

МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ  
НАЦІОНАЛЬНИЙ ФАРМАЦЕВТИЧНИЙ УНІВЕРСИТЕТ  
ІНСТИТУТ ПІДВИЩЕННЯ КВАЛІФІКАЦІЇ СПЕЦІАЛІСТІВ ФАРМАЦІЇ  
КАФЕДРА ОРГАНІЗАЦІЇ, ЕКОНОМІКИ ТА УПРАВЛІННЯ ФАРМАЦІЄЮ

**ПІДГОТОВКА СПЕЦІАЛІСТІВ ФАРМАЦІЇ  
В РАМКАХ КОНЦЕПЦІЇ  
«НАВЧАННЯ ПРОТЯГОМ ЖИТТЯ  
(LIFE LONG LEARNING)»:  
НАУКА, ОСВІТА, ПРАКТИКА**

**МАТЕРІАЛИ ІV НАУКОВО-ПРАКТИЧНОЇ  
ІНТЕРНЕТ КОНФЕРЕНЦІЇ  
З МІЖНАРОДНОЮ УЧАСТЮ, ЯКА ПРИСВЯЧЕНА  
ПАМ'ЯТІ ПРОФ. ТОЛОЧКО ВАЛЕНТИНА МИХАЙЛОВИЧА**

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**A COMPREHENSIVE STUDY ON THE INFLUENCING ELEMENTS OF  
PHARMACISTS' CAREER EVOLUTION AND PROFESSIONAL  
PROGRESSION: PERSPECTIVES OF HEALTHCARE PROFESSIONALS  
AND PHARMACY STUDENTS IN GEORGIA IN LIGHT OF EMERGING  
GLOBAL TRENDS**

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**Abstract.** The primary aim of this research was to scientifically analyze the key factors influencing the professional development of pharmacists, focusing on the perspectives of healthcare professionals and pharmacy students in Georgia. The study employed a quantitative methodology, utilizing surveys and questionnaires to gather data on how various factors impact pharmacists' career development. Respondents were randomly selected, and data collection methods included systematic, sociological, and comparative approaches, as well as mathematical-statistical and graphical analyses. The data were processed and analyzed using SPSS software (version 11.0), which enabled descriptive statistics and regression analysis to identify correlations between different variables. A Chi-square test was applied to evaluate statistical significance, with a p-value of less than 0.05 considered indicative of significant findings. The research highlighted several key factors influencing the career trajectory and professional growth of pharmacists. It revealed that a majority of the respondents believed that pharmacists require continuous professional development through regular training in areas such as new medications,

pharmacotherapy for specific diseases, pharmacology, and drug toxicity.

These findings underscore the need for an upgrade and modernization of educational programs in higher pharmaceutical institutions. The existing curricula must be adapted to address emerging medical challenges, ensuring that pharmaceutical education remains relevant and responsive to evolving healthcare needs. The study also emphasized the necessity for government action to establish continuous professional education programs accessible to all pharmacists. Such programs should focus on qualification upgrading and professional training courses that enable pharmacists to keep pace with new developments in the pharmaceutical field. It is critical that the education process for pharmacists is never interrupted, as ongoing professional development enhances the quality of pharmaceutical services and supports the continuous growth of the profession. Moreover, the research found that experiential education plays a crucial role in fostering critical thinking, problem-solving, and the integration of new discoveries in medicine. These skills are vital for ensuring that pharmacists remain at the forefront of patient care. Health-care specialists overwhelmingly agreed that further regular studies on new medications, pharmacotherapy, and drug toxicity are essential for pharmacists to enhance their effectiveness in these areas. An important finding from the survey was that a significant proportion of healthcare professionals, pharmacy students, and pharmacists themselves agreed on the need for government-mandated certification for pharmacists. Statistical analysis revealed a significant correlation between respondents' views on certification across various categories, including pharmacy managers, pharmacy consumers, employed students, healthcare specialists, and pharmacists. This suggests widespread support for formalizing pharmacist certification as a way to ensure high standards of professional competence. The study also examined the evolving role of pharmacists in modern healthcare systems. While pharmacists traditionally focused on the procurement, preparation, and evaluation of medicines, their role is increasingly shifting towards patient-oriented care. This transition reflects the growing importance of pharmacists in the clinical setting, particularly in the optimization of drug therapy and ensuring patient safety.

The study found that involving pharmacists in drug therapy processes—such as managing drug-drug interactions and preventing adverse drug reactions—has a positive impact on patient outcomes. Pharmacists' interventions were shown to improve therapeutic effects, reduce treatment costs, and minimize the incidence of negative side effects. The research further explored the importance of pharmacists in the broader healthcare framework, particularly in areas such as drug use policy design, collaboration with healthcare professionals to develop treatment guidelines, and participation in the purchase and sale of medications. Despite the fact that the pharmacist profession is not yet fully recognized as a clinical profession, the results indicate a strong trend towards its transformation into one that is more integrated with clinical practice and patient care. The collaboration between pharmacists and physicians has been shown to have positive effects on patients' health, improving outcomes and enhancing the overall quality of healthcare delivery. This study underscores the need for a comprehensive, government-driven approach to professional development for pharmacists in Georgia. It advocates for the modernization of educational programs, the establishment of continuous education initiatives, and the formalization of pharmacist certification. Such measures will ensure that pharmacists are well-equipped to meet the demands of an ever-evolving healthcare landscape, ultimately benefiting both the profession and the patients they serve.

**Keywords:** Assessment, key features, influencing, career trajectory, professional development, pharmacists', healthcare professionals, pharmacy.

**Introduction.** The role of pharmacists has evolved significantly in recent years, transitioning from a primarily product-oriented profession to one that is increasingly patient-centered. This shift is driven by the growing complexity of medical treatments, the rise of chronic diseases, and advancements in pharmaceutical research and drug therapy. Pharmacists today are expected not only to dispense medications but also to play an integral role in patient care, ensuring the safe and effective use of medications, preventing drug interactions, and optimizing treatment outcomes. Given

these changing dynamics, it is crucial to understand the factors influencing the professional development of pharmacists [1-2].

This study focuses on the key elements that shape the career paths and professional growth of pharmacists in Georgia, with particular attention to the perspectives of healthcare professionals and pharmacy students. While pharmacists have traditionally been seen as experts in drug information and dispensing, their role in the broader healthcare system is expanding. The study aims to examine the factors that contribute to this shift and identify the professional development needs of pharmacists to ensure they remain equipped to meet the demands of modern healthcare [3-4].

In Georgia, as in many other countries, the healthcare system faces various challenges, including the increasing complexity of medical treatments, the demand for more personalized healthcare, and the need for healthcare professionals to stay abreast of rapid advancements in pharmaceuticals. As such, understanding how pharmacists can continue to develop their skills and knowledge is crucial for improving the quality of healthcare services. Through this research, we seek to identify gaps in education and training, explore the expectations of healthcare providers and pharmacy students, and assess the effectiveness of current professional development programs for pharmacists [5-6].

The study employs a quantitative research methodology, using surveys and questionnaires to gather data from healthcare professionals, pharmacy students, and practicing pharmacists in Georgia. By analyzing their responses, we aim to gain a comprehensive understanding of the factors influencing pharmacists' professional development and the perceived needs for continuous education and training. Ultimately, this research seeks to contribute to the enhancement of the pharmacy profession in Georgia and provide valuable insights for policymakers, educational institutions, and healthcare providers working to strengthen the role of pharmacists in the healthcare system [7-8].

The pharmacist's role in healthcare is pivotal, and ensuring their continuous professional development is essential to meeting the evolving needs of patients. By

identifying key factors that influence pharmacists' career paths and growth, this study aims to contribute to the ongoing efforts to improve pharmaceutical education, practice, and healthcare delivery in Georgia.

Protecting the people is the primary goal of pharmacy boards. On a broad scale, this mission requires a pharmacist to attend university for a specific number of years and to pass the state competency examination. Boards also set the parameters for what happens if a law or regulation is violated, what penalties result, and what infractions can cause if a pharmacist lose his or her license [9-10].

The health care brigade composes of the patient and all the health care professional specialists who have liability for patient care. This health care brigade demands to be well determined and cooperation needs to be actively defined. Pharmacists have considerable character and role to play in this brigade. Pharmacists must demand to acclimatize their skills, knowledge, information and attitudes to this innovated role, which consolidates all traditional pharmaceutical sciences with hospital/clinical aspects of the patient care, clinical/hospital skills, management, administration and communication skills, active cooperation with medical brigade and solving of drug-related issues. If they are to be recognized as full members of the health care brigade, pharmacists will demand to adopt the essential attitudes required by health professional specialists laboring in this space: visibility, liability, duty, responsibility, accessibility in a working practice targeted at the general population, commitment to confidentiality and patient orientation. Pharmacists will demand to be competent, qualified, knowing and possess all that vision, opinion and a voice to fully integrate themselves into the health care brigade [11-13].

The main goal of the research is to develop a methodology of studying and improving the process of professional development of pharmacist, pharmaceutical specialists and regulatory requirements for pharmaceutical staff of public pharmacies. The study will allow to develop a scientifically based methodological approach to study and improve the process of professional training of pharmaceutical professionals, including rationalization of the stages of professional development, identification of relevant factors involved in the process of professional development

and set a series of performance criteria for evaluation of the process in question, as well as studying the role and determining the characteristics of professional formation of pharmacists at various stages of their field activities. Within the proposed methodological framework with the use of a comprehensive investigation, will be identified patterns and features of the process during the professional development of employees of the pharmaceutical industry and public pharmacies [14-16].

The stage of professional development of specialists is the adaptation to work activity: the beginning of an independent professional activity and the accumulation of experience by young specialists. This stage reflects the student's transition to a new type of activity - to professional work in its various forms in the conditions of real situation, performance of official duties, production relations, finding oneself in the system of work collectives. In the course of adaptation, the system of professional knowledge and skills is acquired in the required volume; the emergence of interest in the work, which begins to play an increasingly important role in life, a sense of the connection between success and the profession, is self-determination for professional development [17-19].

The role of pharmacists has been continuously evolving, transitioning from a focus on medication dispensation to playing an increasingly pivotal role in patient-centered care. As healthcare systems grow more complex, it is essential that pharmacists adapt by enhancing their professional skills and expanding their scope of practice. This study aimed to explore the factors influencing the professional development of pharmacists in Georgia, taking into account the perspectives of healthcare professionals and pharmacy students. By identifying key areas for improvement, the study seeks to provide actionable recommendations to enhance the education, training, and overall professional growth of pharmacists in Georgia [20-22].

**Goal.** The main aim of the study was to analyze and grade of key features driving the career trajectory and professional advancement of pharmacists from the viewpoints of healthcare professionals and pharmacy students in Georgia, with a focus on future trends locally and globally in general.

