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ASSESSMENT OF STRESS IN PRIMARY HEALTH CARE WORKERS IN KAZAKHSTAN

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Abstract

Introduction: Primary health care workers play a key role in providing patient care and keeping them healthy. However, work in this field is often associated with stress and overload, which can negatively affect the physical and mental health of the specialists themselves. In this regard, the problem of stress among primary health care workers is becoming increasingly relevant.

Aim: determine stress level in primary health care workers and assess the degree of its severity.

Materials and methods. Data were obtained through an online survey of doctors and nurses in primary health care organizations. The level and structure of stress were assessed using the PSM-25 scale in two languages: Russian and Kazakh Settings: Medical centers in urban and rural areas of eight regions of Kazakhstan. Target: 612 urban and 244 rural primary health care workers. Statistical data processing was performed using the SPSS-20 program. Using the calculation of skewness and kurtosis, the normality of the distribution was checked. Descriptive statistics were used. An analysis of variance was conducted on the available data with nominal scales and using Pearson's chi-square tests, all data for ordinal scales were processed with the Kruskal-Wallis H test and the Mann-Whitney U test, while data for interval cabinets were analyzed using ANOVA. All indicators were calculated for groups between which there was a difference and the significance level was $P \leq 0.05$.

Results. The data obtained indicate an average level of stress among medical workers. It was found that the level of stress is higher among doctors compared to nurses. Installed that among general practitioners, symptoms associated with higher levels of anxiety and physical distress are more prevalent.

Conclusion. The results obtained allow us to formulate practical recommendations that will contribute to their resistance to stress. To develop and strengthen stress resistance, it is necessary to carry out targeted, comprehensive work.

Keywords: primary health care, stress, stress level.

Резюме

ОЦЕНКА СТРЕССА У РАБОТНИКОВ ПЕРВИЧНОЙ МЕДИКО-САНИТАРНОЙ ПОМОЩИ В КАЗАХСТАНЕ

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Введение: Работники первичной медико-санитарной помощи играют ключевую роль в оказании помощи пациентам и сохранении их здоровья. Однако работа в этой сфере часто сопряжена со стрессом и перегрузками, что может негативно отражаться на физическом и психическом здоровье самих специалистов. В связи с этим проблема стресса у работников первичной медико-санитарной помощи становится все более актуальной.

Цель: определить уровень стресса у работников первичной медико-санитарной помощи и оценить степень его выраженности.

Материалы и методы. Данные получены путем онлайн-опроса врачей и медсестер организаций первичной медико-санитарной помощи. Уровень и структура стресса оценивались с помощью шкалы PSM-25 на двух языках: русском и казахском. Параметры: Медицинские центры в городской и сельской местности восьми областей Казахстана. Целевая группа: 612 городских и 244 сельских работников первичной медико-санитарной помощи. Статистическая обработка данных проводилась с помощью программы SPSS-20. С помощью расчета коэффициентов асимметрии и эксцесса проверялась нормальность распределения. Использовались методы описательной статистики. Дисперсионный анализ был проведен по имеющимся данным с номинальными шкалами и с использованием критерия хи-квадрат Пирсона, все данные по порядковым шкалам были обработаны с помощью теста Краскела-Уоллиса H и теста Манна-Уитни U , а данные по интервальным шкалам были проанализированы с помощью ANOVA. Все показатели были рассчитаны для групп, между которыми имелась разница, и уровень значимости составил $P \leq 0,05$.

Результаты. Полученные данные свидетельствуют о среднем уровне стресса среди медицинских работников. Было выявлено, что уровень стресса выше среди врачей по сравнению с медсестрами. Установлено, что среди врачей общей практики чаще встречаются симптомы, связанные с более высоким уровнем тревожности и физического дистресса.

Заключение. Полученные результаты позволяют сформулировать практические рекомендации, которые будут способствовать повышению их устойчивости к стрессу. Для развития и укрепления стрессоустойчивости необходимо проводить целенаправленную, комплексную работу.

