Changing the institution of the family doctor in Kazakhstan: the experiences of medical staff and mentors of residents

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Abstract

Background

At this point in the health care reform process in Kazakhstan, it is very important to fully implement Data Driven Management methods. However, there is a lack of scientific evidence on how this reform, as well as the family doctor’s professional mission and training standards, are perceived by medical practitioners themselves. The study is aimed at revealing the opinions of medical practitioners about primary health care reform and the family doctor’s professional mission and training standards.

Methods

An interview was used as the qualitative research method in this study. Data from the Kazakhstani focus group research on the family doctor’s professional mission and training standards. The interviews were conducted in four focus groups with experienced health professionals and nurses from Kazakhstan medical institutions where residents do their internships. Each interview group had 8–10 informants.

Results

As a result of the study, a generalized content and categorization of the subjective perceptions of health professionals were obtained, reflecting their views on the reform of the primary health care sector and on the role of the family doctor and other health professionals.

Conclusions

Health professionals in Kazakhstan escalate important problems of modern health care and professional development, as well as the interaction of health professionals of different categories – family doctors, specialist doctors and nurse practitioners. At the same time, some of the problems raised have a universal, international character, while others reflect the socio-cultural specificity of healthcare in the countries of the former Eastern bloc.

Background

In its historical beginnings, the medical profession was by no means a highly specialized profession. Academic university medicine only began to specialize seriously at the end of the 19th century. At the same time, the practicing doctor, especially in the periphery, stayed a general practitioner for a long time. In particular, he delivered babies, treated both infants and the elderly, and the mentally ill, dealt with infectious diseases, surgery and traumatology, and educated the public and patients about sanitation and hygiene.

Especially since the middle of the 20th century, highly specialized medicine has spread from university clinics to mass medical practice [1]. This gave rise to the development of modern primary care. Highly specialized medicine caused a significant and massive breakthrough in the quality of practical medicine.
and health care in general, contributed to an increase in life expectancy entirely, and at least partially restored health and quality of life to a large number of previously incurable patients. On the other hand, the highly specialized approach has, to a certain extent, accompanied the phenomenon where the narrow specialist loses perception of the integrity of the human body and treats the disease rather than the person. As an ideological counterbalance, holistic medicine, its philosophy and practice, emerged.

The modern professional well-being family doctor is a consistent representative of holistic medicine [2]. It is a mediator between the patient and the specialized clinic, a moderator and manager of the preservation of a person’s health, regardless of their social status and age. In all countries with a healthy population, there is usually a coherent primary care sector and a strong professional institute of family doctors. It is quite trivial that quality modern specialized medicine is expensive and heavily subsidized by public finances when resources are limited and the level of public expectations for the quality of services is constantly increasing. Statistics show that doctors-specialists are often and unreasonably overburdened with an excessive flow of patients whose problems can be successfully solved at the primary care level without any damage to their health. A strong and effective professional family doctor, on the other hand, means budgetary efficiency and considerably shorter waiting lists for appointments at specialized clinics. The exorbitant length of the respective waiting lists seems to be the most unattractive grimace of modern healthcare, even in countries with the highest social welfare levels. Another unattractive aspect of the modern healthcare model is worth mentioning [3]. In the subjective hierarchy of medical professions, the family doctor is at the bottom of the ranks. This is also reflected in the hierarchy of salaries of doctors of various specialties. This hierarchy is not entirely fair, as the first representatives of highly specialized medical practices were elite university professors. However, a successful family doctor requires deep holistic competence and the highest degree of personal responsibility.

Finding a reliable competence model of the already working family doctor is currently the most pressing scientific problem. The same should be said about finding an appropriate model of educational content in the university training of young family doctors and residents. Finding a coherent model of cooperation between different professionals is a major challenge [1]. This refers to a system of professional relationships based on the scheme: “the family doctor-the specialist doctor” and “the family doctor-the nurse.” 4 Between 2005–2010 year, the Republic of Kazakhstan began to introduce a modern model of health care and doctors’ training [5–7]. In this model, modern ideas about the crucial role of primary health care and the importance of the professional family doctor are prominent (World Health Organization & United Nations Children's Fund [8]. It is noteworthy that a similar reform-oriented attitude prevails in many countries of the former Eastern Bloc, including the Republic of Lithuania [9]. In this respect, multidimensional cooperation and exchange of experience are expanding between Kazakhstan and Lithuania.