**Methodology.** Research objectives are materials of sociological research: the study was quantitative investigation by using survey (Questionnaire). The study was quantitative investigation by using survey (Questionnaire). The in-depth interview method of the respondents was used in the study. The approved questionnaires were used (Respondents were randomly selected. Were used methods of systematic, sociological (surveying, questioning), comparative, segmentation, mathematical-statistical, graphical analysis. Research objectives are materials of sociological research: the study was quantitative investigation by using survey – questionnaire. The in-depth interview method of the respondents was used in the study. Different types of approved questionnaires were used (respondents were randomly selected), e.g.

- Questionnaire for chief pharmacists: 410 chief pharmacists;
- Questionnaire for patients: 1506 patients (customers of drug-stores);
- Questionnaire for employed pharmacy faculty-students: 222 employed students;
- Questionnaire for health-care specialists: 307 public health specialists;
- Questionnaire for pharmacist specialists: 810 pharmacist specialists.

Totally 3888 respondents were interviewed in Georgia.

The data was processed and analyzed with the SPSS program. Results and discussion: Questions and answers are given in the tables. On each question are attached diagrams or table. Questionnaire and diagrams are numbered. Study of the data was processed and analyzed with the SPSS program. We conducted descriptive statistics and regression analyses to detect an association between variables. Statistical analysis was done in SPSS version 11.0. A Chi-square test was applied to estimate the statistical significance and differences. We defined  $p < 0.05$  as significant for all analyses. The study's ethical items. In order to provide the study's ethical character each participant of it was informed about the study's goal and suggested of willingness of the work to be done. So, the respondents' written or oral compliance was got on that issue. All the studies were carried out by the selected organizations administrations' previous compliance. Were used Informed consent form for each respondent to participate in an anonymous survey. During the whole period of

research, the participants incognita was also provided. For the international rules and criteria' conformity this human subject comprising given study was discussed and confirmed on the Bioethics Committee sessions of the YSMU. In order to meet the objectives, set in the research we also used the results obtained through analysis of available official information, studies and opinions about pharmacists, as well as the methods of quantitative studies. We conducted descriptive statistics and regression analyses to detect an association between variables. Statistical analysis was done in SPSS version 11.0. A Chi-square test was applied to estimate the statistical significance and differences. The research implementation required the following sub studies: key features driving the career trajectory and professional advancement of pharmacists from the viewpoints of healthcare professionals and pharmacy students in Georgia, with a focus on future trends locally and globally in general [25-29].

**Results and discussion.** On the basis of theoretical analysis of the process of professional development will be developed by a set of common criteria for the effectiveness of this process, which will be based on the regularities of formation, reflecting its focus and dynamics: an interest in their chosen profession, changing choice motives, increased satisfaction of occupational choice and labor, increasing the motivation to knowledge and professional development, change career planning purposes. The goal, purpose and objectives of the planned research. The main aim is to develop a methodological approach to study and improve the process of professional development specialists' pharmaceutical profile, regulation requirements for pharmaceutical staff in drugstore professional career improvement strategy and job satisfaction among pharmacists. A systematic analysis identified factors which had influence the formation of personal-professional position of a pharmaceutical professional and realization of their personal resources [30-32].

On the basis of theoretical analysis of the process of professional development there will be developed a set of common criteria for the assessment of the effectiveness of this process, based on which will be identified the regularities of formation, reflecting its focus and dynamics: their interest in profession of choice, changes in choice making motivation, growing job satisfaction, increasing the desire

to acquire more knowledge and professional skills and making appropriate adjustments in their career goals [33-34].

Based on the theoretical analysis of the main approaches to the study of the process of professional development, taking account the concept of pharmaceutical assistance, a set of related criteria for the effectiveness of this process. Based on common performance criteria, the patterns of formation are revealed, reflecting its direction and dynamics: interest in the chosen profession, changing the determinants of choice motives, increasing satisfaction with choice of profession and work, increasing motivation for cognition and continuous professional development, changing career planning goals. On the basis of specific criteria, the specifics of the formation are revealed, which include: incomplete correlation of the internal resources of the individual with the needs of the pharmacist / pharmacist profession, insufficient awareness of individual aspects of future activities, the difficulties of production adaptation, and low satisfaction with the work of pharmaceutical professionals [35-36].

A systematic analysis will identify factors which influence the formation of personal-professional position of a pharmaceutical professional and realization of their personal resources [23-25]. On the basis of theoretical analysis of the process of professional development there will be developed a set of common criteria for the assessment of the effectiveness of this process, based on which will be identified the regularities of formation, reflecting its focus and dynamics: their interest in profession of choice, changes in choice making motivation, growing job satisfaction, increasing the desire to acquire more knowledge and professional skills and making appropriate adjustments in their career goals [37-38].

Deficiency of knowledge and functions of pharmaceutical professions in Georgia is not exists only in the non-medical section of the society, but also in the medical staff like health-care specialists.

Developing a continuous pharmaceutical education system, will enhance the professionalism of pharmaceutical personnel.

We also measure the perception of job satisfaction among Georgian pharmacists

and future proposals to improve pharmacists' job satisfaction. Using described above questionnaire, the purpose of our study was: To obtain data on job satisfaction retail environment; To distinguish aspects of the community of practice that have the greatest contribution to work gratification; To investigate the precision and reliability of the questionnaire in a study sample community pharmacies. We have been studied "the peculiarities of professional pharmacists, career satisfaction and service improvement strategy". It is necessary to obtain a grade of key issue factors influence of pharmacists' professional development according occupational vision of health care professionals and pharmacy students in Georgia. [39-42].

Development of organizational and functional models for licensing pharmaceutical activities, is considered as one of the mechanisms to improve the efficiency of public administration, and has great relevance and scientific and practical value. An integral part of the state system of measures to implement the rights of citizens to protect their health is pharmaceutical care, the quality of the provision which is largely dependent on the qualifications of the personnel pharmacist. In this regard, the professional qualification of experts is under the control of the state and is one of the objects of state regulation of relations in the field of drug- medicine, whose purpose - maintaining the competence of expert specialists on throughout their careers with varying requirements for professional quality [43-45].

The modern system of pharmaceutical care to improve the quality of life of patients depends on highly skilled professionals in drug-store whose competence has been growing in the process of professional development. The pharmacists require not only the use of earned at the institution of knowledge and skills, but also the willingness to professional self-development. Since the scope of drug treatment is one of the most socially significant areas of state regulation, the sequence in carrying out reform measures, conservation experience, and smooth introduction of new methods become crucial. However, comprehensive studies aimed at understanding the process of professional formation pharmaceutical worker, for to provide quality pharmaceutical care has not yet been carried out. Development of organizational and

functional model of the licensing of pharmaceutical activities, pharmacists job as one of the mechanisms to improve the efficiency of public pharmaceutical and public administration, has great relevance, scientific and practical value [46-48].

In many developing countries in the field of pharmacy are regulated, as well as family medicine. The pharmacist as family doctor needs of higher education, post-graduate and continuing education in pharmacy, a pharmacist license and periodic accreditation. In western countries in pharmacy, allowed to work only with higher pharmaceutical education specialists who have graduated from state-recognized and accredited colleges. The opening of a pharmacy permit is issued only to a person of higher pharmaceutical education, who passed the diploma courses in pharmacy and earned the right to open the pharmacy. It should be noted that in developed countries and in many developing countries pharmaceuticals are regulated profession, as well as family medicine, pharmacist as a family doctor, need higher pharmaceutical education, diploma and continuous pharmaceutical education, pharmaceutical license and periodic accreditation. Only pharmacists with higher pharmaceutical education have the right to work as pharmacists in pharmacies, who have graduated from universities recognized and accredited by the state [49-50].

We have been also studied Peculiarities of professional and career improvement strategy for pharmacists in Georgia; Pharmacist specialist' professional features; Factors which most of all had influence on pharmacists' profession(occupational) choice; pharmacists' professional satisfaction, pharmacists' career satisfaction; pharmacists' work satisfaction, satisfaction of the balance between the pharmacists' workload and the pharmacists' personal life, pharmacist' work satisfaction by the time duration of job; pharmacist' satisfaction by income; professional peculiarities of student pharmacists, professional peculiarities of employed pharmacists student, professional peculiarities of the pharmacists with the vision of the chief (head), Peculiarities of professional for pharmacists, grade of key issue factors influence of pharmacists' professional development according occupational vision of health care professionals and pharmacy students in Georgia [51-52].

Without quality pharmaceutical care there is no quality health care. Based on the urgency of the problem the given research and with its design was selected, which defined the following objectives:

- Assess and analyze the current situation of pharmacist in Georgia.
- Detect the gaps and outline the perspectives of the Georgian pharmaceutical system and identified of basic problems of pharmacists in Georgia.
- First time in Georgia has been studied and analyzed grade of key issue factors influence of pharmacists' professional development according occupational vision of health care professionals and pharmacy students.
- Based on the analysis of the current situation in and identified gaps in pharmaceutical system, and taking into consideration international regulations and the Georgian realities, elaboration of conclusions and recommendations aimed at solution of existing problems.

It is necessary to provide a deep cooperation between pharmacists and physicians on the issues of pharmacotherapy and healthcare to ensure the patients' health state effective improvement, and also to provide the best feedback regulation and revision in the healthcare specialists' team work. Pharmacists also should be responsible for registration of the drugs' side effect, as well as be attentive in case of imperperness and professional defects of drugs they provide. To achieve that it is necessary to raise awareness of specialists on the essence of pharmacists' profession and functions among the medical personnel and general public [53-56].

On the question do you think the professional activity of pharmacist is important for the society? Health-care specialists' 94.8% answer yes, health-care specialists' 2.9% answer no; health-care specialists' 2.3% answer to a small extent.

Report on the question - Evaluate factors having influence on your professional development under 5-point scale (system) (evaluate each factor?). See Table 1. To increase the pharmacist's professional qualification, professionalism, professional knowledge and competency the higher pharmaceutical education universities programs should more emphasize the mentioned subjects.

**Report on the factors having influence on respondents' pharmacists' professional development evaluated under 5-point scale (system)**

Answers:	Mean	Median	Std. Deviation
1. Evaluate factors having influence on your professional development under 5-point scale (system) (evaluate each factor)- Interesting and valuable work	4.20	4.00	0.865
2. Evaluate factors having influence on your professional development under 5-point scale (system) (evaluate each factor)- The favorable (prosperous) psychological climate in collective within the colleagues' team	3.48	4.00	1.141
3. Evaluate factors having influence on your professional development under 5-point scale (system) (evaluate each factor) - Possibility of career development (growth)	4.22	5.00	0.991
4 Evaluate factors having influence on your professional development under 5-point scale (system) (evaluate each factor) - Professional training	4.25	5.00	0.978
5 Evaluate factors having influence on your professional development under 5-point scale (system) (evaluate each factor) - Social importance of profession	4.02	4.00	1.037
6 Evaluate factors having influence on your professional development under 5-point scale (system) (evaluate each factor) - Independence in the work	4.28	5.00	0.962

Source – study results

It is too important, that a pharmacist should realize and understand that qualification upgrading study courses, professional trainings and professional workshops are of great necessity for further professional advancement.

