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Health State Of Teaching Staff Of Different Universities In The Republic Of Uzbekistan

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ABSTRACT

A comparative assessment has been carried out on the morbidity with temporary disability (TD) of the teaching staff (TS) of universities of various profiles, currently operating in the Republic of Uzbekistan (2014-2018). Both general characteristics and some differences were revealed in the health indicators of teachers in the studied universities.In all the universities studied, a low level of morbidity with TD was revealed; in the structure of morbidity, up to 84% are severe forms of pathology associated with the peculiarities of the work of the teaching staff (diseases of the circulatory system, acute disorders of cerebral blood supply).In assessing inactivity per 100 employees in some universities, a paradoxical situation was revealed: with a very low incidence rate, the amount of inactivity per 100 employees per year increased, which is associated with the prevalence of severe types of pathology. In all universities, there was an increase in the incidence of TD with a work experience of more than 30 years. The frequency of diseases with TD in men increases with age, while in women there is no clear dependence of the incidence of diseases on age.

Keywords: teachingstaffhealth, teaching staff morbidity,temporary disability, circulatory system, inactivity, cerebral blood supply

INTRODUCTION

The possibility of maximum transfer of knowledge and experience, contributing to the upbringing and training of future specialists, depends to a great extent on the results of the activity and the state of health of teachers of various educational institutions[1,2, 5].

When studying the health problems of university teachers, it is mandatory to study the conditions of their professional activity, which adversely affect the state of health, in particular the morbidity of this professional group [3,4]. This makes it possible to identify the main factors that determine the health of teachers, and to develop measures to optimize the protection of the health of this population group in certain conditions [2,3, 5].

In this regard, the role of in-depth socio-hygienic research on the health of teachers working in specific educational institutions is growing. The results of such studies should be used to develop preventive measures for this category of workers.

Research purpose. This study was conducted with the aim of comparatively assessing the incidence of temporary disability (TD) of the teaching staff (TS) of universities of various profiles, currently operating in the Republic of Uzbekistan.

MATERIALS AND METHODS

The studies were carried out in the three largest universities of the republic of various profiles, located in Tashkent - Tashkent State Technical University named after Islam Karimov (TSTU), at the Tashkent Medical Academy (TMA) and at the National University of the Republic of Uzbekistan named after M. Ulugbek (hereinafter - NUUz).

On the basis of a questionnaire survey, an assessment of the social conditions and lifestyle of the teaching staff was carried out; a hygienic assessment of the working conditions of the teaching staff was conducted based on physical, chemical and visual methods.

Based on materials from the copying of certificates of incapacity for work (form 16), the incidence of TD was studied.With the use of statistical methods, a comparative analysis of the incidence of TS with TD of the three universities for the period 2014-2018 was carried out; in assessing the morbidity structure, ICD-10 was used.

In accordance with our recommendations, on the basis of the student polyclinic of TSTU, a medical examination of teachers with more than 30 years of work experience was carried out. The medical examination was carried out in July 2018 by a commission consisting of: therapist, neuropathologist, gynecologist (women), ENT doctor, ophthalmologist, dermatovenerologist. From the number of laboratory tests, fluorography, complete blood count, helminthological examination were carried out.

RESULTS

Whilst assessing working conditions and questioning the teaching staff, we encountered some atypical situations that matter in incapacity of teaching staff due to their diseases.

First, during the hygienic assessment of the working conditions of the teaching staff according to the degree of hazard and danger, we have not identified mechanical, physical or chemical factors in any university, the magnitude of which would pose a danger to the health of workers.At the same time, the general assessment of working conditions, taking into account the most significant factors (the tension of the labor process), made it possible to classify the work of university teachers under three categories of harmfulness.[1, 6].

Secondly, during the survey-questioning of the teaching staff, it was revealed that from 72 to 89% of teachers in case of an acute illness do not take sick leave, preferring to endure the illness “on their feet” unless their physical condition or family circumstances prevent [1, 6].In connection with these

circumstances, in our opinion, the incidence of the teaching staff of universities with temporary disability partly characterizes the general state of their health, but it still allows us to assess the dynamics and nature of this morbidity, the amount of incapacity, the significance of age and length of service for these indicators.

The incidence of TS with TD was studied in universities that have significant differences in the number, profile and staff composition. In each of these universities the morbidity with TD was studied in two groups of workers: group 1 - main - teaching staff; Group 2 - comparison group - administrative and technical personnel.

Research results at TSTU. During the research period, the number of teaching staff (main group) in TSTU ranged from 775 to 938 people, and the number of administrative and technical workers (comparison group) - from 834 to 1015 people.

The incidence rate in these both studied groups according to the classification of E.L. Notkin (1979) was low: in the main group, it ranged from 6.9 to 26.4 per 100 workers (on average - 13.0 ± 4.3), and in the comparison group - from 9.7 to 22.4 (on average - 16.0 ± 3.1) per 100 workers. Every year in the comparison group, the incidence rate was slightly higher than in the main group, but the differences in the mean values were insignificant (P> 0.05) due to the large scatter of data over the years.

