burdens. The result of the heavy mental burden of nurses during their work is their personal involvement in the affairs of patients, directly related to the character of the profession. Health of each employee depends primarily on his ability to cope in stressful situations.

The quality of dealing with stressful situations depends mostly on the perception of oneself and one's own potential in the context of a specific stressful situation [1].

According to Kowalczyk [2,3], occupational stress is a lack of mutual adaptation between a worker and the working environment. In the work of nurses it may be the result of fatigue, excessive mental and physical loads, making many difficult decisions and working under time pressure and deadlines [2,3].

Bilski and Sykutera [4] recognized the main factors of stressful work environment of nurses to be: a lack of clear criteria for the work assessment, interactions with people connected with the need to mentally support patients and their families, competition in the workplace, lack of support from superiors and co-workers, onerous working conditions (too small restrooms, lack of place to relax, overcrowded wards), inessential role in the decision making concerning working conditions, nature of burdens associated with the position (shift work, availability, strict working hours, sudden and acute cases of patients, contact with death, monotonous shifts, rush), low profession prestige, overwork, necessity of making money on the side, small wages, moral problems, sense of responsibility for patients and constant confrontation with the fact of losing core values (health, life).

As a result of chronic stress, nurses can develop numerous somatic pathologies, including ischemic heart disease, hypertension, stroke, digestive disorders, musculoskeletal disorders, depression, neurosis, sleeping disorders and impairment of immunological response causing viral, bacterial, degenerative or cancerous diseases [4].

According to Kowalczyk *et al.* [2,3], the Central Institute for Labour Protection conducted a study, which shows that work stress of the Polish nurses reaches much higher level than in many other countries, and its main sources are: the level of satisfaction with the work prospects, high quantitative and emotional demands, low and minimal influence on the work and their own development, as well as a great sense of job insecurity.

Eventually, the above results in the development of intolerance of shift work [2,3] that can manifest in sleep disorders, chronic fatigue, cardiovascular diseases, gastric disorders), greater consumption of coffee, alcohol, tranquilizers, impaired social functioning, decrease in overall life satisfaction, decreased quality of sexual life, depression, symptoms of burn-out, psychoneurotic disorders and accelerated ageing process.

Hoffman and Scott [5] showed in their studies that working in 8-hour system is less stressful for the nurses than working in 12-hour system.

The aim of the work was to assess the psychosocial working conditions of nurses, depending on their place of work.

## MATERIALS AND METHODS

The research was conducted between January 2014 and June 2014 after obtaining the approval of the Ethics Committee of the Medical University of Bialystok, R-I-002/59/2014 and the Directors of the Voivodeship Hospital No. 2 in Rzeszow, the Voivodeship Hospital in Przemysl, the District Hospital in Sedziszow Malopolski, SP ZOZ in Kolbuszowa and ZOZ No. 2 in Rzeszow.

The study involved 570 randomly selected nurses, including 260 nurses working in a hospital located in a voivodeship city, 110 in a hospital located in a district city and 200 in healthcare facilities.

The research was conducted on the basis of the diagnostic survey using a standardised questionnaire of Psychosocial Working Conditions – (PWC), used to measure the stress related to psychosocial work characteristics. The questionnaire consists of five theoretical scales and the empirical scales assigned to them: requirements scale (W) - for measuring perceived level of requirements (intellectual, psychophysical requirements and requirements resulting from the responsibility for the safety, as well as the requirements arising from the role conflict and overload); control scale (K) – used to evaluate the perceived scope of control (behavioural and cognitive control); social support scale (WS) - to measure the perceived social support from the work environment (support from superiors and colleagues); welfare scale (D) - used to measure the perceived level of wellbeing (physical and mental wellbeing); and scale of the desired changes (PZ) designed for the evaluation of the perceived need to make changes in the workplace. The questionnaire was made available by Prof. Beata Widerszal-Bazyl, from the Centre of Psychology of Work Sociology, the Central Institute for Labour Protection, the Central National Research Institute in Warsaw [6]. The questionnaire is characterized by high internal consistency of all five theoretical scales ( $\alpha$  from 0.82 to 0.94 depending on the scale) and the

consistency of the empirical scales: out of nine scales of this type only in one case  $\alpha$  is lower than 0.70 (W3,  $\alpha = 0.62$ ) [6].