Ключевые слова: *первичная медико-санитарная помощь, стресс, уровень стресса.*

Түйіндеме

ҚАЗАҚСТАНДАҒЫ АЛҒАШҚЫ МЕДИЦИНАЛЫҚ-САНИТАРЛЫҚ КӨМЕК ҚЫЗМЕТКЕРЛЕРІНІҢ КҮЙЗЕЛІСІН БАҒАЛАУ

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Кіріспе: Алғашқы медициналық-санитарлық көмек көрсетушілер пациенттерге күтім көрсетуде және олардың денсаулығын сақтауда негізгі рөл атқарады. Дегенмен, бұл саладағы жұмыс көбінесе стресс пен шамадан тыс жүктемемен байланысты, бұл мамандардың физикалық және психикалық денсаулығына теріс әсер етуі мүмкін. Осыған байланысты алғашқы медициналық-санитарлық көмек қызметкерлері арасында стресс проблемасы өзекті бола түсуде.

Мақсаты: Алғашқы медициналық-санитарлық көмек қызметкерлерінің стресс деңгейін анықтау және оның ауырлығын бағалау.

Материалдар мен тәсілдер: Деректер МСАК ұйымдарындағы дәрігерлер мен медбикелерден онлайн сауалнама жүргізу арқылы алынды. Стресс деңгейі мен құрылымы екі тілде: орыс және қазақ тілдерінде PSM-25 шкаласы арқылы бағаланды. Қондырғылар: Қазақстанның сегіз облысының қалалық және ауылдық жерлеріндегі медициналық орталықтар. Нысаналы халық саны: 612 қалалық және 244 ауылдық алғашқы медициналық-санитарлық көмек қызметкерлері. Статистикалық мәліметтерді өңдеу SPSS-20 бағдарламасы арқылы жүзеге асырылды. Таралудың қалыптатылуы қиғаштық пен куртоздық коэффициенттерді есептеу арқылы тексерілді. Сипаттамалық статистикалық әдістер қолданылды. Дисперсия талдауы номиналды шкаласы бар қолда бар деректер бойынша және Пирсон хи-квадрат сынағы арқылы жүргізілді, реттік шкалалар бойынша барлық деректер Kruskal-Wallis H және Mann-Whitney U тесті арқылы талданды, интервалдық шкалалар бойынша деректер талданды.

ANOVA көмегімен. Барлық көрсеткіштер арасында айырмашылық бар топтар үшін есептелді және маңыздылық деңгейі $P \leq 0,05$ болды.

Нәтижелер. Нәтижелер медицина қызметкерлері арасындағы стресстің орташа деңгейін көрсетеді. Дәрігерлер арасында күйзеліс деңгейі медбикелерге қарағанда жоғары екені анықталды. Мазасыздық пен физикалық күйзелістің жоғары деңгейіне байланысты симптомдар жалпы тәжірибелік дәрігерлер арасында жиі кездесетіні анықталды.

Қорытынды. Алынған нәтижелер олардың стресске төзімділігін арттыруға көмектесетін практикалық ұсыныстарды тұжырымдауға мүмкіндік береді. Стресске төзімділікті дамыту және нығайту үшін мақсатты, кешенді жұмыс жүргізу қажет.

Негізгі сөздер: алғашқы медициналық-санитарлық көмек, стресс, стресс деңгейі.

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Background

Primary health care workers play a vital role in the delivery of essential health services, serving as the front line of patient care. However, the demanding nature of their work often exposes them to high levels of stress, which can have significant consequences on their well-being and work performance.

Several positive aspects of the work environment are believed to reduce stress levels in the workplace. And also an attribute of a positive working moment is organizational functionality, individual satisfaction, motivation from management, opportunities for professional development [10,18].

Today's medical workplace is a challenging environment, with healthcare professionals responding differently. Since some find this profession interesting and exciting, while some experience stress [3].