In TSTU, unlike other universities of the republic, there are more men than women in the teaching staff. When carrying out statistical processing of the data, we paid attention to the more frequent diseases of women. Therefore, the incidence rates with TD were calculated, taking into account gender.

The dynamics of the incidence rate with TD in male and female teachers is shown in Table 1.

Table 1 Dynamics of the incidence rate with TDI in the teaching staff of TSTU

Year	Morbidity rate per 100 workers			
	Men		Women	
	abc.	per 100 workers	abc.	per 100 workers
2014	44	7,7	38	11,2
2015	41	6,9	60	17,3
2016	68	13,9	105	36,6
2017	74	14,4	67	22,1
2018	47	8,5	86	26,4
On average in year, M ±m	54,8±6,3	10,1±1,4	71,2±7,2	22,2±4,9

The presented data indicate that the incidence rate of women per 100 workers of the same sex is indeed 1.4-2.6 times higher than that of men.

The calculation of the average annual incidence rate of women without taking into account maternity leave for pregnancy, childbirth and the postpartum period showed that the incidence rate of women in these conditions is still higher than that of men - 14.3 ± 1.1 per 100 workers (for men - 10.1 ± 1.3, p <0.05).

When analyzing the structure of morbidity, the average over five years indicators of the frequency of certain forms of diseases were calculated according to ICD-10. The results of the study indicate that the structure of diseases of the teaching staff is atypical for workers - in most studies among workers, diseases of the respiratory, digestive, and circulatory systems are most often recorded (in women, conditions associated with pregnancy and childbirth are usually in second place). In our studies, in the comparison group, the first 6 places in order of importance (excluding pregnancy, childbirth and the postpartum period) are also occupied by respiratory diseases (25.1%), diseases of the circulatory system (8.7%), injuries (8.3%), diseases of the nervous system (6.4%), diseases of the digestive system (5.8%), diseases of the genitourinary system (5.2%). In the main group, in the first place - diseases of the circulatory system (26.7%), in second place - diseases of the respiratory system (20.5%), in the third - diseases of the musculoskeletal system and connective tissue (6.1%), fourth - diseases of the nervous system (5.2%), fifth - injuries (5.1%), sixth - diseases of the genitourinary system (3.8%).

It was also revealed that the structure of diseases in the main group in men and women has some differences (Table 2). Among men, diseases of the circulatory system are in first place, accounting for 41.3% of the total number of registered diseases, in second place are diseases of the respiratory system (19.6%), in third place are some infectious and parasitic diseases, diseases of the musculoskeletal system and connective tissue (7.4% each), fourth - diseases of the digestive system (5.9%), fifth - diseases of the nervous system and injuries (4.1% each), sixth - diseases of the genitourinary system (3.0%). In women, in the first place - diseases of the respiratory system (21.9%), in second place - diseases of the circulatory system (10.8%), in third - diseases of the nervous system (6.8%), in fourth - injuries (6, 0%), fifth - diseases of the musculoskeletal system and connective tissue (5.1%), sixth - diseases of the genitourinary system (4.4%). In total, these diseases account for 67.4% of all registered diseases.

Table 2 Comparativestructureofthemorbidityofmenandwomenofthemaingroup (on average for 2014-2018)

ICD-10 class	Disease class name	The structure of morbidity considering gender			
		Men		Women*	
		abc.	%	abc.	%
I	Some infectious and parasitic diseases	4	7,4	0,6	0,8
II	Neoplasms	1	1,8	0,6	0,8
III	Diseases of the blood, hematopoietic organs and certain disorders involving the immune mechanism	0,2	0,4	0,4	0,5
IV	Endocrine system diseases, eating disorders and metabolic disorders	1,3	2,2	0,6	0,8
VI	Diseases of the nervous system	2,2	4,1	5,0	6,8
VII	Diseases of the eye and its adnexa	1	1,8	1,2	1,6
VIII	Diseases of the ear and mastoid	0		0,2	0,3

IX	Diseases of the circulatory system	22,4	41,3	8,0	10,8
X	Respiratory diseases	10,6	19,6	18,4	21,9
XI	Diseases of the digestive system	3,2	5,9	0,8	1,14
XII	Diseases of the skin and hypoderm	0,4	0,7	0,2	0,3
XIII	Diseases of the musculoskeletal system and connective tissue	4,0	7,4	3,8	5,1
XIV	Diseases of the genitourinary system	1,6	3,0	3,2	4,4
XIX	Injury, poisoning and some other consequences of exposure to external causes	2,2	4,1	4,4	6,0
	Others	0,2	0,4	8,0	10,8
Total		50,7	100	73,8	100

*Excluding pregnancy, childbirth and the postpartum period

It should be noted that, in contrast to men, in women a significant part of inactivity is associated with providing care for sick children or other relatives (10.8%).