At this point in the health care reform process in Kazakhstan, it is very important to fully implement Data Driven Management methods. However, there is a lack of scientific evidence on how this reform, as well as the family doctor’s professional mission and training standards, are perceived by medical practitioners themselves. The aim of this study and article is to highlight this issue within the framework of the
research project of the Ministry of Science and Higher Education of the Republic of Kazakhstan “Capacity Building for Medical Education and Research Technologies in Family Medicine in Kazakhstan”, Grant No. AR09260428. Some of its results have already been published [10].

Any social (broadly defined) reform takes place in a particular socio-cultural context and is sometimes significantly influenced by it. Best practice from abroad needs to be adapted cautiously, as direct implementation is sometimes risky. A study of the subjective perceptions, expectations, and criticisms of medical practitioners, using qualitative methods in particular, is therefore highly relevant.

**Methods**

**Research design and study participants**

The study involved a qualitative research design (focus group) to find out the opinions and experiences of survey participants [11] on the family doctor's professional mission and training standards. Participants of focus groups included the experienced health care practitioners from medical institutions in Kazakhstan, in which residents, studying in the “Family Medicine” program, are doing their internships. Four focus groups, consisting of informants – expert mentors and/or practice supervisors for the residents, were organized. Each focus group included 8 to 10 informants.

The main objective of focus groups included sub-topics such as (1) primary health care reform and (2) family doctor training and professional development. In line with the study aim experts including medical doctors and nurses were specially invited. They are mentors who take residents for internships in medical institutions. The purpose of this study was explained to experts and informed consent was obtained from all participants prior to the focus group discussions. Transcriptions were made anonymously by assigning random numbers to the transcripts. We have excluded identifying information from citations.

**Data collection and analysis**

Data collection was carried out between May and June 2022. Four 1 ½ h focus groups were held with each of the groups of informants. The focus groups were conducted using a semi-structured interview guideline, recorded and transcribed. Transcripts were analyzed using qualitative content analysis by software MAXQDA2022 [12, 13] The text was read several times to clarify the thematic lines/categories.

**Results**

The study of family doctor's professional mission and training standards as perceived by medical practitioners resulted in a total of eleven thematic categories [14, 15].

1. **Status-hierarchical Relationships Between Doctors And Nurses As A Demotivating Factor**
The focus group informants state the existing hierarchical relationship between a doctor and a nurse:

*There is no need to remind all the time “I am a doctor, you are a nurse”, if the doctor “pokes” all the time, no one will want to work.*

*Some doctors constantly tell the nurse: “know your place, you are a nurse.*

The nurses highlight that such relationship between a doctor and a nurse, occurring especially in communicating with young doctors, is sometimes unpleasant and even humiliating:

*But being reminded all the time that you are a nurse is humiliating.*

*There is a difference between older doctors and younger doctors. I think older doctors are better. For example, I am an experienced nurse, in some matters I can tell the doctor what to do, sometimes I say “it would be better, you can do it like that,” but young doctors do not even listen. They do not listen because the nurse is talking.*

2. Dysfunctional developments in planning the workload of doctors and nurses, fuzzy boundaries of the job description, and the problem of optimizing the workload

The excessive workload of family doctors is emphasized by the experts:

*There is too much work for one doctor: clinical examinations, disease management programs, vaccinations, tuberculosis and other tasks. Only person working as a doctor in a polyclinic knows this burden.*

*A family doctor’s list includes at least 1700 people, which is a huge a population. When there was pediatrics service the upper limit for one district was 800–900 children. Now we have 500 children under 6 years in one list, which is much for one pediatrician. Previously, infants, newborns, disorganized children were taken into account, but now it is not the case.*

*We are three nurses here, and on behalf of the nurses, I can say we are all busy. Everyone says nurses don’t do their work, nurses are so and so. But still, I myself meet with the nurses, and I myself sit from 8 o’clock in the morning until evening. We have patients and our door does not close.*

Moreover, focus group informants state the fuzzy boundaries of their job:

*There are many doctors, though they are short of time due to constant tension, examinations of patients and home visits. It is very hard for them.*

*A doctor sometimes doesn’t have time for training residents. Doctors should take residents with them to examine patients.*

*Due to the shortage of doctors, residents conduct appointments on their own. Or we ask them about the diagnosis they have put, how they will examine the patients further, how they will interpret the ECG and*
tests after the examination. They immediately open their gadgets and search. Well, let them at least read in class.