It is worth noting that medical education and the medical workplace promotes an unhealthy lifestyle. Since during training, doctors are faced with sleep deprivation, which can lead to cognitive disorders and emotional instability [21]. Physicians who are stressed or depressed are more likely to treat patients with disrespect and are more likely to make poor decisions during treatment [4].

There is also evidence that doctors are at higher risk of stress than other populations, since in general the work of a doctor requires physical and emotional effort [12].

Occupational stress is a harmful reaction, especially physical and psycho-emotional, due to the discrepancy between job requirements and the employee's qualifications, resources and needs. Stress among healthcare workers is multifactorial [9]. The prevalence of stress among healthcare workers ranges from 27-87.4%. Occupational stress is considered a significant cause of physical and mental health, and it can also lead to patient safety issues and poor quality of care [5].

It is important to note that healthcare professionals in primary care face increased levels of stress associated with

the need to respond quickly and appropriately to various medical situations. In the daily activities of medical workers, complex ethical and moral dilemmas often arise, as well as a high level of responsibility for the lives and health of patients [1,17,13].

Physicians and nurses face many stressors that can contribute to their overall stress levels. One important factor is the excessive workload they face due to the growing demand for medical services. Research shows that healthcare workers often experience time pressure, long work hours and excessive administrative tasks, leading to increased stress levels. In addition, the complexity of patient cases, the need for constant decision-making, and the emotional costs associated with patient suffering also contribute to stress [14].

In general, primary care staff show high levels of stress, possibly related to work pressure. Since it is well known that the activities of primary health care workers are characterized by high emotional intensity, communicative and cognitive complexity, the need to quickly respond to changes in the health status of patients, which contributes to the formation of professional burnout in this contingent. This necessitates further study of their professional activities, which will make it possible to determine individual trajectories of counteracting occupational stress, as well as to develop a general concept of prevention [11].

The impact of stress on primary care workers is multifaceted and can impact both their personal and professional lives. First, high levels of stress can lead to burnout, emotional exhaustion, depersonalization, and decreased personal achievement. Research has shown that burnout rates among primary care workers are alarmingly high, leading to decreased job satisfaction and increased turnover. In addition, stress can also have detrimental effects on mental health, leading to increased levels of anxiety, depression, and sleep disturbances [2,19,15].

Because of all these factors, doctors and nurses working in primary health care organizations are at risk of

developing stress, so issues related to the characteristics of its occurrence, prevention and treatment become especially relevant and require study.

We found no relevant studies conducted in Kazakhstan examining stress among primary health care workers. In this regard, the purpose of our study was to assess the structure and severity of psychological distress and stigma among health workers in primary health care in modern conditions.

Materials and Methods

Study design

A cross-sectional study was conducted using an online questionnaire in primary health care centers in all regions of Kazakhstan under the jurisdiction of the Ministry of Health. The study was carried out over two months from November to December 2021. The study involved 912 people, of which 856 doctors and nurses from various regions of the country were included for analysis, including the East Kazakhstan region, North Kazakhstan region, Zhambyl region, Turkestan region, Almaty region, Karaganda region, Kostanay region and the city of Nur-Sultan. 56 people were excluded from the analysis because they had other specialties that did not meet the inclusion criteria. Among them: GPs - 201, managers - 32, pediatricians - 78, therapists - 46, nurses - 481, social nurses - 5, senior nurses - 8. The questionnaires were in two languages: Russian and Kazakh. The questionnaire was validated in the Kazakh language, and authorship was obtained.

The sample for the study in the Republic of Kazakhstan was calculated based on the total population of primary health care institutions. The calculation was carried out using EpilInfo version 7.0 with a risk of loss of 20% and CI of 95%. Next, areas and organizations were randomly selected to become the objects of research. The selection took into account such criteria as readiness to participate in the survey, availability of positions as a doctor and nurse in primary health care, and the absence of clinical manifestations of mental disorders. Among the selected study participants, doctors and nurses who refused to participate, were on annual leave, maternity leave, or sick leave were excluded.