The main part of the revealed diseases of teaching staff is quite complex and requires serious treatment. According to our data, it was these diseases that made up the group of patients subjected to inpatient treatment: during the study period, inpatient treatment was received by 23.0%, inpatient and subsequent outpatient treatment - 7.3% of sick men and, respectively, 12.4% and 3.6% of ill women.

When analyzing the nature of diseases of the circulatory system, it was revealed that in both men and women this class of diseases is represented by such forms of pathology as hypertension (up to 11.4% of all diseases), ischemic heart disease (up to 8.9% of diseases), acute cerebral blood supply disorders (up to 8.1% of diseases).

The duration of inactivity for each case of the disease depends both on the form of pathology and on the gender of persons who received sick-leave: in women, the degree of inactivity to a certain extent depends on the prenatal and postnatal periods. Therefore, when calculating the duration of one case of the disease for women, we made two calculation options - including and excluding the complications of prenatal and postnatal leave (Table 3). If we bear in mind theinactivity of women, considering maternity leave, then the duration of one case on sick leave each year was higher for women than for men. Whereas when calculating the inactivity of women only due to diseases, the duration of one case of the disease in women turned out to be significantly lower, but only in 2014, the differences with the same indicator in men were insignificant.

Table 3 Duration of one case of the disease, days, M ± m

Gender of the studied people	2014	2015	2016	2017	2018
Men	17,1±1,4	15,2±0,9	15,3±0,6	14,7±1,1	17,4±1,5
Women with PL*	43,1±3,4 P**<0,01	28,0±2,8 P<0,01	29,7±2,0 P<0,01	34,9±1,9 P<0,01	30,0±1,1 P<0,01
Women without PL*	10,9±0,1 P**>0,05	10,6±0,3 P<0,05	9,4±1,6 P<0,05	9,5±2,1 P<0,01	6,8±1,1 P<0,01

*PL - prenatal and postnatal maternity leave

** Pcomparing to men

When assessing inactivity per 100 workers, we encountered a paradoxical situation: with a very low incidence of TD, the value of labor losses per 100 workers per year turned out to be increased (Table 4).

The amount of labor loss per 100 employees per year according to the TDI scale by E.L. Notkin in men of TSTU in 2014-2015 can be characterized as below-average, in 2016-2017 as above-average, in 2018 - as average.

In women, this indicator, taking into account complications during maternity leave, was very high in all years of the study (up to 3119 days in 2016), and an increase in this indicator was noted, especially noticeable in 2016 (Table 4).

Table 4 Number of days of incapacity for work per 100 employees per year, days

Gender of the studied people	2014	2015	2016	2017	2018
Men	752,4	625,2	1040,4	1087,8	817,8
Women with PL*	1637,8	1680,0	3118,5	2338,3	2580,0
Women without PL*	1607	1648,2	3052,7	2300,3	2546

* PL - prenatal and postnatal maternity leave

Whilst studying the incidence of TD, we also assessed the significance of the age of workers for the frequency of diseases. It turned out that in men and women, both in the main group and in the comparison group, the significance of age manifests itself in different ways. In men, with increasing age, the incidence of diseases unambiguously increases, while in women, the trend is mainly opposite (Fig. 1).

