

THE EFFECT OF WORK-RELATED RISK FACTORS ON HEALTH SYMPTOMS OF HOSPITAL PHYSICIANS

Vangelova K., Dimitrova I., Cekova I., Stoyanova R.

National Center of Public Health and Analyses, Sofia1413, Bulgaria

Introduction. The job of hospital physicians is responsible and decision-rich, carried under shift work. For years Bulgaria is facing physician's shortage, which contributes to their long working hours. The aim of the study was to follow the work-related risk factors of hospital physicians in Sofia.

Methods. The study is cross-sectional and comprised 759 physicians (456 females and 303 males) of average age (44.3 ± 14.1) years from 19 hospitals in Sofia. The anonymous questionnaire was filled, including demographic information, working hours and shift system, with special attention to night work and long working hours, stress and health symptoms. Statistical analysis was made using SPSS.

Results. More than 90 % of the physicians felt under strain and emotional dissonance of working with patients. 27.1 % of the physicians worked more than 5 night shifts monthly. Overtime was common, 64.9 % of the studied physicians were working overtime > 2 times per week and 49.8 % worked in second health care establishment, together with a second workplace contributing to long working hours of 51–60 hours per week in 27.8 % of the physicians and > 61 hours in 13.7 %. Work-related stress, night work and long-term working hours were related to self-rated emotional and physical exhaustion and poor health.

Discussion. The work-related factors raise health concerns for occupational health of hospital physicians and urgent preventive measures are needed to control stress and reduce working hours and night work.

Key words: work-related stress, overtime, shift work

Introduction

The job of hospital physicians is responsible and decision-rich in the changing clinical environments, requiring permanent concentration, and often is made under time pressure. An important aspect is the shift work, often including night work, extended shifts, overtime and irregular working hours [1, 2]. Dealing with patients and their families can also be difficult, due to both emotional and social stress [2–4]. Also, there are stressors related to collaboration with colleagues, supervisors and nursing staff, even leading to conflicts in some cases [3, 4]. The findings of Ettorre and Greco [6] indicate that hospital health care workers incur a greater risk of work related stress as compared with those of care services. Hospital physicians can respond to this high level of stress at work by physical and psychological symptoms, such as sleep disorders, fatigue, psychosomatic complaints and emotional and physical exhaustion [3, 7, 8]. Our data also show sleep deterioration and fatigue increase in hospital physicians with the increase of night work and working time [9].

Stress and some of the shift work characteristics can contribute to increase in health risk, especially cardiovascular, endocrine and metabolic diseases, digestive diseases, mental health and reproduction

problems [10–12]. Stress effects on the quality of the work, including due to the long working hours, are discussed, as well [13].

For a long time Bulgaria is facing shortage of physicians because of departure of younger specialists to western countries, which contributes to long working hours for physicians in the country due to overtime or/and second work place. The work at night, long working hours and work-related stressors can operate in interaction, resulting in more health symptoms and poor health.

The aim of the work was to study work-related risk factors and effect of night work and long working hours on the health of hospital physicians.

Methods

Study design

A cross-sectional survey was conducted which included 19 largest hospitals (>150 beds) in Sofia, Bulgaria, as a part of a study of risk factors for health in the health care. The survey was anonymous, self-administered questionnaire was filled by physicians at their workplaces. 759 physicians participated in the study, 456 females and 303 males of the average age (44.3 ± 14.1) years and the average length of service (19.1 ± 13.9) years, with no gender differences concerning age

and length of service, as well as a family status (Table 1). The study was approved by the ethical committee of the National Center of Public Health and Analyses. All participants have signed an inform consent.

Data collection

The questionnaires covered information on demographic, physical and behavioral characteristics as well as on the previous and current work schedules of physicians, such as shiftwork, night shifts, length of the shifts. The information is also collected on how many night shifts have been worked per month: 0 nights per month, 1–2 nights per month, 3–4 nights per month, more than 5 nights per month. In order to assess the history of night work, the respondents reported on the number of years with night shifts (including rotating and non-rotating night shifts). The participants also answered questions on the overtime worked in the hospital and how often it was happened, whether they had a second job, and taking in account the overtime and second job how many hours on the average they worked a week. The average hours worked per week were specified as follows: 21–40 hours, 41–50 hours, 51–60 hours and > 61 hours/week.