Analysis of the numerical value of PWC consisted in putting the values of the basic descriptive statistics (mean, median, standard deviation) in the three compared groups and evaluating the differences between them using the test of Kruskal-Wallis. A probability value of the test was also calculated by means of the independence test - chi-square. Additionally, to clarify which of the groups differ from each other, the procedure for multiple comparisons was used. This work uses statistical tests that are used to assess whether the dependencies and relationships observed in the test are the result of more general regularity in the entire population or if they are just the accidental results. The result was the so-called test probability ( $p$ ), low values of which show statistical significance of the considered relationship. The following rules were accepted: when  $p \geq 0.05$  we are talking about no basis for rejection of the null hypothesis, which means that the tested difference, relationship, effect is not statistically significant; when the  $p < 0.05$  we are talking about statistically significant relationship (we mark the fact using \*);  $p < 0.01$  is a highly significant relationship (\*\*);  $p < 0.001$  is a very highly statistically significant relationship (\*\*\*). The analysis of correlation of psychosocial working conditions, in relation to the level of satisfaction of nurses with different aspects of their work, was carried out by the calculation of correlation coefficient value of Spearman.

## RESULTS

The study involved 570 nurses, including 21.3% at the age of 20-30, 13.9% - 31-40, 39.1% - 41-50 years, and 24.9% - 51-60. The study group was dominated by women (96.3%). Most of the surveyed nurses came from cities (60.2%). Most people from the analyzed occupational group were married (71%). The others were unmarried (21.7%), divorced (4.2%), widowed (3.1%). Almost 55% nurses rated their social conditions as good, 21.7% - as average, 17.9%, - very good, 3.8% poor, and 1.4% - very poor. Every third nurse (33.2%) had bachelor's degree in nursing, 21% of the respondents finished medical high school, and 25.6% - medical studies. 17.9% of them had master's degree in nursing, and 2% had higher education.

Almost 45% of the respondents worked in the voivodeship hospital, 19.3% - in the district hospital, and 35.1% - in the facilities of primary health care. Most of the respondents were employed in the general clinics (34.1%). The rest of them worked in the medical treatment facilities (28.5%), medical treatment wards (17.7%), clinics (0.5%), endoscopic laboratory (0.3%), pulmonology surgery, treatment room, ophthalmic clinic and paediatric clinic (0.2%) or other clinics 18.1%.

The PWC was used to analyse the five aspects of nurse work. The results for each category ranged from 1-5 points. The scale of requirements and desired changes are pejorative, i.e. higher values indicate worse working conditions. The other three indicators should have the highest possible values, meaning that an employee better controls the scope of duties, has a greater sense of social support and higher general quality of life and work (Table 1).

**Table 1.** Psychosocial working conditions - description of the distribution 5 of calculated measures

Psychosocial working conditions	N	$\bar{x}$	Me	s	$c_{25}$	$c_{75}$	min	max
W: Requirements scale↓	570	<b>3.34</b>	<b>3.36</b>	0.39	3.08	3.64	2.28	4.36
K: Control scale↑	570	<b>3.15</b>	<b>3.15</b>	0.44	2.85	3.45	1.90	4.25
S: Social support scale↑	570	<b>3.06</b>	<b>3.06</b>	0.75	2.56	3.56	1.00	5.00
D: Welfare scale↑	570	<b>3.63</b>	<b>3.68</b>	0.52	3.32	4.00	1.68	5.00
Z: Necessary changes scale↓	570	<b>3.39</b>	<b>3.50</b>	0.75	2.95	3.90	1.30	5.00

The evaluation of the relationship between the level of satisfaction with selected aspects of nurse work and the five aspects of nurse work included in the questionnaire assessing psychosocial working conditions was carried out (PWC).

The assessment of requirements related only to the level of satisfaction of a few aspects of nurse

work. It turned out that the greater the need for change, the lower the job satisfaction, whereas, a high sense of self-control at work, social support and welfare were linked with better ratings. Correlation coefficients with the overall, average level of job satisfaction was quite high - exceeded 0.30 or even 0.40 (Table 2).