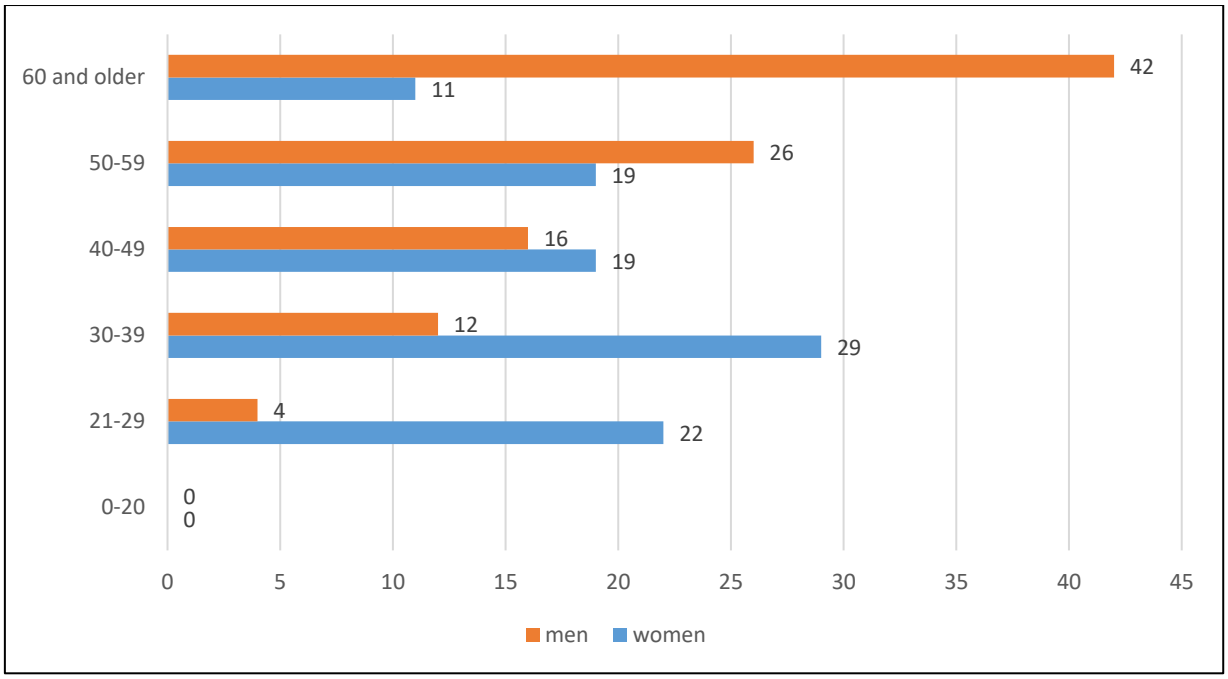

Fig.1. Average incidence of diseases with TD in men and women of the main group, depending on age, the percentage of the total number of registered diseases (2014-2018)

When assessing the incidence of TD with work experience at a university, we divided all studied groups into 4 seniority groups: up to 10 years, 11-20 years, 21-30 years, 31 and more years. In men of the main group, most often the sick were persons with work experience of 31 years or more - 58.8% of all registered patients; in second place are people with 21-30 years of experience (17.5%), in fourth - with 11-20 years of experience (14.2%), in fifth - teachers with up to 10 years of experience (9.1%). In the comparison group, the situation turned out to be similar - most often, men with work experience of more than 30 years (51.5%) were ill, less often (4.5%) - with work experience of up to 20 years.

In women, both in the main group and in the comparison group, people with little work experience most often suffered from illnesses: with an experience of up to 10 years in the main group, the indicator was 32.9%, in the comparison group - 48.2% of the total number of cases. Women with long work experience were the least likely to get sick - only 10.4% (comparison group) and 19.7% (main group) of sick women had more than 30 years of work experience.

A complete characterization of the state of health can be provided by a medical examination of workers. However, such medical examination of the teaching staff of universities in the republic is very problematic since medical care for teachers is carried out at their place of residence, and the organization of special medical examinations is a very costly event, and funds for it are not provided from the budget of universities. But, taking into account our proposals, in 2018 at TSTU an attempt was made to conduct a medical examination of at least some of the teachers on the basis of the student's Central Multidisciplinary Polyclinic in accordance with the Agreement of the Polyclinic and the Administration of TSTU. The list for the medical examination included 158 teachers (heads of departments - 11 people, professors - 39 people, associate professors - 69 people and senior teachers - 39 people) with a total work experience of 30 years or more. As said, periodic medical examinations of the teaching staff at the university are not mandatory, therefore, only 86 people passed the medical examination (54.4% of the payroll and 10% of the total number of university teachers at the time of the study).

The medical examination was carried out in July 2018 by a commission consisting of: therapist, neuropathologist, gynecologist (women), ENT doctor, ophthalmologist, dermatovenerologist. From the number of laboratory tests, fluorography, general blood count, helminthological examination were carried out.

Of the total number of those surveyed, only 18 teachers (20.9%) turned out to be practically healthy. One or another disease was detected in 68 people (79.1%), and some teachers had two or even three types of pathology. The most common type of detected pathology was myopia of varying degrees (33.3% of all diagnosed diseases). In second place in frequency - diseases of the respiratory system (18.7%), in third place - diseases of the circulatory system (16.0%), in fourth - diseases of the musculoskeletal system and connective tissue (10.7%), then - diseases of the endocrine system, nutritional disorders and metabolic disorders (5.3%), diseases of the blood and blood-forming organs, diseases of the genitourinary system, diseases of the ear and mastoid (4% each), diseases of the digestive system (2.7%), diseases of the nervous systems (2.0%).

The data obtained complement the results of our previous studies to assess the health indicators of teaching staff. So, according to the survey, 68% of the respondents consider themselves healthy [10], while according to the results of the medical examination, only 20.9% of the teaching staff are practically healthy. This is largely due to the fact that the majority of teachers do not consider myopia as a pathology, which forms the morbidity of teaching staff by 33.3%.

Morbidity ofTSwith TD in TMA. During the research period, the number of teaching staff in TMA ranged from 630 (2014) to 688 (2018) people; the number of female teachers was significantly higher (60%)

than men (40%). The number of administrative and technical workers (comparison group) ranged from 430 to 450 people.

As in TSTU, the incidence rate of TS during the entire study period was low - from 8.2 to 15.4 per 100 workers (on average, 12.5 ± 1.4 per 100 workers per year). At the same time, the incidence rate in women was 1.4-2.1 times higher annually than in men (Table 5 and Fig. 2).

