

Research Article

Assessment of Job Satisfaction of Nurses with Nursing Reforms in the Health Care System of the Republic of Kazakhstan

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Abstract

The level of satisfaction of medical workers is one of the main factors for their effective work. First of all, this concerns nurses, since they are the largest group of medical staff and make a significant contribution to the provision of medical services. Today, their role is especially growing due to the introduction in the national health care system of the position of a nurse practitioner, having the level of applied and academic bachelor's degrees. The level of satisfaction of health workers is one of the basic conditions for their effective work. The aim of this study is to study the level of satisfaction of nurses in general, and in particular, the implementation of the new reform of nursing, as well as to determine the factors influencing the satisfaction of nurses. This cross-sectional study was conducted using a questionnaire posted on the Survey Monkey online platform. A total of 468 nurses from 49 medical organizations throughout the Republic took part in the survey. Statistical processing of the results was carried out using the STATA 14.2 software and using the methods of descriptive statistics, bivariate analysis with the Chi-square test and the Fisher test, multiple logistic regressions. According to the results of this study, more than 80% of nurses have opportunities for professional growth, and the organization's leadership supports them in this endeavor. More than half of the respondents noted that the hospital administration sends nurses for additional training in case of errors in their activities. Nurses receive more praise and support from senior and head nurses (96%) than from medical staff (56%). Social relevance, recognition in the professional community and professional results that lead to higher earnings were identified by nurses as significant incentives for high-quality and conscientious work. The satisfaction of nurses was associated with the availability of opportunities for professional growth, support and praise from the leadership, participation in organizational decision-making. With the introduction of the new reform of nursing, it is expected that the activities of nurses in Kazakhstan will meet the international level in accordance with the needs of modern healthcare and will improve the quality, efficiency and safety of medical services.

Keywords: Healthcare System; Nurses; Satisfaction; Medical Staff; Nursing Reform

Introduction

The satisfaction of medical workers is one of the important factors in the providing of high-quality medical care in the health care system. Therefore, employee satisfaction is becoming an increasingly important aspect of healthcare organizations around the world. For example, in Turkey, the satisfaction of medical personnel with work was 60%, and the remaining 40% of unsatisfied medical workers noted the reasons as insufficient wages and inappropriate working conditions [1]. In the United States of America, using the Satisfaction of Employees in Health Care Survey, a rather high degree of satisfaction of health workers was revealed, which amounted to 79.88% [2]. As part of the nursing development program (2009-2014) in the Russian Federation, a study was carried out in five different medical institutions (hereinafter referred to as MPIs), where more than 70% of nurses were satisfied with their work. The highest rates

were among employees of multidisciplinary healthcare institutions, obstetric and dental clinics, the lowest among those working in oncology and psychiatry [3].

Due to the fact that medical workers are the key link in the provision of medical services to the population, the factors affecting their level of satisfaction should be studied and taken into account in building the correct management system both at the level of medical organizations and at the level of the healthcare system as a whole. The level of satisfaction of medical personnel directly depends on such indicators of the result of the provision of medical services as safety, quality service, patient satisfaction, as well as the quality of the relationship between a medical professional and a patient. In many countries, job satisfaction is measured by cognitive (evaluative), affective (or emotional), and behavioral components [5-7]. In addition, the rational use of the results of assessing job

satisfaction can be an excellent tool for increasing the efficiency of medical organizations, retaining the staff of medical and paramedical personnel and attracting new specialists [8,9].

According to studies, 50% of medical services are provided by nurses, and in some countries this figure reaches 80% [10]. It has been argued that happy employees are more productive and achieve better results than those who are unhappy with their work [10-12]. A study in the United States and twelve European countries found that a significant proportion of nurses in each country reported about inadequate quality of care, high nursing burnout, job dissatisfaction, and intention to leave their current positions [13]. According to a study conducted by Professor Golenkov, among nurses who chose the profession independently and consciously, job satisfaction was 86%; among those who made a decision about a profession on the advice of relatives and friends - 76%. The nurses, whose choice was random, reported almost complete dissatisfaction with their work. In the group of nurses who were satisfied with their work, such indicators as financial situation, self-development, achievements, spiritual satisfaction, as well as professional life, family life and social life were significantly higher than in the group of employees who were dissatisfied with their work [3].