**Table 2.** Relationship between the results of evaluation of psychosocial work conditions and its selected aspects

Aspects of nurse work	Psychosocial work conditions				
	requirements	control	social support	welfare	need of change
autonomy in decision making	0.02 (p = 0.6863)	0.27 (p = 0.0000***)	0.26 (p = 0.0000***)	0.24 (p = 0.0000***)	-0.17 (p = 0.0001***)
safety at work	-0.15 (p = 0.0005***)	0.23 (p = 0.0000***)	0.22 (p = 0.0000***)	0.18 (p = 0.0000***)	-0.21 (p = 0.0000***)
good work organization	-0.10 (p = 0.0142*)	0.27 (p = 0.0000***)	0.32 (p = 0.0000***)	0.19 (p = 0.0000***)	-0.31 (p = 0.0000***)
good relations with a superior	-0.11 (p = 0.0064**)	0.24 (p = 0.0000***)	0.33 (p = 0.0000***)	0.23 (p = 0.0000***)	-0.25 (p = 0.0000***)
good relations with colleagues	-0.10 (p = 0.0236*)	0.14 (p = 0.0006***)	0.23 (p = 0.0000***)	0.14 (p = 0.0006***)	-0.24 (p = 0.0000***)
company culture	-0.10 (p = 0.0157*)	0.25 (p = 0.0000***)	0.30 (p = 0.0000***)	0.23 (p = 0.0000***)	-0.23 (p = 0.0000***)
ease of getting a job	-0.01 (p = 0.7471)	0.18 (p = 0.0000***)	0.26 (p = 0.0000***)	0.24 (p = 0.0000***)	-0.19 (p = 0.0000***)
promotion opportunity	-0.05 (p = 0.2050)	0.19 (p = 0.0000***)	0.26 (p = 0.0000***)	0.25 (p = 0.0000***)	-0.22 (p = 0.0000***)
reconciliation of work and family	-0.09 (p = 0.0400*)	0.18 (p = 0.0000***)	0.18 (p = 0.0000***)	0.25 (p = 0.0000***)	-0.15 (p = 0.0005***)
contact with people	0.04 (p = 0.3479)	0.17 (p = 0.0000***)	0.17 (p = 0.0000***)	0.12 (p = 0.0048**)	-0.11 (p = 0.0117*)
helping others	0.02 (p = 0.5730)	0.23 (p = 0.0000***)	0.19 (p = 0.0000***)	0.08 (p = 0.0540)	-0.09 (p = 0.0308*)
shift work	-0.06 (p = 0.1482)	0.06 (p = 0.1725)	0.18 (p = 0.0000***)	0.13 (p = 0.0016**)	-0.06 (p = 0.1486)
professional development	0.05 (p = 0.2398)	0.21 (p = 0.0000***)	0.26 (p = 0.0000***)	0.17 (p = 0.0000***)	-0.16 (p = 0.0001***)
appropriate remuneration	-0.06 (p = 0.1262)	0.22 (p = 0.0000***)	0.17 (p = 0.0000***)	0.20 (p = 0.0000***)	-0.22 (p = 0.0000***)
sense of job security	-0.03 (p = 0.4213)	0.20 (p = 0.0000***)	0.21 (p = 0.0000***)	0.20 (p = 0.0000***)	-0.18 (p = 0.0000***)
meaning of work	0.03 (p = 0.5198)	0.21 (p = 0.0000***)	0.24 (p = 0.0000***)	0.16 (p = 0.0002***)	-0.14 (p = 0.0007***)
social respect	0.02 (p = 0.6343)	0.16 (p = 0.0001***)	0.14 (p = 0.0013**)	0.16 (p = 0.0001***)	-0.12 (p = 0.0044**)
respect of superiors	-0.02 (p = 0.7188)	0.23 (p = 0.0000***)	0.32 (p = 0.0000***)	0.21 (p = 0.0000***)	-0.16 (p = 0.0002***)
the work is interesting	0.00 (p = 0.9553)	0.16 (p = 0.0001***)	0.27 (p = 0.0000***)	0.22 (p = 0.0000***)	-0.16 (p = 0.0002***)
social benefits	-0.06 (p = 0.1526)	0.17 (p = 0.0001***)	0.16 (p = 0.0001***)	0.16 (p = 0.0001***)	-0.12 (p = 0.0038**)
<b>Average satisfaction level</b>	<b>-0.06</b> (p = 0.1509)	<b>0.37</b> (p = 0.0000***)	<b>0.41</b> (p = 0.0000***)	<b>0.32</b> (p = 0.0000***)	<b>-0.31</b> (p = 0.0000***)

