



SYSTEM ANALYSIS OF THE LEVEL OF TRAINING OF POSTGRADUATE EDUCATION OF SECONDARY MEDICAL PERSONNEL

Usmanbekova Gulmira Kadirbekovna

Head of the Department of advanced training of secondary medical workers of the Tashkent State dental Institute
Tashkent, Uzbekistan

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Abstract:

New medical technologies and modern development of medical science, which determine the need for systematic postgraduate training, are considered. So far, there is no scientifically grounded technology for the implementation of continuing medical education and the motivation of nursing staff to systematic advanced training has not been studied. The article presents the opinion of experts regarding independent education in specialty of middle medical personnel and analysis of motivation to systematic advanced training.

Keywords: nursing staff, postgraduate training, system, motivation.

RELEVANCE OF THE STUDY. One of the most important components of any country's health system is nursing. The tasks set by the country's leadership for the healthcare system largely depend on the qualifications, professional skills, creativity and entrepreneurial qualities of medical personnel. Reforming the healthcare system, in particular the entire system of postgraduate education of secondary medical personnel – is not a fashion statement, but a time requirement due to various reasons, including personnel problems related to the existing conditions of social development of society, the lack of material incentives, conditions for professional development and career growth, and a decrease in the prestige of the profession in society. As a result of the development and implementation of the latest innovative technologies, the requirements for both the level of knowledge of secondary medical personnel and the acquisition of new competencies have increased. Today, a nurse of modern dental office should not only know, but also have the skills to work with modern equipment, have an idea of personal responsibility when conducting medical manipulations. All this requires an in-depth comprehensive study of the activities of secondary medical personnel of dental institutions and the development of scientifically based recommendations for improving the quality and efficiency of their work. And research to a certain extent serves the fulfillment of tasks, the Decree of the President of the Republic of Uzbekistan dated May 6, 2019 No. PP-4310 "On measures for further development of the system of medical and pharmaceutical education and science", the Decree of the President of the Republic of Uzbekistan dated April 7, 2020 No. PP-4666 "On measures for the introduction of a completely new system of training and continuous professional development development of personnel in the medical and sanitary sphere", as well

as in other regulatory documents adopted in this area. The conducted medical and social studies made it possible to more objectively and fully assess the quality indicators of postgraduate education, the effectiveness of its implementation, to identify the strengths and weaknesses of this process in order to optimize it in the process of training specialists of secondary medical personnel of dental clinics.

The aim of the study is to analyze the shortcomings of the educational process of continuous and continuous professional development courses for middle-level employees of medical institutions of dental profile at the postgraduate level;

Materials and methods - ofresearch-710 secondary medical personnel (including 504 medical personnel of dental (therapeutic, surgical and orthopedic) departments and 204 dental technicians) were selected as the subject of the study, as well as 317 experts: chief physicians and department heads-38 people, teachers of advanced training courses-37 people, dentists – 242 people working in dental institutions in Tashkent, Samarkand, Bukhara, and Surkhandarya regions. The subject of the study was institutions that carry out postgraduate education of employees of the secondary medical level of the health care system. Research methods. In the process of conducting scientific research, the following methods were used: statistical, social and hygienic methods based on the basic principles of evidence-based medicine.

RESEARCH RESULTS. According to the data of the Ministry of Health of the Republic of Uzbekistan for 2010-2020 revealed, a significant dynamic of changes in the personnel component of the entire system of secondary medical personnel among the population of our state was revealed (Table 1).



Table 1.

Personnel structure of secondary medical personnel of dental institutions for 2014-2020. (per 10,000 population)

Indicators	2014	2015	2016	2017	2018	2019	2020
Number of nursing staff	103.4	102.6	102.4	101.3	101.6	103.6	102.8
Number of dental technicians	0.32	0.36	0.30	0.34	0.38	0.41	0.45

An analysis of the dynamics of the population's provision with nurses, as well as indicators of the ratio of doctors to secondary medical workers in the period from 2014 to 2020, showed the presence of a reliably positive trend in the current personnel policy in the republic. If in 2014 practitioners there were an average of 2.31 mid - level medical workers per medical practitioner, then in 2020 there is a significant increase in the number of doctors, it was 3.23. The monitoring of the ratio of doctors to nurses has significantly improved.