Widespread worldwide tendencies in national health systems are a steady growth of an aging population, a high prevalence of chronic diseases and an increase in the cost of their treatment, an increase in the incidence of various etiologies, especially among the poor. In this regard, special attention has begun to be paid to a healthy lifestyle, disease prevention, replacing inpatient care with outpatient care or replacing doctors with nurses [14-16]. All of these factors are prompting countries around the world to create a new modern model of nursing, including the introduction of such a new specialty in primary care as the nurse practitioner, who is an autonomous, licensed, registered nurse whose work is aimed at making an initial diagnosis, prescribing an appropriate treatment and prevention of diseases [17,18]. In the United States, where nurses see patients and prescribe treatment on their own, it was found that the quality of care among adults has improved, nursing satisfaction has increased, health care costs have decreased, and the use of emergency care has decreased [19].

In the Republic of Kazakhstan, an active reform of the nursing service has been carried out in recent years, including increasing the role and status of nurses in the treatment and diagnostic process, introducing clinical nursing guidelines and standard operating procedures, increasing the potential of specialists working in the industry and introducing new positions for nursing specialists - nurses extended practice, chief nurses (deputy chief physicians for nursing). So in 2014, the training of nurse practitioners was launched for the first time as a pilot project within the World Bank Project. This is a comprehensive project that covers all aspects of the implementation of this new model, starting with student education, employment and subsequent monitoring of their performance [20]. Since this new model of nursing service was introduced relatively recently, there is a need for constant monitoring of the level of knowledge, skills and study of nurses satisfaction level in general, as well as the implementation of a new reform of nursing, including the identification of factors influencing the satisfaction of nurses with

their work. The aim of this study is to investigate the overall level of satisfaction with the work of nurses, and in particular with regard to the implementation of the new reform of nursing, as well as to identify the factors influencing the satisfaction of nurses.

Materials and Methods

To achieve this goal, the method of analytical cross-section open uncontrolled study was chosen. In order to comprehensively assess the effectiveness of the nursing service reform, in the Republic of Kazakhstan, the authors have developed a unique questionnaire to study the satisfaction of nursing staff with their work and their attitude towards the new nursing reform. This questionnaire was reviewed and approved by the Expert Council of the Republican Center for Health Development (hereinafter - RCHD). The survey consisted of 26 questions and was posted on the Survey Monkey online platform. A link to the online questionnaire was sent to 49 medical organizations involved in the implementation of the new model of nursing (pilot organizations).

Nurses with Technical and Vocational Education (TVE), academic bachelor's and applied bachelor's degrees, of any gender and nationality, over 18 years old, working in pilot medical organizations of the Republic, with good mental and physical health, were invited to participate in the survey. The exclusion criteria for participants were those under 18 years of age and those who did not wish to participate in the study, since participation in the study was voluntary. 468 nurses from 49 medical organizations of the Republic participated in the survey. The coverage of responses was 100%.

STATA statistical package version 14.2 was used to analyze the data. Univariate analysis for both explanatory and outcome variables were conducted using descriptive statistics. Bivariate analysis for categorical explanatory variables and outcome variable was performed with Pearson's Chi-square test and the Fisher's exact test.

Results

Characteristics of Participants

According to Table 1, survey participants were mainly represented by hospital nurses (n = 267, 57.05%) and senior nurses (n = 56, 11.97%). Some respondents marked the answer option "other" (n = 68, 14.53%), where the following answers were indicated: infection control nurse, laboratory assistant, medical statistician, masseur and secondary school nurse. During the distribution of respondents by specialties, it was revealed that most of them are nurses with a TVE education (n = 435, 92.9%), and the smallest number of respondents have a master's level in nursing (postgraduate) (n = 2, 0.43%). Most of the respondents reported that they have more than 10 years of work experience (n = 251, 53.63%). Many of the participants do not have qualification categories (n = 212, 45.30%). However, the share of respondents with the highest category was 36.32% (n = 170). According to the answers of the respondents, almost half of them take advanced training courses, participate in seminars, master classes in their specialty every year (n = 221, 47.2%). However, none of the descriptive data is statistically significant, which suggests that nursing satisfaction is not related to job title, specialty, and length of service, category, and professional development.