Thus, the Government should develop continuous pharmaceutical education programs accessible to all pharmacists. The qualification upgrading study courses, professional education or training courses should be available for all pharmacists. Pharmacist's education process should not be stopped. Developing a continuous pharmaceutical education system will enhance the professionalism of the pharmaceutical personnel. Experiential education should encourage perfection of critical opinion and the problem resolving processes along with the medicine discovery [57-59]. Translation of professional pharmaceutical literature should be supported and implemented, with further inclusion in educational programs.

International professional publications in pharmacy should be more accessible, as they are highly required for all pharmacists.

On the question- What is the sense (meaning) of the work of pharmacist? health-care specialists' 39.1 % answer with timely, proper and qualitative provision (supply) of the population and hospitals/clinics with pharmaceutical products, health-care specialists' 60.9% answer optimization of quality of life for people, related to health by providing of pharmaceutical care (assistance, aid).

On the question- What functions are performed by pharmacists in the drug store (Pharmacy)? Indicate no more than 5 answers - health-care specialists' 53.4% answer realization of drugs (medications) and instruments of medical purpose, health-care specialists' 35.8% answer creation, development, production and sale of drugs, medical devices, instruments for medical purposes and healthcare products, health-care specialists' -53.7% answer provide information about drugs (medications) to the population, health-care specialists' 25.1% answer pharmaceutical care, health-care specialists' 33.2% answer they are experts of drugs (medicines.), health-care specialists' 42.7% answer ultimately cared about their patients' health and wellness, health-care specialists' 40.4% answer to dosage and dispensing of drugs (medications), health-care specialists' 34.9% answer to inform customers- consumers (patient) in pharmacotherapy direction, health-care specialists' 28.7% answer to inform customers- consumers (patient) in cost-effectiveness and cost-benefits of drugs , health-care specialists' 25.1% answer helping customers- consumers (patient) in offering or selection of (Over-the-counter) OTC drugs , health-care specialists' 12.1% answer to inform customers- consumers (patient) about drug design and drug forms, health-care specialists' 12.7% answer to inform customers- consumers (patient) about drugs' generic, chemical and brand name, health-care specialists' 21.5% answer to inform customers- consumers (patient) about drugs' effectiveness, safety and toxic effects , health-care specialists' 9.8% answer to inform customers- consumers (patient) about routes of drug administration, health-care specialists' 11.4% answer to inform customers- consumers (patient) about rules of drug administration , health-care specialists'

31.6% answer to help in selection of analogue of drugs (medication). See Table 2.

On the question- What is important to you in your work? (Indicate no more than 2 answers) health-care specialists' 61.2% answer receive remuneration and provision of necessities of life, health-care specialists' 78.8% answer personal realization as a specialist, health-care specialists' 26.7% answer pain and suffering relief to people, health-care specialists' 19.2% answer possibility for career development, health-care specialists' 2% answer Can not say.

*Table 2*

**Respondents' opinion about the pharmacists' functions in the drug store  
(Pharmacy)**

What functions are performed by pharmacists in the drug store (Pharmacy)? Indicate no more than 5 answers		
Answers:	Count	Column N %
1 Realization of drugs (medications) and instruments of medical purpose	164	53.4%
2 Creation, development, production and sale of drugs, medical devices, instruments for medical purposes and healthcare products	110	35.8%
3 Provide information about drugs (medications) to the population	165	53.7%
4 Pharmaceutical care	77	25.1%
5 They are experts of drugs (medicines.)	102	33.2%
6 Ultimately cared about their patients' health and wellness	131	42.7%
7 To dosage and dispensing of drugs (medications)	124	40.4%
8 To inform customers- consumers (patient) in pharmacotherapy direction	107	34.9%
9 To inform customers- consumers (patient) in cost-effectiveness and cost-benefits of drugs	88	28.7%
10 Helping customers- consumers (patient) in offering or selection of (Over-the-counter) OTC drugs	77	25.1%
11 To inform customers- consumers (patient) about drug design and drug forms	37	12.1%
12 To inform customers- consumers (patient) about drugs' generic, chemical and brand name	39	12.7%
13 To inform customers- consumers (patient) about drugs' effectiveness, safety and toxic effects	66	21.5%
14 To inform customers- consumers (patient) about routes of drug administration	30	9.8%
15 To inform customers- consumers (patient) about rules of drug administration	35	11.4%
16 To help in selection of analogue of drugs (medication)	97	31.6%

Source – study results

On the question- Does the level of basic training of pharmacists correspond to the contemporary requirements? Health-care specialists' 24.1% answer yes, health-care specialists' 45.6% answer no, health-care specialists' 20.8% answer to a small extent, health-care specialists' 9.4% answer cannot say. See Illustration 1.

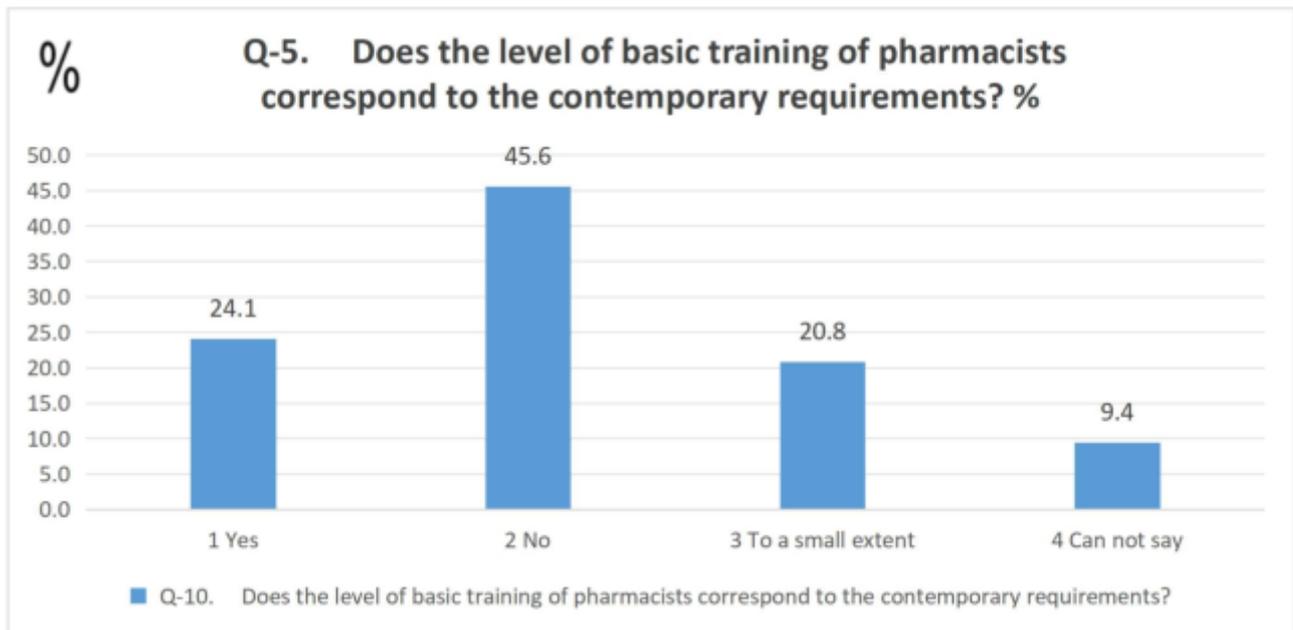


Illustration 1. Respondent's' opinion about pharmacists' basic training level if corresponding to the contemporary requirements

Source – study results.

On the question-What are the issues to which for pharmacists are in need of additional- further regular study or training? (You can indicate several answers) Health-care specialists' 60.9% answer New medications, Health-care specialists' 33.6% answer psychology of communication with customers- consumers (patient), health-care specialists' 64.2% answer issues of pharmacotherapy of certain diseases, health-care specialists' 50.2% answer safety and effectiveness of drugs (medications), health-care specialists' 73% answer pharmacology and pharmacotherapy, health-care specialists' 30.6% answer normative legal regulation of pharmaceutical activity ,health-care specialists' 53.4% answer about drugs (medications) toxicity, health-care specialists' 36.5% answer about drugs (medications) dosage, health care specialists' 35.8% answer about routes of drug administration, health care specialists' 19.9% answer about drug forms , health care specialists' 14% answer

about drug design, health care specialists' 40.1% answer about rules of drug administration, health care specialists' 18.6% answer about drugs generic, chemical and brand names, health care specialists' 35.2% answer about selection of (Over-the-counter) OTC drugs, health care specialists' 31.3% answer about cost-effectiveness and cost-benefits of drugs.

On the question - Are you familiar with the concept of pharmaceutical care (aid)? Health care specialists' 27.4% answer yes, health care specialists' 51.5% answer no, health care specialists' 17.6% answer to a small extent, health care specialists' 3.6% answer Can not say.

On the question- Is it necessary to provide cooperation between Pharmacists and physicians on the issues of pharmacotherapy? Health care specialists' 89.3% answer yes, health care specialists' 4.9% answer no, health care specialists' 4.9% answer to a small extent, health care specialists' 1% answer cannot say.

On the question is a pharmacist responsible for treatment together with a physician? Health care specialists' 25.4% answer yes, health care specialists' 54.1% answer no, health care specialists' 20.2% answer partially, health care specialists' 0.3% answer cannot say. See Illustration 2.

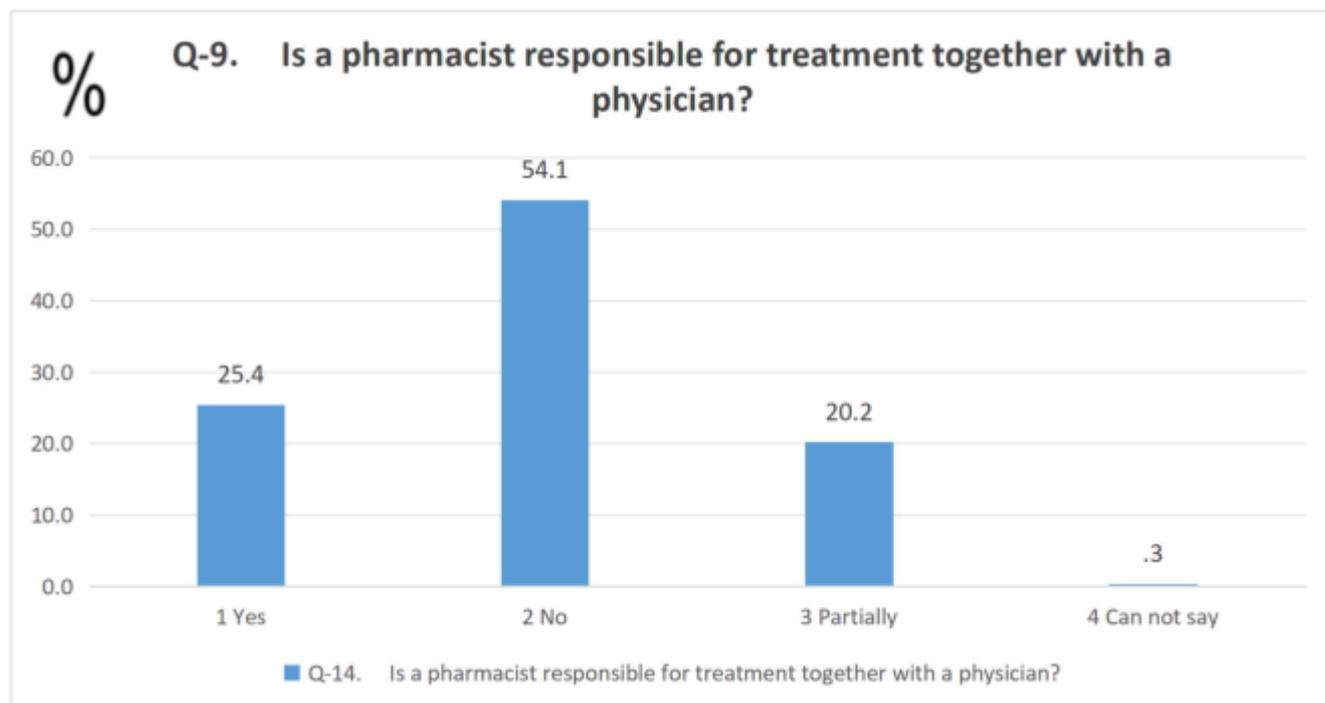


Illustration 2. Respondents' opinion if pharmacist responsible for treatment together with a physician

Source – study results.

