

THE FEATURES OF THE ROLE, INNOVATIONS, OCCUPATIONAL AND EDUCATIONAL PERFECTION VISTAS OF PHARMACISTS' PROFESSION IN THE SCOPE OF THE DEVELOPMENT OF PHARMACEUTICAL CARE DIRECTION IN GEORGIA

Nodar Sulashvili

Doctor of Theoretical Medicine in Pharmaceutical and Pharmacological Sciences, Associate Professor, Head of The International Pharmacy Education Study Program of Faculty of healthcare at Millennium University, Tbilisi Georgia
E-mail: n.sulashvili@ug.edu.ge

Tea Mchedluri

Doctor of Biological Sciences. Professor. Iakob Gogebashvili Telavi State University.
Dean of The faculty of healthcare at Millennium University, Tbilisi Georgia;
E-mail: t.mchedluri@yahoo.com

Abstract: The main objective of the study was to analyze the features of the role, innovations, occupational and educational perfection vistas of pharmacists' profession in the scope of the development of pharmaceutical care direction in Georgia. The study was a quantitative investigation and analysis of the role, innovations, occupational and educational perfection vistas of pharmacists' profession in the scope of the development of pharmaceutical care direction in Georgia, by using questionnaires. Were conducted a survey study. The in-depth interview method of the respondents was used in the study. The 7 types of approved questionnaires were used (Respondents were randomly selected): Questionnaire for chief pharmacists: 410 chief pharmacists participated in the study. Questionnaire for patients: 1506 patients participated in the study. Questionnaire for the employed pharmacy faculty-student: 222 employed pharmacy faculty students participated in the study. Questionnaire for health-care specialists: 307 public health specialists participated in the study. Questionnaire for pharmacist specialist, 810 pharmacist specialists participated in the study. Were used methods of systematic, sociological (surveying, questioning), comparative, mathematical-statistical, graphical analysis. The data were processed and analyzed with the SPSS program. Were 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. According the study results, Government should make the certification of higher pharmaceutical education pharmacists. That is very essential for pharmacist's professional perfection, for successful higher pharmaceutical education, for pharmacist self-realization, for pharmacist's career advancement, for to exist pharmaceutical continuous professional education, for pharmacist professional growth, for pharmacist job gratification, for pharmacist career satisfaction, for pharmacists much higher status between health care specialists. Pharmacist certification is essential for pharmacists economic (material) welfare, for allows pharmacists to realize fully the received knowledge from higher education institution in work by the full extent, for to have private pharmaceutical activity, for pharmacists vocational development, for correspondence of pharmacist qualification to work, for further improvement perspective for pharmacists' professional promotion, for possibility to career enhancement strategy, for to realized by the full extent pharmacist professional capabilities, skills and habits, for occupational growth, for pharmacists professional satisfaction, for career enhancement perspective, for satisfaction of income (salary). Therefore, pharmacists' certification should start immediately and pharmacist vocation should become regulated health profession like family doctors. The pharmacist should possess deep and steady knowledge in pharmacology, pharmacotherapy, toxicology, pharmaceutical care, clinical pharmacy, pharmacokinetics, pharmacodynamics, basics of medicine and other pre-clinical and clinical subjects. Such knowledge can be obtained only from higher pharmaceutical education institutions. Therefore, pharmacist working on pharmacist position must have exclusively the higher pharmaceutical education, to provide higher quality pharmaceutical care services.

Keywords: Role, innovations, occupational, educational, pharmacists, profession, pharmaceutical care, Georgia

Introduction: The term "pharmaceutical care" was first published in 1990. Many of European countries have tried to explain the meaning of this word. In the European countries, there are different pharmaceutical activities and policies of the organization, so different points of view of the issue exist. The pharmaceutical care practice is liable, answerable and responsible procuring pharmaco- therapy for the goal of attaining determined results which develop the quality of patient's life, including treatment of an illness, removal and decrease of sick patient's symptoms, retaining or slowing down of the illness condition or disease prevention. Pharmaceutical care services include the methods and process via the pharmacist collaborates and contributes within the patient and another health occupational in implementing, designing, planning, monitoring and controlling

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pharmacotherapeutic schedule that will make certain pharmacotherapeutic results for the individual patient. Those in the round include several majority purposes and functions: recognizing and identifying suppose, practical and actual medicine associated challenges, solving current medicine associated issues and prevention of them. Pharmaceutical care services are the needful principles of public health care and must be united with various principles. It should assure for the direct profit and advantage for the individual patient. Therefore, pharmacists are directly liable and answerable to the quality of pharmaceutical care services for the patient [1-3].