The stress was assessed using a questionnaire based on the short version of the German Instrument for stress-related job analyses for hospital physicians [14]. The questionnaire included 30 items focused on stressors, such as time pressure, uncertainty, frustration, problems in workflow due to supervisors and colleagues, social stressors such as emotional dissonance with patients and their families and resources, such as autonomy, professional development, participation, social support from supervisors and colleagues, justice. Also, questions about the subjective feeling of work under the high strain, the need of maintaining constant concentration during work were included, as well as work-related problems in the family life.

The health was assessed by the 5-point scale as excellent, very good, good, fair and poor, the participants answered how often they were emotionally and physically exhausted during the last 4 weeks [15], and completed a self-rated health questionnaire (17 health symptoms).

Data analysis

The data was introduced and processed with the SPSS 15.0 statistical package. ANOVA and Pearson correlation coefficient were used for statistical analyses, and the significance level was set at $p < 0.05$.

Results

The shift work, night work and the extended shifts were common among the studied physicians and the majority of male physicians worked for more than 5 night shifts monthly (Table 2). The overtime was common, 64.9 % of the studied physicians worked overtime for more than 2 times per week and 49.8 % worked at the second health care establishment. The overtime together with the work at a second workplace contributed to long working hours of 51–60 hours per week in 41.5 % of physicians and > 61 hours in 13.7 %. A great deal of male physicians had a second job and worked for long working hours in comparison with females.

More than 90 % of physicians worked under strain (Figure), with high tempo, the job required permanent concentration, at least 2 times/week physicians worked under time pressure and felt emotional dissonance in their work with patients. More than 60 % of physicians felt frustration, e.g. lack of enough time for patients because of a lot of administrative duties, and more than 45 % felt uncertainty, e.g. decision making without having enough information at least 2 times/week. A great deal of the studied physicians considered their payment poor and more than 45 % felt unsafe at their work places. On the other hand more than 70 % of

Table 1

Gender, age, length of service and family status of participants in the study

	All physicians n = 759	Male physicians n = 303 (39.9 %)	Female physicians n = 456 (60.1 %)
Age, years (mean ± SD)	44.3 ± 14.1	44.3 ± 14.1	44.3 ± 14.1
Experience, years (mean ± SD)	19.1 ± 13.9	19.1 ± 13.9	19.1 ± 13.9
Family status, %			
Single	33.8	29.9	36.4
Family	54.3	61.1	49.8
Divorced	8.6	8.3	8.7
Widow	3.3	0.7	5.1

Table 2

The share of the studied physicians (%) working under the following time arrangement characteristics

	All physicians n = 759	Male physicians n = 303 (39.9 %)	Female physicians n = 456 (60.1 %)	Pearson χ^2 ; p
Shift work, %	73.6	73.9	73.4	NS
Night work, %	63.7	64.5	63.1	NS
> 5 night shifts/month, %	27.1	34.6	22.1	20.787; 0.000
12-hour shifts, %	49.7	49.2	50	NS
Overtime > 2 days/week, %	64.9	62.9	66.4	NS
Second job, %	49.8	55	46.5	5.270; 0.013
Working time in hours/week, %				14.178; 0.003
20–40 hours/week	20	17.4	21.7	
41–50 hours/week	38.5	34.6	41.1	
51–60 hours/week	27.8	28.9	27.1	
> 61 hours/week	13.7	19.1	10.1	

physicians had autonomy on their work, opportunities for professional development, social support from supervisors and colleague; more than 40 % considered that the work distribution between the staff was fair.

There were no significant gender differences in the ratings of stressors and resources, but several items were in relation to night work and working hours weekly (Table 3). The share of physicians, always working under the time pressure, frustration > 2 times a week and a treat of violence significantly increased with the increase of the number of night shifts/month and working hours weekly with the highest values of physicians working > 5 night shifts/month and > 61 hours/weekly. The rates of physicians with work-related family problems also increased with the increase of night shifts and working time as a whole, while, on the other hand, the rates decreased with the ratings of autonomy, opportunities for professional development and justice.

The health was self-rated as good, (2.91 ± 0.69), with no significant differences concerning gender, night work and long working hours. The ratings for emotional and physical exhaustion were high, with no significant gender differences, but both increased with the increase of night work and long working hours (Table 4). The female physicians reported significantly more often on health symptoms in comparison with male ones, (7.21 ± 3.66) versus (6.42 ± 3.49), $F = 7.320$, $p = 0.007$. The psychosomatic complaints increased with the increase of night work and working hours, but did not reach significant values.