Table 3 presents the overall distribution of specific measures in the whole study population. Analyzing these results, the individual components frequent were additional requirements resulting from the conflict nature of the job and overload.

However, when interpreting the results one shall remember that the measures of requirements and desired changes are pejorative, that is, higher values indicate worse conditions. Other indicators should have the highest possible values.

Table 4 shows the scales of requirements and control. As one can see, significant correlations involved relation between the level of satisfaction of nurses with working conditions and the requirements

of the scales were compared. When it comes to the requirements it turned out that the worst ratings were given to psychophysical requirements, and the least resulting from the conflict nature of the job and overload, and the level of control of their work in behavioural and cognitive aspects. The higher the level of requirements the lower the satisfaction with the assessed aspects of work, whereas, a greater sense of control was a factor enhancing satisfaction of nurses with their work.

Measures of support, wellbeing and the need for changes were related in statistically significant way with almost all evaluated aspects of nurses work.

**Table 3.** The overall distribution of the detailed measures of the questionnaire for psychosocial working conditions in the entire study population

Psychosocial work conditions	N	$\bar{x}$	Me	s	c <sub>25</sub>	c <sub>75</sub>	min	max
W1: intellectual requirements↓	567	3.18	3.22	0.60	2.78	3.67	1.22	4.89
W2: psychophysical requirements↓	567	4.09	4.22	0.54	3.78	4.44	2.00	5.00
W3: conflict situations and overload↓	567	2.57	2.50	0.62	2.17	3.00	1.00	4.67
K1: behavioural control↑	564	2.63	2.60	0.57	2.20	3.00	1.10	4.10
K2: cognitive control↑	564	3.76	3.78	0.53	3.33	4.11	2.22	4.89
S1: support of superiors↑	566	2.91	3.00	0.88	2.38	3.50	1.00	5.00
S2: support of colleagues↑	566	3.22	3.25	0.79	2.75	3.75	1.00	5.00
D1: physical wellbeing↑	566	3.69	3.73	0.62	3.27	4.09	1.45	5.00
D2: mental wellbeing↑	566	3.57	3.64	0.52	3.27	3.91	1.27	5.00
Z: need for changes↓	563	3.43	3.58	0.79	2.95	4.00	1.11	5.00

The level of nurses satisfaction was affected in the most significant way by the support from superiors and the need for change. The support from superiors was a factor positively affecting the

opinion of nurses, and the need for change was greater in people dissatisfied with their work (hence the negative correlation for this factor). Table 5 shows the results.

**Table 4.** Correlations between requirements regarding working conditions and requirements resulting from the conflict nature of the job and overload, and the level of work control in behavioural and cognitive context