On the question- Should a pharmacist provide assistance in teach patients to understand rules of intake of prescribed drugs (medications)? Health care specialists' 79.5% answer yes, health care specialists' 6.5% answer no, health care specialists' 14% answer partially. See Illustration 3.

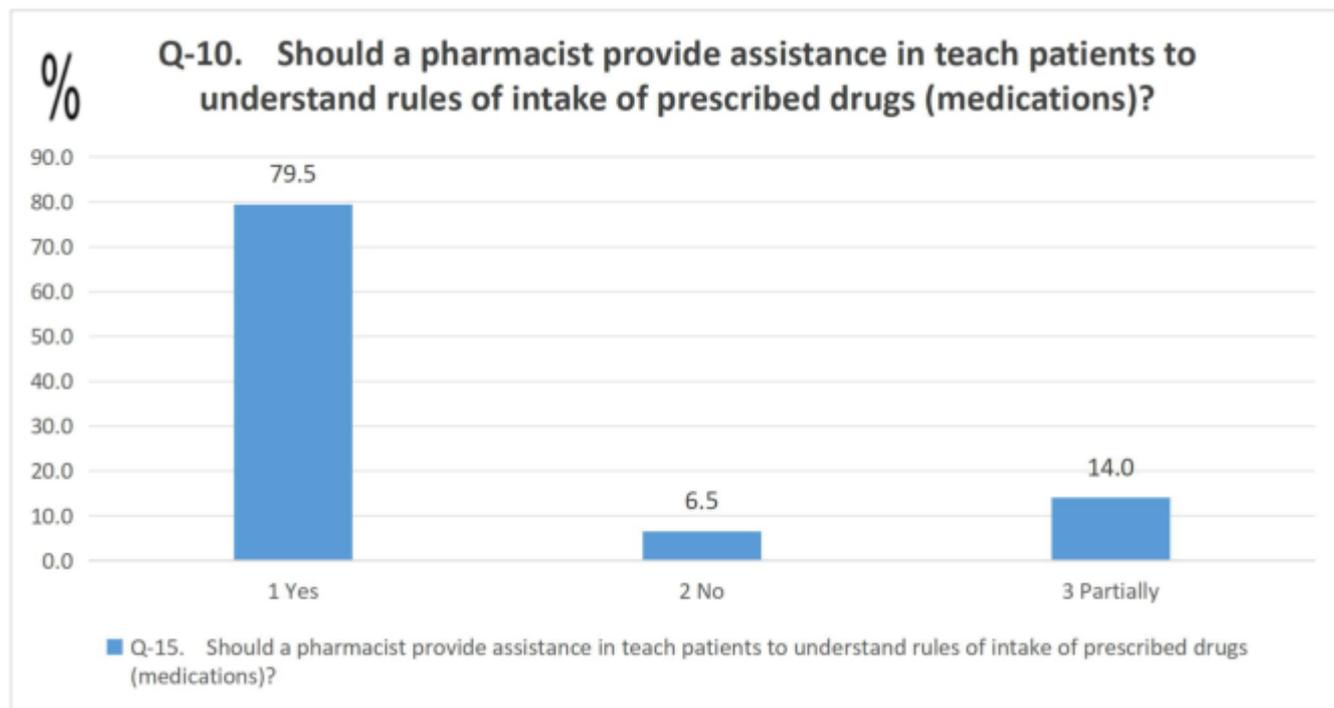


Illustration 3. respondents' opinion if a pharmacist should provide assistance in teach patients to understand rules of intake of prescribed drugs (medications)

On the question - Is the pharmacist responsible for registration of side (adverse) effects of the drug (medication)? Health care specialists' 30.6% answer yes, health care specialists' 49.5% answer no, health care specialists' 14.3% answer partially, health care specialists' 5.5% answer can not say.

On the question- Do you think that the government should make the certification of pharmacists? Health care specialists' 94.8% answer I agree, health care specialists' 4.6% answer I partly agree, health care specialists' 0.7% answer I do not agree.

On the question -what most of all had influence on your professional (occupational) choice (indicate only one answer)? Pharmacy faculty students' 25.7% answer parents' advice (or will) , pharmacy faculty students' 4.4% answer teachers'

advice, pharmacy faculty students' 7.2% answer worker-specialist's advice, pharmacy faculty students' 3.8% answer friends advice , pharmacy faculty students' 3.4% answer relatives or acquaintances' advice, pharmacy faculty students' 29.2% answer this profession corresponds to my aspiration, and inclination (affection), pharmacy faculty students' 26.3% answer interest in profession.

On the question-What underlying motives did you have while selection of the given direction of education? (Indicate no more than 5 answers) pharmacy faculty students' 53.6% answer desire to obtain high-quality professional training, pharmacy faculty students' 26.3% answer prestige of specialty, pharmacy faculty students' 22.9% answer the existence of abilities to this (the given) type of activity, pharmacy faculty students' 8.8% answer family tradition, pharmacy faculty students' 39.8% answer desire to develop own capabilities, aspirations, and inclinations (affections), pharmacy faculty students' 29.8% answer the desire (ambition) to be included in a student community as a special social environment, pharmacy faculty students' 36.1% answer the desire to expand horizons (desire to widen sense of vision), pharmacy faculty students' 18.5% answer desire to extend (lengthen) carefree period of life, pharmacy faculty students' 16% answer opportunity to take high social position, pharmacy faculty students' 49.8% answer guarantee to be employed, pharmacy faculty students' 27% answer desire to get high level to material well-being (security), pharmacy faculty students' 28.5% answer the possibility to develop further (future) social promotion , pharmacy faculty students' 10.7% answer desire to obtain self-respect in the eyes of others who are close to me, pharmacy faculty students' 10% answer the desire (ambition) and interests to obtain certain circle of contacts, connections with friends and acquaintance, pharmacy faculty students' 1.9% answer deferring from military service, pharmacy faculty students' 13.5% answer desire to have needful social well-being, pharmacy faculty students' 39.8% answer interest in a profession, pharmacy faculty students' 21.6% answer desire to be useful to people.

On the question- Are you satisfied with your professional (occupational) choice? Pharmacy faculty students' 77.4% answer yes, I am satisfied with my professional

choice , pharmacy faculty students’ 9.1% answer in general, I am satisfied, but I have some doubts about the preciseness of my professional (occupational) choice, pharmacy faculty students’ 8.5% answer I am partly satisfied with my professional choice , pharmacy faculty students’ 3.8% answer I am mostly disappointed with my professional choice, pharmacy faculty students’ 1.3% answer I am not satisfied with my professional choice. See Illustration 4.

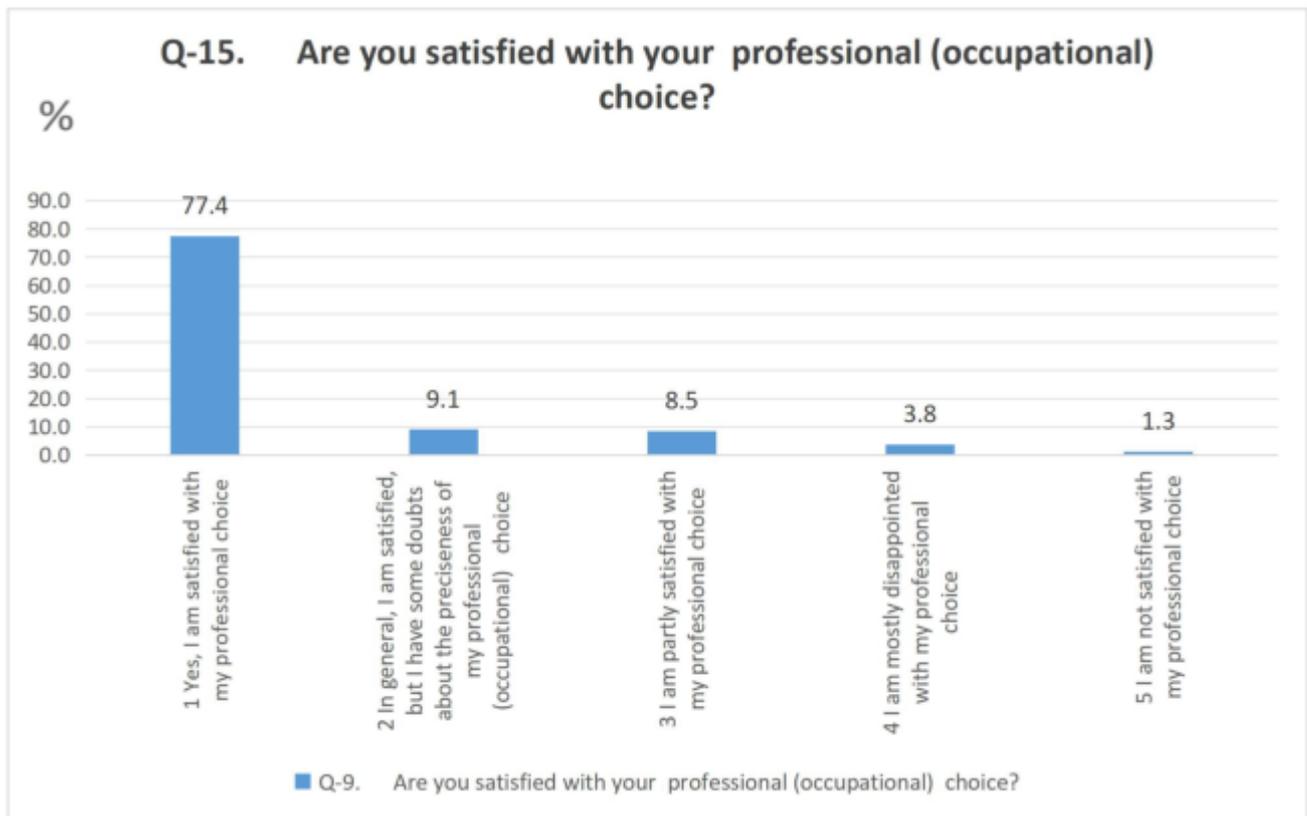


Illustration 4. Satisfaction of respondents with professional (occupational) choice

Source – study results

On the question what is your interest in regard of your future work (workplace)? (You can indicate several answers) pharmacy faculty students’ 34.2% answer content (essence) of the work, pharmacy faculty students’ 35.7% answer labor conditions, necessary equipment, pharmacy faculty students’ 66.8% answer the system of labor and rate of wage (salary of labor), pharmacy faculty students’ 23.5% answer peculiarities of team of collective, where I have to work, pharmacy faculty students’ 17.6% answer employment opportunities , pharmacy faculty students’ 31% answer demand for such specialist at the labor market. See Illustration 5.