Educational tool

The PSM-25 Lemur-Tessier-Fillion scale is one of the most common and widely used instruments for assessing perceived stress among workers. This scale includes 25 statements that respondents must answer, which allows assessing the level of stress and its impact on the psychological state of people.

Application of the PSM-25 scale in primary health care helps not only to identify workers experiencing high levels of stress, but also to develop individual stress management strategies, thereby increasing the quality of work and the level of staff satisfaction. In addition, assessing the level of stress among health care workers allows us to recognize risk groups and prevent the development of psychological problems.

This scale has three levels for assessing psychological stress (high – a score of ≥ 155 points indicates maladaptation and the need for psychological correction; medium – 154–100 points; low – 99 points indicates psychological adaptation to stress).

Data collection and analysis

An online self-report questionnaire was launched to conduct the study and collect information. An official letter was sent to organizations with a link to an online questionnaire, then managers sent the link to their colleagues using Whats App. Participants were asked to complete the questionnaire via the online platform Google Forms, which took approximately 15 minutes on average.

The questionnaire included two sections. The first section included socio-demographic characteristics such as age, gender, presence of children, work experience, marital status, full-time employee or part-time employee, current position, as well as the use of tobacco and alcohol products and the presence of additional work. The second section of the questionnaire included an assessment of the level of anxiety and distress, where respondents filled out the psychological stress scale (PSM - 25). Statistical data processing was performed using the SPSS-20 program. Using the calculation of skewness and kurtosis, the normality of the distribution was checked. Descriptive statistics were used. An analysis of variance was conducted on the available data with nominal scales and using Pearson's chi-square tests, all data for ordinal scales were processed with the Kruskal-Wallis H test and the Mann-Whitney U test, while data for interval cabinets were analyzed using ANOVA. Results are reported with mean \pm standard deviation, as well as median and interquartile range for nominal scales. All indicators were calculated for groups between which there was a difference and the significance level was $P \leq 0.05$. The effect size was assessed according to generally accepted criteria: strong (≥ 0.50), moderate (0.3–0.49) and weak (0.10–0.29). The significance for the weak average wasp effect when comparing nominal traits with more than two grades of deportation effect size was adjusted for degrees of freedom and threshold values.

Ethical considerations

Participation in the study was voluntary and anonymous to ensure the integrity and integrity of the study. Respondents were informed through informed consent about the nature of the study, its goals and objectives, as well as the role of the participant and the opportunity to withdraw from the study at any time. Participants were also informed that the data would be stored in encrypted form and would remain strictly confidential, and that any published information would be presented in the form of integers and percentages.

The study was conducted in accordance with the Declaration of Helsinki. Ethical consent was obtained from the local ethics committee (protocol No. 3 of October 28, 2020).

Results

A total of 856 primary care staff participated in the survey. In addition, there was a significant number of respondents from cities (612 people - 71.5%, respectively). A total of 789 women (92.2% of the cohort) and 67 men (7.8%) were assessed, and the majority were married (608 people - 71%, respectively). Table 1 describes the sociodemographic data of the sample in more detail.

From the survey results it follows that the majority of respondents experience a state of tension and extreme anxiety 204 (23.8), although 125 (14.6) answered "often," which indicates the manifestation of these feelings. Feelings

of a lump in the throat and/or dry mouth are not common 332 (38.8) and were rare among respondents. Most respondents to the survey experience work overload and a feeling of lack

of time. Swallowing food in a hurry or forgetting to eat is common and accounts for more than half of respondents 288 (52.5).

Table 1.

Demographic characteristics of the study participants.