In terms of other questions, 80.34% (n = 376) of respondents

Table 1: Descriptive information of the general data of the survey participants and bivariate analysis with Chi-square tests and Fisher's exact test.

Variables	N (all=468)	Frequency, %	P-value
Position, N (%)			
Chief Nurse	13	2.78%	0.611
Senior nurse	56	11.97%	
Hospital nurse	267	57.05%	
Outpatient nurse	37	7.91%	
GP nurse	27	5.77%	
Other	68	14.53%	
Specialty, N (%)			
Nurse (TVE)	435	92.9%	0.166
Applied Bachelor of Nursing	18	3.85%	
Bachelor of Nursing	13	2.78%	
Master of Nursing	2	0.43%	
Work experience, N (%)			
Less than 1 year	43	9.19%	0.102
1-5 years old	95	20.3%	
6-10 years old	79	16.8%	
Over 10 years	251	53.63%	
Category, N (%)			
No category	212	45.3%	0.150
2 nd category	26	5.6%	
1 st category	60	12.82%	
Highest category	170	36.32%	
Training, N (%)			
2 or more times a year	71	15.2%	0.456
Annually	221	47.2%	
Every 2-3 years	176	37.6%	
Do not pass	0	0%	

Table 2: Bivariate analysis with Chi-square tests and Fisher's exact test.

Variables	Mean ± SD	CI 95%	P-value
Position	3.59±0.086	3.42; 3.76	0.611
Work experience	3.14±0.048	3.05; 3.24	0.166
Education	1.11±0.019	1.07; 1.15	0.102
Category availability	2.40±0.063	2.28; 2.53	0.456
Attendance at courses, seminars	2.12±0.048	2.02; 2.21	0.150
leadership support	1.30±0.033	1.24; 1.37	0.000
Professional growth opportunity	1.88±0.015	1.85; 1.95	0.000
Participation in organizational decision making	1.81±0.018	1.77; 1.85	0.000
Measures to be taken in case of medical error	1.61±0.042	1.52; 1.69	0.000
Openness and availability of managers	1.96±0.009	1.93; 1.97	0.006
Praise from doctors	2.35±0.036	2.28; 2.42	0.000
Support from more experienced nurses	1.14±0.019	1.10; 1.18	0.000
Support from doctors	1.35±0.031	1.29; 1.42	0.000
Profession prospects	1.91±0.060	1.79; 2.03	0.000
Attitude towards reform: workload	2.01±0.058	1.89; 2.12	0.029
Attitude towards reform: career growth	2.41±0.057	2.30; 2.53	0.000
Attitude towards reform: competence	1.99±0.034	1.93; 2.06	0.000
Availability of standards	3.19±0.055	3.09; 3.31	0.000

noted the support of the management of their medical organizations in striving for professional growth, 15.39% (n = 72) indicated a rare support and 4.27% (n = 20) lack of support. 11.75% (n = 55) of nurses answered "no" to the question about the possibility of professional growth of nurses in their organizations, and 88.25% (n = 413) gave a positive answer. Among the reasons for the impossibility of professional growth were indicated the lack of conditions for