Table 5 Dynamics of the incidence rate with TDof TS in TMA

Year	Morbidity rate per 100 workers			
	Men		Women	
	Abc.	Per 100 workers	Abc.	Per 100 workers
2014	29	11,5	58	15,3
2015	13	4,9	41	10,3
2016	23	8,8	45	11,4
2017	29	10,6	76	18,6
2018	31	12,4	71	16,9
On average in year, M ±m	25,0±3,5	9,4±1,4	58,0±6,7	14,6±1,6

In the comparison group, the incidence with TD was also low and ranged from 10.5 to 18.7 (on average, 14.8 ± 1.6) per 100 workers. Thus, annually in the comparison group, the incidence rate was slightly higher than in the main group, although the differences in the average annual indicators were insignificant (P> 0.05) due to the large scatter of data over the years.

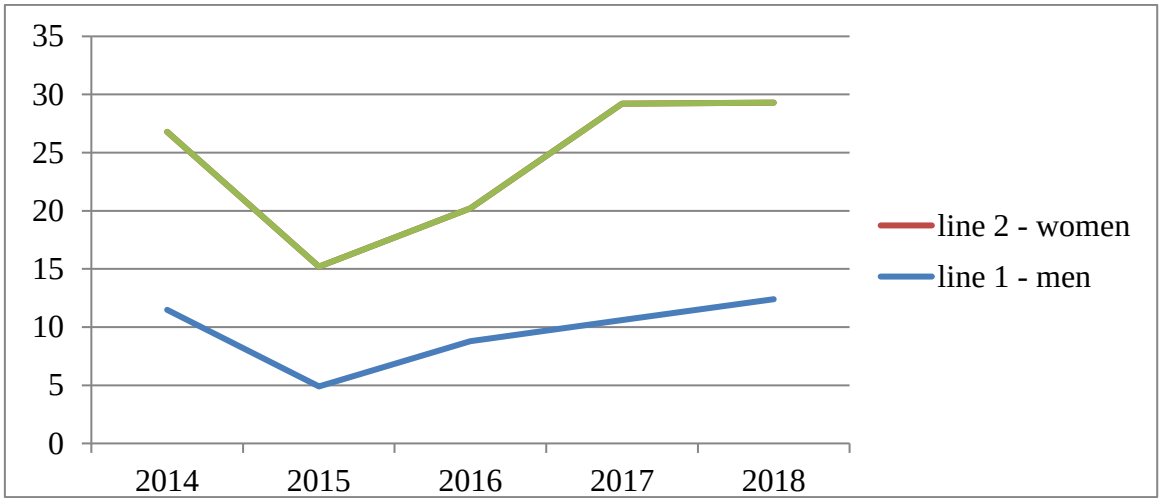

Fig. 2. Dynamics of the incidence rate with TD in male and female teachers per 100 employees of the appropriate gender (2014-2018)

The structure of the incidence of TS of TMA calculated, as in TSTU, on average for five years, is presented in Table 6.

Table 6 Comparative structure of diseases with TD in the main group and in the comparison group TMA (on average over 5 years)

ICD-10 class	Name of diseases	Crude structure, (men+women), %	
		Main group	Comparison group

I	Infectious diseases	1,0	7,9
II	Neoplasms	1,9	0
III	Diseases of the blood and blood-forming organs	0,7	0
IV	Diseases of the endocrine system, eating and metabolic disorders	2,5	2,3
VI	Diseases of the nervous system	6.1	3,4
VII	Diseases of the eye and its appendages	1,6	1,1
IX	Diseases of the circulatory system	18,9	26,1
X	Respiratory diseases	35,3	27,3
XI	Diseases of the gastrointestinal tract	3.0	2,3
XIII	Diseases of bones, joints, muscles and connective tissue	9,3	6,8
XIV	Diseases of the urinary and reproductive system	2,2	6,8
XV	Complications of pregnancy, childbirth and the postpartum period	5,2	3,4
XIX	Traumas	5,6	11,4
	Other	5,6	0
		100	100

The above data indicate that the structure of the diseases of TS in TMA somewhat differs from similar indicators in TSTU: respiratory diseases are most often recorded among workers (35.3%), in second place in frequency are diseases of the circulatory system (18.9%), on the third - diseases of bones and joints (9.3%), on the fourth - diseases of the nervous system (6.1%), on the fifth - traumas (5.6%), on the sixth - diseases of the gastrointestinal tract (3.0 %). These groups of diseases account for 78% of all reported cases.

In the comparison group, the first 6 places in order of importance are taken by: diseases of the respiratory system (27.2%), diseases of the circulatory system (26.1%), traumas (11.4%), infectious diseases (7.9%), bone diseases and joints and diseases of the urinary-reproductive system (6.8% each). The structure of diseases in the comparison group differs from that in the main group.