The most frequent (> 60 % of the respondents) are complains on frequent fatigue, anxiety, forgetting, pains in the muscles and bones, pains in the back (Table 5), followed by more than 50 % of sleep problems and lack of mood, by more than 30 % of stomach problems and numbness of the limbs. Gender differences were found concerning complaints of fatigue, anxiety, forgetting,

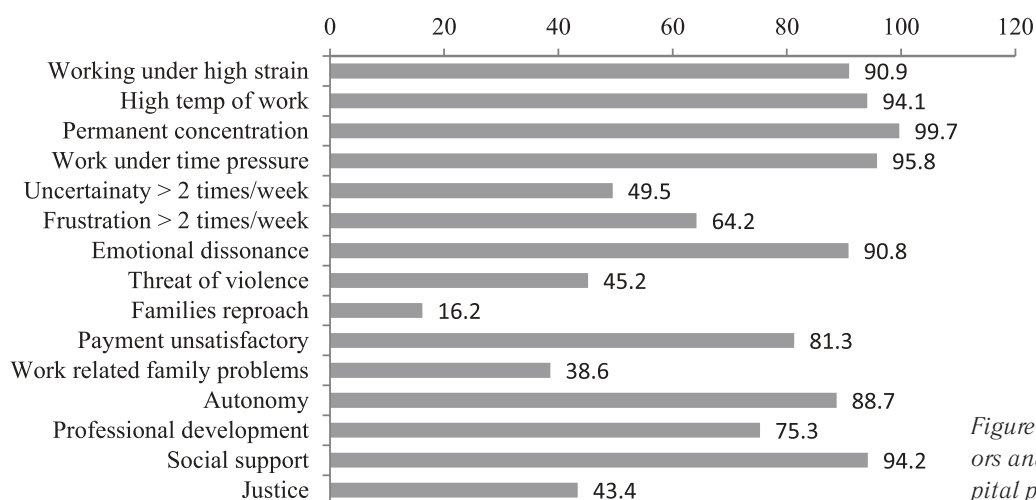


Figure. Self-rated stressors and resources in hospital physicians, %

Table 3

The effect of night work and long working hours on stress and resources ratings of hospital physicians, %

Stressors and resources	Night work, % of physicians					Long working hours, % of physicians				Pearson χ^2 ; p	
	0	Night shifts/month				21–40	hours/week				Pearson χ^2 ; p
		1–2	3–4	>5	0		41–50	51–60	> 61		
Always under time pressure	39.8	55	36.9	45.1	18.009; 0.006	38.6	37.6	42.9	58.9	19.536; 0.003	
Frustration >2 times/week	56.6	81.5	69.3	64.3	22.615; 0.007	61	63.4	67.3	68.8	24.423; 0.004	
Threat of violence	34.7	48.8	45.3	57.4	21.993; 0.000	41.5	46.9	42.3	59.8	9.698; 0.021	
Payment unsatisfactory	79.4	75.9	83.2	83.9	NS	75.7	81	83.7	88.5	NS	
Work-related family problems	33	45.7	39.6	42	NS	32.4	35.8	43.4	48.5	8.960; 0.030	
Autonomy	38.3	25.6	20.1	26	20.593; 0.002	35.9	28.8	23.2	21.4	NS	
Professional development	79.7	81.7	75.8	65.1	14.727; 0.002	81.7	76.3	70.9	68	7.804; 0.050	
Justice	50.9	37.5	41.3	39.1	NS	58	39.3	40.1	37.5	29.238; 0.000	

pains in the muscles and bones, headache, lack of mood, heaviness in the stomach, dizziness, apathy, all with higher rates in female physicians.

The regression analysis in highly significant models showed as determinants of emotional exhaustion, the time pressure, uncertainty, high strain, frustration and lack of autonomy; while for physical exhaustion the same stressors plus the number of night shifts per month and emotional dissonance (Table 6). The number of psychosomatic complaints was related to the time pressure, patient or family reproach, emotional dissonance, lack of autonomy, justice and gender.