the growth and support of colleagues, a limitation in career growth after the post of a senior nurse. 54.91% (n = 257) of the respondents answered that they do not need additional training in certain types of competencies, however, 45.05% (n = 211) answered that they need and indicated the options as emergency care, work with ultrasound and X-ray machines, learning additional languages, management, massage courses and so on. To the question "Does your organization's nursing staff participate in organizational decision-making?" 18.59% (n = 87) of nurses answered "No", as chief nurses mostly make decisions, 81.41% (n = 381) answered "Yes". In response to the question "In the event of errors made by nurses, what measures does the management take?" 58.55% responded that they use measures to train nurses, 26.50% indicated "punishment" depending on the severity of the error and 11.32% indicated that they were limited to criticism, 3.63% chose the option "Other" and noted such measures as explanatory letter, reprimand, etc. 95.73% (n = 448) of the respondents determined that nursing executives are open and accessible to nursing staff, 4.27% (n = 20) gave a negative answer. According to the results, nurses very often receive praise and recognition from the medical staff and administration in 14.53% (n = 68) of respondents, often in 41.61% (n = 195), not very often in 38.03% (n = 178) and almost never received by 5.77% (n = 27) of the respondents. Some respondents indicated that in their organizations there is no such thing as praising a young employee. 88.03% (n = 412) of young nurses always receive support from older, more experienced nurses on work issues, while 11.33% do not always, and 0.64% mostly do not receive support, but they did not indicate any reasons. In terms of the question of support of young nurses by medical doctors, administration regarding work issues 73.50% (n = 344) gave a positive answer, 19.87% (n = 93) answered "not always", 3.85% (n = 18) "mostly no", 2.78% said they do not support. 47.86% of respondents suggest the introduction of effective professional development programs for working specialists as an example of changes in nursing work, while 24.79% noted the option "introduction of effective motivation mechanisms", 15.81% - "revision of the nurse's functionality" and 9.83% - "implementation of the principles of evidence-based nursing practice". Also, when asked about satisfaction with the prospects of the nursing profession, 56.62% of respondents indicated the answer option "Yes", 18.59% noted "More likely yes than no", 10.04% - "More likely no than yes", 5.98% answered that they were not satisfied and 8.76% found it difficult to answer. 60.68% (n = 284) of nurses believe that their profession is prestigious, 17.74% (n = 83) answered "rather yes than no", 10.04% indicated that "more likely no than yes", 7.48% noted that their profession is not prestigious, 4.06% found it difficult to answer this question. To the question "Taking into account the positive and negative aspects of your work, in general, to what extent are you satisfied with the work in your medical organization?" respondents answered as follows: 25% (n = 117) - "Completely satisfied", 29.70% (n = 139) - "More likely to satisfy than not", 27.14% (n = 127) - "Partially satisfied, partially not", 7.26% (n = 34) - "Rather not satisfying than satisfying", 4.49% - "Not at all satisfied" and 6.41% - "Difficult to answer". The importance of incentives for high-quality and conscientious work of nurses was mainly distributed as 20.51% (n = 96) - social importance, responsibility to patients and their relatives when performing work; 14.96% (n = 70) - recognition in the professional community; 13.46% (n = 63) - professional results that lead to an increase in earnings; 13.03% (n = 61) - salary; 12.82% (n =

Table 3: Multiple logistic regression results.

Variables	aOR	CI 95%	P-value
Openness and availability of managers	0.23	0.14; 0.32	0.000
Profession prospects	0.11	0.03; 0.19	0.008
Participation in organizational decision making	0.09	0.01; 0.17	0.040
Professional growth opportunity	0.44	0.15; 0.73	0.003
leadership support	0.46	0.12; 0.79	0.007