Aspects of nurse work	Psychosocial work conditions				
	intellectual requirements	psychophysical requirements	requirements resulting from conflict and overload	behavioural control	cognitive control
autonomy in decision making	0.15 (p = 0.0004***)	0.05 (p = 0.2010)	-0.22 (p = 0.0000***)	0.28 (p = 0.0000***)	0.17 (p = 0.0000***)
safety at work	0.00 (p = 0.9864)	-0.03 (p = 0.4790)	-0.29 (p = 0.0000***)	0.18 (p = 0.0000***)	0.19 (p = 0.0000***)
good work organization	-0.02 (p = 0.5904)	0.05 (p = 0.1983)	-0.30 (p = 0.0000***)	0.24 (p = 0.0000***)	0.18 (p = 0.0000***)
good relations with a superior	-0.03 (p = 0.4198)	0.01 (p = 0.8751)	-0.22 (p = 0.0000***)	0.17 (p = 0.0000***)	0.23 (p = 0.0000***)
good relations with colleagues	-0.04 (p = 0.4045)	-0.02 (p = 0.6348)	-0.15 (p = 0.0005***)	0.11 (p = 0.0123*)	0.13 (p = 0.0017**)
company culture	0.02 (p = 0.7105)	0.00 (p = 0.9605)	-0.25 (p = 0.0000***)	0.19 (p = 0.0000***)	0.23 (p = 0.0000***)
ease of getting a job	0.05 (p = 0.2745)	0.01 (p = 0.7729)	-0.12 (p = 0.0049**)	0.15 (p = 0.0003***)	0.13 (p = 0.0025**)
promotion opportunity	0.06 (p = 0.1377)	-0.03 (p = 0.5067)	-0.20 (p = 0.0000***)	0.16 (p = 0.0001***)	0.15 (p = 0.0005***)
reconciliation of work and family	-0.04 (p = 0.3283)	-0.02 (p = 0.6328)	-0.14 (p = 0.0010**)	0.09 (p = 0.0322*)	0.19 (p = 0.0000***)
contact with people	0.11 (p = 0.0105*)	0.04 (p = 0.3694)	-0.08 (p = 0.0625)	0.12 (p = 0.0059**)	0.16 (p = 0.0001***)
helping others	0.05 (p = 0.2786)	0.09 (p = 0.0405*)	-0.08 (p = 0.0472*)	0.15 (p = 0.0005***)	0.23 (p = 0.0000***)
shift work	-0.08 (p = 0.0489*)	0.01 (p = 0.8467)	-0.07 (p = 0.0760)	0.00 (p = 0.9898)	0.09 (p = 0.0262*)
professional development	0.14 (p = 0.0008***)	0.10 (p = 0.0160*)	-0.16 (p = 0.0001***)	0.18 (p = 0.0000***)	0.17 (p = 0.0000***)
appropriate remuneration	0.06 (p = 0.1656)	-0.06 (p = 0.1726)	-0.17 (p = 0.0000***)	0.18 (p = 0.0000***)	0.17 (p = 0.0000***)

sense of job security	0.01 (p = 0.8702)	0.03 (p = 0.5245)	-0.13 (p = 0.0026**)	0.12 (p = 0.0055**)	0.20 (p = 0.0000***)
meaning of work	0.10 (p = 0.0136*)	0.11 (p = 0.0120*)	-0.17 (p = 0.0000***)	0.12 (p = 0.0048**)	0.23 (p = 0.0000***)
social respect	0.11 (p = 0.0065**)	0.05 (p = 0.2241)	-0.18 (p = 0.0000***)	0.14 (p = 0.0009***)	0.13 (p = 0.0023**)
respect of superiors	0.05 (p = 0.1941)	0.06 (p = 0.1580)	-0.19 (p = 0.0000***)	0.16 (p = 0.0002***)	0.22 (p = 0.0000***)
the work is interesting	0.05 (p = 0.2067)	0.07 (p = 0.0990)	-0.13 (p = 0.0015**)	0.10 (p = 0.0182*)	0.18 (p = 0.0000***)
social benefits	0.03 (p = 0.5207)	-0.03 (p = 0.4632)	-0.16 (p = 0.0002***)	0.14 (p = 0.0006***)	0.10 (p = 0.0161*)
<b>Average satisfaction level</b>	<b>0.08</b> (p = 0.0458*)	<b>0.05</b> (p = 0.2721)	<b>-0.31</b> (p = 0.0000***)	<b>0.28</b> (p = 0.0000***)	<b>0.31</b> (p = 0.0000***)