As in TSTU, it was also revealed that the structure of diseases in the main group in men and women has some differences (Table 7).Among men, diseases of the circulatory system are in first place, accounting for 29.6% of the total number of registered diseases, in second place are diseases of the respiratory system (24.9%), in third - injuries (19.2%), in fourth – diseases of gastrointestinal tract and endocrine system diseases (6.6% each), in the fifth - diseases of the nervous system (5.7%), in the sixth - diseases of bones and joints (5.0%).Among women, in the first place - diseases of the respiratory system (39.1%), in second place - diseases of the circulatory system (14.4%), in third place - labor losses due to caring for relatives (9.7%), in fourth - diseases of the nervous system (6.5%), fifth - diseases of the gastrointestinal tract (6.3%), sixth - diseases of bones and joints (6.0%). These forms of diseases account for most of the registered diseases in both men and women — 84 and 82%, respectively.

Table7 Comparative structure of the morbidity of men and women in the main group (on average for 2014-2018)

ICD-10 class	Name of diseases	Frequency of registered pathology, %,	
		Men	Women

I	Infectious diseases	0,7 ± 0,6	1,2 ± 0, 4
II	Neoplasms	1,7 ± 1,6	1,9 ± 0,5
III	Diseases of the blood and blood-forming organs	0	1,1 ± 0, 3
IV	Diseases of the endocrine system, eating and metabolic disorders	6,6 ± 2,9	0,9 ± 0,5
VI	Diseases of the nervous system	5,7 ± 1,8	6,5 ± 1,5
VII	Diseases of the eye and its appendages	2,0 ± 1,3	1,4 ± 0,5
IX	Diseases of the circulatory system	29, 6± 4, 8	14,4 ± 3,6
X	Respiratory diseases	24,9 5, 4	39,1 ± 7,9
XI	Diseases of the gastrointestinal tract	6,6 ± 1,1	6,3 ± 1,8
XII	Diseases of the skin and subcutaneous tissue	3,1 ± 2, 9	0,5 ± 0,4
XIII	Diseases of bones, joints, muscles and connective tissue	5,0 3, 9	6,0 ± 2,0
XIV	Diseases of the urinary and reproductive system	1,5 ± 0,8	2, ,4 ± 1,3
XV	Conditions related to pregnancy and childbirth	-	5,2 ± 1, 9
XIX	Traumas	12,2 ± 1,8	3,3 ± 1,0
	Other	0	9,7 ± 3,4

In general, it is quite obvious that the structure of diseases with TD in the studied main group is associated with the peculiarities of the work of the teaching staff. Thus, the most important group of registered diseases - diseases of the circulatory system - in both men and women is represented by such forms of pathology as hypertension (up to 11.4% of all diseases), coronary heart disease (up to 8.9% of diseases), acute disorders of cerebral blood supply (up to 8.1% of diseases). The high neuropsychic stress characteristics of the work of the teaching staff are one of the most important risk factors for these diseases.This group of diseases is quite complex and requires serious treatment. According to our data, these diseases constituted the group of patients who underwent inpatient treatment: during the study period, 23.0% received inpatient treatment at TSTU, 30.4% at TMA, 7.3% and 8.8% of sick men received inpatient and subsequent outpatient treatment, and, respectively, 12.4 - 22.1% and 3.6 - 4.1% of sick women.

The duration of incapacity for each case of the disease turned out to be different in different universities and depended on the form of pathology, and the gender of persons who received sick leave. As in TSTU, for women, the amount of incapacity in TMA were estimated according to two calculation options - with and without the complications of prenatal and postnatal leave (Tables 8 and 9).Unlike TSTU, the duration of one case of the disease in women in 2014 and 2015 was significantly less than in men; This is because during these years, cases of diseases were registered among men that required long-term inpatient and then outpatient treatment (pulmonary tuberculosis, stroke). In other years, the duration of one case for women did not differ significantly from men, both with and without maternity.

Table8 Duration of one case of TS morbidity in TMA, days, M ± m

The gender of the studied people	2014	2015	2016	2017	2018
Men	20,9 ±11,1	22,9± 8,2	11,6 ±3,4	4,9 ± 0,7	5,8±0,9
Women with PL*	5,6 ± 0,5	5,2 ± 0.7	4,8 ±0,5	4,8 ±0,7	6,4 ± 0,8

	P**<0,01	P<0,01	P>0,05	P>0,05	P>0,05
Women -1 casePL	5,6 ± 0,5 P**<0,01	5,2 ±0,7 P<0,01	4,8 ±0,5 P>0,05	4,0 ±0,7 P>0,05	6,1 ±0,7 P>0,05

*PL - predelivery and postdelivery leave, P**- compared to men

In assessing incapacity per 100 workers in TMA, it was revealed that the level of incapacity can be characterized as low and very low (Table 9)

Table9 Number of days of incapacity for work per 100 employees at TMA per year, days

The gender of the studied people	2014	2015	2016	2017	2018
Men	606,1	297,7	266,8	142,1	179,8
Women with PL*	325,1	213,2	216,0	172,8	448,0
Women without PL*	270,4	125,8	197,8	123,8	385,0

*PL - predelivery and postdelivery leave

In assessing the significance of the age of workers for the incidence of diseases, it was found that in men and women, both in the main group and in the comparison group, the significance of age manifests itself in different ways. As in TSTU, among male TMA teachers, the incidence of diseases increases with age, while such a tendency was not revealed in women (Fig. 3).

