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# DEVELOPMENT OF PROFESSIONALISM IN MEDICAL EDUCATION – THE EXPERIENCE OF THE WEST KAZAKHSTAN MEDICAL UNIVERSITY

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**Abstract**

Medical education is a flexible education system focused on the needs of society and scientific achievements. The training of a doctor takes place throughout life, so it is important to create a strong basis for the accumulation of knowledge and experience. When developing educational programs, it is necessary to adhere to a competency-based approach, which is the key to successful training of a qualified and professional specialist. At the same time, professionalism is a core competence that all graduates must achieve. In the article, we shared our experience in developing and implementing an educational program to develop professionalism among residents of the family medicine. It was important for us to disclose the key attributes of professionalism in the training program, which, in addition to good clinical knowledge and skills, include such qualities of a professional as honesty, responsibility, reliability, accountability and the ability to maintain an appropriate balance between the duties of caring for the patient and personal obligations. Here, we have detailed the learning outcomes and teaching methods of professionalism educational program. In the present study, the P-MEX (Professionalism Mini Evaluation Exercise) was used as an instrument for the first time, which was translated into Kazakh, passed a pilot study, demonstrating good reliability and validity.

***Keywords:*** *professionalism, educational program, residency, family medicine.*

**Резюме**

# РАЗВИТИЕ ПРОФЕССИОНАЛИЗМА В МЕДИЦИНСКОМ ОБРАЗОВАНИИ – ОПЫТ ЗАПАДНО-КАЗАХСТАНСКОГО МЕДИЦИНСКОГО УНИВЕРСИТЕТА

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Медицинское образование является гибкой системой, ориентированной на потребности общества и научные достижения. Обучение врача проходит на протяжении всей жизни, поэтому важно создание крепкого базиса для накопления знаний и опыта. При разработке образовательных программ необходимо придерживаться компетентностного подхода, что является залогом успешной подготовки квалифицированного и профессионального специалиста. При этом профессионализм является базовой компетенцией, которую все выпускники должны достичь. В статье мы поделились опытом разработки и внедрения образовательной программы по развитию профессионализма у резидентов семейной медицины. Для нас было важным раскрытие в программе обучения ключевых атрибутов профессионализма, к которым, помимо хороших клинических знаний и навыков, относят такие качества профессионала как честность, ответственность, надежность, подотчетность и способность сохранять надлежащий баланс между обязанностями по уходу за пациентом и личными обязательствами. Здесь мы подробно описали результаты и методы обучения, а также в данном исследовании впервые был применен инструмент мини оценки профессионализма - P-MEX, который был переведен на казахский язык, прошел пилотное исследование, продемонстрировав хорошую надежность и валидность.

***Ключевые слова:*** *профессионализм, образовательная программа, резидентура, семейная медицина.*

**Түйіндеме**

# МЕДИЦИНАЛЫҚ БІЛІМ БЕРУДЕГІ КӘСІБИЛІКТІ ДАМЫТУ – БАТЫС ҚАЗАҚСТАН МЕДИЦИНА УНИВЕРСИТЕТІНІҢ ТӘЖІРИБЕСІ

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Медициналық білім беру қоғамның қажеттіліктері мен ғылыми жетістіктерге бағытталған икемді білім беру жүйесі болып табылады. Дәрігердің оқуы өмір бойы жүреді, сондықтан білім мен тәжірибе жинақтау үшін берік негіз жасау маңызды. Білім беру бағдарламаларын әзірлеу кезінде білікті және кәсіби маманды нәтижелі дайындаудың кепілі болып табылатын құзыреттілік көзқарасты ұстану қажет. Сонымен қатар, кәсібилік – барлық түлектер қол жеткізуі тиіс негізгі құзырет. Мақалада біз отбасылық медицина резиденттері арасында кәсібилікті дамыту үшін білім беру бағдарламасын әзірлеу және енгізу тәжірибесімен бөлістік. Біз үшін оқыту бағдарламасында кәсібиліктің негізгі атрибуттарын ашу маңызды болды, олар жақсы клиникалық білім мен дағдылардан басқа, кәсіби маманның адалдық, жауапкершілік, сенімділік, есеп берушілік және науқасты күту міндеттері мен жеке міндеттемелері арасындағы сәйкес тепе-теңдікті сақтай білу сияқты қасиеттерді қамтиды. Бұл зерттеуде біз оқытудың нәтижелері мен оқыту әдістерін егжей-тегжейлі қарастырдық және алғаш рет қазақ тіліне аударылған, жақсы сенімділік пен негізділігін көрсете отырып, пилоттық зерттеуден өткен P-MEX шағын кәсіби бағалау құралы қолданылды.