60) - recognition by colleagues at work. 77.56% (n = 363) believe that nursing staff should be assigned a special status, however 12.61% (n = 59) answered that a special status will not affect the quality and results of work, and 9.83% found it difficult to answer this question. 63.03% of respondents noted that there are sufficient conditions for career development of nurses today, whereas 20.73% indicated that career growth of nurses is practically impossible and 16.24% of nurses found it difficult to answer. To the question "How exactly did the nursing reform in Kazakhstan reflect in your work in terms of workload?" 58.12% (n = 272) noted an increase in work, 5.56% (n = 26) replied that there was less work, for 13.89% (n = 65) this was not reflected in any way, and 22.44% (n = 105) believe that the degree of their workload is not related to reforms. To the question "How exactly did the nursing reform in Kazakhstan reflect in your work in terms of career growth?" the respondents' answers were distributed as follows: "I had an opportunity / desire to improve my job position" - 37.18% (n = 174), "It has become more difficult to grow in career plan" - 10.9% (n = 51), "Not was reflected" - 25% (n = 117), "My career / promotion has nothing to do with reforms" - 26.92% (n = 126). To the question "How exactly did the nursing reform in Kazakhstan reflect in your work in terms of raising your status?" the following answers were given: "My status has improved" - 27.35% (n = 128), "It was not reflected in any way" - 45.51% (n = 213), "Difficult to answer" - 27.14% (n = 127). To the question "How exactly did the nursing reform in Kazakhstan reflect in your work in improving your professional skills (competencies)?" 50.43% (n = 236) indicated that they had more learning opportunities, 16.45% (n = 77) believe that their skills have remained the same and 33.12% (n = 155) believe that they undergo only routine training in accordance with the professional development plan. 27.56% (n = 129) of respondents noted that in their activities new standards of nursing services (guidelines, standards of operating procedures, algorithms of action, etc.) were not introduced and, accordingly, do not affect their activities, however, in their opinion they are very necessary. New standards for nursing services were introduced in the work of 7.91% (n = 37) nurses, but they do not use them, while the majority, namely 64.53% (n = 302) of respondents indicated that the standards have appeared and are already actively used in the workflow. In estimating the relationship between outcome variable and independent categorical variables that have more than five observations in each category, the Pearson's Chi-square test, was used. Fisher's exact test was used for bivariate analysis of categorical variables with less than five observations in each category and outcome variable (Table 2). As a result, all variables except position, work experience, education, category availability and attendance of courses or seminars were statistically significant (p-value=<0.05) and included in the multiple logistic regression model for further research (Table 3). In the end, five independent variables (openness and availability of managers, profession prospects, participation in

organizational decision making, professional growth opportunity and leadership support) were included in final model. All variables were statistically significant predictors of outcome variable.

Discussion

According to the findings, more than 80% of nurses have the opportunity for professional growth and the organization's leadership supports their efforts in this. Also encouraging is the fact that more than half of the respondents identified additional training as a management measure undertaken in the event of errors in the activities of nurses. Nurses receive more praise and support from senior and head nurses (96%) than from medical staff (56%). Social relevance, recognition in the professional community and professional results that lead to higher earnings were identified by nurses as significant incentives for high-quality and conscientious work.

According to the results of this study, more than 80% in the studies carried out in the Russian Federation, low wages are considered as one of the main factors of dissatisfaction with work, and the need for high earnings is the leading motivational factor. According to Norwegian nurses, solidarity and cooperation with colleagues is more important than salary for job satisfaction and motivation to stay in the profession. In addition, working conditions, the profile of the health care facility (hospital, semi-hospital, and outpatient clinic), shift (day or night) play a positive role. Stress indicators directly correlated with job satisfaction, as well as its component indicators of the manager's professional competence, salary and career opportunities. Nurses have the opportunity to grow professionally and the leadership of the organization supports their efforts in this. Also encouraging is the fact that more than half of the respondents identified additional training as a management measure undertaken in the event of errors in the activities of nurses. Nurses receive more praise and support from senior and head nurses (96%) than from medical staff (56%). Social relevance, recognition in the professional community and professional results that lead to higher earnings were identified by nurses as significant incentives for high-quality and conscientious work [21].

In accordance with the results of our study, with the introduction of a new reform of nursing, 50% of nurses have a desire to improve their knowledge and skills, 37% have a desire and opportunity to improve their positions. However, after the introduction of the reform, more than 58% of nurses report an increase in workload and no change in status. Over 20% of nurses are not satisfied with their profession and its prospects and consider it not prestigious. According to the results of other similar studies carried out in foreign countries, the following consequences of dissatisfaction of nurses with their work in the long term were revealed: unrest among medical personnel, absenteeism, a decrease in a sense of responsibility, efficiency and commitment to work. Also, lack of job satisfaction leads to medical and nursing errors, and other undesirable consequences. In addition, people who are not satisfied with their work have a reduced sense of self-satisfaction [22]. Lack of recreational facilities, such as listening to music and conducting corporate leisure activities, are another problem that prevents nurses from enjoying their work [23].