Socio-demographic characteristics		Number of respondents (%)
gender	men	67 (7.8)
	women	789 (92.2)
Family status	married	608 (71.0)
	single	130 (15.2)
	divorced	118 (13.8)
Job title	General practitioners	198 (23.1)
	Heads of the department	32 (3.7)
	nurses	480 (56.1)
	Social work nurses	8 (0.9)
	senior nurses	14 (1.6)
	pediatricians	78 (9.1)
	General practitioners	46 (5.4)
Children	1 child	310 (36.2)
	2 children	314 (37.7)
	3 children	147 (17.2)
	4 or more	85 (9.9)
Staff member or part-time worker	Regular	823 (96.1)
	part-time worker	33 (3.9)
Work experience	Less more than 1 year	39 (4.6)
	1-5 years	171 (19.9)
	5-10 years	143 (17.7)
	10-15 years old	81 (9.5)
	15-20 years old	78 (9.1)
	Over 20 years	344 (39.2)
Length of service in this organization	Up to 1 year	114 (13.3)
	1 to 5 years	214 (25)
	5 to 10 years	169 (19.7)
	10 to 20 years	168 (19.6)
	20 to 40 years old	191(22.3)
There is additional work	Yes	124 (14.5)
	No	732 (85.5)
Number of hours of sleep	2 hours	5 (0.6)
	4 hours	69 (8.1)
	6 hours	500(58.4)
	8 o'clock	274 (32)
	10 hours	8 (0.9)
Alcohol consumption	Yes	102 (11.9)
	No	754 (88.1)
Smoking	Yes	55 (6.4)
	No	801(93.6)
City		612 (71.5)
Village		244 (28.5)

After work, many respondents have difficulty disconnecting from work thoughts and problems, which indicates that they are constantly experiencing 539 (64.2). Feelings of loneliness and misunderstanding are not common among respondents 345 (40.3), but still some sometimes experience this feeling 144 (16.8). Physical ailments such as dizziness, headaches, tension, cervical discomfort, back pain and stomach cramps are common and affect more than half of respondents 473(55.3).

Some are rarely consumed by dark thoughts and anxious states. Most do not experience sudden changes in

temperature 341 (39.8). Fatigue is also common among respondents, "sometimes" 222 (25.9) and "often" 164 (19.2). Forgetfulness about meetings and matters is not typical for the majority of respondents 285 (33.3).

Clenching your teeth or clenching your fists in difficult situations is not a common reaction 416 (48.6), and the rarity of calm and serene states is observed in a small part of respondents 104 (12.1).

Excitement and anxiety are sometimes found among respondents 189 (22.1). Breathing difficulties and digestive and intestinal problems are not common among respondents 396

(46.3) and 275 (32.1), respectively. "I get scared easily; noise or rustling makes me flinch" 292 (34.1) answered "never." "It takes me more than half an hour to fall asleep" - this happens often, very often or constantly, 134 (15.7%), 68 (7.9%) and 124 (14.5%) applicants responded to surveys, respectively. I feel confused, confused in my thoughts, lack of concentration, and have never encountered such a problem before, answered 303 (35.4%) respondents. "My eyes always look tired with their own bags and circles, sometimes this happens in my life," answered 223 (26.1%) people. I feel a weight on my shoulders, sometimes and even often, noted 201 (23.5%) and 117 (13.7%) applicants. Responses to questions about

restlessness, constant need to move, inability to stand or sit still, and feelings of tension were split evenly - 50/50. When it comes to controlling my actions, emotions, moods or gestures, I have never had such a problem, answered 340 (39.7%) survey participants." (Table 2)

Likelihood ratio criteria indicate the significance of such variables on stress as gender $P = 0.013$ ($\chi^2 = 8.763$), the desire to change one's job to a calmer one $P = 0.000$ ($\chi^2 = 117.036$), as well as the amount of sleep per day $P = 0.000$ ($\chi^2 = 30.434$). (Table 3)

According to the survey results, half (50%) of participants reported feeling extremely anxious.

Table 2.

Descriptive survey results.