Discussion

The shift schedules of more than 60 % of the studied hospital physicians are rotating and include night work and 50 % 12-h shifts. The long working hours are common because of the overtime and the second job; and the increase of the working time correlates with higher number of night shifts. Shift work with more night shifts monthly and in overtime hours weekly was earlier shown to contribute to impaired sleep and fatigue in the studied group of physicians [9]. The sleep impairment was more evident with the increase in the number of night shifts, while fatigue with the increase of working hours.

More than 90 % of the studied physicians worked under strain and with high temp, at least 2 times/week the physicians worked under the time pressure and felt emotional dissonance in their work with patients. More than 60 % of physicians felt frustration, e. g. lack of enough time for patients because of a lot of administrative duties and more than 45 % felt uncertainty, e. g. decision making without having enough information at least 2 times/week.

The share of physicians, rating to work under the time pressure, frustration and treat of violence significantly increased with the increase of the number of night shifts/month and working hours weekly. These findings are consistent with the study of Vandevala et al. [16], showing that employees, who work for more than 40 h per week in an intensive care unit report on the experience of higher levels of stressors, and the latter are associated with higher incidences of burnout and depression. The studies do not account for shift patterns and night work but evidence that when the work takes more than 40 h there can be less time for actual recovery after work. Our data also show higher level of emotional and physical exhaustion with the

Table 4

Self-rated emotional and physical exhaustion in relation to night work and long working hours

Variable	Risk factor	$\bar{x} \pm SD$	F; p
Emotional exhaustion	Night work		3.314; 0.020
	0 shifts	2.9 ± 1.4	
	1–2 shifts	3.3 ± 1.1	
	3–4 shifts	3.1 ± 1.2	
	> 5 shifts	3.2 ± 1.3	2.617; 0.050
	Long working hours		
	21–40 hours/week	2.9 ± 1.4	
	41–50 hours/week	3.0 ± 1.3	
51–60 hours/week	3.3 ± 1.1		
> 61 hours/week	3.2 ± 1.3		
Physical exhaustion	Night work		6.936; 0.000
	0 shifts	2.7 ± 1.5	
	1–2 shifts	3.2 ± 1.2	
	3–4 shifts	3.0 ± 1.2	
	> 5 shifts	3.2 ± 1.1	4.019; 0.008
	Long working hours		
	21–40 hours/week	2.8 ± 1.5	
	41–50 hours/week	3.0 ± 1.3	
51–60 hours/week	3.2 ± 1.2		
> 61 hours/week	3.3 ± 1.1		
Psychosomatic complaints	Night work		NS
	0 shifts	6.5 ± 3.4	
	1–2 shifts	7.6 ± 4.0	
	3–4 shifts	7.1 ± 3.5	
	> 5 shifts	7.0 ± 3.8	NS
	Long working hours		
	21–40 hours/week	6.7 ± 3.5	
	41–50 hours/week	6.7 ± 3.6	
51–60 hours/week	7.1 ± 3.6		
> 61 hours/week	7.6 ± 4.1		

Table 5

The rate of physicians (%), total and by gender rating of psychosomatic complaints

	Physicians			Gender differences	
	Total, %	Males, %	Females, %	χ^2	p
Frequent fatigue	67.2	63	70	3.887	0.030
Forgetting	70.84	70	71.4	NS	
Pains in the muscles and bones	67.1	61.9	70.5	7.575	0.006
Pains in the back	63.6	60.4	65.7	1.997	0.091
Anxiety	69	61.3	74.2	13.714	0.000
Lack of mood	53.5	58	50.6	3.797	0.030
Sleep problems	56.7	55.1	57.7	NS	
Dizziness	38.1	25.3	46.8	33.832	0.000
Stomach ache	34.2	30.3	36.8	3.268	0.042
Headache	36.2	24.7	43.8	27.593	0.000
Limb numbness		35.9	34	37.1	NS
Pains in the chest	27.4	24.4	25.4	NS	
Apathy	25.6	29.1	23.2	3.121	0.047
Quickly out of breath	15.3	17.1	14	NS	

Table 6

The determinants of emotional and physical exhaustion and psychosomatic complaints