The activities of secondary medical personnel are subject to increased requirements, which are taken into account in the search for new approaches to improving the quality and optimization of their work. It should also be emphasized that as of January 1, 2020, the provision of residents of our republic with secondary medical personnel is 100%.

I would like to note another aspect of improving the quality of training of secondary medical personnel, this is the tendency to increase the share of medical workers in order to improve their professional competencies: in 2014, this indicator was $66.4 \pm 0.25\%$, while in 2019 it reached $72.1 \pm 0.24\%$, which indicates a positive desire of secondary medical workers they need to improve their competence. On the other hand, the share of unskilled nurses remains high ($33.6 \pm 0.25\%$ in 2014 and $27.9 \pm 0.24\%$ in 2019) (Figure1).

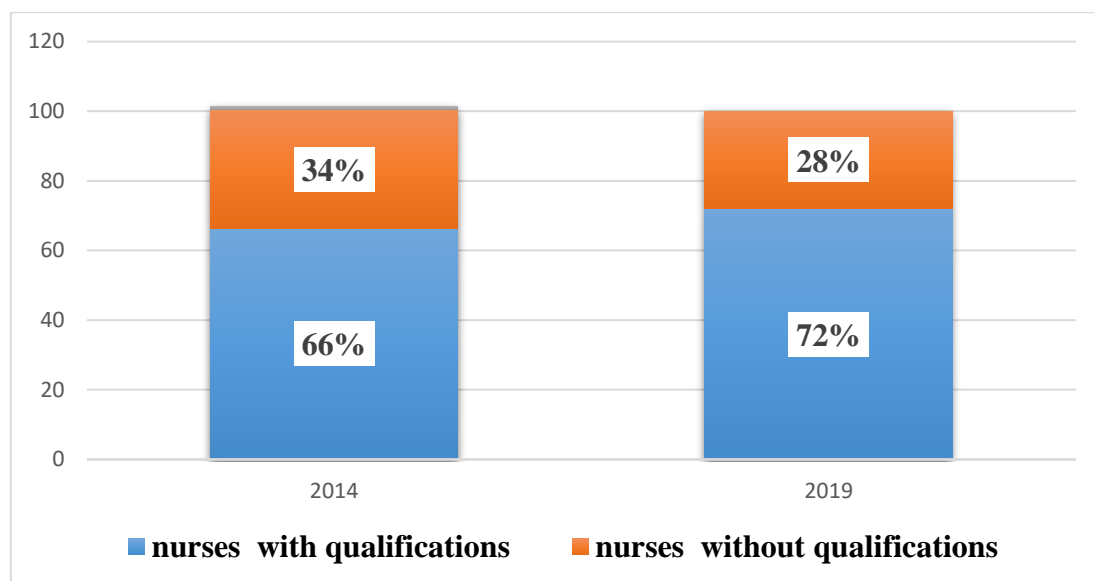


Figure 1. Distribution of SMR according to qualification categories

As you can see, today it is necessary to work out measures, develop new approaches to improving the skills of middle-level medical staff, and do not discount the increase in the influx of young specialists without certain qualification categories. All this confirms our data on the need for postgraduate training and additional training of medical staff.

A sociological survey of nurses of dental institutions (710 respondents) using a specially developed questionnaire made it possible to create a medical and social portrait of the nursing profession. The average age was 37.0 ± 2.1 years, the majority of respondents were women ($97.9 \pm 0.7\%$). The results of the analysis of marital status showed that more than half of the senior medical staff members are married ($68.19 \pm 1.62\%$), divorced – $4.25, 25 \pm 1.26, 26\%$, widows - $5.0 \pm 0.9\%$, about $25.0 \pm 1.7\%$ of respondents have never been married (Figure2).