**Table 5.** Correlation measure of support, well-being and needs of the assessed aspects of nurses work

Aspects of nurse work	Psychosocial work conditions				
	support of superiors	support of colleagues	physical wellbeing	mental wellbeing	need for change
autonomy in decision making	0.28 (p = 0.0000***)	0.16 (p = 0.0001***)	0.24 (p = 0.0000***)	0.20 (p = 0.0000***)	-0.17 (p = 0.0000***)
safety at work	0.24 (p = 0.0000***)	0.14 (p = 0.0009***)	0.14 (p = 0.0011**)	0.20 (p = 0.0000***)	-0.21 (p = 0.0000***)
good work organization	0.32 (p = 0.0000***)	0.22 (p = 0.0000***)	0.15 (p = 0.0002***)	0.19 (p = 0.0000***)	-0.31 (p = 0.0000***)
good relations with a superior	0.35 (p = 0.0000***)	0.19 (p = 0.0000***)	0.17 (p = 0.0000***)	0.25 (p = 0.0000***)	-0.25 (p = 0.0000***)
good relations with colleagues	0.18 (p = 0.0000***)	0.22 (p = 0.0000***)	0.10 (p = 0.0213*)	0.19 (p = 0.0000***)	-0.23 (p = 0.0000***)
company culture	0.30 (p = 0.0000***)	0.20 (p = 0.0000***)	0.17 (p = 0.0001***)	0.28 (p = 0.0000***)	-0.24 (p = 0.0000***)
ease of getting a job	0.28 (p = 0.0000***)	0.17 (p = 0.0001***)	0.21 (p = 0.0000***)	0.22 (p = 0.0000***)	-0.19 (p = 0.0000***)
promotion opportunity	0.28 (p = 0.0000***)	0.13 (p = 0.0016**)	0.21 (p = 0.0000***)	0.22 (p = 0.0000***)	-0.22 (p = 0.0000***)
reconciliation of work and family	0.18 (p = 0.0000***)	0.13 (p = 0.0017**)	0.22 (p = 0.0000***)	0.23 (p = 0.0000***)	-0.14 (p = 0.0009***)
contact with people	0.11 (p = 0.0068**)	0.19 (p = 0.0000***)	0.06 (p = 0.1436)	0.18 (p = 0.0000***)	-0.11 (p = 0.0117*)
helping others	0.15 (p = 0.0003***)	0.20 (p = 0.0000***)	0.05 (p = 0.2278)	0.12 (p = 0.0036**)	-0.09 (p = 0.0408*)
shift work	0.16 (p = 0.0002***)	0.17 (p = 0.0000***)	0.09 (p = 0.0301*)	0.15 (p = 0.0002***)	-0.06 (p = 0.1421)
professional development	0.25 (p = 0.0000***)	0.19 (p = 0.0000***)	0.14 (p = 0.0008***)	0.19 (p = 0.0000***)	-0.16 (p = 0.0001***)
appropriate remuneration	0.20 (p = 0.0000***)	0.07 (p = 0.1037)	0.17 (p = 0.0001***)	0.19 (p = 0.0000***)	-0.22 (p = 0.0000***)
sense of job security	0.21 (p = 0.0000***)	0.13 (p = 0.0014**)	0.18 (p = 0.0000***)	0.18 (p = 0.0000***)	-0.18 (p = 0.0000***)
meaning of work	0.24 (p = 0.0000***)	0.15 (p = 0.0005***)	0.11 (p = 0.0070**)	0.20 (p = 0.0000***)	-0.14 (p = 0.0006***)
social respect	0.15 (p = 0.0005***)	0.06 (p = 0.1389)	0.13 (p = 0.0018**)	0.16 (p = 0.0002***)	-0.13 (p = 0.0028**)
respect of superiors	0.34 (p = 0.0000***)	0.17 (p = 0.0001***)	0.15 (p = 0.0003***)	0.23 (p = 0.0000***)	-0.16 (p = 0.0001***)
the work is interesting	0.25 (p = 0.0000***)	0.21 (p = 0.0000***)	0.15 (p = 0.0003***)	0.26 (p = 0.0000***)	-0.16 (p = 0.0001***)
social benefits	0.19 (p = 0.0000***)	0.07 (p = 0.1090)	0.16 (p = 0.0002***)	0.13 (p = 0.0022**)	-0.12 (p = 0.0043**)
<b>Average satisfaction level</b>	<b>0.41</b> (p = 0.0000***)	<b>0.27</b> (p = 0.0000***)	<b>0.27</b> (p = 0.0000***)	<b>0.33</b> (p = 0.0000***)	<b>-0.31</b> (p = 0.0000***)

The analysis of the results concerning the comparison of specific measurements of requirements, control, support, or wellbeing due to the workplace lead to the conclusion that the nurses from voivodeship hospitals rated their work lower in the category of intellectual demands and nurses from PHC - requirements resulting from the conflict

nature of the job and overload. Behavioural control and the need for change differed for PHC nurses in relation to the two other hospitals, and mental wellbeing was rated lower in the district hospitals than in the other two types of medical facilities (Table 6).