“The doctor now doesn’t know what to grasp: oncology, cardiology, children’s service.” Here the general practitioners refer to state programs and reports on the implementation of these programs.

The focus group informants’ suggestions for optimization of work includes the reduction of the family doctors’ patients list and making it well-defined in order to improve individual patient care throughout their lives:

Doctors in addition to conducting appointments must delve into the work of the site, draw up reports on the site themselves. Then, they will be more oriented in the work of the local doctor.

There should be more family doctors and not so that four or five thousand people were in one doctor’s list. A doctor can’t remember all families. It is necessary to somehow organize more doctors: one doctor for four houses with a decent salary for knowing the whole history and remembering what diseases can be expected in children.

3. The Dialectic Of Medical Specialization And Universality

Experts consider that general practitioners are responsible for all medical issues and should be competent to meet this demand:

Any inspector asks “why don’t you know cardiology, oncology, phthisiology? It is all primary health care – the field of a general practitioner”.

Young general practitioners come and want to observe children above 6 years old, though they should look children from 0 to 18 years old. It is clear that a general practitioner goes through a narrow specialization.

Family doctors should perform ECG and interpret the results themselves, but now they don’t know how to do that. Why don’t they teach spiography, cardiopulmonary resuscitation and issue certificates?

Some interviewees stress challenges of being the primary contact person for all medical issues despite the initial specialization:

General practitioners observe children from birth to the age of majority, there are sites where they have children from the age of six. It is challenging for a general practitioner to know all from the neonatal period to old age. I am a former pediatrician and it is easier for me to work with children. University graduates do not know children well. They treat children like adults.

General practitioners have to observe all without clear gradations: children, therapeutic, old, mental patients, drug addicts, tuberculosis patients. It is better to separate medical examination from the general
practitioners and transfer it to the specialized department and let them calculate percentages, detectability. We do some foolishness and then we are still surprised: why are our doctors so dumb and don’t know anything?

Health care practitioners indicate the importance of peer assistance and collaborative work:

In case I need assistance of course I appeal to peers. A family doctor is mostly focused on therapeutics and pediatrics, and there must be assistance.

General practitioners should have a close communication with narrow specialists. Therefore, the general practitioner must be informed in all areas in order to send a patient to a narrow specialist in time.

We have a “chamomile system”, that is a mutual referral of patients.

4. The Problem Of The Division Of Roles And Responsibilities Between Doctors And Nurses

The nurses interviewed perceive their work as an excessive responsibility, sometimes for the doctors’ issues:

Doctors’ responsibilities are on nurses now. Doctors only conduct appointments and are not interested in other issues – site, results of mammography, fluorography, as nurses write reports.

We have a program that doctors should run, and as they don’t have time, nurses write prescriptions. So, doctors think this is the nurse’s duty and send a patient to a nurse if he needs a prescription without examining the patient or changing the treatment.

Nurses consider that general practitioners should be more responsible in performing their duties:

Doctors should be responsible. Previously they knew names of their clinical patients, patients with disabilities and tuberculosis by heart.

The nurse should visit a newborn 3–4 times during the first month, whereas the doctor should visit the newborn twice, but they don’t go.

5. Doctors’ And Nurses’ Rights Are Not Adequately Protected

Most of the medical practitioners highlight that their rights at work are not at all protected and, thus, feel themselves vulnerable:

All reports of the site are required from nurses.
A patient sued a nurse for not wearing a mask and asked for 300,000 tenge for a moral damage. It would be good if the associations supported health workers.

"Now doctors are afraid of complaints, they are afraid of missing something."

There are complaints about work from morning to evening: there is no this or that, no doctors!

After all, we are not legally protected from anything.

We must create all 33 conditions so that a complaint does not go anywhere. Although a patient is not always right, we have an attitude that the client is right.