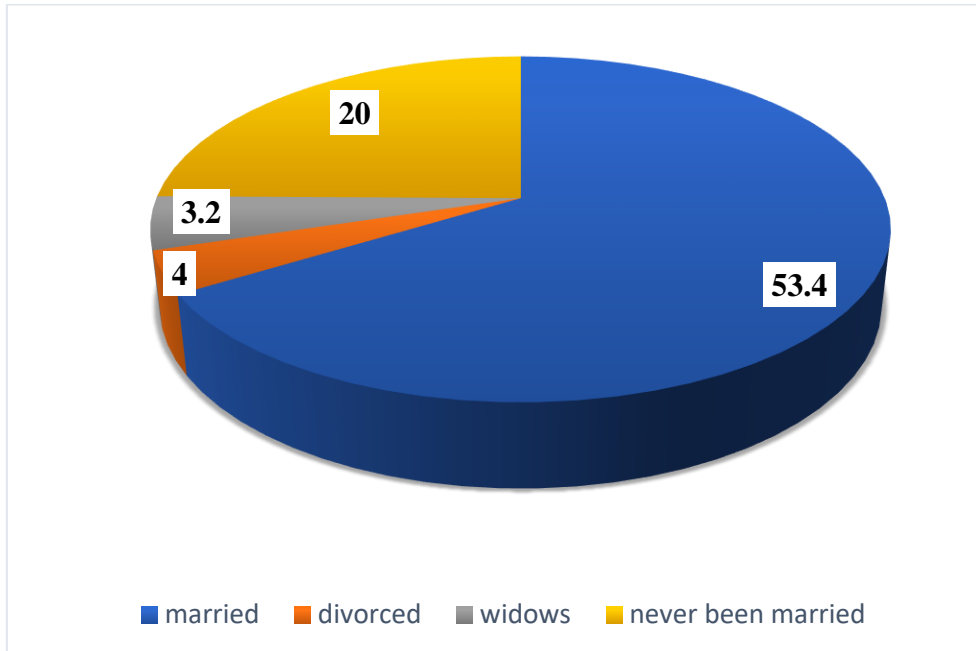


Fig. 2. Results of the survey on the question of the marital status of the SMR

The majority of respondents had children, while in $42.3 \pm 1.81\%$ of cases they had one child; two children- $20.7 \pm 1.3\%$; three or more children have about $2.0 \pm 1.14\%$ of respondents; about $29.6 \pm 1.77\%$; only $4.1 \pm 0.6\%$ refused to answer this question (Figure 3).

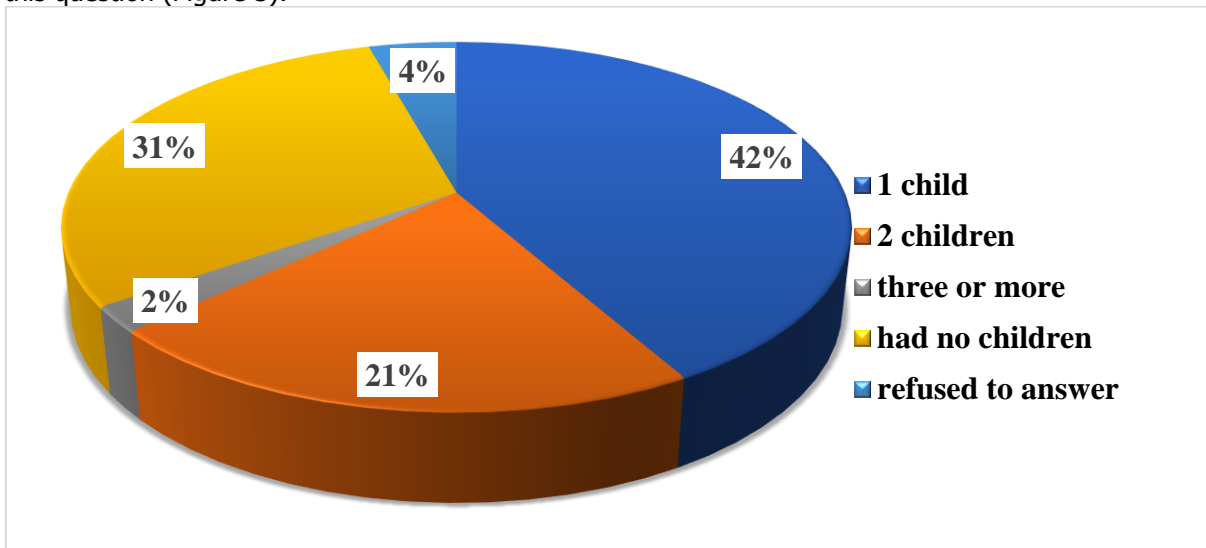


Figure 3. Results of the survey on children with disabilities

According to a number of sociological studies, the attractiveness of working with secondary medical personnel is determined by many factors, such as a favorable level of general income, good wages, social protection measures, income from providing paid services, etc.