No.	question	Never Abs.(%)	Rarely Abs.(%)	Very rarely Abs.(%)	Rarely Abs.(%)	Sometimes Abs.(%)	Often Abs.(%)	Often Abs.(%)	Constantly Abs.(%)
1	A state of tension and extreme agitation	172 (20.1)	83 (9.7)	76 (8.9)	97 (11.3)	204 (23.8)	125 (14.6)	53 (6.2)	46 (5.4)
2	Feeling of a lump in the throat and/or dry mouth	332 (38.8)	110 (12.9)	58 (6.8)	95 (11.1)	144 (16.8)	55 (6.4)	36 (4.2)	26 (3.0)
3	I'm overloaded with work. I don't have enough time at all	109 (12.7)	69 (8.1)	55 (6.4)	79 (9.2)	195 (22.8)	164 (19.2)	80 (9.3)	105 (12.3)
4	I swallow food in a hurry or forget to eat	155 (18.1)	104 (12.1)	54 (6.3)	93 (10.9)	180 (21)	137 (16)	67 (7.8)	66 (7.7)
5	After work, I can't turn off thoughts about unfinished business, problems, plans; I get stuck worrying about work situations and unresolved issues, thinking about my ideas over and over again	103 (12)	80 (9.3)	54 (6.3)	70 (8.2)	164 (19.2)	170 (19.9)	96 (11.2)	119 (13.9)
6	I feel lonely and misunderstood	345 (40.3)	74 (8.6)	59 (6.9)	89 (10.4)	145 (16.9)	68 (7.9)	34 (4)	42 (4.9)
7	I am suffering from physical illness; I have dizziness, headaches, tension and discomfort in the cervical region, back pain, stomach cramps	159 (18.6)	91 (10.6)	58 (6.8)	75 (8.8)	173 (20.2)	153 (17.9)	72 (8.4)	75 (8.8)
8	I am consumed by dark thoughts and tormented by anxiety	291 (34)	103 (12)	54 (6.3)	93 (10.9)	165 (19.3)	77 (9)	36 (4.2)	37 (4.3)
9	I suddenly feel hot and cold	341 (39.8)	120 (14)	56 (6.5)	86 (10)	139 (16.2)	55 (6.4)	34 (4)	25 (2.9)
10	I forget about appointments or things I have to do or decide	285 (33.3)	143 (16.7)	74 (8.6)	98 (11.4)	160 (18.7)	51 (6)	24 (2.8)	21 (2.5)
11	My mood often deteriorates; I can easily cry from resentment or show aggression, rage	197 (23)	142 (16.6)	76 (8.9)	93 (10.9)	180 (21)	91 (10.6)	44 (5.1)	33 (3.9)
12	I feel like a tired man	97 (11.3)	101 (11.8)	55 (6.4)	65 (7.6)	222 (25.9)	164 (19.2)	67 (7.8)	85 (9.9)
13	In difficult situations, I clench my teeth (or clench my fists) tightly.	416 (48.6)	87 (10.2)	45 (5.3)	76 (8.9)	115 (13.4)	57(6.7)	38 (4.4)	22(2.6)
14	I am calm and serene	49 (5.7)	64 (7.5)	63 (7.4)	104 (12.1)	178 (20.8)	153 (17.9)	81 (9.5)	164 (19.2)
15	I have trouble breathing and/or suddenly lose my breath	396 (46.3)	104 (12.1)	62 (7.2)	95 (11.1)	125 (14.6)	38 (4.4)	22 (2.6)	14 (1.6)
16	I have problems with digestion and intestines (pain, colic, upset or constipation)	275 (32.1)	104 (12.1)	43 (5)	72 (8.4)	154 (18)	116 (13.6)	49 (5.7)	43 (5)
17	I'm excited, worried, excited	217 (25.4)	128 (15)	71 (8.3)	101 (11.8)	189 (22.1)	88 (10.3)	39 (4.6)	23 (2.7)
18	I get scared easily; noise or rustling makes me flinch	292 (34.1)	145 (16.9)	60 (7)	89 (10.4)	149 (17.4)	72 (8.4)	22 (2.6)	27 (3.2)
19	It takes me more than half an hour to fall asleep	120 (14)	114 (13.3)	53 (6.2)	91 (10.6)	152 (17.8)	134 (15.7)	68 (7.9)	124 (14.5)
20	I'm confused; my thoughts are confused; I lack concentration and cannot concentrate	303 (35.4)	124 (14.5)	78 (9.1)	97 (11.3)	156 (18.2)	41 (4.8)	28 (3.3)	29 (3.4)