***Түйін сөздер:*** *кәсібилік, білім беру бағдарламасы, резидентура, отбасылық медицина.*

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**Relevance**

Professionalism is one of the most important clinical competencies that all medical university graduates must achieve. Lack of professional conduct, in turn, is the most common reason for disciplinary actions against medical practitioners, as well as the most difficult to assess and eliminate [11]. Desirable professional qualities, in addition to having good clinical knowledge and skills, include humility, honesty, responsibility, reliability and accountability [12]. The ability to maintain a proper balance between patient care responsibilities and personal obligations is also an important feature of professional conduct. Altruism, respect, loyalty, compassion, sensitivity and tact are other desirable professional qualities [7]. Besides, professionalism requires a heightened sense of intellectual curiosity, an understanding of personal strengths and weaknesses, maturity, a commitment to clinical excellence, and self-directed learning. In our country, as in many other countries of the post-Soviet space, a lot of time was devoted to the personal and professional education of the future specialist. The elements of professionalism were taught in many disciplines, as well as outside school hours, having a “hidden” format, that is, they were not prescribed in the goals and objectives of medical education. With the implementation of numerous reforms in the field of medical education and the cooperation of medical universities with Western schools, professionalism is prescribed in all educational programs (pre- and postgraduate) as a core competency that all graduates must achieve [2]. Taking into account the numerous warnings that inadequate professional attitudes can harm the well-being and health of patients, as well as the morale of doctors [13], the development and promotion of medical professionalism among medical specialists of the Republic of Kazakhstan (RK) is one of the key tasks of medical education and healthcare in general.

According to numerous studies of Western specialists, professionalism should and can be taught through lectures, workshops and discussions in small groups, role-playing exercises, analysis of clinical incidents, individual observation and counseling [6]. However, today, many programs of pre- and postgraduate medical education in the RK find it difficult to teach and assess this competence, mainly sharpening young professionals on clinical knowledge and skills, while the “soft skills” of a professional remain unexplored. In this article, we want to present our experience of teaching and evaluating the professionalism of young professionals on the example of residents of family

medicine NJSC "West Kazakhstan Marat Ospanov Medical University" (WKMOMU).

**Materials and methods of research.**

The study was conducted on the basis of WKMOMU. The study involved 24 residents (5 - 1st year of study, 19 - 2nd year of study) in the specialty "Family Medicine". The average age of the respondents is 25 years. The approval of the ethical committee of the university for the study was received (protocol No. 23 dated 06/17/21). Informed consent was obtained from all participants. In addition, the information collected from the participants was used only for the purposes of this study. The development of the competence of professionalism was carried out in several stages and was implemented by a temporary research team within the framework of the project of the Ministry of Science and Higher Education of the RK “Building the capacity of technologies for medical education and research in family medicine in Kazakhstan” (Grant No. AP09260428).

*Stages of implementation of the professionalism development program:*

1. Amendments have been made to the Academic policy of the Family Medicine Residency Education Program regarding the expectations and proper professional behavior of residents during their studies and zero tolerance for unprofessional behavior, both by residents and teachers/mentors, up to and including exclusion from the program.

2. A "Contract of professionalism" was developed, with which each participant in the study had to read and sign their informed consent.

3. The course "Professionalism" was developed as part of the extra-curriculum of the residency. For 2 years of study, each resident received from 4 to 5 lessons on this topic as part of continuing education. The objectives and learning outcomes were clearly defined. Classes were held in the form of mini-lectures, discussions, seminars, analysis of clinical cases with incidents of unprofessional behavior and modeling of appropriate behavior.

4. The exercise-questionnaire for a mini assessment of professionalism P-MEX was translated and adapted into the Kazakh language and passed preliminary testing on 24 residents of family medicine, native speakers.

5. On the basis of a formative and summative assessment, a system for accumulating points with obligatory feedback from a teacher/mentor was developed, which is responsible for the formation of the professional competence of a future specialist.