**Table 6.** Comparison of the specific measurements of requirements, control, support and wellbeing due to the work place

Psychosocial work conditions	Medical facility									P
	hospital in a voivodeship city			hospital in a district city			PHC			
	$\bar{x}$	Me	s	$\bar{x}$	Me	s	$\bar{x}$	Me	s	
<b>Requirement level</b>										
intellectual requirements	3.09	3.11	0.61	3.23	3.22	0.60	3.29	3.22	0.59	0.0043**
psychophysical requirements	4.04	4.11	0.58	4.14	4.22	0.52	4.12	4.22	0.50	0.3053
requirements resulting from conflicts and overload	2.68	2.67	0.63	2.71	2.67	0.55	2.37	2.33	0.60	0.0000***
<b>Control</b>										
behavioural	2.59	2.60	0.51	2.45	2.30	0.59	2.78	2.80	0.60	0.0000***
cognitive	3.74	3.72	0.54	3.71	3.67	0.49	3.79	3.89	0.54	0.2878
<b>Support</b>										
from superiors	2.90	3.00	0.88	2.74	2.87	0.89	2.97	3.00	0.85	0.0903
from colleagues	3.17	3.25	0.80	3.17	3.25	0.79	3.30	3.38	0.75	0.1139
<b>Wellbeing</b>										
physical wellbeing	3.69	3.82	0.60	3.62	3.73	0.69	3.71	3.73	0.61	0.6330
mental wellbeing	3.60	3.64	0.52	3.43	3.50	0.59	3.61	3.64	0.47	0.0255*
<b>Need for changes</b>										
need for changes	3.60	3.68	0.69	3.56	3.74	0.80	3.15	3.21	0.83	0.0000***

P – test probability value calculated using the Kruskal-Wallis test

The results show clear differences in the assessment of psychosocial working conditions of nurses from hospitals in relation to the opinion of nurses from PHC. The biggest differences are related to the assessment made on the scale of control and desired changes. Here, the respondents from hospitals (both district and voivodeship) had "worse"

results than the ones from PHC. There were no differences in the opinions of nurses from both types of hospitals. Somewhat different was the relationship between the requirement assessment in relation to workplace - nurses from district hospitals assessed the level of requirements higher than the other two groups. (Table 7).

**Table 7.** Correlations between the assessment of psychosocial working conditions in relation to workplace

Psychosocial work conditions	Medical Facility									P
	hospital in a voivodeship city			hospital in a district city			PHC			
	$\bar{x}$	Me	s	$\bar{x}$	Me	s	$\bar{x}$	Me	s	
Requirements scale	3.33	3.32	0.40	3.43	3.44	0.35	3.31	3.36	0.38	0.0456*
Control Scale	3.11	3.15	0.37	3.03	2.95	0.45	3.25	3.25	0.49	0.0000***
Social support scale	3.03	3.00	0.75	2.95	3.00	0.75	3.14	3.13	0.71	0.0684
Welfare scale	3.65	3.73	0.51	3.52	3.59	0.60	3.66	3.67	0.49	0.1570
Need for changes scale	3.55	3.65	0.65	3.51	3.70	0.77	3.12	3.20	0.79	0.0000***

P – test probability value calculated using the Kruskal-Wallis test

## DISCUSSION

Leka and Jain [7] emphasize that all over the world most adults, but also children spend most of their day at work, where they encounter different threats due to chemicals, biological and physical agents, adverse ergonomic conditions, allergens, complex safety threats, as well as numerous and various psychosocial factors.

In the opinion of Rutkowska [8], the role and tasks of nurses continually transform, but this group is always required to have great psychosocial skills, guaranteeing the high quality of professional services. Possession and perfecting of these skills protect nurses against the syndrome of burnout, and enhance the quality of medical services.