Lack of quantity and quality of nurses was another problem pointed out by the participants in our study. Labor shortages are

directly linked to increased workload, which clearly leads to job dissatisfaction. There are publications indicating that modern and appropriate medical equipment is one of the most important factors in the provision of effective care, and its absence can lead to interruptions in work, delays, lack of care and emotional exhaustion of staff [24-25].

Workplace stressors are common and unavoidable. Research has shown that there is a significant negative relationship between nurses' job satisfaction and their job stress [26,27]. Constant communication with patients, taking responsibility for human health, performing clinical processes, working with difficult patients and emergencies, shift work are all stressful occupational factors that can reduce the quality of patient care in medical institutions, especially when caring for patients with depression, fatigue and delays in work [28].

In contrast to our study, which did not show an association between seniority and nursing satisfaction, other studies found that older health care professionals (61 to 70 years) had the highest satisfaction rates, with statistically significant age differences in seven of the 17 aspects of job satisfaction assessed. Age-related aspects of job satisfaction included the relationship between management and workers, the possibility of promotion, job changes, the variety of tasks performed at work, job stability, educational opportunities, and overall satisfaction [29]. According to Golenkov, employees with more experience have higher indicators of creativity, and the sphere of life associated with professional activity is especially important for them [21].

Based on the results of our research, we assume that the desire to learn and gain more experience gives young professionals a more positive outlook on certain aspects of their work. These same aspects of work lead middle-aged workers to express dissatisfaction. Likewise, the greater experience of older professionals in many cases allows them to better adapt to the job, and their experience also gives them a more objective perspective on aspects of the work that others are dissatisfied with (for example, their relationships with managers and colleagues, working methods hospitals). Higher-educated nurses are more satisfied with their jobs than lower-educated nurses. Satisfaction was lowest in terms of pay, management gratitude and trust, involvement in decision making, concern for employee welfare, career advancement and leadership opportunities, and the highest in job and peer satisfaction. Similar results were obtained by Sveinsdottir et al, who showed that nurses are most satisfied with their peers and head nurses and least satisfied with their career opportunities and pay [30].

Other studies also included other factors such as leadership style, nursing autonomy, creativity, etc. For example, Li et al found a positive correlation between nursing job satisfaction and group cohesion in the workplace. It was also reported that higher job satisfaction as a nurse was associated with people- and relationship-centered leadership style, nursing autonomy, control over their practice and nursing leadership in the department, and the emotional intelligence of leaders [31].

According to the results of our study, job satisfaction was associated with indicators of opportunities for professional growth, support and gratitude from management, participation in organizational decision-making. Lorber and Savic found that nurses

in Slovenian hospitals wanted to be involved in decision-making and goal setting, as well. It was also noted that doctors and nurses rate the level of their personal participation as low and indicated a lack of involvement in work teams [32].

Strengths of this study: the magnitude of the research (conducted throughout Kazakhstan). Limitations: the impossibility of determining causality due to the peculiarities of the study design.

Conclusion

Opportunities for professional growth, support and gratitude from the management, participation in organizational decision-making, the prestige of the profession and attitude to the profession, job satisfaction is directly related to the satisfaction of nurses ($P < 0.05$).

With the introduction of the new nursing reform, it is expected that the nursing system in Kazakhstan will meet the international level in accordance with the needs of modern healthcare to improve the quality and efficiency and safety of healthcare in the Republic.

It is very important to coordinate the work on reforming nursing at the level of local executive bodies and regional health departments, the activity of professional associations of nursing specialists and support for reforms from departmental organizations to effectively promote the activities of extended practice nurses. There is also a need to continue work on informing the population in this direction using all available methods, including widely using the websites of medical educational organizations, social networks and all media.

For future research, it is recommended to conduct qualitative research in the form of interviews on nursing satisfaction in order to obtain deeper, more transparent information.

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