**The results of the study**

**Additions to the Academic Policy of the educational program "Family Medicine".**

All requirements are made in strict accordance with the Academic Policy of the University, the Student's Code of Honor, the Policy of Academic Integrity, the Charter of the University. Included in the discipline policy were expectations of professional behavior towards residents and faculty.

*Professionalism Expectations for Residents:*

Residents during their studies must demonstrate a commitment to professionalism and ethical principles, which is expressed in the following, the resident is able to express:

- Compassion, honesty and respect for others;
- Responsiveness to the needs of patients, surpassing personal interest;
- Respect for the privacy and autonomy of patients;
- Accountability to patients, society and the profession;
- Respect and responsiveness to a diverse group of patients with differences in gender, age, culture, race, religion, disability, national origin, socioeconomic status and sexual orientation.
- Recognizing and developing a plan for personal and professional growth;
- Timely disclosure and elimination of conflict or duality of interests.
- For committing a disciplinary offense by a student at the University, the following types of disciplinary sanctions are applied: reprimand; rebuke; severe reprimand; expulsion from the university

*Professionalism Expectations for Teachers:*

- Being a role model in professionalism is a “role model” for a resident;
- Demonstrate a commitment to providing safe, quality, cost-effective and patient-centered care;
- Create and maintain an educational environment conducive to the learning of residents;
- Regularly participate in organized clinical discussions, rounds, journal clubs and conferences;
- Report cases of offense, unprofessionalism on the part of any member of the team.

Residents will be assessed for professionalism continuously throughout the entire period of study. Residents will be admitted to the final certification under the following conditions:

- 80% attendance of clinical rotations;
- 80% attendance of practical seminars;
- a positive summative assessment of professionalism;

Residents in practical classes must prepare and submit their work (presentation, case, essay, report) subject to the submission deadline, which will be strictly observed. Assignments submitted after the scheduled date will be rejected unless for really good reasons. In addition to the above obligations, residents must not be late for classes and clinical rotations. They are expected to behave appropriately, maturely and actively participate. It is also important that in case of absence, whether at seminars or at the clinic outside the permitted hours of absence, the teacher/mentor is notified in advance. Residents agree with their mentor on the exact schedule, which must be strictly adhered to. Being late is inappropriate and disrupts the workflow in the clinic. In the polyclinic, residents actively participate in all the tasks assigned to them by the mentor according to the curriculum. In case of ambiguity in the treatment of a patient, residents talk with a mentor after the patient has already left the clinic. At all times, residents must strictly adhere to the Code of Ethics for Medical Professionals, especially the principle of confidentiality. The code of ethics binds the resident in the same way with the same consequences as his teacher/mentor. Together with the academic policy, the Resident Professionalism Contract was developed [1].The professionalism contract sets out the specific expectations of the family medicine residency program for students and failure by the resident to meet these requirements may result in adverse consequences, including the possibility of exclusion from the program.

**Curriculum for Professionalism.**

The residency curriculum in the specialty "Family Medicine" is implemented in accordance with the state standard of education of the Republic of Kazakhstan and is a 2-year educational program (140 credits), which presents the main topics that correspond to the key competencies of a family doctor. The training program on professionalism was included as an additional, extra program to the ongoing training and was implemented during the residents' free hours from clinical practice and practical classes (the schedule was agreed with each resident individually). The program is represented by a module of 4 seminars, which were held in two training courses. Table 1 presents the main topics of the curriculum.

*Table 1.*

**Main topics of the professionalism curriculum.**

| |
|---|
| 1. Recognizing professionalism in everyday practice |
| 2. Professionalism in patient care |
| 3. Professionalism with colleagues and other healthcare professionals |
| 4. Society and professionalism |

*Learning Outcomes*

The curriculum clearly reflected the objectives and learning outcomes to be achieved by residents during their first and second year of study. Learning outcomes correlated with learning methods and were supported by appropriate assessment methods (Table 2).