Clinical pharmacists often apply their knowledge of drugs to a patient-specific treatment plan and evaluate dosage suitability, side effects, efficacy, and drug interactions. If necessary, the clinical pharmacist can discuss any issue and advise the physician, who is primarily responsible for prescribing drugs to patients, to ensure optimal use of the drugs. To practice, clinical pharmacists must graduate in a recognized area of qualification. The specific requirements for these degrees may differ depending on the country of operation. Subjects that are commonly found in the university's clinical pharmacist program include biology, chemistry, pathology, pharmacology, and socio-behavioral sciences. Most clinical pharmacists in the United States hold a Ph.D. in Pharmacy (Phar.D.) in addition to several years of postgraduate education such as a pharmaceutical residency. They can be certified as a clinical pharmacist through the Pharmaceutical Specialties Council, which is independent of the American Pharmacists Association. Education and certification requirements in other countries may differ depending on the guidelines set by the regulatory authorities. Clinical pharmacists are responsible for providing safe, effective, and timely drug therapy. Through various tasks in the department, they provide support for centralized and decentralized drug use systems, as well as optimal drug therapy for patients with a wide range of medical conditions. Clinical specialist pharmacists are competent in delivering direct patient-centered medical care and integrated operational pharmacy services in a decentralized practice with the participation of doctors, nurses and other hospital staff. These physicians are aligned with targeted multidisciplinary programs and specialized services to ensure drug therapy management within specialized patient care services and to ensure that pharmaceutical care programs are properly integrated across the facility. In these clinical roles, clinical pharmacists are involved in all necessary aspects of the drug use system, while providing comprehensive and personalized pharmaceutical care to patients in their assigned areas [4-7].

Pharmaceutical care services include, but are not limited to, assessing patient needs, integrating age and disease characteristics into drug therapy and patient education, adjusting patient care, and providing clinical interventions to identify, mitigate and prevent adverse drug reactions. Specialist clinical pharmacists serve as department resources and liaison with other departments, hospital staff, or external groups. They also lead clinical research and practice improvement projects as well as quality patient care and compliance initiatives to improve drug use or pharmaceutical practice. Specialist clinical pharmacists provide education and training related to medicines and practice and actively act as mentors for doctoral students and pharmacy residents. Where appropriate, participation in a quality management program is expected to improve services by monitoring processes, analyzing data, implementing interventions to improve and evaluating the effectiveness of those interventions. The responsibilities of a clinical pharmacist may include setting and maintaining long- and short-term goals for a quality management program; track and document quality improvement projects to make progress towards quality improvement goals [8-11].

The name of "clinical pharmacy" was invented to characterize the job of pharmacists whose fundamental job is to communicate with other healthcare professionals, meeting, interview, conversation and evaluation of patients, perform concrete pharmacotherapeutic advices, monitor and control patient responds to pharmacotherapy and ensure information about the medicines. Clinical pharmacists principally working in clinics, hospitals, medical insurance companies and acute health care directions. They give patient centered rather than production focused services. The clinical pharmacist should have knowledge of pharmaceutical sciences, medicine, pharmacology, pharmacotherapy, clinical pharmacology, pharmaceutical care, clinical pharmacy and all pharmacy subject to be capable to cure in rational pharmacotherapy, which includes the cost on behalf of the minimum economic conditions toward achieve maximum therapeutic effect, and, ultimately, the patient health and safety of care [12-13].

In the pharmacy field, an increase of negative trends, such as poor mechanisms of interaction between the professional education and the pharmaceutical market, slow adaptation of graduates to the market reality is being observed. A difference between the increasing demands of the patients and the level of specialists' knowledge, as well as adaptation to market reality can affect the process of professional development of specialists and the quality of pharmaceutical care in general. The mentioned trends, as well as the pharmaceutical professionals' increasing role and responsibility in the health care system, make necessity to analyze current

practical experience and evaluate the theoretical background of the specialists' development, as well as identify new contributing factors for their development as professional pharmacist practitioners [14]

The modern system of pharmaceutical care is to improve and enhance the life quality of patients, which is promoted by highly skilled professionals in pharmacies, whose competence has been growing along the process of professional development. Pharmaceutical specialists should not only be to be capable to use their knowledge and skills gained at the educational institutions, but also should be ready and motivated for the professional self-development, because without qualified pharmaceutical care there is no qualified health care system. Since the scope of drug treatment, pharmacy is one of the most socially significant areas of the state regulation, the sequence of carrying out the reform measures, accumulation of experience, and also smooth introduction and application of new methods become crucial nowadays. Development of an organizational and functional model of licensing of pharmaceutical activities, pharmacists work as one of the mechanisms can improve the efficiency of public pharmaceutical administration, which has the great relevance, scientific and practical value.

An integral part of the state system of measures to implement the rights of citizens for protecting their health, via using the quality pharmaceutical care services. The provision of pharmaceutical care maintenance is significantly dependent on the pharmacist personnel qualifications. In this concern, the professional qualification of drug experts is under the state control and is one of the state regulations objects in regard to the drug-medicine relationship aiming to maintain the competence of expert specialists throughout their careers with the varying requirements for professional quality.