The analysis of respondents' answers to the question "Are you satisfied with your salary?" showed the following: as it turned out, only about $46.1 \pm 1.0\%$ of respondents are satisfied with the salary received, against $54.1 \pm 1.0\%$ of the total number of respondents who are not satisfied. This leads to the conclusion that the majority of patients are not satisfied with the salary of their work activities (Fig. 4).

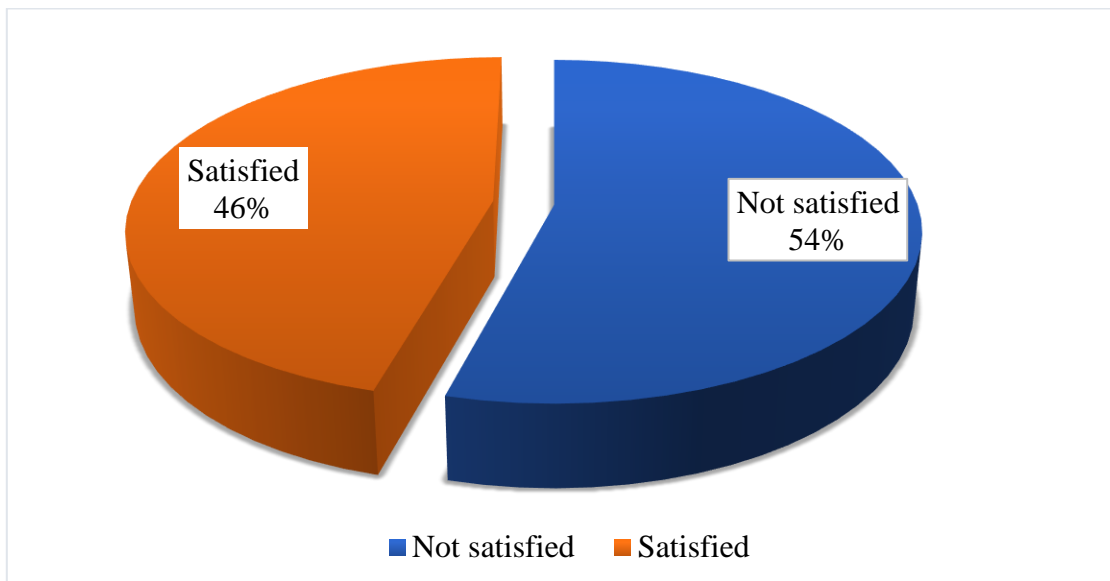


Figure 4. Respondents' responses about the salary received

In the survey of respondents "Do you like your profession?" half of the respondents (48.5±2.1%) said that they liked their profession, 40.3±2.1% said that they could not answer clearly, 8.7±0.7% said that they did not like their profession, and 2.5 ±0.5% were indifferent to their profession (Figure5).