6. The Vocation, Competence, And Pedagogical Tact Of The Mentor

The doctors and nurses interviewed defined the qualities of a good mentor and doctor:

*Mentors must be educated and well-brought in order to pass on their knowledge to students in an accessible form.*

*A mentor must be a psychologist, sociable, confident, competent, able to work with students, demonstrate communicative competence, resistance to stress, tidiness and a professionalism.*

*Clinical mentors should develop positive qualities in residents and contribute to the development of their professional outlook.*

*The doctor must believe in himself so that he can answer any questions.*

*Doctors of the older generation are more confident and knowing.*

The informants stated the specific qualities that should be present in the study conducted by the doctors in clinical institutions, being the mentors and/or advisors of residents, and a mentor-resident relationship such as mutual respect, trust and honesty:

*Training of residents should be conducted without infringing on them. Doctors shouldn’t say: “What? Don’t you know this? How did you not study it?*  

*I tell students that I perceive them as doctors, so they need to behave like doctors. I turn my attention to their appearance, preparation for classes and behavior in front of the patient. I give a lot of advice in these areas.*

*There must be trust, honesty and chain of command between a mentor and a resident.*

7. Patient And Public Education
Health care practitioners indicate that the reform of the primary health care sector brought an unusual situation for the population. Roles of health care practitioners, to which the patients were used to, changed:

*It is necessary to change the consciousness of people, who are not ready for having a family doctor. They are used to the fact that on their first scandal and stomping their foot, narrow specialists will observe them and examinations will be carried out at their request.*

*The population has a dependent attitude and someone is always to blame. We need to convey to the population that their health is in their hands, make patients take care of their health themselves first.*

The focus group informants understand that a huge work should be undertaken with population, thus mastering family doctors’ professional competences is of high importance:

*Everyone knows within the scope of their knowledge, but it is our duty to teach and demand from patients when they come to the polyclinic.*

*We give information, go to television. To explain something to a patient, doctors must be literate. I would like to participate in more Kazakh training conferences.*

*We have troubles with young parents asking questions on information, available in the Internet. They believe false information from the Internet, but not doctors. Doctors must know and navigate in all information flows, be prepared and receive support.*

8. **The Nomenclature Of Skills And Knowledge Deficits Of The Residents**

The interviewees state the lack of communication skills in residents:

*Residents cannot communicate with patients. When a patient comes in, there is no collection of complaints and anamnesis, residents immediately begin to either measure pressure, or, now the tendency, measure oxygenation with a pulse oximeter.*

*Residents can't talk to patients and have no communication skills. They sit quietly in silence. Maybe it is because of tests and everything is in electronic format.*

*If someone comes to complain, residents say go wherever you want, complain to whomever you want.*

The possible solution for developing residents’ skills of patient-centred communication, clinical and diagnostic skills can be training intern-students in medical institutions:

*Students of 6–7 years also come to us. Now clinical thinking, the ability to make a diagnosis is important in their studies. We have a very good base and experienced teachers, so you need to open such a base*
near the medical center. Students, working at the Aktobe Medical Centre demonstrate a good knowledge and a good grip about the results of analyses and sick leave. Those who work in shops and pharmacies are rather weak, there is no clinical thinking. If severe patients arrive, they do not accept on their own, they wait for the doctor.

9. The importance of autodidactic, the acquisition of competencies and experience in the workplace (prior learning, lifelong learning, learning network)

The importance of acquisition of competencies and experience in the workplace is highlighted by the informants:

Previously, when applying for a job, nurses were taught by a senior nurse for 2 weeks. I think doctors need to be trained that way too.

There are doctors, that out of their office sit together with elder doctors, watching, listening and learning.

I heard that in other polyclinics the head teaches young doctors.

The high-quality prior learning is significant for medical practitioners for managing challenges in their practices:

The 7th year students still do not know a lot of things.

Deontological ethics should be taught in the 5th year, and not in the first year, everything is forgotten.

We used to write histories by hand. Residents simply don’t know this. Outpatient cards for children are ready in an hour as there are templates.

I don’t know how to evaluate. Everything is written in test; it is required to stupidly select the answer when reading.

The medical practitioners perceive their work as requiring life-long learning:

One must be informed in all areas.

General practitioners must study the whole life. They should obtain practical and clinical experience. Residents are young, of course, they don’t know a lot of things. Everything will come to light with time.

10. The Vocation And Intrinsic Motivation Of The Doctor

The interviewed medical practitioners indicate that residents are not interested in their profession:

Many students say they won’t be a general practitioner. They plan to work as a surgeon, etc.