Variables	Determinants	β	T	p
Emotionally exhausted	Time pressure	.165	3.874	.000
	Uncertainty	.185	4.633	.000
	High strain	.173	4.446	.000
	Frustration	.163	3.988	.000
	Autonomy	-.130	-3.417	.001
$r^2 = 22.90, F = 33.670, p = 0.000$				
Physically exhausted	Time pressure	.210	4.989	.000
	High strain	.186	4.680	.000
	Frustration	.145	3.521	.000
	Autonomy	-.100	-2.589	.010
	Number of night shifts/monthly	.085	2.176	.030
	Emotional dissonance	.108	2.756	.006
$r^2 = 21.50, F = 22.503, p = 0.000$				
Psychosomatic complaints	Time pressure	.216	5.112	.000
	Patients or families reproach	.188	4.498	.000
	Justice	-.158	-3.732	.000
	Emotional dissonance	.138	3.344	.001
	Autonomy	-.105	-2.487	.013
	Gender	.089	2.195	.029
$r^2 = 21.10, F = 22.499, p = 0.000$				

increase of the working hours, as well as the number of night shifts. The rates of physicians with work-related family problems increased with the increase of the number of night shifts and working time, while the rating of resources such as autonomy, opportunities for professional development and justice decreased. These data are in accordance to with the findings of Vandebroek et al. [17], who also found that the emotional exhaustion was in strong negative associations with all assessed outcomes of individual well-being. Also, long working hours do not reach significance to be predictor of emotional and physical exhaustion in our study, they relate on the time pressure, a strong predictor of both emotional and physical exhaustion. The emotional exhaustion component is considered as a crucial burnout dimension [18] and doctors, experiencing high workload and working in long shifts, were found to be more prone to development of the burnout [19]. A recent systematic review [20], extracting data from 182 studies involving 109628 individuals of 45 countries, published between 1991 and 2018, showed substantial variability in prevalence estimates of burnout and burnout dimensions among practicing physicians (67.0 % for overall burnout, 72.0 % for emo-

tional exhaustion, 68.1 % for depersonalization, and 63.2 % for low personal accomplishment), but also marked variation in burnout definitions, assessment methods, and study quality.

Health care workers are exposed to various occupational stress factors, most of which are susceptible to reduction. Ettorre and Greco [6] proposed stress management programs aimed to improve work context factors associated with occupational stress and in such way to minimize the impact of work related stress on workers. Our data show that the shift work, especially night work and long working hour should be carefully managed.

In conclusion, work-related factors raise health concerns for occupational health of the studied hospital physicians. Emotional exhaustion, the key dimension of burnout, was strongly related on the time pressure, uncertainty, high strain, frustration and lack of autonomy; while for physical exhaustion these were the same stressors plus the number of night shifts per month, emotional dissonance and age. Urgent preventive measures are needed to control stress, as well as to manage the shift work, both night work, overtime and long working hours.