*Table 2.*

**Learning outcomes, teaching methods and assessment methods in the professionalism curriculum.**

| End result of training | Teaching methods | Assessment Methods |
|---|---|---|
| Recognizes the essential elements of professionalism and ethical principles in family practice; | Lecture, project work | MCQ*, MEQ**, oral method, essays |
| Recognizes the importance of building professional relationships in the context of their work in an ethical manner; | Essays, oral presentation, discussion | Role playing, essays |
| Gives examples of methods that help to effectively build and develop professional relationships; | Oral presentation, discussion, clinical work, reading, skills training | OSCE***, MCQ, oral method |
| Conducts self-assessment of the development of professionalism using reflection methods, special scales / questionnaires; | Literature search, reading, skills training | Essays, P-MEX**** |
| Demonstrates the qualities of professionalism in daily practice; | Role playing, study visit, videos, educational movies | OSCE, P-MEX |
| Properly represents family medicine to other specialties during rotation; | Clinical work, observation | P-MEX |
| Appreciates punctuality, honesty, commitment and efficiency as the principles of professionalism; | Clinical work, observation | P-MEX |
| *Abbreviations:* *MCQ – multiple choice questions; **MEQ – modified essay questions; ***OSCE – objective structured clinical exam; ****P-MEX - Professionalism Mini Evaluation Exercise. | | |

*Teaching methods*

The curriculum on professionalism consists of mini-lectures, practical seminars and exercises. While lectures and seminars are well-defined methods and allow slight modifications, the exercises use the appropriate teaching methods defined in the EURACT educational agenda [14]. One of the introduced teaching methods for this program was writing an essay with answers to modified questions and presenting an oral presentation (seminar report) on a chosen topic. Residents were required to write an essay and present it orally in front of their peers and a teacher/mentor, followed by discussion and discussion. Residents choose a topic from real clinical practice (usually a common medical complaint about deviation from professional behavior) and write about it in terms of literature data, regulatory documents [3,5], as well as their own ethical principles and views. If the clinical case concerned a complaint about a deviation from the quality of medical care provided, then the structure of such a report is a case report, the first part of which is a formulated clinical question asked by the resident using the PICO scientific search method. Residents must answer it based on evidence-based medicine data, having previously searched international databases [9]. The second part of the seminar report is the coverage of the solution to this problem. Since the patient is at the forefront of family medicine (patient-centered care), the report should also convey the way the patient is involved in the treatment of the described disease, the specifics of communication with him and the management of patients with this problem. When a resident submits the first draft of a seminar report for evaluation, the teacher evaluates it and at the same time suggests corrections (feedback). If the resident corrects the assignment, the teacher grades the corrected version. The residents can present the results of the seminar report in the form of a research project at a practical conference. Other methods of teaching professionalism are literature search, reading, watching educational videos, reflective practice, supervised clinical work in the family medicine office, role playing.

*Assessment Methods*

As part of the training, we used both formative and summative assessment [22]. Residents underwent formative evaluation of teachers/mentors throughout the training period, which consisted of oral presentation, essay analysis, work in clinical practice with an assessment of professionalism using the P-MEX tool, self-assessment (P-MEX), assessment of clinical skills using the OSCE method. Then each type of work performed was evaluated by the teacher on a 6-point Likert scale (0 - unsatisfactory, 5 - excellent). The summative grade (final grade) was calculated from the scores of all sections of the course. At the end of the course, Year 2 residents were required to take a written examination consisting of 50 multiple choice test questions (MCQ) in professionalism. The final grade is calculated based on the scores for all sections of the course and the scores for the written exam. Thus, each resident within

the framework of the completed course on professionalism had to submit for evaluation an essay, an oral presentation and a seminar report on a chosen topic, a P-MEX professional assessment (self-assessment, teacher assessment, mentor assessment) and pass the final test control. Professionalism was assessed in the pass/fail format. The assessment was based on a list of acquired knowledge/skills and included:

- *Commitment of residents to professional competence*, which implies the desire to maintain the medical knowledge, clinical abilities and team skills necessary to provide quality care;

- *Desire to improve the quality of medical care*, which suggestsnot only to continuously, informedly review the medical literature and maintain clinical competence, but also to work with peers, healthcare systems, and other professionals to improve patient safety, reduce medical errors, and increase the availability and effectiveness of care. Minimize overuse and underuse of medical resources and improve health outcomes.