According to Leka and Jain [7] The International Labour Organization (ILO), defines psychosocial risks as "*interaction between the content of work, management and organization of the work process and other organisational and environmental conditions on the one hand, and the needs and competencies of employees on the other.*" In this context, they refer to this kind of interactions, which perception and experience of the staff has been proven to carry a risk to their health [7].

Cox and Griffiths [7] define psychosocial threats as "*those aspects of the design and management of work, together with their organizational and social context, which can potentially cause psychological or physical damage.*"

Potocka [8] notes that the analysis of occupational hazards is still very difficult. According to the modern model of health care, the recognition, monitoring and attempt to eliminate occupational hazards should also include psychosocial hazards present in the workplace.

In the literature [9,10] it is emphasized that from the point of view of stress the most unfavourable are situations where high demands are accompanied by a low level of control and social support. It is also noted that the above three features of work are associated with health indicators not only when interacting with each other, but also occurring independently [10].

This study used the questionnaire including five theoretical scales and the empirical scales assigned to them [6]. The higher the result, the higher the intensity of the properties - requirements, control, social support, wellbeing and need for change [6]. It turned out that the nurses, who worked in worse conditions, rated the scale of requirements and the desired changes higher. Hence, the greater the need for change, the lower the job satisfaction among the respondents. No statistically significant relationship was noted between the level of intellectual or psychosocial requirements and the average level of job satisfaction. It turned out that the support of superiors was a factor favourably

affecting the opinion of nurses, and a sense of the need for change was greater in dissatisfied people.

Rotter *et al.* [11] conducted the study involving 388 nurses working in surgical, behavioural and psychiatric wards. Nearly half of the nurses considered the requirements at work to be average and 36.66% - too high; the highest level of requirements was presented by nurses from medical treatment wards. Nurses working on shifts in psychiatric wards experienced burdens resulting from the conflict nature of the job and overload much more intensively [11]. The examined with seniority of over 10 years much more often described the level of behavioural control to be too high in relation to people working for a shorter period. Regardless of the type of ward, most often, nurses evaluated the support from colleagues as average (44.33%) and 1/5 considered it to be low [11].

Tartas *et al.* [12] conducted the study involving 60 nurses with at least one year experience of working in hospices and general surgery ward. It turned out that the nurses from hospices, unlike nurses from general surgery, differed in regards to some specific stressors related to work, e.g. hospice nurses felt greater discomfort associated with "the possibility of professional development," "conflicts with superiors" and "relationship with patients' families" [12]. However, similar discomfort concerned, "the level of workload," "technical equipment of ward", "salary", "sense of stability of employment", "mismanagement", "difficulties with teamwork", "deterioration of a patient's health", "patient's death", and "relationship with a patient." Nurses from the general surgery declared that they were supported by friends both in relation to professional and private problems to a larger extent [12]. However, the two groups rated the support received from their superiors as low. Professional work was perceived as a significant source of stress for both hospice nurses and the general surgery nurses [12].

In the present study, nurses from the voivodeship hospitals rated their work lower in the category of intellectual demands, and nurses from PHC – the requirements resulting from the conflict nature of the job and overload. Nurses working in PHC and hospitals also differed in the behavioural control and the need for change, whereas, mental wellbeing was the worst in employees of district hospitals.

The reference literature [7] emphasize that exposure to adverse physical and psychosocial working conditions can affect mental and somatic health. There is evidence for the relationship between reporting complaints about the loss of health related to work and exposure to psychosocial risk factors, and the interaction between physical and psychosocial threats, resulting in negative health consequences at an individual and organizational level [7].



Extrapolation of the impact of psychosocial working conditions on health is difficult on the global scale due to lack of data. In the recent years, more and more attention is attracted to the need to develop measuring systems and programs allowing to fight with and prevent psychosocial risks, hence, the work on the above should be continued.

## CONCLUSIONS

1. It has been shown that the greater the sense of work control or social support, the clearly higher the level of job satisfaction.
2. It was stated that the higher the level of requirements and the greater need for change, the lower the satisfaction of the assessed aspects of work.
3. We found significant differences in the assessment of psychosocial working conditions of nurses from hospitals in relation to nurses from PHC.

## Conflicts of interest

The authors declare that they have no conflicts of interest in this work.

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