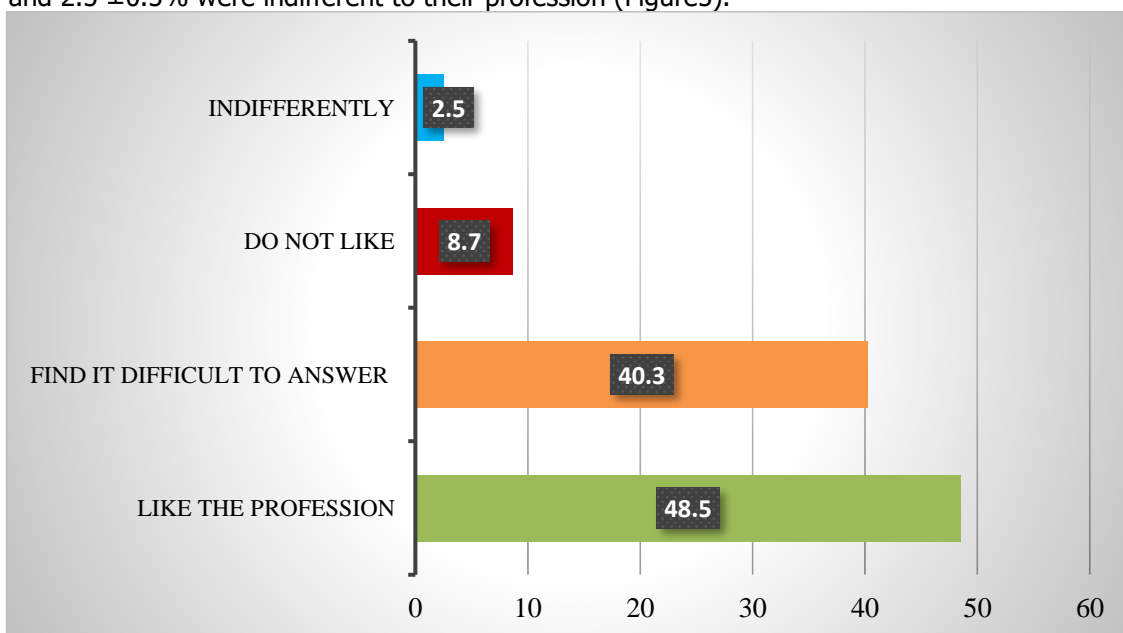


Figure 5. Distribution of respondents' responses regarding their profession

To the question "Would you like to work in another profession now?" only 12.1±1.4% of respondents answered positively, 49.3±2.1% found it difficult to answer, 37.6±2.1% of respondents wanted to stay in their profession.

When assessing the state of health, the respondents gave only a subjective assessment of their state of health, as can be seen from the answers, only 8.38±0.67% of respondents indicated the complete absence of diseases, the presence of good health, 48.7±2.1% of respondents have good health and rare colds, 20.9±1.7% of respondents have satisfactory health and fairly frequent cold sand 15.0±1.5% of respondents are constantly in poor health and have a history of chronic diseases.

At the same time, according to a number of authors, currently not enough attention is paid to the processes of developing scientifically based work standards, because depending on the changing working conditions of health facilities, the introduction of new medical equipment, it is necessary to constantly review all existing standards.



Another interesting fact is that according to the absolute majority of respondents, there was an increase in the total amount of work performed, respectively, and the overall workload ($46.34, \pm 2.5\%$ and $48.22 \pm 1.9\%$, respectively). Respondents also note an increase in the occurrence of stressful situations both at work ($47.8 \pm 2.1\%$) and at home ($20.2 \pm 1.7\%$), all of which affects relationships with others, both with relatives ($7.5 \pm 1.1\%$), with colleagues ($5.8 \pm 1.0\%$) and patients ($3.2 \pm 0.6\%$), respectively.

The possibility of professional development and confidence in the future is considered in the concept of quality of working life due to the fact that the effective implementation of the employee's labor potential is impossible without his professional growth. The majority of average medical staff ($55.2 \pm 2.1\%$) believe that there are real incentives for professional development, a third are convinced that there are none ($38.1 \pm 2.0\%$), and $48.7 \pm 2.1\%$ have positive incentives for systematic professional development. The main measures that affect the quality of medical care are primarily financial incentives ($29.6565 \pm 1.44\%$), improvement of working conditions ($19.3232 \pm 0.90\%$), continuous professional development, obtaining new skills and a sense of responsibility for the results of work ($11.00 \pm 0.95\%$).

Table 2.
Comparative assessment of the educational process on PC cycles
(on a 10-point scale)

Estimated factor	Nurses	Dental technicians
Availability of theoretical knowledge	8.62±0.09	9.3232±0.11
Availability of professional competencies	7.90±0.2	8.46±0.16
Creation of an appropriate material and technical base for practical classes	8.1919±0.2020	8.4646±0.12
Professional qualities of teachers	9.1313±0.10	9.441±0.14
Introduction of an independent training system (evening, after work)	7.00±0.3	7.10±0.38
Ability to work with educational literature both in the institution and outside-	8.2525±0.1414	8.3232±0.77
Evaluation of clinical bases, including material and technical equipment	8.67±0.16	8.55±0.16
Indicator of premises for conducting training sessions	8.23±0.23	8.02±0.18
Potential not to lose the average salary of working labor	7.50±0.27	7.21±0.34
Ability to concentrate on the learning process	8.31±0.18	9.00±0.16
Total scores of points	9.0±0.11	8.88±0.12