**P-MEX (review, implementation, results)**

As part of this study, one of the assessment tools was adapted by the project research team for a mini-assessment of professionalism - P-MEX. Initially, the P-MEX was developed in Canada by R. Kruess et al. [8]. The P-MEX consists of 21 questions included in four main domains: doctor-patient relationship, reflective skills, time management, and interprofessional relationships (Table 3). The questionnaire has a special processing technique from 0 to 4 points, where "4" - exceeded expectations, "3" - met expectations, "2" - below expected, "1" - unacceptable behavior. As well as the fifth category "0" - not observed or not applicable, this category is used when the behavior is not observable. P-MEX has been designed to be used in every situation, when the student's behavior can be observed, including meetings with patients, small group sessions, and rounds. Evaluation should be based on relatively short interactions that often occur within training so that each resident can be evaluated multiple times by different instructors. A higher score indicates a higher assessment of professionalism. Each form has two copies, one of which is given to the student and the other remains with the teacher.

The assessor is expected to provide timely feedback to the student, which will give him an opportunity for reflection and self-development. The questionnaire was tested and validated in Japan [23] and Finland [17], where culturally significant items were added. Since the 2011 Ottawa Report [15], studies have examined the assessment of medical professionalism in various non-Anglo-Saxon/Western contexts such as Korea, Japan and China [18, 24]. However, so far there are no studies devoted to the assessment of medical professionalism in Kazakhstan. Translation from English and adaptation of the P-MEX questionnaire was carried out as part of this study with the written permission of the questionnaire developers.

*Translation*

At stage 1, the original version of the questionnaire was translated into Kazakh (100% of residents study in Kazakh). The translation was carried out by two professional translators, native speakers, independently of each other. During the translation process, each of the translators produced a direct translation of the original questionnaire, instructions, and answer options. After comparing both versions of the translation and agreeing, a combined verified version was created - Version 1.

*Table 3.*

**Professionalism Mini Evaluation Exercise (P-MEX).**

| Skill category | Item |
|---|---|
| Doctor-patient relationship | 1. Listened actively to patient<br>2. Showed interest in patient as a person<br>3. Recognized and met patient needs<br>4. Extended him/herself to meet patient needs<br>5. Ensured continuity of patient care<br>6. Advocated on behalf of a patient<br>11. Maintained appropriate boundaries |
| Reflective skills | 7. Demonstrated awareness of limitations<br>8. Admitted errors/omissions<br>9. Solicited feedback<br>10. Accepted feedback<br>12. Maintained composure in a difficult situation |
| Time management | 14. Was on time<br>15. Completed tasks in a reliable fashion<br>17. Was available to colleagues |
| Interprofessional relationship skills | 11. Maintained appropriate boundaries<br>13. Maintained appropriate appearance<br>16. Addressed own gaps in knowledge and skills<br>18. Demonstrated respect for colleagues<br>19. Avoided derogatory language<br>20. Maintained patient confidentiality<br>21. Used health resources appropriately |

At the 2nd stage, the revised Version 1 was translated into the original (English) language. The translation was carried out by a professional translator, native English speaker. One of the conditions for back translation was that the translator did not have access to the original version of the questionnaire. These two new versions were compared with each other and served as the basis for the consensus version of the translation of the English-language questionnaire. This version - Version 2 in the Kazakh language turned out to be grammatically and semantically acceptable.

At the 3rd stage of creating the Kazakh-language version, the created Version 2 was tested on patients. This stage is necessary in order to determine the acceptability of the translation (instructions, questions and answer options). Two main aspects were checked - the equivalence of items and answer options in translation with the original. 30 respondents took part in the testing. The questionnaire was filled out by each respondent independently of each other; in case of difficulties, the subject addressed directly to the interviewer. At the end of the survey, the interviewer clarified whether the respondent had any problems in understanding the questionnaire and filling it out. During the survey, the wording of questions and answer options were corrected based on the wishes of the respondents. There were no changes due to the version 2 survey. However, 65% of the respondents said that they did not understand the content of some questions. Disagreements and misunderstandings on some of the assessment issues required explanatory workshops for both faculty and residents. Incomprehensible questions that required detailed analysis are given in Table 4.

