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Research Article

Analysis of Some Aspects of The Morbidity of Health Workers with Temporary Disability

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ABSTRACT
The study of morbidity of medical workers with temporary disability, carried out in medical diagnostic centers, has shown that the integrated evaluation of indices allows to estimate the morbidity rate of medical workers with temporary disability of the studied centers of the Republic of Karakalpakstan as "high", in Bukhara region - "average", and in Tashkent and Kashkadarya regions - "low" and "below average".

Keywords: medical diagnostic centers, medical workers, morbidity with temporary disability.

INTRODUCTION

In recent decades, the protection of public health has remained the main task of the multistage reforms in Uzbekistan's health care system.

Currently, more than 89,700 doctors and 356,700 nursing staff work in the country, accounting for about 2.3 per cent of the total working population. Each medical establishment carries a whole range of factors that determine occupational risks. Medical personnel in the course of their work are exposed to a number of harmful factors, including, along with traditionally recognized - biological, chemical and physical - ergonomic, psychological and environmental factors.

Influence of psychogenic factor on development of professional disease, influence of professional stress on mental health of medical workers became widely discussed topic in foreign and domestic literature. One of the important aspects of the mentioned condition is the signs of emotional burnout syndrome, which represents the greatest risk for doctors' health. The consequences of the syndrome are wide and serious, they affect mental and physical health, quality of life and efficiency of medical professionals [5]. Over the past 3 decades, several studies have found that the prevalence of stress, depression and substance abuse, particularly alcohol, among physicians is significantly higher than in the general population [1]. The prevalence of stress among physicians significantly exceeds 18%, a figure established in the general population [8]. In psychiatrists, in 28% of cases, the severity of stress exceeded a threshold level at any given time and study [9].

Engineering infrastructure, covering water supply, sewerage, electricity, gas, heat, cooling, as well as telephone and transport links, is key to the livelihoods of human society. In the context of a medical facilities, in particular, Medical Diagnostic Centers (MDC), engineering infrastructure is a key link in the creation of favorable working conditions for the facility's employees and a high-quality technological and hygienic platform for providing consultative and diagnostic assistance [2,3].

Given the above, it should be noted that the specifics of disease risk prevention among medical personnel is the observance of health-saving behavior by the employees themselves. This will allow to preserve compensatory, protective, regulatory mechanisms of the body and to ensure efficiency in all conditions of its professional activity, which are mainly determined by the provision of sanitary and hygienic conditions. That is why the issues of health risk prevention for medical workers of modern medical organization in interrelation with the quality of engineering infrastructure acquire special urgency [5,7].

The aim of the study is to analyze morbidity with temporary disability of medical workers of the Medical Diagnostic Centers for further development of a set of measures to manage occupational risk factors.

MATERIALS AND METHODS

The object of the study was 10 diagnostic centers located in Tashkent city, the Republic of Karakalpakstan, Bukhara and Kashkadarya regions. In order to identify the specific features of the formation of occupational risks among the medical staff of the MDC, an analysis was carried out of the morbidity rate among the staff of three MDC and seven consultation and diagnosis centers (CDC) over a three-year period (2016-2018), based on the results of a study of 778 temporary disability records.

In order to study the state of morbidity of medical workers with temporary disability, data was extracted from the lists of disability of employees for the years 2016-2018.

The objects of research were divided into groups: the main group - medical workers of MDC and CDC, located on the territory of Bukhara and Kashkadarya regions and the Republic of Karakalpakstan, the control group - workers of Centers of Tashkent city, having more favorable sanitary-technical conditions [2].

The classification of diseases by nosological groups is given according to the "International Statistical Classification of Diseases and Related Health Problems" 10th revision. For comparison of the received data the review of publications of domestic and foreign authors in the scientific medical literature devoted to the study of morbidity of medical workers is carried out.

RESULTS AND DISCUSSION

The study of the morbidity of medical workers with temporary disability was carried out in the MDC and CDC of Tashkent city and regions of the republic - Bukhara and Kashkadarya regions and the Republic of Karakalpakstan. Taking into account the level of provision of sanitary-hygienic conditions and engineering infrastructure in the surveyed centers, all the surveyed workers were divided into 2 groups: the main group - workers of MDC and CDC of regions of the republic and the control group represented by workers of the capital MDC and CDC [2].

The results of the study showed that the average absolute number of cases of temporary disability among medical workers for the period 2016-2018 was 87 cases in Tashkent city, 74.4 cases in Bukhara region, 91.0 cases in Kashkadarya region and 115.7 cases in Republic of Karakalpakstan. The absolute number of days of morbidity with temporary disability in the control group averaged 1,314 days in Tashkent city over three years. In the main group, on average, for 3 years, the absolute number of days with temporary disabilitywas as follows: in Bukhara region - 994 days, in Kashkadarya region - 1296 days, in the Republic of Karakalpakstan - 1364 days.

Comparative analysis of data on the number of cases morbidity with temporary disability per 100 workers was carried out among medical workers of the main and control groups of the studied centers (Table 1).

Table 1: Number of morbidity cases per 100 employees of medical diagnosis centers in the studied regions in the period 2016-2018.

