



Medical Personnel's Job Satisfaction in Public Polyclinics of the Remote Kyzylorda Region in Kazakhstan: Insider Perspective

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Abstract

The research aims to study the job satisfaction of doctors and paramedical personnel in public institutions of the Kyzylorda Region of Kazakhstan in the post-COVID period and identify factors affecting their increase, which can generally positively impact sustainable development. The considered region is characterized by complexity, recognized as an ecological disaster zone, enhanced by remote population areas that are difficult to access for medical care. These issues put forward a policy of caring for the region's medical professionals, their status, and their level of satisfaction because medical workers are more vulnerable due to high workloads. The data were analyzed with the help of a survey among respondents, interviews with heads of public institutions, and statistical analysis. Out of 150 selected survey participants, 138 respondents represent public clinics in the region (92% of the research sample). The satisfaction of physicians was 59.1%, and the satisfaction of the paramedical personnel was 56%. Based on the research data, the authors conclude that the essential criteria for forming satisfaction and commitment to the work of public institutions' medical workers in the Kyzylorda Region include remuneration (bonuses), professional development, and the

possibility of combining jobs. This research, conducted in the post-pandemic period, identified factors that affect the job satisfaction of physicians and paramedical personnel working in public institutions in the Kyzylorda Region that have a negative ecological status.

Keywords

Satisfaction · Human resources for health · Services · Central Asia · Kyzylorda Region

JEL Classification

I18 · I21 · I23 · M1

1 Introduction

The recovery of the healthcare system after the occurrence of a risk on a global scale, such as COVID-19 and the post-COVID period, requires many efforts in the field of personnel management in public institutions of all countries. Undoubtedly, timely response measures were taken at all levels: national and subnational. However, the public sector system employees carried the enormous burden of countering COVID-19. Physicians and medical workers demonstrated high commitment, determination, and readiness to provide medical care to the population.

The healthcare system of Kazakhstan demonstrated the effectiveness of decision-making to combat SARS-CoV-2 infection. The combination of these consequences exerted the greatest burden on the medical staff of public clinics, especially in regions with a shortage of medical workers at all levels.

This research aims to study the job satisfaction of doctors and paramedical personnel in public institutions of the Kyzylorda Region of Kazakhstan in the post-COVID period

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and identify factors affecting their increase, which can generally positively impact sustainable development. The global need for a health workforce is widely recognized, especially during the impact of the COVID-19 pandemic starting in 2020.

The Kyzylorda Region belongs to a region with an unfavorable ecological status in Central Asia. Geographically, the Aral Sea is located in the region, which is a source of salt extraction and is also an environmental disaster (Andrulionis et al. 2022; Issanova et al. 2023) in Central Asia and the world. It is the cause of climate deterioration (Kostianoy et al. 2010), due to which the number of dusty, sand, or salt storms has increased (White 2014), which has significantly increased the risk of chronic diseases in the local population. The scale of dust transfer from the drained bottom of the Aral Sea is estimated by various authors at 15 to 75 million tons/year (Aladin et al. 2017). Experts affirm that the toxic mixture settles in the territories from the Tien Shan to Scandinavia. Poisonous salt was found in Antarctica, affecting almost 35 million people (Saktapova 2017). The Kyzylorda Region is known worldwide for industrial space exploration (Baikonur), the consequences of which add to the unfavorable environmental component (Kiselev et al. 2003; Neronov et al. 2012). The Kyzylorda Region has an area of 226 thousand sq. km, with four cities, seven districts, and 142 rural districts on this territory. The region's total population is 836,533 people as of April 1, 2023 (Table 1).

The region accounts for only 4.2% of the country's population, of which the rural population predominates over the urban population, although Kazakhstan is urbanizing. Thus, the city-to-village ratio in the country is 1.62. In the region, this ratio is 0.88. There is an equal ratio of men and women.

Healthcare professionals play a key role in improving health. They also play an important role in the economy. A deeper understanding of medical and social personnel, including the necessary investments, has become a

prerequisite for the creation of effective, strong, and sustainable healthcare systems (Government of the Republic of Kazakhstan 2022).

2 Policy and Practice of Personnel Management in Healthcare of Kazakhstan

Kazakhstan's healthcare reform has gone through several phases and currently applies the model of compulsory medical insurance, which is focused on optimizing and using effectively all its resources. The Concept for Healthcare Development until 2026 has been adopted (Government of the Republic of Kazakhstan 2022), which views "a competitive healthcare system ... that provides equal access to quality medical services based on a personalized approach to diagnosis and treatment with competent, motivated, legally protected medical personnel." The National Development Plan of the Country until 2025 has been adopted (Pharmreviews 2021), where Task 3 is aimed at "developing human resources and scientific medicine." The need for medical personnel increases annually, especially in unfavorable ecological regions, which is accompanied by an increased risk of chronic diseases and systemic disorders (Pharma 2020; World Health Organization n.d.). The special relevance of human resources development was noted with the beginning of the COVID-19 epidemiological situation that caused high morbidity and mortality of medical workers, as well as the emergence of fear and unwillingness to work in clinics, which aggravated an outflow of specialists from the healthcare system.