Students should be prepared to become a doctor, but they show no interest in work.
Young doctors conduct 5 hours of admission and don’t want to do anything else: delve into the work of the site and reporting.

There is a ready-made program and we are ready to show them, but only a few students visited.

Focus group family doctors report that some residents coming for practice have no intrinsic motivation for becoming a general practitioner and perform their duties efficiently:

It is necessary to determine the professional suitability in the first year. Most lack communication skills, there is no interest in the patients’ problems, there is no compassion, there is no desire to talk with patients. It is necessary to explain the importance, goals and objectives of preventive examinations. It is important to teach students the need and meaning of clinical observation. Students should be taught to use the program Damumed. Practical skills such as taking an ECG, taking smears should also be taught.

Residents aren’t coming as they work somewhere. Only 3 girls, that are pregnant and do not work anywhere, come. Only one of them was interested.

A lot depends on the residents themselves. I had a student, who knows the whole ECG procedure and another boy was also very literate.

11. Targeted Reforms And Well-thought-out Legislation Are Required

Medical practitioners negatively perceive the primary health care guidelines, that change too often. Family doctors state the impossibility of the timeline view of changing and renewing orders:

Orders often change and we cannot cope with this due to lack of time. A Kazakh suffix is changed in a word and the order is reproduced. The orders are big enough and we often fail to read them till the end. There is already the 149th order, before there was the 81st order. It’s physically impossible to follow all of them.

At the end of 2020, a lot of orders came out. When we passed accreditation, we searched for these orders and found them ourselves. I don’t see that these orders or protocols were discussed at the PHC level. Methodical recommendations and new orders should be discussed by doctors.

The focus group interview results highlight a need for targeted reforms and a well-thought-out legislation in primary health care sector:

To raise the status of a general practitioner, the state must be interested. To motivate a resident to become a general practitioner, they need to increase the salary and the workload must be appropriate to let the doctors know their patients and the family. We will not move further without this, because anyway we will not raise the status, people will be dissatisfied and go to private clinics or look for narrow specialists.
A good base is needed and the health care must be ready, and not writing new orders every 2 days. It is also necessary to change the consciousness of the people.

It is necessary to draw up regulatory legal acts according to qualification requirements and instructions stating the functions of the family doctor.

A summary of the focus group results with health care professionals is shown in Table 1.

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<th>Category</th>
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<td>Status-hierarchical relationships between doctors and nurses as a demotivating factor</td>
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<td>14.3</td>
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<tr>
<td>Dysfunctional developments in planning the workload of doctors and nurses, fuzzy boundaries of the job description, and the problem of optimizing the workload</td>
<td>9</td>
<td>25.7</td>
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<tr>
<td>The dialectic of medical specialization and universality</td>
<td>8</td>
<td>22.9</td>
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<td>The problem of the division of roles and responsibilities between doctors and nurses</td>
<td>4</td>
<td>11.4</td>
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<tr>
<td>Doctors’ and nurses’ rights are not adequately protected</td>
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Source: authors’ elaboration based on focus group analysis

**Discussion**

The current study aimed at exploring medical practitioners’ perceptions about (1) the primary health care reform in Kazakhstan and (2) the family doctor’s professional mission and training standards in a changing situation. Employing a qualitative research design – focus groups with the experienced health care practitioners from Kazakhstani medical institutions, in which “Family Medicine” program residents are doing their internships, the study resulted in a vast number of thematic lines/categories. Kazakh health professionals have raised the essential, critical issues that are crucial to the effective functioning of the entire primary health sector and, in particular, the family doctor profession. Some of the issues raised have a socio-cultural dimension and seem more relevant to the former Eastern Bloc countries. At least at the level of expert knowledge of health systems in different countries, it can be said that the
problems of a) legal protection of health workers, b) protection of the whole sector from ill-conceived and hasty reforms, c) the partly authoritarian nature of the doctor-nurse relationship is not as painful in developed Western countries. The corresponding problems have largely been solved in the West. On the other hand, the informants addressed universal problems that remain acute in every country and in every health system. These include the search for an appropriate model of medical practitioner competence, the problem of professional vocation and intrinsic motivation, the differentiation of medical staff functions from different disciplines, and the importance of autodidactic in the process of professional development.