21	I look tired; bags or circles under the eyes	173 (20.2)	103 (12)	61 (7.1)	63 (7.4)	223 (26.1)	117 (13.7)	55 (6.4)	61 (7.1)
22	I feel a weight on my shoulders	187 (21.8)	95 (11.1)	62 (7.2)	84 (9.8)	201 (23.5)	117 (13.7)	45 (5.3)	65 (7.6)
23	I am anxious and need to constantly move; I can't stand or sit in one place	221 (25.8)	114 (13.3)	68 (7.9)	95 (11.1)	175 (20.4)	95 (11.1)	46 (5.4)	42 (4.9)
24	I have difficulty controlling my actions, emotions, moods, or gestures	340 (39.7)	130 (15.2)	73 (8.5)	99 (11.6)	122 (14.3)	45 (5.3)	22 (2.6)	25 (2.9)
25	I feel tension	193 (22.5)	124 (14.5)	71 (8.3)	83 (9.7)	188 (22)	103 (12)	39 (4.6)	55 (6.4)

Table 3.

Polynomial regression. Likelihood ratio tests.

Effect	Model Fitting Criteria -2 log-likelihood of the simplified model	Likelihood ratio criteria		
		chi-square (X2)	Degree of freedom	P-value
Age	1216.760	2.580	2	0.275
Experience	1218.576	4.397	2	0.111
Amount of children	1216.900	2.720	2	0.257
City_village	1220.046	5.866	2	0.053
Job title	1234.526	20.346	12	0.061
Gender	1222.942	8.763	2	0.013
Family status	1217.941	3.762	4	0.439
State	1215.703	1.523	2	0.467
Extra work	1214.500	0.320	2	0.852
Change	1331.216	117.036	2	0.000
Changing workload during the COVID period	1215.803	1.623	2	0.444
Number of hours of sleep	1244.614	30.434	8	0.000
Alcohol consumption	1218.213	4.034	2	0.133
Tobacco use	1217.042	2.863	2	0.239

The average level of the entire sample of psychological stress on the PSM - 25 scale did not reach the threshold values of moderate intensity (37.5%). Physicians experienced more intense stress (55%) compared to nurses (46%) $\chi^2 = 123.0$, $P = 0.00$, Cramer's $V = 0.2$; taking into account degrees of freedom $n = 4$, the effect size is average. General practitioners are the most susceptible to distress (59.5%). Levels of psychological stress among health care workers are presented in Table 4.

The average age of respondents was 41 years (standard deviation ± 12.98). According to the assessment of stress using the Lemur-Tessier-Fillion scales e PSM-25,

a high level of stress was observed in medical workers aged 35-39 years more often than in others. (Table 5).

Table 4.

Levels of psychological stress in medical workers.

	Frequency	Interest	Valid Interest	Accrued interest
Norm	487	56.9	56.9	56.9
Average	321	37.5	37.5	94.4
High	48	5.6	5.6	100.0
Total	856	100.0	100.0	

Table 5.

Average age of respondents according to the state of stress on the scale.

States\Scale	1	2	3	4	5	6	7	8
A state of extreme agitation and tension	42	42	41	41	41	42	42	39
Work overload/lack of time	43	40	42	40	41	41	43	40
Feelings of loneliness	42	41	43	39	42	42	41	34
Physical ailment (headache, back pain, stomach cramps)	41	42	40	42	42	42	42	39
Confused, thoughts are confused, there is no concentration and concentration of attention	42	42	41	39	42	42	41	35

Discussions:

Assessing stress in primary care workers is a critical area of research as it sheds light on factors contributing to stress and its consequences.