*Table 4.*

**Questions of the questionnaire that required clarification.**

| R-MEX questions | Respondents' opinion | Explanation and examples for practice |
|---|---|---|
| Showed interest in patient as a person (Doctor-patient relationship skills) | Should the doctor know the patient not only as a sick person, but also take an interest in his private life? | Interest in the patient lies in the implementation of the principles of patient-centered care. Addressing the patient by name, eye contact, active listening, empathy, showing interest in the patient. |
| Recognized and met patient needs (Doctor-patient relationship skills) | The doctor is not obliged to meet all the needs of the patient, especially if these needs are contrary to evidence-based practice. | A patient's need is the ability to benefit from medical services. Patients may need additional or better care. If this need is not met, it can lead to dissatisfaction with services and changes in patients' quality of life. A constructive dialogue with the patient and good clinical skills are the best way to meet the needs of the patient. |
| Advocated on behalf of a patient (Doctor-patient relationship skills) | A doctor should not defend the rights of a patient who was wrong from the point of view of the law, showed obvious neglect or aggression towards the doctor. | This issue refers to the patient's right to health, the right to timely and appropriate health care services. A doctor is an advocate for his patients in the field of ensuring this particular right. All other relationships are regulated in accordance with the current legislation. |
| Maintained appropriate boundaries (Doctor-patient and interprofessional relationships skills) | First of all, this issue provides for the observance of professional subordination in relations with senior colleagues and paramedical personnel. | In addition to subordination in interprofessional relations, the observance of boundaries in the relationship with the patient plays an important role. Namely:<br>- Avoid sharing personal information with patients (including on social networks);<br>- Do not engage in sexual or intimate emotional relationships with the patient or anyone close to him.<br>- Act quickly to restore boundaries if the patient is behaving inappropriately.<br>- Be alert for signs of violation of professional boundaries between doctor and patient (expensive gifts, flirtatious notes, text messages or calls, invitations to social meetings and obscene comments) and stop them in time. |
| Demonstrated awareness of limitations (Reflective skills) | The doctor must clearly recognize the scope of his duties. | Physicians need to be aware of their limitations in professional skills and knowledge, which means admitting what they do not know. For example, if a patient presents with a problem that is beyond the knowledge or competence of the doctor, the doctor can independently determine his limitations for performing a particular task and take measures to correct this situation. In doing so, the clinician must be able to explain the task they performed, their limitations in terms of relevant professional skills, and how they handled it (e.g., asking for help from a more experienced colleague or manager and/or referring the matter entirely to another specialist) |

Thus, after clarification and discussion, version 2 was accepted as the final version in the Kazakh language. Cronbach's Alpha coefficient (α) was used to calculate internal consistency. If the coefficient values are equal to or greater than 0.70, then they are considered satisfactory [20] for testing.

*Preliminary testing.*

To confirm its applicability in everyday practice, the Kazakh version of the P-MEX was tested in two stages on 24 native-speaking residents. The criteria for inclusion in the pilot study were:

-family medicine residents;

- fluency in the Kazakh language;

The family medicine residents were asked to conduct a self-assessment as part of the course, and the same group of residents were also evaluated by teachers/mentors at the end of the course.

There were no obstacles in either the questions or the answer section of the questionnaire. It took 9 to 17 minutes to complete one questionnaire (median = 11 minutes). Among the respondents there were 16 (67%) women and 8 (33%) men. The age of the respondents ranged from 23 to 32 years, while the average age was 25 years. According to the requirements for the translation procedure, all respondents were native speakers of the Kazakh language. Participants were informed in detail about the study protocol with the opportunity to discuss any issues that arise.

*Assessment of the reliability.*

As Table 5 shows, the P-MEX questionnaire in the Kazakh language as a whole and its domains separately, had the Cronbach's Alpha coefficient above the boundary value of the indicator α≥0.70, which indicates an acceptable level of internal consistency of the instrument scales. Thus, the overall index of Cronbach's Alpha for the Kazakh-language instrument was equal to α=0.73. In the questionnaire, the highest value of the coefficient was for the relationship between the doctor and the patient (α=0.78), the second place was for interprofessional relations with the indicator α=0.72. The lowest value of the coefficient was in the field of time management and was equal to the value α=0.70.