References

1. Baldwin D. C., Daugherty S. R., Tsia R., Scotti M. J. (2003), «A National Survey of Residents' Self-Reported Work Hours: Thinking Beyond Specialty», *Acad Med*, 78, 1154–1163. <https://doi.org/10.1097/00001888-200311000-00018>.
2. Cohen J. S., Patten S. (2005), «Well-being in residency training: a survey examining resident physician satisfaction both within and outside of residency training and mental health in Alberta», *BMC Med Educ.*, 5, 21. <https://doi.org/10.1186/1472-6920-5-21>.
3. Renzi C., Di Pietro C., Tabolli S. (2012), «Psychiatric morbidity and emotional exhaustion among hospital physicians and nurses: association with perceived job-related factors», *Arch Environ Occup Health*, 67 (2), 117–23. <https://doi.org/10.1080/19338244.2011.578682>.
4. Hämmig O. (2018), «Explaining burnout and the intention to leave the profession among health professionals – a cross-sectional study in a hospital setting in Switzerland», *BMC Health Services Research*, 18, 785. <https://doi.org/10.1186/s12913-018-3556-1>.
5. Taylor C., Graham J., Potts H. W.W. et al. (2005), «Changes in mental health of UK hospital consultants since the mid-1990s», *Lancet*, 366, 742–744. [https://doi.org/10.1016/S0140-6736\(05\)67178-4](https://doi.org/10.1016/S0140-6736(05)67178-4).
6. Ettorre G., Greco M. (2015), «Healthcare Work and Organizational Interventions to Prevent Work-related Stress in Brindisi, Italy», *Safety and Health at Work*, 6 (1), 35–38. <https://doi.org/10.1016/j.shaw.2014.10.003>.
7. Karhula K., Härmä M., Sallinen M. et al. (2013), «Job Strain, Sleep and Alertness in Shift Working Health Care Professionals – a Field Study», *Industrial Health*, 51 (4), 406–16. <https://doi.org/10.2486/indhealth.2013-0015>.
8. Karhula K., Härmä M., Sallinen M. et al. (2013), «Association of job strain with working hours, shift-dependent perceived workload, sleepiness and recovery», *Ergonomics*, 56 (11), 1640–51. <https://doi.org/10.1080/00140139.2013.837514>.
9. Vangelova K., Cekova I., Dimitrova I. (2018), «Sleep and fatigue in hospital physicians in relation to shift work», *Ukrainian Journal of Occupational Health*, 3 (56), 16–21. <https://doi.org/10.33573/ujoh2018.03.016>.
10. Moreno C. R. C., Marqueze E. C., Sargent C. et al. (2019), «Working time society consensus statements: evidence-based effects of shift work on physical and mental health», *Industrial Health*, 57, 139–157. <https://doi.org/10.2486/indhealth.SW-1>.
11. Knutsson A. (2003), «Health disorders of shift workers», *Occup. Med.*, 53, 103–108. <https://doi.org/10.1093/occmed/kgq048>.
12. OPINION of the French Agency for Food, Environmental and Occupational Health & Safety on the «Assessment of the health risks associated with night work» ANSES Maisons-Alfort, 2016. <https://www.anses.fr/en/system/files/AP2011SA0088RaEN.pdf>
13. Landrigan C. P., Rothschild J. M., Cronin J. W. et al. (2004), «Effect of reducing interns' work hours on serious medical errors in intensive care units», *N Eng J Med*, 351, 1838–1848. <https://doi.org/10.1056/NEJMoa041406>.
14. Keller M., Bamberg E., Böhmert M., Nienhaus A. (2010), «Entwicklung eines Instruments zur stressbezogenen Arbeitsanalyse für Klinikärztinnen und -ärzte (ISAK)», *Zeitschrift für Arbeitswissenschaft*, 64, 337–353.
15. SHORT COPSOQ II questionnaire. National Centre for the Working Environment, Denmark file:///C:/Users/kvangelova/Downloads/1_copsoq%20ii%20short%20questionnaire%20english%20(1).pdf.
16. Vandevala T., Pavey L., Chelidoni O. et al. (2017), «Psychological rumination and recovery from work in intensive care professionals: associations with stress, burnout, depression and health», *Journal of Intensive Care*, 5, 16. <https://doi.org/10.1186/s40560-017-0209-0>.
17. Vandebroek S., Van Gerven E., De Witte H. et al. (2017), «Burnout in Belgian physicians and nurses», *Occup Med (Lond)*, 67 (7), 546–554. <https://doi.org/10.1093/occmed/kqx126>.
18. Demerouti E., Bakker A. B., Nachreiner F., Schaufeli W. B. (2001), «The job demands-resources model of burnout», *Journal of Applied Psychology*, 86, 499–512. <https://doi.org/10.1037/0021-9010.86.3.499>.
19. Wallace J. E., Lemaire J. B., Ghali W. A. (2009), «Physician wellness: a missing quality indicator», *Lancet*, 374, 714–1721. [https://doi.org/10.1016/S0140-6736\(09\)61424-0](https://doi.org/10.1016/S0140-6736(09)61424-0).
20. Rotenstein L. S., Torre M., Ramos M. A. et al. (2018). «Prevalence of Burnout Among Physicians: A Systematic Review», *JAMA*, 320 (11), 1131–1150. <https://doi.org/10.1001/jama.2018.12777>.

Вангелова К., Димитрова І., Цекова І., Стоянова Р.

ВПЛИВ ФАКТОРІВ РИЗИКУ, ПОВ'ЯЗАНИХ З РОБОТОЮ, НА СИМПТОМИ ЗДОРОВ'Я ЛІКАРІВ У ЛІКАРНЯХ

Національний центр громадського здоров'я та аналізу, Софія 1413, Болгарія

Вступ. Праця лікарів, що працюють у лікарнях, є відповідальною, пов'язаною з прийняттям рішень і виконується в змінному режимі. Протягом багатьох років Болгарія стикається з браком лікарів, що сприяє понаднормовій роботі. *Мета дослідження* – вивчити фактори ризику лікарів у лікарнях м. Софії, що пов'язані з роботою.