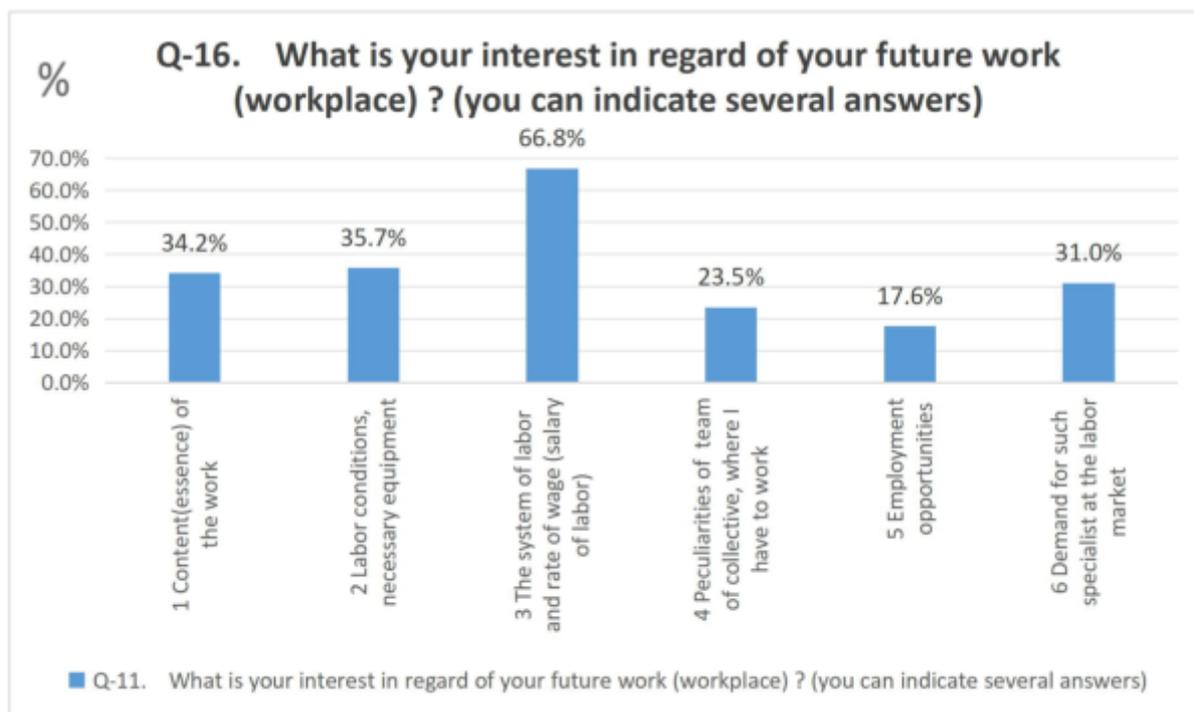


Illustration 5. Respondents interest issues regarding of future work (workplace)

Source – study results.

On the question -how is your attitude towards learning? Pharmacy faculty students’ 85.3% answer I learn with great pleasure, pharmacy faculty students’ 11% answer I have indifferent attitude to learning, pharmacy faculty students’ 3.8% answer learning is burden to me.

On the question would you like to change your chosen specialty? Pharmacy faculty students’ 13.2% answer yes, pharmacy faculty students’ 86.8% answers no.

On the question- What is main reason for change your direction of learning? Pharmacy faculty students’ 31.7% answer I understand that the given work is not interesting to me, pharmacy faculty students’ 46.3% answer future work will not correspond to my aspirations, and inclinations (affections), pharmacy faculty students’ 9.8% answer I am not satisfied with the quality of education, pharmacy faculty students’ 7.3% answer I do not like the quality of teaching, pharmacy faculty students’ 4.9% answer other reason. See Illustration 6.

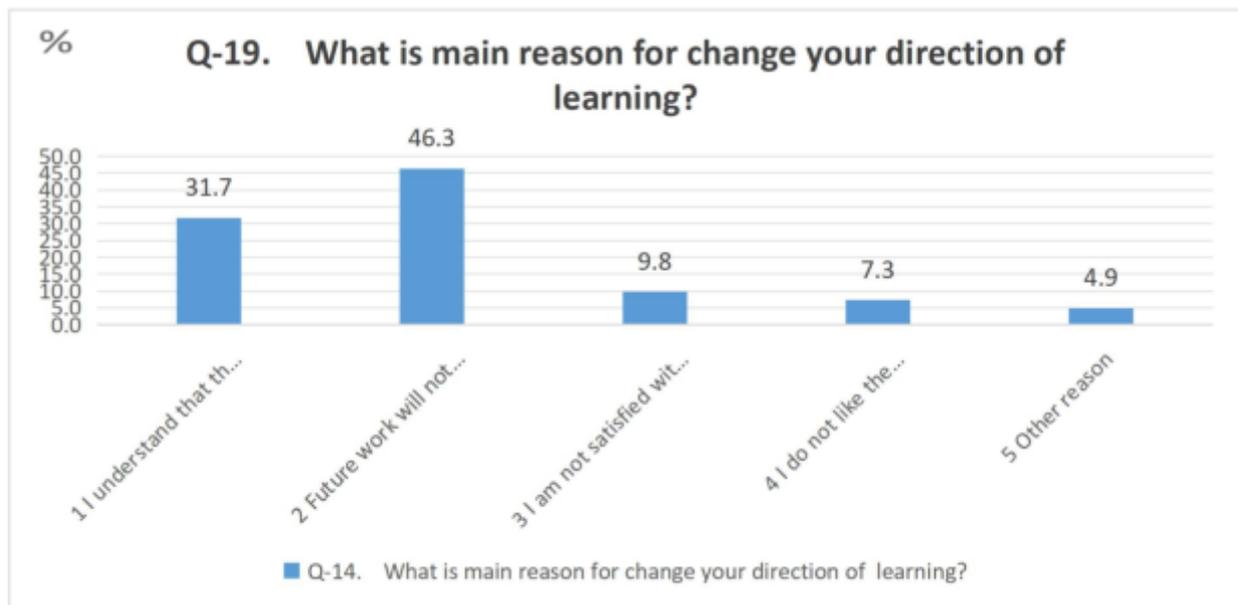


Illustration 6. respondents’ main reason for changing direction of learning  
 Source – study results.

On the question do you know where to work after graduating? Pharmacy faculty students’ 40.8% answer yes, pharmacy faculty students’ 17.9% answer no, pharmacy faculty students’ 41.4% answer I know roughly, but it may be change. Illustration 7.

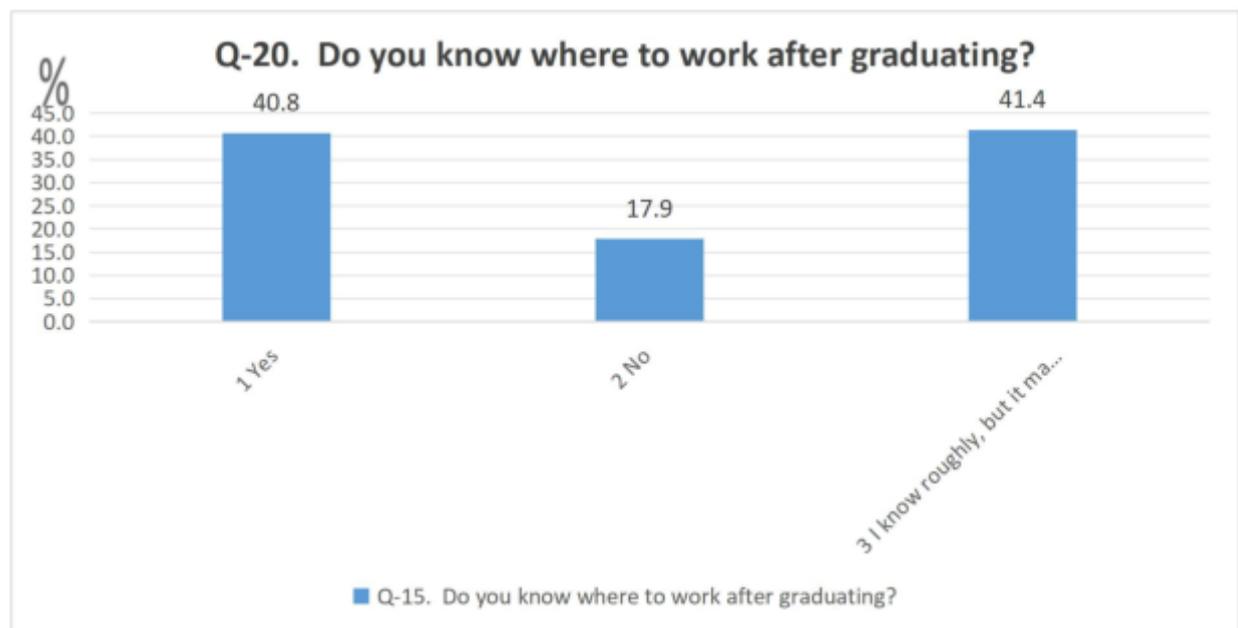


Illustration 7. respondents’ opinion, where to work after graduating  
 Source – study results.

On the question -Are you engaged in the search of your future work by

specialty (training)? Pharmacy faculty students' 63.3% answer yes, pharmacy faculty students' 36.7% answers no. See Illustration8.