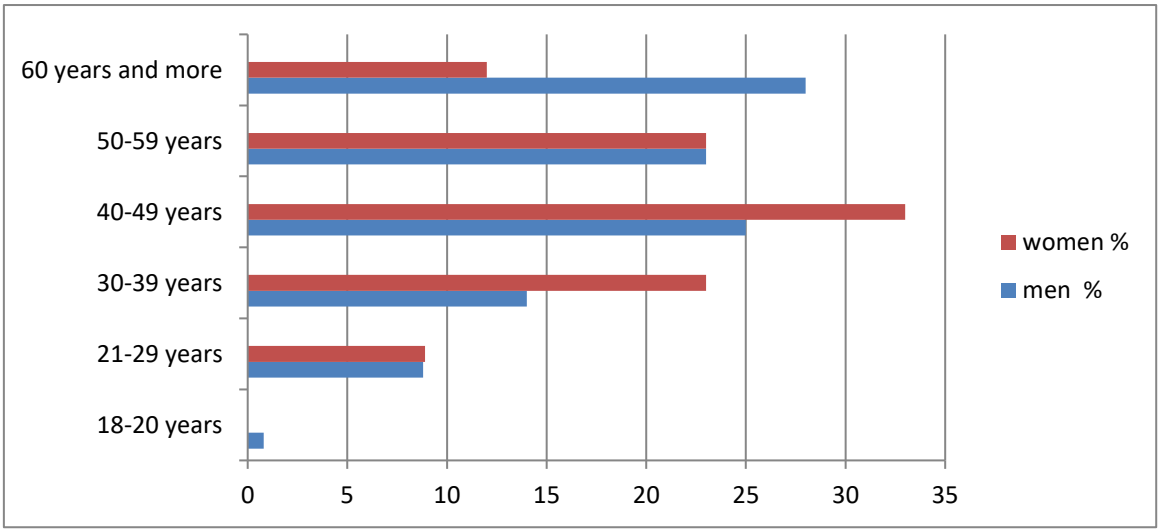

Fig. 3. Average incidence of diseases with TD in men and women of the main TMA group, depending on age,% of the total number of registered diseases (2014-2018)

In assessing the significance of work experience in TMA for morbidity with TD, all those studied were also divided into 4 seniority groups: up to 10 years, 11-20 years, 21-30 years, 31 and more years. Among men of the main group, most often are the patients with work experience of 31 years or more - 45.6% of all registered patients; in second place are persons with 11-20 years of experience (23.2%), in third - with 21-30 years of work experience, in fourth - with up to 10 years of experience (15.2%).In women of the main group, the incidence of diseases practically did not depend on the length of service: with work experience of up to 10 years, the indicator was 22.1%, 11-20 years - 26.8%, 21-30 years - 27.2%, 31 and more years - 23.8% of all registered patients. In the comparison group, people with more than 11-20

years of work experience most often suffered (up to 48.5%), least often (4.5%) - with more than 30 years of work experience.

Morbidity with TD of TS in NUUz

During the research period, the teaching staff of NUUz consisted of 810-930 people, and the number of administrative and technical workers (comparison group) - from 480 to 520 people.As in the two universities described above, the incidence rate in these two study groups was also low: in the comparison group, the incidence with TD was at the level of 24.4 ± 1.1 per 100 workers, and in the main group, 13.5 ± 1.5 per 100 workers, but the incidence in the main group was significantly higher than in the comparison group ($p < 0.05$). At the same time, the incidence of women, as in the two previous universities, was 2–4 times higher than that of men - 15.1–25.8 and 5.1–12.6 per 100 workers, respectively.

The structure of morbidity with TD ofTS in NUUz is presented in Table 10.

Table10 Comparative structure of diseases with TD in the main group and in the comparison group of NUUz, %

ICD-10 class	Name of diseases	Crude structure, (men+women), %	
		Main group	Comparison group
I	Infectious diseases	0,9	0
II	Neoplasms	1,1	0
III	Diseases of the blood and blood-forming organs	0,3	0,5
IV	Diseases of the endocrine system, eating and metabolic disorders	1,4	3,4
VI	Diseases of the nervous system	4,7	2,6
VII	Diseases of the eye and its appendages	0,6	0
IX	Diseases of the circulatory system	18,5	12,0
X	Respiratory diseases	26,9	19,8
XI	Diseases of the gastrointestinal tract	5,9	3,4
XII	Diseases of the skin and subcutaneous tissue	2,9	0,9
XIII	Diseases of bones, joints, muscles and connective tissue	5,2	6,0
XIV	Diseases of the urinary and reproductive system	1,4	6,9
XV	Conditions related to pregnancy and childbirth	16,9	32,7
XIX	Traumas	5,3	5,2
	Other	8,4	6,0
Total		100	100

In the comparison group, the first 5 places in order of importance (excluding pregnancy, childbirth and the postpartum period) are occupied by: diseases of the respiratory system (19.8%), diseases of the

circulatory system (12.9%), diseases of the genitourinary system (6.9%), diseases of bones and joints (6.0%), injuries (5.2%).