Class of diseases	Tashkent city		Bukhara region			Kashkadarya region			Republic of Karakalpakstan		
	M	±m	M	±m	P	M	±m	P	M	±m	P
III	0,6	0,7	0,3	0,5	-	0,2	0,3	-	27,4	4,4	***
VI	9	2,9	2,2	1,3	**	8,9	2,1	-	5,8	2,3	**
IX	6,9	2,5	5,2	2	-	2,9	1,3	-	5,5	2,3	-
X	19,7	4	8,5	2,6	**	3,5	1,4	***	15,2	3,6	***
XI	0,6	0,8	12,5	3	***	13	2,5	***	4,8	2,1	***
XIV	4,7	2,1	20,9	3,7	***	7,9	2	-	27,8	4,4	***
XV	3,9	1,9	3,1	1,6	-	2,4	1,2	-	14,8	3,5	***
Others	5,2		9,2			11,4			10,2		
Total	50,6	5	62,0	4,4	**	50,2	3,8	-	111,9	0,32	***

Note: * - P<0,05, ** - P<0,01, *** - P<0,001

Thus, in Tashkent, the average level of cases of temporary disability was 50.6±5. Highly reliable differences between the main and control groups in the number of cases are observed according to the data of Bukhara region (62.0±4.4 vs. 50.6±5, P<0.01) and the Republic of Karakalpakstan (111.9±0.32 vs. 50.2±5, P<0.001). In Kashkadarya region, the average level of cases without reliable differences (50.2±3.8 vs. 50.2±5) is observed.

To estimate the level of morbidity with temporary disability, the scale of evaluation of morbidity indicators with temporary disabilityto E.L. Notkin is used [6].

Table 2: Scale of evaluation of morbidity indicators with temporary disability by E.L. Notkin.

Grade assessment	per 100 employees		% employees with disability
	cases	Days	
Very high****	150 and above	1500 and above	80 and above
High***	120-149	1200-1499	70-79
Above average***	100-119	1000-1199	60 -69
Medium**	80-99	800-999	50 -59
Below average*	60-79	600 -799	40 -49
Low*	50-59	500-599	35-39
Verylow*	Lessthan50	Lessthan500	Lessthan35

According to E.L. Notkin's scale of evaluation of morbidity with temporary disability, it can be noted that the rate of morbidity with temporary disability by the number of cases of medical workers in the Centers of Tashkent and Kashkadarya region is defined as "low" (Table 2). At the same time, the centres of Bukhara province surveyed show the rate of morbidity among workers as "below average" and the centres of the Republic of Karakalpakstan as "above average".

Along with the number of cases of morbidity with temporary disability, the number of days of disability per 100 employees is of high importance for the analysis of employee morbidity, which depends on many factors that affect the duration of disability and is characterized by the severity of the disease (Norenko 2012).

Table 3 presents the results of comparative analysis of the number of days of disability for medical workers of the MDC and CDC of the surveyed regions, calculated for 100 employees. The data in the table indicate that there is a reliably high difference between the control group and the data for the Republic of Karakalpakstan (1229.4±12.0 vs. 764.1±12.2, P<0.001) and Bukhara region (828.3±21.6 vs. 764.1±12.2, P<0.001). The number of days of disability in the control group and the Kashkadarya region have a small but reliable difference (716.2±8.3 vs. 764.1±12.2, P<0.01). (Table 3).

Table 3: Number of days of employees ' disability of medical diagnostic centers of the studied regions of the republic (per 100 employees)

Class of diseases	Tashkent city		Bukhara region			Kashkadarya region			Republic of Karakalpakstan		
	M	±m	M	±m	P	M	±m	P	M	±m	P
III	4,3	0,6	4,4	0,7		2,0	0,3	**	212,9	6,8	***
VI	93,2	2,1	26,1	0,5	***	112,2	3,1	***	69,1	2,0	***
IX	96,9	2,2	76,7	3,5	**	46,4	4,7	***	69,7	7,0	***
X	333,7	2,0	96,1	2,6	***	38,5	2,1	***	155,9	1,5	***
XI	10,9	0,7	152,2	4,8	**	214,4	6,2	***	52,9	0,6	***
XIV	70,7	0,8	316,7	9,5	***	138,3	2,5	***	357,1	21,9	***
XV	65,5	1,4	55,6	2,1	***	33,5	1,8	***	174,2	2,8	***
Others	89,0		100,6			130,9			137,8		
Total	764,1	12,2	828,3	21,6	**	716,2	8,3	**	1229,4	12,0	***

Note: * - P<0,05, ** - P<0,01, *** - P<0,001

The level of morbidity with temporary disability of health workers by days of disability calculated for 100 employees was analyzed in accordance with the scale of E.L. Notkin. The results of the analysis allow to note that in Tashkent city and Kashkadarya region the level of the disease incidence is estimated as "below average", while in Bukhara region - "average" and in the Republic of Karakalpakstan - "high".

Summing up the results of the analysis of the above mentioned indicators of the morbidity of medical workers, Table 4 has been compiled, which allows to determine the morbidity rate of the Centers' employees by regions from a comparative point of view.

Table 4: Scale of evaluation of morbidity level with temporary disability by E.L. Notkin. Data of morbidity of medical workers of the CMD and CDC of the studied regions 2016-2018 years

Studied regions	For 100 employees		Morbidity level by Notkin
	cases	days	
Tashkent city	50,6±5*	764,1±12,2*	*low
Bukhara region	62,0±4,4*	828,3±21,6**	** average
Kashkadarya region	50,2±3,8*	716,2±8,3*	*low
Republik Karakalpakstan	111,9±0,32***	1229,4±12,0***	***high

Evaluation of the morbidity level by E.L. Notkin: *- low, low average, ** average, ***- above average, high

CONCLUSION

Integrated assessment of indicators allows estimating the morbidity level among medical workers of the studied Centers of the Republic of Karakalpakstan as "high", in Bukhara region - "average", and Tashkent city and Kashkadarya region as "low" and "below average".

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