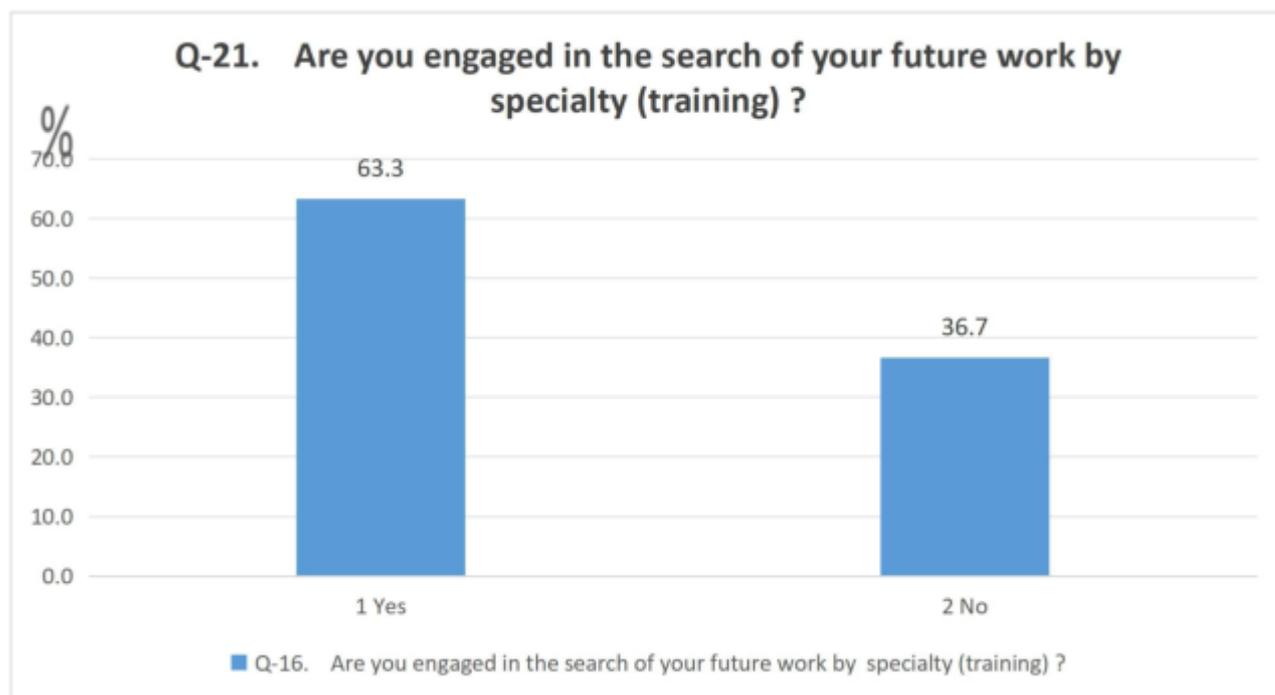


Illustration 8. If respondents are you engaged in the search of future work by specialty (training)

Source – study results.

The majority of higher pharmaceutical education pharmacists' specialists were female; among them the largest majorities were working on the pharmacist position at pharmacies. The Government and pharmaceutical companies should create promotional conditions for males to make pharmacist profession attractive for men. It is very important for career advancement and satisfaction to provide a balance between the workload and man personal life for the satisfaction by income, for pharmacists' professional satisfaction, for pharmacist job satisfaction, and also for the career promotion perspectives. The Government should take care of the profession of pharmacist authority. The pharmacist's profession in the health care system should increase the authority and social importance by the state support. Pharmacist's profession should become of more power and authority; a pharmacist should have a much higher status in the healthcare system. Therefore, the role of a pharmacist is significantly increased in the healthcare system and is directly related to his

professional education level. Therefore, pharmacist should have appropriate higher pharmaceutical education. All the mentioned is achieved then, when the pharmacist profession will move into the health-regulated professions list.

The professional competency is mandatory for pharmacists. Pharmacists' professional competency can be achieved by adopting of higher pharmaceutical education and by certification of pharmacists. The higher pharmaceutical education, pharmacists' certifications are the guarantee for higher professionalism of pharmacists and the pharmaceutical service provision in pharmacies. The level of basic training of pharmacists should be in compliance with the contemporary requirements. The pharmacist should have deep knowledge in pharmacology, in pharmacotherapy, in toxicology, in pharmaceutical care, in clinical pharmacy, in pharmacokinetics, in pharmacodynamics, in basic of medicine and in other pre-clinical and clinical directions. Such knowledge can be obtained only in the higher pharmaceutical education institutions. Therefore, pharmacist working in pharmacy must have only higher pharmaceutical education.

Pharmacy faculty students should take part in the patient care practice in hospitals, society proceeding settings and in other practical experiences. Students should have the possibility to apply the clinical and pharmaceutical information taught in classes when studying in medical facilities by working under the supervision of volunteer mentors (the healthcare specialists or professionals). The research activity of the pharmaceutical faculty students in all fields of pharmaceutical practice should be encouraged.

Quality reliance refers to the necessity to improve higher pharmaceutical education to guarantee a useful, sustainable and steady activity and appropriate skills and competencies of the tomorrow's labor resources. The pharmacy degree programs should be proposed at the higher pharmaceutical institution level and entire experimental constituent element in the clinical facilities. To raise the professional standards the Government should make a certification of the higher pharmaceutical education pharmacists. It is very essential for pharmacist's professional perfection and professional growth, for self-realization and job satisfaction of the higher pharmaceutical education pharmacists, for the pharmacists' career advancement, their

much higher status among the health care specialists and economic welfare, for their full realization of the received knowledge while working, for an opportunity to have private pharmaceutical activity, for the perspectives of professional promotion and correspondence of pharmacists qualification to the work performed. There is a substantial need for preparation and implementation of the registration-certification regulations for pharmacists' staff. Process of the pharmacists' certification should be started immediately.

For the majority of respondents mostly significant factors while choosing a pharmacy were: service culture, wide range of products and reasonable prices. For less than half part of respondents mostly significant factors while choosing a pharmacy were: possibility to receive consultation about medications with a physician/ a pharmacist, convenient location of the pharmacy, high qualification of pharmacist personnel (See tabl.3).

*Table 3*

**The mostly significant factors while respondents choose a pharmacy**

The most significant factors while choosing a pharmacy (no more than 5 answers were accepted)	Count	Percent (%)
1. Service culture	764	50.7
2. Wide range of products	798	53.0
3. Possibility to receive consultation about medications with a physician/ pharmacist	742	49.3
4. Reasonable prices	877	58.2
5. High qualification of personnel	547	36.3
6. Convenient location of the pharmacy	681	45.2
7. Absence of queues	477	31.7
8. Friendly staff	293	19.5
9. The existence of high-quality medicines	472	31.3

Analysis the data of respondents' answers on the question „Do you think that the Government should make the certification of pharmacists? “(Q) revealed the following in different categories: the majority of chief pharmacists, of consumers of pharmacies, of the employed students, of the healthcare specialists and pharmacists considered, that Government should make certification of pharmacists ( $P < 0.005$ ) There are statistically significant points between variables. (See Figure 1).

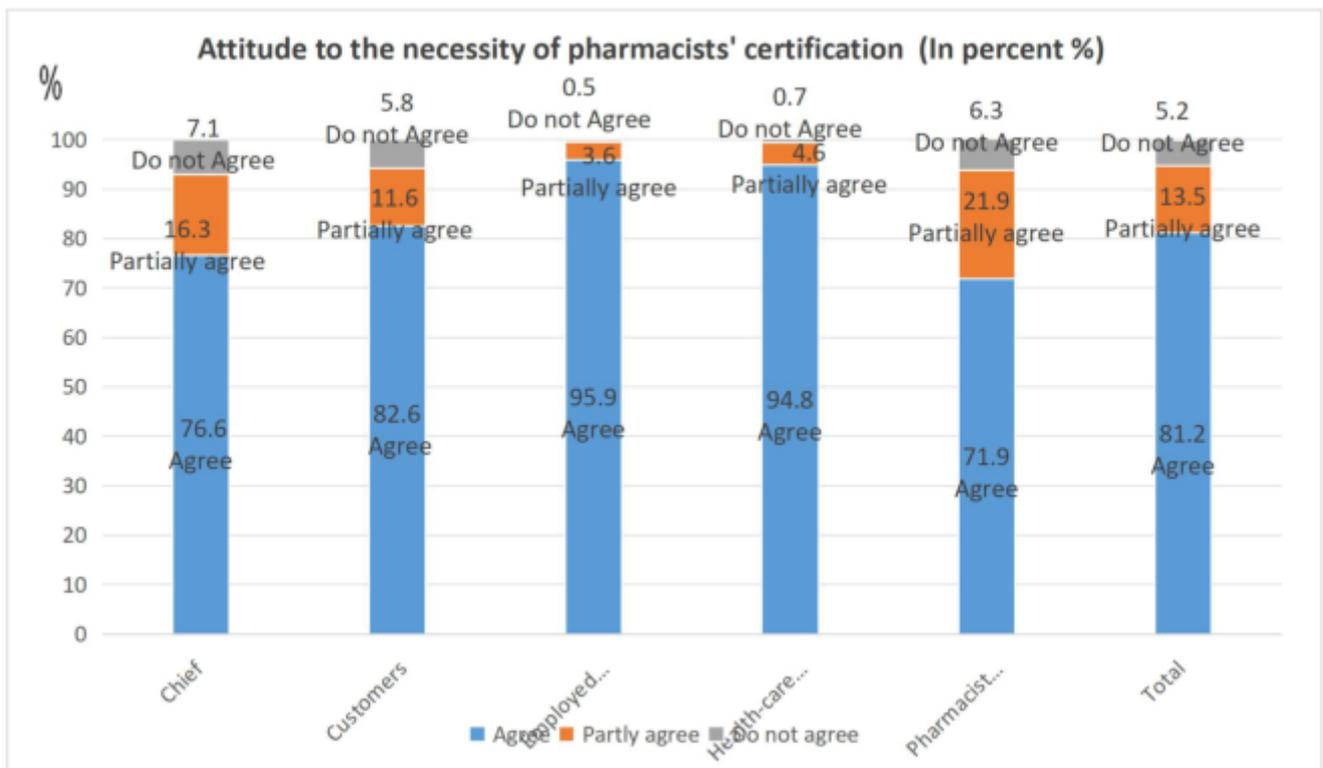


Figure 1. Attitude to the necessity of pharmacist certification

Statistically significant was association between the buyers' educational level and their opinion about the necessity of pharmacists' certification ( $p < 0.04$ ): customers with higher education considered certification of pharmacists as mandatory more often, than did buyers (patients) with secondary education. The respondents' vast majority considered that the issues to for pharmacists were in need of the further regular studies or trainings in the following fields: new medications, issues of pharmacotherapy of certain diseases, pharmacology and pharmacotherapy, drugs toxicity. From study results it is obvious that in the higher pharmaceutical institutions' pharmaceutical educational programs and curriculum need upgrade, renewal, modernization and adaptation to the new modern medical challenges. Therefore, continuous pharmaceutical educational programs should be created. These programs should be more focused on new medications, pharmacotherapy, drugs toxicity and dosage, routes of drug administration, selection of OTC drugs, cost-effectiveness and cost-benefits of drugs. Pharmacist provide contribution and assistance in teaching of patients to understand the prescribed drugs intake rules, pharmacists need in deep knowledge in basics of medicine, pharmacology,

pharmacotherapy, pharmaceutical chemistry, pharmaceutical care, clinical pharmacy and other pharmaceutical disciplines. Properly educated pharmacists have great importance and value for the provision higher quality health care services, for the provision higher quality pharmaceutical care and very essential for patient's safety. The respondents' vast majority considered that the Government should make the certification of pharmacists. It is very essential and important that higher pharmaceutical educated pharmacists to have pharmacist license issued by the Government. The vast majority of the public health specialists considered that the professional activity of pharmacist is very important for the society. Chi-square test of independent has been performed in order to compare the attitude of different sides to the necessity of pharmacists' certification regulation by Government. The opinion that certification of pharmacists should be mandatory was more common among public health specialists, than among managers (Chi-square = 45.2,  $p < 0.001$ ) and pharmacists (Chi-square = 68.9,  $p < 0.001$ ), but there was not statistically significant difference between chiefs and pharmacists. It was more common also among patients than in pharmacists (Chi-square = 44.2,  $p < 0.001$ ). The necessity of pharmacists' certification was stated more often by employed students, than by pharmacists (Chi-square = 57.3,  $p < 0.001$ ). Present pharmaceutical services connected to self-health care and the significance that pharmacist professionals drive the health care frame systems in the new modern direction. Collaboration between physicians and pharmacists in treatment is gaining moment and has shown positive effects on patients' health. So according study results found, that drug-drug interactions, adverse drug reactions and treatment costs are reduced by involving pharmacists in the drug therapy process. Study showed that when pharmacists interventions were taken into account, the therapeutic effect improved in majority of patients and adverse drug reactions were prevented in many of cases.