In the main group, in the first place are also diseases of the respiratory system (26.9%), in the second - diseases of the circulatory system (18.5%), in the third - diseases of the gastrointestinal tract (5.9%), in fourth - trauma (5.3%), fifth - diseases of bones, joints, muscles and connective tissue (5.2%). Among male teachers, disability was most often associated with diseases of the circulatory system (36.0%), diseases of the respiratory system (21.5%) and injuries (14.0%), in women - with diseases of the respiratory system (28%), pregnancy and childbirth (23.9%), diseases of the circulatory system (10.3%). As in other universities, in women, disability is largely due to the need to care for family members (10.9% of all sick leaves).

In our opinion, the predominance of nonspecific respiratory diseases in the structure of the diseases of TS in NUUz, in contrast to other universities, is a factor responsible for a significantly higher rate of outpatient treatment, which was received by up to 85.4% of all sick women and up to 66.7% of sick men. In the comparison group, this figure was 82.8%.

The nature of the prevailing forms of pathology was reflected in the duration of one case of the disease - in men this indicator was 5.3 - 8.5 days, in women 3.9 - 7.1 days, and excluding maternity leave - 3.3-7.6 days.

The amount of incapacity per 100 employees per year according to the scale of indicators of TD according to E.L. Notkin was attributed to low indicators. With a very low incidence of TS with TD, the amount of incapacity per 100 employees per year was lower than in the comparison group and in other universities: in the comparison group, annual disability reached 558 days, and in the main group - in men - from 175 to 247 days, in women - from 324 to 532 days. At the same time, the incapacity of women by 15.4 -19.9% is associated with maternity leave.

As in the two previous universities, we investigated the significance of age and work experience for the incidence of TD. It turned out that in NUUz in men and women, both in the main group and in the comparison group, the significance of age manifests itself in different ways. In men, with increasing age, the incidence of diseases unambiguously increases. Men aged 50-59 years old are most often sick, who account for up to 42.5% of cases. In women, the largest percentage of cases falls on the age of 30-39 - up to 44.6% of all diseases.

In men, a regular increase in the incidence rate per 100 workers was noted, with an increase in the length of service. For example, in 2014, 10% of cases fell on men with work experience of up to 10 years and 17.5% with 11-20 years of work experience. 21-30 years -22.5%, over 30 years - 50% of all cases; in 2018, the increase in the number of cases in each subsequent training group reached 12%. For women, the value of work experience was the same as in other universities - most often, women with work experience of up to 10 years were ill - up to 45.8%; This suggests that for women, it is not the length of service that matters more, but the age.

An objective assessment of the health indicators of the teaching staff of the studied universities allows us to draw the following

conclusions:

-when studying the morbidity of teachers with temporary disability (2014-2018) in all studied universities, a low incidence rate was revealed, which is not related to the actual state of affairs, but to the fact that teachers take sick leave only in case of serious illnesses, and in other cases they carry the disease “on their feet”, with self-medicating;

-in the structure of morbidity with temporary disability up to 82-84% are severe forms of pathology associated with the peculiarities of the work of the teaching staff. So, the most important group of registered diseases - diseases of the circulatory system - in both men and women - is represented by such forms of pathology as hypertension (up to 11.4% of all diseases), coronary heart disease (up to 8.9% of diseases), acute cerebral blood supply disorders (up to 8.1% of diseases). These diseases for which the high neuropsychic stress, characteristic of the work of the teaching staff, is one of the most important risk factors;

- These diseases constituted a group of patients who underwent inpatient treatment: during the study period, up to 23.0% received inpatient treatment at TSTU, up to 30.4% at TMA, up to 47.5% at NUUz,

inpatient and subsequent outpatient treatment – 7.3%, 8.8% and up to 24% of sick men and, respectively, 12.4, 22.1%, 8.0% of sick women.
- In assessing incapacity per 100 employees in some universities (TSTU), a paradoxical situation emerges: with a very low incidence rate, the amount of incapacity per 100 employees per year turned out to be increased (up to 3119 days per year in women), which is associated with the prevalence of severe types of pathology (in women - with pregnancy and childbirth), requiring long-term and often inpatient treatment.
-the frequency of diseases with TD in men increases with age, while in women there is no clear dependence of the incidence of diseases on age
-for the incidence rate with TD in all universities, the length of service is important: most often, diseases with TD were noted with a work experience of 30 or more years.

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