Note: * - significance of differences ($P < 0.05$)

Thus, all SMRs noted a high level of teacher training (9.0 points or more) in the admission cycle. According to the cycle, a high level of theoretical training, appropriate equipment of classrooms, clinical bases for acquiring new competencies, a sufficient fund of educational literature, etc. was noted. As a rule, representatives of the secondary medical staff who have insufficient practical experience rate the training opportunities higher than those of a more qualified SMR (Table 2).

Table 3.
Assessment of distance and inpatient training by nurses and dental technicians (on a 10-point scale)

Estimated factor	Nurses (n=504)		Dental techniques (n=206)	
	Dist.Stat cycles	Static cycles	.Dist cycles.cycles	of Stat. cycles
Theoretical knowledge	9,5±0,3	7,6±0,2	9,2±0,19	7,3±0,1
Proficiency in practical skills	4,8±0,3	8,6±0,2	4,5±0,48	8,4±0,1
Material and technical base for conducting classes	9,2±0,2	6,5±0,1	9,3±0,3	6,2±0,1
Level teachers knowledge level	9.1±0.1	8.7±0.1	9.1±0.15	8.1±0.2
Availability of educational literature	9,6±0,2	5,5±0,2	9,2±0,34	5,4±0,2



Ability to concentrate on the learning process	6,8±0,2	8,1±0,1	6,7±0,2	8,0±0,2
Amount of points	8,2±0,2	6,9±0,1	7,9±0,2	7,2±0,2

Note: * - significance of differences ($P < 0.05$)

Among the significant factors, students noted the financial benefits of distance learning cycles both for the dental institution and for the trainees themselves, while the work/study balance on distance learning cycles was considered as a negative factor. Opportunities for practical skills and general clinical training are also significantly reduced in distance learning cycles.

During the survey, all students noted a high level of training of teachers on cycles (9.1±0.1-medical nurses, 9.1±0.2-dental technicians). It is noted that the cycles have a higher quality of theoretical training (9.5±0.3-medical nurse, 9.2±0.19-dental techniques), practical skills (4.8±0.3 –nurse, 4.5±0.48 – dental techniques). All participants noted the extremely high level of material and technical resources used in remote cycles (9.2±0.2-medicalcare of the nurse, 9.3±0.3-dental techniques). According to the cumulative scores, all students perceived the form of training on distance cycles as more preferable than on stationary ones: 8.2±0.5 and 6.9±0.1, respectively, for the nurse, 7.9±0.2 and 7.2±0.2 – dental techniques (Table 3.).

Analysis of the survey data of students who were trained in the PCSMR sector allowed us to draw the following conclusion: comparing the two forms of training (stationary and remote cycle), it was found that all SMRs of various directions prefer training in the remote cycle.

Thus, the results of the conducted sociological survey, analysis of the opinions of both experts and participants of the educational process themselves showed the need to reorganize and improve the entire system of organizing training, retraining and advanced training of secondary medical workers in accordance with the needs and trends in practical healthcare.

CONCLUSIONS: According to the results of the study, it is established that the existing system of organization of postgraduate training of secondary medical personnel has a number of significant shortcomings, while only every third medical worker is partially satisfied with it or does not suit at all. Consequently, it is necessary to modernize the system of advanced training of middle-level specialists, especially dental specialists, and create various forms of professionally oriented training based on the principles of continuing medical education.

The optimized model of organization of postgraduate training of secondary medical personnel on the basis of medical universities and multidisciplinary health care institutions was developed on the basis of the results of a questionnaire and sociological survey and an assessment of the quality of the current system of advanced training of secondary medical personnel.

The implementation of the program of an optimized model of postgraduate training for dental assistants and dental technicians contributes to improving the level of professional competencies, regardless of the basic level of qualification category and work experience.

The article defines the forms of implementation of the optimized model of postgraduate education of dental specialists on the basis of a funded system in the form of advanced training in accordance with the individual educational plan of professional development of a medical worker, as well as by accumulating academic credits.

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