Consumers (customers) of medications a little more than a third choosing the drugs (medications) by the advice of a pharmacist, more than half of consumers (customers) of medications consider, that for pharmacists are essential required professional competency. Consumers (customers) of medications vast majority ask to

pharmacists about rule of intake of drugs (medications). The vast majority of health-care specialists consider that for pharmacists are in need of additional- further regular study in direction of new medications, in issues of pharmacotherapy of certain diseases, in pharmacology and pharmacotherapy, in drugs (medications) toxicity. More than half of health-care specialists consider, that pharmacists provide information about drugs (medications) to the population. The vast majority of health-care specialists consider that, pharmacists doing optimization of quality of life for people, related to health by providing of pharmaceutical care (assistance, aid). Less than half of health-care specialists consider that the levels of basic training of pharmacists are not corresponding to the contemporary requirements. The vast majority of health-care specialists consider that, it is necessary to provide cooperation between pharmacists and physicians on the issues of pharmacotherapy. The vast majority of health-care specialists consider that, a pharmacist should provide assistance in teach patients to understand rules of intake of prescribed drugs (medications) [42-45]. Chi-square test of independent have revealed that pharmacists who have completed postgraduate education were more likely to hold higher position (Chi-square= 4.9,  $p < 0.03$ ). Statistically, significant association was revealed between the pharmacists' position and their satisfaction with professional career and job. Holding high positions were associated with increased career and job satisfaction (Chi-square= 9.4,  $p = 0.002$  and Chi-square= 5.5,  $p < 0.02$ , respectively), but not to professional choice satisfaction. It (Statistically analysis) showed also that long terms of work experience in the current position were associated with lower career and job satisfaction (Chi-square= 16.4 and 13.2,  $p = 0.001$ ). Believing that the professional capabilities and skills of respondents have been realized to the full extent in the current job was associated with higher career and job satisfaction (Chi-square =15.9,  $p = 0.001$  and Chi-square= 5.7,  $p < 0.02$ , respectively). Having a positive opinion about the importance of continuing professional development was also associated with the increased job and career satisfaction (Chi-square= 5.0  $p < 0.001$  and Chi-square= 24.8,  $p < 0.03$ , respectively). Use of knowledge, obtained from professional literature in the practice was significantly related to higher job satisfaction (Chi-square =13.6,

p<0.001), but not to career satisfaction. Pharmacists' engagement in the planning of professional career wasn't associated with increased job and career satisfaction. One of the main predictors of pharmacists' career and job satisfaction was also their income (Chi-square =23.9, p<0.001 and Chi-square=50.4, p<0.001) [48-52]. Pharmacists who were satisfied with their income were more often satisfied also with their job and career.

The results of this study provide important insights into the factors influencing the professional development of pharmacists in Georgia, with a focus on the perspectives of healthcare professionals and pharmacy students. The data was gathered using surveys, questionnaires, and in-depth interviews, which allowed for a thorough examination of the current state of the pharmacy profession and the perceived needs for continuous professional growth.

#### Key Findings:

- **Need for Continuous Education:** A majority of respondents, including healthcare professionals and pharmacy students, highlighted the need for ongoing professional development in areas such as new medications, pharmacotherapy, pharmacology, and drug toxicity. Respondents emphasized that the fast-paced advancements in the pharmaceutical field necessitate that pharmacists regularly update their knowledge to remain competent. This finding underscores the importance of continuous education programs to support the ongoing professional development of pharmacists.
- **Curriculum Modernization:** A significant portion of participants expressed the belief that the pharmaceutical education programs in Georgia's higher education institutions require significant modernization. The existing curricula need to be updated to reflect new developments in drug therapies, pharmacological research, and other emerging trends in healthcare. Respondents noted that the education provided in pharmaceutical institutions must be more adaptable to the evolving demands of the medical field, ensuring that graduates are adequately prepared for the challenges of contemporary healthcare settings.

- **Government Certification and Professional Development:** The study revealed a strong consensus among respondents that the government should establish a formal certification process for pharmacists. The majority of healthcare specialists, pharmacy students, and pharmacists themselves supported the idea of government-mandated certification to ensure the professional competence and accountability of pharmacists. Statistical analysis confirmed that this opinion was shared across different respondent categories, including pharmacy managers, healthcare specialists, and pharmacy consumers. This finding suggests that certification could be a vital tool in elevating the professional standards of pharmacists and enhancing public trust in the profession.
- **Role Expansion of Pharmacists:** One of the most striking findings from the study was the growing recognition of pharmacists as integral players in the healthcare system. While traditionally seen as medication dispensers, pharmacists are now expected to engage more actively in patient care. Many respondents agreed that pharmacists should participate in clinical decision-making, drug therapy optimization, and the prevention of adverse drug reactions. This shift towards a more patient-centered role reflects the evolving nature of the pharmacy profession, which is now seen as essential in managing complex medication regimens and improving therapeutic outcomes.
- **Collaboration with Healthcare Professionals:** The study also revealed the importance of collaboration between pharmacists and other healthcare professionals, particularly physicians. A significant number of respondents noted that involving pharmacists in the treatment process, such as by addressing drug-drug interactions and reviewing medication regimens, resulted in improved patient outcomes. The positive impact of pharmacist involvement in the healthcare team was particularly evident in reducing adverse drug reactions and lowering treatment costs. This reinforces the growing recognition of pharmacists as key contributors to multidisciplinary healthcare teams.
- **Importance of Experiential Education:** Respondents strongly supported the

idea of experiential education as a key component of pharmacist training. Many healthcare professionals and pharmacy students emphasized the need for hands-on learning opportunities that encourage critical thinking, problem-solving, and the ability to adapt to rapidly changing healthcare environments. The incorporation of experiential education into pharmacy programs would help to refine the practical skills necessary for effective patient care and drug management.

The findings of this study support the idea that the pharmacy profession in Georgia is at a critical juncture. As healthcare becomes more complex, the role of the pharmacist is evolving, and so too must their education and professional development. The widespread call for modernization of pharmaceutical curricula and the implementation of certification processes indicates a need for stronger regulatory frameworks to ensure that pharmacists are equipped to handle the challenges of modern healthcare.

Moreover, the increasing emphasis on patient-centered care highlights the importance of pharmacists being more involved in clinical settings. This shift aligns with global trends where pharmacists are seen not only as dispensers of medications but also as active participants in optimizing patient health outcomes. The study's results suggest that, to facilitate this transition, both educational institutions and healthcare systems must collaborate to create opportunities for pharmacists to develop the necessary clinical skills and knowledge.

One of the study's most important implications is the need for continuous professional development. As medical advancements continue to evolve, the ability of pharmacists to keep up with new drug therapies, pharmacological techniques, and emerging health challenges is crucial. Continuous education and training will ensure that pharmacists are not only knowledgeable about current treatments but also prepared to respond to future developments in the field.

The study's findings also highlight the critical need for government involvement in regulating the pharmacy profession. The support for mandatory certification suggests that formal recognition of a pharmacist's qualifications could

significantly enhance professional standards and public confidence in the profession. Certification could also help establish clear benchmarks for continuing education and skill development, fostering an environment where pharmacists can continuously improve and adapt.

The study contributes valuable information regarding the professional development needs of pharmacists in Georgia. The results suggest that there is broad support for changes that will help to modernize education programs, establish government certification processes, and provide opportunities for continuous professional development. The findings indicate a clear direction for the future of the pharmacy profession in Georgia, emphasizing the need for a more collaborative, patient-centered approach to healthcare and the essential role that pharmacists must play in the evolving healthcare landscape.

This study employed a quantitative research approach to assess the influence of key factors on the professional development of pharmacists. Data were collected through surveys and questionnaires administered to a broad sample of healthcare professionals, pharmacy students, and practicing pharmacists in Georgia. The study also incorporated in-depth interviews to gather qualitative insights into the challenges and needs faced by pharmacists in their professional journeys.

Statistical methods, including descriptive statistics, regression analysis, and chi-square tests, were used to identify significant trends and correlations within the data. The study aimed to uncover how these factors, such as education, training, certification, and the role of pharmacists within healthcare teams, contribute to their professional development.

## **Key Findings**

### **1. Continuous Professional Development Needs**

A dominant theme that emerged from the study was the significant need for continuous education and training for pharmacists. Respondents consistently emphasized that pharmacists should engage in regular professional development in areas such as pharmacotherapy, pharmacology, new drug therapies, and drug toxicity. These findings reflect the rapidly evolving nature of the pharmaceutical field and the

necessity for pharmacists to stay updated on the latest advancements.

The healthcare professionals, pharmacy students, and practicing pharmacists all recognized the importance of acquiring and maintaining up-to-date knowledge to ensure effective patient care and medication management. With new medications and therapies being introduced frequently, pharmacists must have a solid understanding of emerging treatments to support patient safety and well-being.

## **2. Curriculum Modernization in Pharmaceutical Education**

The study identified a significant gap between the current curriculum in pharmaceutical institutions and the needs of the modern healthcare environment. Respondents highlighted that existing educational programs were outdated and did not fully prepare graduates for the challenges they would face in practice. Many suggested that pharmaceutical programs need to incorporate more practical, patient-centered training, as well as current pharmacological knowledge, to align with modern healthcare demands.

Curricula modernization is particularly urgent in light of the growing complexity of medical treatments and patient care practices. To address this, respondents proposed the inclusion of more hands-on experience, greater focus on clinical skills, and integration of new technologies in pharmacy education.

## **3. Government Certification and Regulatory Frameworks**

One of the most compelling findings was the strong support for government-mandated certification for pharmacists. The majority of participants, including healthcare professionals and pharmacy students, agreed that certification would serve as an effective mechanism for ensuring pharmacist competence. Respondents argued that such a system would not only promote professionalism but also enhance public trust in the pharmacy profession.