According to WHO, we will consider the indicator of "healthcare and infrastructure workforce" through the dynamics of the number of physicians and paramedical personnel, including linear dependence on changes in the population size of the country and region (Table 2).

The indicators for the Kyzylorda Region are below the republican level and much inferior to the average indicator for the country—0.56. The dynamics before COVID-19 among the paramedical personnel in the region have a leading position. The number per 1000 people is 3.18 higher than the national level, demonstrating the paramedical staff's sufficiency. The dynamics of growth in the number of physicians and paramedical personnel (Tiwari et al. 2021) are shown in Fig. 1.

Following the data from Fig. 1, we can see that the number of doctors and paramedical personnel has tended to increase over the past nine years and amounted to 34.3% and 34.4%, respectively. Over the post-COVID period, the dynamics are insignificant. Growth in the number of physicians (Nardin and Moger 2022) was only 1.7%, the paramedical staff—2.4%. Comparing 2020 with 2019,

Table 1 Population of the Republic of Kazakhstan and the Kyzylorda Region as of April 1, 2023

People			
	Total population	Including:	
		Urban population	Rural population
Republic of Kazakhstan	19,832,737	12,260,185	7,572,552
Kyzylorda region	836,533	392,724	443,809

Source Compiled by the authors based on Taldau Information-analytical system of the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan (2022)

Table 2 Indicators of the availability of medical workers for residents in general and in a remote region

Indicator	2019		2020	
	Absolute numbers	per 1000 people of the population	Absolute numbers	Per 1000 people of the population
<i>Physicians</i>				
Republic of Kazakhstan	74,046	3.97	76,443	4.05
Kyzylorda Region	2740	3.41	2842	3.49
<i>Paramedical Personnel</i>				
Republic of Kazakhstan	179,837	9.65	185,757	9.84
Kyzylorda Region	10,402	12.95	10,601	13.02

Source Compiled by the authors based on Ministry of Healthcare of the Republic of Kazakhstan (2021)

the growth dynamics were evident. In absolute numbers, it amounted to 102 doctors and 199 paramedical workers. Similarly, in the post-COVID period (2021–2020), there were 18 doctors and 120 paramedical personnel, which shows a low interest on the part of medical personnel. In 2023, the implementation of the national project on the modernization of rural health care began in the Kyzylorda Region.

3 Literature Review

Satisfied staff usually perform more productive work, take the initiative, and are loyal and committed to their work and the (Horton et al. 2016) employer. A significant role is played by state support and the amount of spending allocated to the healthcare system. After A. A. Legostaeva and B. K. Jazykbaeva (Legostaeva and Jazykbaeva 2021) had conducted research, they concluded that the healthcare

system is experiencing serious difficulties due to the aging of medical personnel. However, the share of Kazakhstan’s total expenditures on health care is 3.3% of the country’s GDP, which is half as much as recommended by WHO (6% of GDP). Kazakhstan ranks 174th out of 189 countries in the ranking of countries in the world in terms of spending on medicine (Mamyrkhanova 2023).

Scientists consider job satisfaction as a sort of emotional component of a medical worker. It is a fair remuneration for work, including internal professional satisfaction (Mrduljas-Dujić et al. 2010), ergonomic working conditions, lack of stress, well-being at the workplace, and employee motivation (Aoun et al. 2021; Xuan Tran et al. 2013) that has an impact on the organizational commitment of medical workers (Blaauw et al. 2013), and the quality of medical services provided and access to these services (Mere et al. 2023).

The working day of a medical worker has its own specific features—this includes long working hours (Kisa and Kisa 2006), high returns focused on striving for effectiveness and adherence to therapy (Domagala et al. 2018), and providing professional medical care to the population, on which the quality of life of patients, their safety, and life depend. Considering the human factor, the speed of decision-making, the possibility of stress risk, and the influence of working conditions, the important elements in the concept of job satisfaction are the environment, atmosphere, relationships in the clinic team, the management style, and opportunities for career and personal growth.

Although there are scientific papers available, job satisfaction of physicians and paramedical staff, given the high level of stress and workload during and after the pandemic, requires more in-depth research among medical workers of public clinics, considering the growth of negative environmental problems of the studied region.

Institutional assistance to medical staff in Kazakhstan is fragmented and limited; it was an additional financial motivation during the COVID-19 pandemic.