Матеріали та методи дослідження. У перехресному дослідженні брали участь 759 лікарів (456 жінок і 303 чоловіків), середній вік яких склав $(44,3 \pm 14,1)$ років, з 19 лікарень м. Софії. Заповнювалася анонімна анкета, яка включала демографічну інформацію, робочий час і змінний графік, з особливою увагою до нічної роботи та тривалості робочого часу, симптомів стресу і показників здоров'я. Статистичний аналіз був виконаний з використанням SPSS.

Результати. Понад 90 % лікарів відчували напругу та емоційний дисонанс від роботи з пацієнтами. 27,1 % лікарів мали понад 5 нічних змін у місяць. Понаднормові часи були звичайним явищем, 64,9 % опитаних лікарів працювали понаднормово > 2 рази на тиждень, а 49,8 % працювали ще й в іншому медичному закладі, що разом становило 51–60 год на тиждень для 27,8 % лікарів, і > 61 год у 13,7 %. Стрес, пов'язаний з роботою, нічна праця та тривалий робочий день викликали емоційне й фізичне виснаження та сприяли поганому здоров'ю.

Висновки. Пов'язані з роботою фактори ризику викликають заклопотаність з приводу професійного здоров'я лікарів у лікарнях, тому необхідні термінові профілактичні заходи для боротьби зі стресом, скороченням робочого часу і нічних змін.

Ключові слова: стрес, що пов'язаний з роботою, понаднормові часи, змінна праця

Вангелова К., Димитрова И., Цекова И., Стоянова Р.

ВЛИЯНИЕ ФАКТОРОВ РИСКА, СВЯЗАННЫХ С РАБОТОЙ, НА СИМПТОМЫ ЗДОРОВЬЯ ВРАЧЕЙ БОЛЬНИЦ

Национальный центр общественного здоровья и анализа, София, Болгария

Вступление. Труд врачей, работающих в больницах, является ответственным, связанным с принятием решений и выполняется в сменном режиме. В течение многих лет Болгария сталкивается с нехваткой врачей, что способствует их сверхурочной работе.

Цель исследования – изучить связанные с работой факторы риска врачей больниц в Софии.

Материалы и методы исследования. В перекрестном исследовании приняли участие 759 врачей (456 женщин и 303 мужчин), средний возраст которых составил $(44,3 \pm 14,1)$ лет из 19 больниц г. Софии. Заполнялась анонимная анкета, которая включала демографическую информацию, рабочее время и сменный график, с особым вниманием к ночной работе и продолжительности рабочего времени, симптомам стресса и состоянию здоровья. Статистический анализ был выполнен с использованием SPSS.

Результаты. Более 90 % врачей испытывали напряжение и эмоциональный диссонанс от работы с пациентами. 27,1 % врачей имели более 5 ночных смен в месяц. Сверхурочные часы были обычным явлением, 64,9 % опрошенных врачей работали сверхурочно > 2 раз в неделю, а 49,8 % работали во втором медицинском учреждении, что вместе составляло 51–60 ч в неделю для 27,8 % врачей и > 61 ч в 13,7 %. Стресс, связанный с работой, ночной труд и длительный рабочий день вызывали эмоциональное и физическое истощение, и способствовали плохому состоянию здоровья.

Выводы. Связанные с работой факторы вызывают озабоченность по поводу профессионального здоровья врачей больниц; поэтому необходимы срочные профилактические меры для борьбы со стрессом, сокращением рабочего времени и ночных смен.

Ключевые слова: стресс, связанный с работой, сверхурочное время, сменный труд

ORCID ID of co-author and their contributions to the preparation and writing the article:

Vangelova K. K. (ORCID ID 0000-0003-4702-3130) – defining the purpose and design of the study, analyzing the results received, formulation of the conclusions, design and writing of the article;

Dimitrova I. D. (ORCID ID 0000-0001-5394-4783) – conducting the study, review of literature on the paper subject, statistical processing, analysis of the data received;

Cekova I. V. (ORCID ID 0000-0002-9777-2028) – conducting the study, review of literature on the paper subject, statistical processing, analysis of the data received;

Stoyanova R. I. (ORCID ID 0000-0003-4142-761X) – conducting the study, review of literature on the paper subject, statistical processing, analysis of the data received.

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Контактна особа: Вангелова К., Національний центр громадського здоров'я та аналізу, Софія 1413, Болгарія.
Тел.: + 35 928056224. Електронна пошта: k.vangelova@ncpha.government.bg