Certification was viewed as a means to standardize training, encourage continuing education, and hold pharmacists accountable for their knowledge and skills. It was suggested that certification could also serve as a platform for creating structured professional development opportunities, making it easier for pharmacists to access relevant training and development resources.

#### **4. The Expanded Role of Pharmacists in Healthcare**

A key theme emerging from the study was the expanding role of pharmacists in the healthcare system. Traditionally viewed as medication dispensers, pharmacists are increasingly being called upon to contribute to clinical decision-making, drug therapy optimization, and patient safety management. Many respondents emphasized the importance of pharmacists being involved in monitoring drug interactions, preventing adverse drug reactions, and counseling patients on medication use.

The involvement of pharmacists in clinical teams was seen as crucial for improving patient outcomes, particularly in reducing the incidence of medication errors and enhancing the overall quality of healthcare delivery. This evolving role reflects the global shift toward a more integrated and collaborative healthcare approach, where pharmacists work closely with physicians and other healthcare providers to ensure that patients receive optimal care.

#### **5. Collaboration with Other Healthcare Professionals**

The study also highlighted the importance of fostering collaboration between pharmacists and other healthcare professionals, such as physicians and nurses. The majority of healthcare specialists surveyed agreed that the inclusion of pharmacists in healthcare teams led to better patient outcomes, particularly in areas such as drug therapy management and disease prevention.

By collaborating with physicians, pharmacists can contribute valuable insights regarding drug interactions, alternative treatments, and side-effect management. This cooperation helps ensure that patients receive comprehensive and well-rounded care, ultimately improving therapeutic outcomes and reducing healthcare costs.

#### **6. Experiential Education and Hands-on Learning**

Respondents strongly supported the idea of incorporating more experiential education into pharmacy programs. Hands-on experience was seen as a critical component of training, as it encourages practical application of theoretical knowledge and enhances critical thinking, problem-solving, and decision-making skills. Experiential learning was viewed as essential for developing a deeper understanding of patient care and fostering a greater sense of responsibility and accountability in

future pharmacists.

By providing pharmacy students with real-world experiences in healthcare settings, educational programs can better prepare them for the challenges they will face in practice. This approach also promotes a greater focus on patient-centered care, which is becoming increasingly important in modern pharmacy practice.

**Implications.** The findings from this study suggest that there are several areas in which the professional development of pharmacists in Georgia can be enhanced. The need for continuous education, curriculum modernization, and government certification is clear, and addressing these factors could have a significant impact on improving the competency and effectiveness of pharmacists in the healthcare system.

The study also highlights the evolving nature of the pharmacist's role in patient care. As healthcare systems become more complex, pharmacists are required to take on more responsibilities, particularly in clinical decision-making and patient safety management. The integration of pharmacists into healthcare teams will require further changes in pharmacy education and professional development, with a greater emphasis on clinical skills and collaborative practices.

In conclusion, this research underscores the importance of ongoing investment in the professional development of pharmacists to ensure they are equipped to meet the challenges of modern healthcare. Through continuous education, curriculum improvements, certification, and greater collaboration within healthcare teams, pharmacists can continue to play a vital role in improving patient outcomes and healthcare delivery in Georgia.

The study revealed a widespread agreement among respondents on the importance of continuous professional education for pharmacists. The rapid advancements in pharmacology, drug therapies, and the increasing complexity of healthcare require that pharmacists remain up-to-date with the latest medical developments. Many respondents, particularly healthcare professionals and pharmacy students, emphasized that pharmacists must pursue regular studies in emerging areas such as new medications, pharmacotherapy for specific diseases, drug toxicity, and clinical pharmacology. This continuous learning is essential not only to ensure that

pharmacists provide the highest level of care but also to equip them with the tools needed to respond to evolving healthcare challenges.

These findings align with global trends in the pharmacy profession, where there is an increasing emphasis on lifelong learning. Pharmacists, particularly in the context of Georgia, face the challenge of accessing ongoing education due to barriers such as cost, limited availability of courses, or lack of structured programs. It is crucial for educational institutions and healthcare systems to invest in and promote continuous education opportunities for pharmacists. Governments should play a role in facilitating access to professional development courses that are both affordable and accessible.

A significant issue identified by this study is the outdated nature of current pharmacy education in Georgia. While the pharmaceutical field is advancing rapidly, many respondents felt that educational programs have not kept pace with these changes. There is a clear need to modernize the curriculum to reflect contemporary practices and incorporate emerging healthcare challenges. Respondents emphasized the importance of including more clinical, patient-centered training within pharmacy programs to ensure that students are better prepared for real-world practice.

Pharmacy education should adapt to focus not only on traditional pharmacology but also on practical, hands-on experience that reflects the changing roles of pharmacists in healthcare teams. The integration of patient counseling, clinical decision-making, and collaborative practice into the curriculum will help bridge the gap between theoretical knowledge and the practical skills required in today's pharmacy practice. This aligns with trends in other countries where pharmacy education is increasingly being designed to meet the needs of modern healthcare systems, which place greater emphasis on collaborative care and patient outcomes.

Moreover, the growing role of technology in healthcare means that pharmacy education should also integrate digital tools, such as electronic health records (EHRs), medication management systems, and telemedicine platforms. This would ensure that future pharmacists are well-equipped to work in increasingly digital healthcare environments.

A notable finding of this study was the strong support for government-mandated certification of pharmacists. There is a significant body of evidence suggesting that certification processes are instrumental in ensuring that healthcare professionals maintain high standards of practice. This study found that both healthcare specialists and pharmacy students strongly endorsed the idea of government certification for pharmacists. Certification can serve as a formal recognition of a pharmacist's qualifications, which in turn could help build public trust and ensure consistent levels of competence across the profession.

The majority of respondents believed that certification could help pharmacists remain accountable to the healthcare system and ensure that they continue to meet the evolving needs of patients. A formal certification system would provide pharmacists with clear benchmarks for professional development, promote self-regulation, and ensure that they stay informed about the latest advancements in medicine. However, the implementation of such a system would require significant collaboration between governmental bodies, educational institutions, and professional organizations to ensure that it is effective, fair, and accessible.

One of the most striking findings of this study was the growing recognition of the expanded role of pharmacists in healthcare teams. Traditionally, pharmacists have been perceived as dispensers of medication. However, as healthcare systems evolve toward more patient-centered models, pharmacists are increasingly seen as integral members of multidisciplinary healthcare teams. The involvement of pharmacists in clinical decision-making, patient counseling, and drug therapy management was strongly supported by the majority of respondents in the study.

Pharmacists have the expertise to contribute to various aspects of patient care, including preventing adverse drug reactions, managing drug interactions, and providing medication counseling. Their involvement in these areas can enhance patient outcomes by optimizing drug therapy and improving the overall quality of care. Collaborative practice between pharmacists and other healthcare providers such as physicians and nurses can significantly improve patient safety, reduce medication errors, and help manage chronic conditions more effectively.

Incorporating pharmacists into decision-making processes not only increases the quality of patient care but also aligns with the broader shift in healthcare systems toward team-based care. In countries where pharmacists work closely with healthcare providers, studies have shown improvements in patient outcomes, reduced hospital admissions, and cost savings. The growing recognition of this expanded role calls for greater support for collaborative practice and stronger integration of pharmacists into healthcare teams in Georgia.

The findings from this study underscore the importance of experiential learning as part of pharmacy education. Pharmacy students and healthcare professionals alike highlighted the value of gaining real-world experience in clinical settings. Experiential learning helps students apply theoretical knowledge to actual patient care scenarios, develop critical thinking skills, and become more comfortable with patient interactions. It also provides students with the opportunity to learn how to work collaboratively within healthcare teams, which is increasingly essential in modern pharmacy practice.

Experiential education is particularly valuable in developing a pharmacist's ability to make clinical decisions, optimize medication regimens, and effectively communicate with patients. By fostering an environment of hands-on learning, pharmacy programs can better prepare students to meet the demands of the healthcare environment and ensure that they are well-equipped to make a positive impact on patient care.

The findings from this study highlight several key areas for improvement in the professional development of pharmacists in Georgia. Continuous education, curriculum modernization, certification, and enhanced collaboration within healthcare teams are critical factors in ensuring that pharmacists remain competent and effective in their roles. Addressing these issues requires a concerted effort from educational institutions, government bodies, and professional organizations to ensure that pharmacists are adequately trained and supported in their professional development. By implementing these recommendations, Georgia can strengthen its pharmacy workforce and enhance the quality of patient care in the country.

**Conclusion.** The study provides critical insights into the factors influencing the professional development of pharmacists in Georgia, shedding light on the perspectives of healthcare professionals and pharmacy students. Several key conclusions can be drawn from the research:

- **Need for Continuous Professional Development:** The majority of respondents emphasized the necessity for pharmacists to engage in ongoing education and training, particularly in areas such as new medications, pharmacotherapy, pharmacology, and drug toxicity. This highlights the importance of upgrading educational programs in pharmaceutical institutions to keep pace with emerging medical challenges and innovations.
- **Government Role in Certification and Education:** A significant proportion of respondents supported the idea that the government should implement certification for pharmacists. This aligns with the broader need for more structured professional development programs, including qualification upgrading and specialized training. Establishing such certification mechanisms would help ensure the competence and accountability of pharmacists, benefiting the overall healthcare system.
- **Transformation of the Pharmacist's Role:** The study revealed a growing shift in the role of pharmacists from a product-oriented focus to a more patient-centered approach. Pharmacists are increasingly involved in clinical decision-making, drug therapy optimization, and patient safety. This transformation underscores the importance of incorporating clinical skills into the education and training of pharmacists to enhance their contribution to patient care.
- **Collaboration with Healthcare Professionals:** Effective collaboration between pharmacists and healthcare providers, including physicians, is essential for improving patient outcomes. The study demonstrated that involving pharmacists in the management of drug therapy, such as preventing drug-drug interactions and adverse drug reactions, has a significant positive impact on therapeutic outcomes. This collaboration is crucial for enhancing the overall quality of healthcare delivery.
- **The Need for Educational Program Modernization:** The research highlighted the need for the modernization of pharmaceutical education programs to ensure they

are aligned with the latest medical developments and global healthcare trends. The curriculum should be continuously updated to incorporate new drug therapies, advancements in pharmacology, and other relevant fields.

- **Future Prospects for Pharmacists' Professional Growth:** The study identified that there is a strong desire among healthcare professionals and pharmacy students for greater opportunities for professional growth and development. This includes both formal education and hands-on experiences that promote critical thinking, problem-solving, and adaptability in the evolving healthcare landscape.
- The research emphasizes the critical need for systemic changes to improve the professional development of pharmacists in Georgia. A focus on continuous education, certification, and the expansion of pharmacists' roles in patient care will not only enhance their professional competencies but also improve the quality of healthcare provided to the population. By addressing these needs, the pharmacy profession can better meet the challenges of modern healthcare and contribute more effectively to patient health and well-being.

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