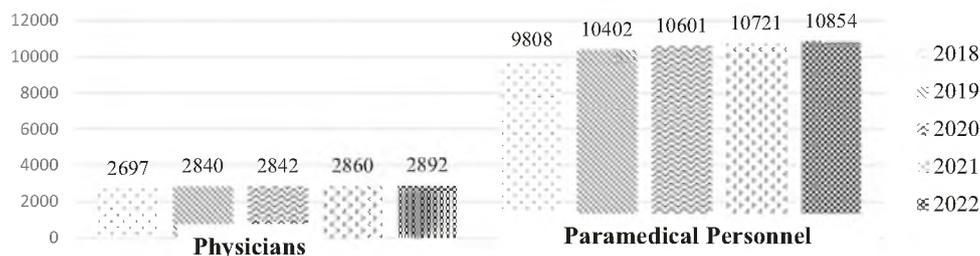


Fig. 1 Dynamics of the number of physicians and paramedical personnel in the Kyzylorda Region for 2014–2022. Source Compiled by the authors based on Taldau Information-analytical system of the

Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan (2022)

4 Method

The approach is based on a descriptive study, a mixed research method implemented in the form of interviews among the heads of public polyclinics, and an individual formalized e-questionnaire where questions were asked in a predetermined order with closed most appropriate answers (fixed-alternative questions) from several proposed options on the Likert scale. The questions were based on the results of interviews with the top management of institutions (Sutriyawan et al. 2021) to adapt to local working conditions and identify problems and preferences among respondents. Effective changes for personnel management in public institutions were identified that would help ensure sustainability and helpful solutions for implementing sustainability.

5 Results

The target respondents were physicians and medium-level and junior medical personnel of public polyclinics, such as municipal state enterprises on the right of economic management “Municipal Polyclinic.” The interview involved 138 respondents of various levels, of which 91% were women and only 9% were men. As for the types of respondents, physicians accounted for 6.5%, top management—1.5%, medium-level medical personnel—86.9%, and junior medical personnel—5.1%. Of the respondents, 3.6% finished medical residency or internship, 13% had higher education (bachelor’s degree), 5.1%—incomplete higher education, and 78.3%—secondary professional medical education (college).

It was found that more than half of the physicians interviewed in public polyclinics are aged 18–34 years and account for 63.7%; the more mature age from 35 to 62 years accounts for 27.2% of physicians. Notably, 9.1% are doctors who practice while already retired. For paramedical personnel, the ranking by age looks more uniform. The exception is that 11.2% of respondents are at the pre-retirement age of 55–62. Almost 32% of doctors have been working in polyclinics for more than seven years, 36.4% of respondents—for three to seven years, 22.7% of respondents have been working for one to three years, and the smallest category—9.1% have been working for less than one year. The situation with the paramedical staff is more obvious and immediately shows the high loyalty of employees, as almost 70% have been working for more than seven years. Only 3.5% started working in clinics less than a year ago. The rest were evenly distributed from 8–9% in each category. In general, the paramedical staff in public polyclinics is almost permanent and loyal; staff turnover is lower.

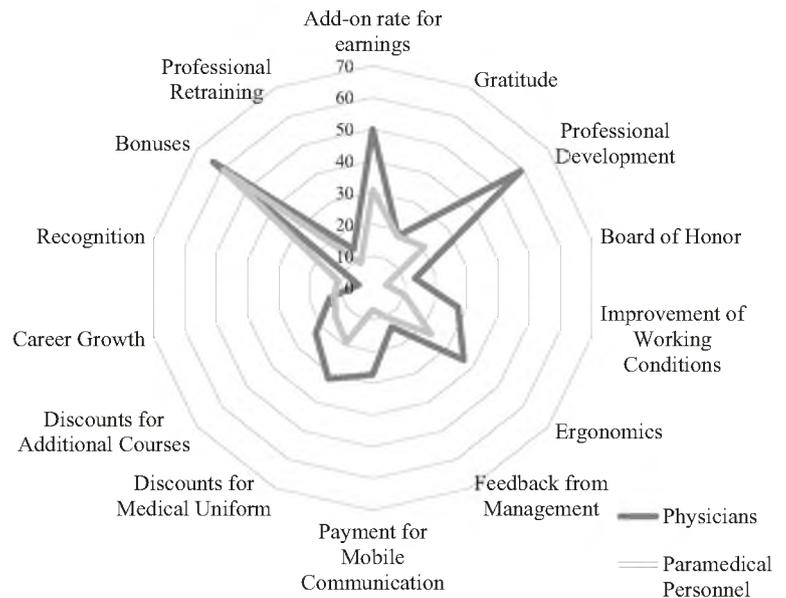
6 Findings

The studied period is a post-COVID period, and the impact was still great. As we have found, measures were taken on the part of the state policy to support and motivate medical workers (Cucchiari et al. 2021), and the value of personnel was increased. In Kazakhstan, by a measure of the Government and the Ministry of Health of the Republic of Kazakhstan, starting from January 1, 2022, wages for healthcare system workers have been increased. We have taken the opportunity to assess the impact of this fact on employee satisfaction during this period.