*Table 5.*

**Internal consistency of the P-MEX questionnaire in the Kazakh language.**

| Domains of medical professionalism | question number | Average score (SD) n=24 | Alpha - coefficients n=24 |
|---|---|---|---|
| Doctor-Patient Relationship | 1-6, 11 | 3.49 (0.50) | 0.78 |
| Reflective Skills | 7-10, 12 | 3.00 (0.43) | 0.71 |
| Time management | 14, 15, 17 | 2.90 (0.30) | 0.70 |
| Inter-professional relationship | 11, 13, 16, 18, 19-21 | 3.18 (0.40) | 0.72 |
| Questionnaire as a whole | 1-21 | 3.43 (0.51) | 0.73 |

Thus, the Kazakh-language version of the P-MEX questionnaire showed good internal consistency and can be used in assessing the professionalism of future doctors.

**Discussion**

One of the main objectives of medical education is to turn interns/residents into independent practitioners who embody the qualities listed above and can establish effective, healing relationships with their patients and their families [19]. Patients and their families must be able to trust not only the competence of individual clinicians, but also their moral character, in addition to the profession as a whole [21]. In our complex medical environment, in which technological, political, legal and changing market forces can influence medical practice, optimal patient care cannot be provided if our patients and their families do not trust us to do what is considered right [10, 21]. One of the most important documents on the world stage, which can be used to define expectations of professionalism is the article "Medical Professionalism in the New Millennium: A Physician's Charter", originally published in 2002 and hereinafter referred to as the "Physician's Charter" [5]. This document outlines the three fundamental principles of professionalism and 10 professional responsibilities. The founding principles of the Charter are: patient welfare, patient autonomy and social justice. This foundational document has been endorsed by 109 organizations worldwide and more than 100,000 copies have been distributed. The Physicians' Charter clearly states commitment to the profession, serving the patient regardless of outside forces, respecting patient autonomy, and advancing social equity in healthcare as fundamental guiding principles. These principles are based on the concept of reliability, which makes this virtue the basis of medical professionalism. Medical educators have a responsibility not only to produce competent physicians dedicated to lifelong learning, but also physicians of character who hold professional values as their own. [10, 21]. Thus, the goal of our training is to develop in our wards their own internal compass, based on the standards of medical professionalism, which will help them make principled decisions even in times of stress. In other words, we must support residents in developing their professional identity [10]. This process takes time and experience and depends on the trainees' self-awareness, attitudes and lifelong learning habits, which can be formed under appropriate guidance [16]. As part of this study, we presented our vision and experience in developing the competence of professionalism using the example of residents of family medicine. During our research, we encountered certain limitations. Firstly, the understanding of the professionalism of medical workers in Kazakhstan differed from that of Western schools [4], which required training seminars and master classes for both faculty and students. It is necessary to involve all team members in professionalism training, including teaching staff, clinical mentors, employees of clinical sites. On the other hand, within the framework of this study, we had the opportunity, through training and assessment, to begin the process of forming the “correct” image of a professional in family medicine among young professionals. Secondly, we had to avoid deviations from the prescribed percentage of changes in the standard residency program, which was strictly controlled by the supervisory authorities in the field of education. Innovations had to be included as part of an extra program and only at the request of the student, which caused dissatisfaction among some residents. The need for flexibility and which caused discontent among some residents. There is a need for flexibility and more freedom in changing the educational programs of residency and its internationalization. Also, for the first time in the Republic of Kazakhstan, we used the P-MEX as a tool for assessing professionalism, adapting it as part of our study. Research in this area is still ongoing. Now we are faced with the task of evaluating the effectiveness of the implemented technologies as part of the ongoing education and training of young professionals.

**Conclusion**

The development of professionalism as a core competency of the medical profession has a long tradition. Western medical organizations developed several documents and teachers’ courses which can serve the development of professionalism curricula in the new established postgraduate programs in Family medicine which is also a case WKMOMU. Here, learning outcomes and teaching methods are in concordance with EURACT teaching agenda. Also, some innovative approaches are used, i.e. using art in teaching holistic approach to patients and using e-learning environment for students’ project and communication.

***Authors' contribution:***

***Abenova N.A.*** *– drafting the article, revising it critically for important intellectual content;*

***Zhamaliyeva L.M.*** *– work with residents adaptation and conducting a survey of the P-MEX tool*

***Koshmaganbetova G.K.*** *– research resource management, statistical processing; Dilmaganbetova G.S. - critical analysis of the conducted literature search;*

***Yessengaliyeva I.E., Imanbayeva A.U.*** *- primary data analysis*

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