The problem of adequate workload for health care practitioners remains an acute problem worldwide. Numerous empirical studies show that health professionals in general have a rather high risk of job-related stress-burnout. Consistent with Buciuniene et al. [9], stating that in the context of reforming the primary health care with retraining of general practitioners from district physicians and paediatricians, the challenge such as the lack of experience in organizing their activities arises, our findings demonstrate that family doctors are often delegated many additional functions, such as clinical examinations, disease management programs, vaccinations, home visits to patients, training of residents, etc. Considerable instability of the legal basis makes a serious negative impact too.

The focus group interviews showed that medical practitioners negatively perceive the primary health care guidelines, that are changed and renewed too often. The study results highlight the need for targeted reforms and a well-thought-out legislation in primary health care sector, which is in line with Busse et al. [3], indicating that, for clinical guidelines to have an actual impact on processes and outcomes, they need to be not only well developed and based on scientific evidence but also disseminated and implemented in ways that ensure they are actually used by clinicians.

Prior studies [16, 17] have noted the importance of a culture of safety, understood as values, attitudes, perceptions, competencies and patterns of behaviour that determine the commitment to, and the style and proficiency of, an organization's health and safety management [19]. It is as well reflected by our focus group respondents, indicating the importance of addressing the behavioural patterns such as doctor-patient communication, doctor-nurse communication and division of roles, mentor-resident relationship, peer assistance and collaborative work, organizational learning and support, patient and public education.

Along with the lifelong learning approach to health care practitioners’ education, another contributing factor in improving the changing health care system and medical practitioners’ practices is facilitating patient education, as well as endorsing patient engagement and fostering doctor-patient shared decision-making, corroborating with the findings of a great deal of the previous work [19–21]. Importance of increasing health care practitioners’ motivation for work and lifelong education, that was also reported by Brook [22], Shah et al. [23], and many other researchers, and addressing the healthcare infrastructure and digital transformation in healthcare provision by policy-makers and healthcare organizations, supported by the evidence of Busse et al. [3], will contribute to improving the primary health care practices. Policy
designs and management strategies for improving family doctors’ and nurses’ motivation, well-being and performance [24] should create working environments that foster feelings of being valued and supported.

This focus group study results have added to our understanding of medical practitioners’ perceptions of primary health care reforms implemented in Kazakhstan and their practices, a topic that is not traditionally covered in international literature. In the future, it would be advisable to conduct as representative a cross-cultural study as possible to determine how health professionals perceive the implementation of health care reform according to WHO recommendations, the modernization of the primary care sector and the institution of the professional family doctor.

Conclusions

A generalized analysis of the medical practitioners’ responses allows for the formulation of specific conclusions.

1. The hierarchy and inequalities in the relationship between family doctor and nurse were highlighted.

2. Primary health care staff see a lack of order in workload planning and rationing, and the need for a clearer delineation of the roles of doctors and nurses. They are convinced that medical practitioners are not sufficiently protected in law and express a legitimate expectation that any reforms in the health sector will be thoughtful and purposeful.

3. There is a belief that educating patients and the public about health issues is part of the family doctor’s professional role.

4. Informants raise the essential problem of the dialectic of medical specialization and universality that applies to family doctors and their training.

5. Informants delved into the topics of vocation, competence, cognitive and non-cognitive characteristics of the medical practitioner’s personality.

Declarations

Acknowledgments

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Authors’ contributions

Bubeliene conceptualized and designed the research, conducted data search, and drafted this manuscript. Merkys participated in manuscript revision and critical review. Zhamaliyeva conducted data extraction and data synthesis. Koshmagambetova participated in quality appraisal and review of the manuscript. Abenova conducted quality appraisal and data interpretation. Zhylkybekova transcribed
focus group responses. Kuzembayeva provided interpretation of findings. All authors participated in revision of the important content for publication and approved the final version of the manuscript. All authors agreed to be accountable for questions related to its accuracy or integrity.

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**Availability of data and materials**

All data generated or analyzed during this study are included in this published article.

**Ethics approval and consent to participate**

Ethics approval was obtained from the Ethics Committee of the West Kazakhstan Marat Ospanov Medical University (No. 7, September 9, 2020).

All methods were carried out in accordance with relevant guidelines and regulations. Informed consent was obtained from all subjects.

**Consent for publication**

Not applicable.

**Competing interests**

The authors declare no competing interests.

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