The survey findings show that the level of satisfaction with payment and invested efforts of physicians is much higher than that of the paramedical staff. The measurement made it possible to discover aspects of ambiguity among the satisfied and dissatisfied because the share has not actually changed over the measured years. The weight of satisfied employees has become 9.1% higher in order of importance. Professionals showed a higher level of dissatisfaction in 2021 due to a lower pay level. Simultaneously, in 2021, 13.6% of physicians were dissatisfied with payment. The level of satisfaction of the paramedical staff who rated “excellent” increased by 12% compared to the previous period. There was also a growth in those who assessed such satisfaction as “good” (1.7%). Only 7% of nurses gave a “satisfactory” assessment in 2022 (18.1% a year before). Comparing the assessment of the degree of satisfaction with the results of their work, it can be stated that doctors evaluate their contribution more highly. Doctors who are fully satisfied with the results of their work account for 62.1%. The paramedical personnel’s satisfaction is lower by 7.6%. Approximately the same number of respondents assessed it as “good.” Almost 1% of doctors put up “satisfactory” versus 13.6% of the paramedical staff. It can be seen that physicians rate feedback from the top management as “excellent” (59.1%). The same rating made by the nursing staff is 7% lower. The analysis shows that 18.2% of doctors assessed it as “good” versus 32.2% of the paramedical staff. A neutral assessment was made by 18.2% of doctors; this indicator shown by nurses is 7.8% lower. The assessment results according to the criteria “very dissatisfied” and “unsatisfactory” are similar and vary within 5%. Figure 2 shows the results of the most important criteria that can increase job satisfaction among medical personnel.

According to Fig. 2, respondents selected important criteria that can increase their satisfaction. Thus, physicians and the paramedical staff highlighted “Bonuses” as the most important criterion, as well as the possibility of receiving an additional daily operational rate within an organization—financial motivation.

Fig. 2 Specify the most important criteria that can increase your job satisfaction.
 Source Compiled by the authors



Among the non-financial components for doctors and nursing staff, of great importance are such criteria as ergonomics (air conditioning system, considering the climate in summer + 46 °C and in winter – 37 °C) and the improvement of on-the-job working conditions that will prevent fatigue and the development of occupational diseases and will contribute to preserving the health of specialists.

7 Discussion and Conclusion

Empirical studies have shown that the surveyed doctors and paramedical staff of public polyclinics in the region are generally satisfied with the payment and the result of their efforts: 81.8% and 88.8%, respectively. This is confirmed by research (Kisa and Kisa 2006); salary and income were found to be an important source of dissatisfaction. This is partly due to the fact that in Kazakhstan, by a measure of the Government and the Ministry of Health of the Republic of Kazakhstan, starting from January 1, 2022, wages for healthcare system workers have been increased. Additionally, with a status of an unfavorable region, the population living in an ecological disaster zone receives compensation (Electronic Government of the Republic of Kazakhstan 2021), the region’s population receives a 30% allowance, and residents of the Aral and Kazalinsk Regions—a 50% allowance. However, the survey findings showed that, despite the high level of satisfaction with pay, employees distinguish two important factors: bonuses and the possibility of part-time work. The level of medical personnel’s satisfaction with the results of their work is satisfactory, as, on average, this indicator is about 47.5% for doctors and 43.2% for paramedical staff, which

is confirmed by the results obtained. When highlighting the level of importance of the criteria, the most significant criterion was noted—professional development. Research findings show that the level of feedback from the management is positive but insufficient. It requires efforts to increase and improve communication between them. According to the research results, 22.7% of physicians and 15.6% of paramedical personnel are unsatisfied. At the level of organizations’ top management, a set of measures should be developed that will make it possible to increase staff satisfaction based on improving feedback and interaction. The research recommendations are as follows:

- To monitor the level of employee satisfaction to find a solution to improve the work efficiency twice a year;
- To conclude contracts with private suppliers (medical uniforms and telecommunications (mobile communications)), provide employees of public polyclinics with discounts for purchase or payment on a mutually beneficial basis, and provide an employee insurance opportunity for medical workers and render services with priority service (maybe in cooperation with other public institutions for the benefit of scale) on the part of a supplier;
- To improve the ergonomic conditions of stay of medical personnel and patients.

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