The survey results provide valuable information about the state of psychological and emotional well-being among primary care providers. The total number of survey participants, reaching 856 people, provides a sufficiently broad and representative amount of data for analysis. It is interesting to

note that the vast majority of respondents are women, which indicates the particular vulnerability of this group.

It should be noted that in many cases, doctors experience dissatisfaction with professional life, largely due to the growing burden of legal norms and regulations. In turn, these rules and regulations are beyond the control of doctors themselves and healthcare management. Therefore, it is important to look for approaches that can be applied at the local level. Available evidence suggests that

physician leaders can play a critical role in engaging stress prevention among employees [8].

Our results show differences in stress levels between doctors and nurses, with doctors rating their stress levels as more intense. This may indicate characteristics of professional activity and roles in the patient care system that are more stressful for doctors.

An important conclusion from the presented data is that the majority of respondents experience various forms of stress and psychological discomfort. This is supported by the high percentage of respondents who reported feeling tense, overloaded with work, and having difficulty switching off from work thoughts after work. Physical symptoms such as headaches and neck and back discomfort also occurred in a significant number of respondents. In general, respondents rarely experienced feelings of loneliness and misunderstanding, but they still encountered these emotions from time to time. Symptoms of anxiety and neurosis, such as clenching teeth or clenching fists, were also not uncommon among respondents.

In his book, scholar Studer (2015) provides a list of "leading and lagging indicators" of this condition. Leading indicators or behaviors include irritability, decreased patient satisfaction, and loss of energy. Lagging indicators include social isolation, problems in personal relationships, and error claims [16].

Additionally, it was found that high levels of stress were observed among healthcare workers aged 35 to 39 years more often than other age groups. This indicates the need for targeted efforts to support and manage stress for this age group of employees.

Our findings highlight the need for further research and the development of specific support and stress management programs for healthcare personnel, especially in age groups with a higher propensity for stress. These measures can help reduce the negative effects of stress on workers' physical and mental health and ultimately improve the quality of care they provide.

Addressing stress among primary care providers requires a multifaceted approach. First, organizational change is necessary to reduce excessive workload and administrative burden. This can be achieved through the implementation of effective planning systems, increasing staff numbers and providing adequate resources and training [6]. Moreover, creating a positive work environment that promotes support, cooperation, and open communication can help mitigate the negative effects of stress [20]. In addition, individual-level interventions such as stress management programs, mindfulness training, and promotion of work-life balance are necessary to enable primary care providers to effectively manage stress [7].

A study of survey results among primary health care workers allows us to identify problems associated with psychological tension and stress and develop effective interventions to solve them. Regularly conducting such surveys and analyzing the results will improve working conditions and improve the quality of life of medical workers.

Strengths and Limitations

To our knowledge, this is the first study aimed at assessing stress among primary health care workers in Kazakhstan.

This study has several limitations that should be taken into account. First, data were collected using an online questionnaire based on respondents' self-reports. Although the PSM - 25 scale is a valid research instrument, it is necessary to take into account the possible inaccuracy of data associated with the fact that respondents completed the questionnaire independently. Second, this research design was cross-sectional, which means that we cannot identify causal relationships between the study variables. Longitudinal studies are required to more consistently determine cause-and-effect relationships. Taking into account these limitations, the results obtained are still significant and can serve as the basis for further research and development of this topic.

Conclusion. In our study, more than half of the participants reported extreme anxiety, doctors also experienced more stress than nurses, and it turned out that general practitioners were the most susceptible to distress. Predictors such as gender, amount of sleep per day, and the desire to change one's job to a more relaxing one influenced stress. Workers aged 35 to 39 had higher levels of stress than others. Thus, the issue of workplace stress in primary health care poses a major challenge. It is important to recognize the dynamic factors associated with workplace stress in this area, which can help develop prevention and intervention strategies to reduce burnout. This will also help address workplace dissatisfaction and prevent future turnover among doctors and nurses.

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