The practice of the pharmacy has changed a lot in recent years. Professionals can directly contribute to patient care to reduce drug-related deaths, promote health and prevent disease. Medical organizations around the world are under tremendous pressure from the growing demand for patients. Unfortunately, cure is not always possible, especially in this era of chronic disease, and the role of doctors is limited to controlling and relieving symptoms. The growing number of patients with chronic conditions is associated with high morbidity, health care costs and the burden on physicians. The clinical pharmacy took over the medical care, which the doctors partly refused. Overwhelmed by the number of patients and the emergence of new drugs, doctors are increasingly turning to pharmacists for information about drugs, especially in institutions. After the pharmacists were transferred to the counting and dispensing of drugs, they carried out institutional reviews of drug use and acted as consultants for all types of healthcare facilities. In addition, when clinical pharmacists are active members of the healthcare team, they increase efficiency by: Providing the necessary feedback on drug use and dosage. Work with patients to resolve medication problems and improve adherence.

The developed countries and many from the developing countries in the field of pharmacy have also worked out as family medicine. A pharmacist, as a family doctor, should not have just the higher, post-graduate and consistent education in pharmacy, but also needs the pharmacist license and periodic accreditation by the board of pharmacy (BOP). In the western countries' pharmacies, just the specialists with the higher pharmaceutical education who have graduated from the state-recognized and accredited colleges and universities are allowed to work. A pharmacy opening permit is issued only to a person of higher pharmaceutical education with the diploma.

The aim and objectives of the research: The goal of the research was to provide a complex study, analysis and evaluation of the features of the role, innovations, occupational and educational perfection vistas of pharmacists' profession in the scope of the development of pharmaceutical care direction in Georgia.

METHODS OF RESEARCH: Scientific research was conducted using questionnaires. Research was conducted based on the analysis of data from official sources of respondents' filled questionnaires (the aim was to obtain information about general trends and processes). It was also planned to conduct field scientific research in order to obtain the data that were comprehensively and statistically analyzed. Studies allowed identifying the range and variety of opinions and patterns of professional behavior of respondents. In the research were used surveys; Surveys with the pharmacist and medical professionals; Surveys with students of the faculty of pharmacy; Surveys with the drug store patients and visitors; Surveys with public health specialists; Surveys with the young pharmacist specialists (up to 35 years).

The following 7 types of approved questionnaires there were used (Respondents were randomly selected):

- Questionnaire for chief pharmacists: 410 chief pharmacists were participated in the study.
- Questionnaire for patients: 1506 patients were participated in the study.
- Questionnaire for the employed pharmacy faculty student: 222 employed pharmacy faculty students were participated in the study;

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- Questionnaire for health-care specialists: 307 public health specialists were participated in the study;
- Questionnaire for pharmacist specialist, 810 pharmacists were participated in the study;
- Questionnaire for pharmacy faculty students: 319 pharmacy faculty students were participated in the study;
- Questionnaire for the young pharmacist specialists up to 35 years: 314 young pharmacist specialists were participated in the study.

▪ The total number of respondents was: 410+ 1506+222+307+810+319+314=3888

The number of respondents was calculated by using sample size of the open-source epidemiologic statistics for public health (OpenEpi) <http://openepi.com/SampleSize/SSPropor.htm>.

Open-source epidemiologic statistics for public health (OpenEpi) provides statistics for counts and measurements in descriptive and analytic studies, stratified analysis with exact confidence limits, matched pair and person-time analysis, sample size and power calculations, random numbers, sensitivity, specificity and other evaluation statistics, R x C tables, chi-square for dose response and links to other useful sites.

Each investigation was carried out in three interconnected stages. At the previous stage itself investigation purpose setting, the target population criteria selection, as well as the study options choice and their implementation were determined. At the second stage mainly, itself inquiry with the help of filling the questionnaires and the data collection was performed. At the third stage the collected data were subjected to analysis by means of the SPSS 11.0 for Windows 7 Program, and then definite discussions were encountered. For the Cross analysis the data obtained by means of Cross tabulation and Chi-Square Tests were served as a base.

- Marketing research process was involved a series of sequential steps:
 - Development a program of research;
 - Getting and analyzing the data from respondents' filled questionnaires;
 - Presenting the results of the research, illustration, drawing, conclusions and recommendations;
 - Analysis, assessment and discussion;
 - Summary, conclusion and practical recommendations.

Were used methods of the systematic, sociological (surveying, questioning), comparative segmentation, mathematical-statistical, graphical analyses were used. 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.

- Independence χ^2 test application, aiming to reveal existing connection between the variables. As the main hypothesis a fact of the variables' independent being was considered. The test was performed by the 95% credibility threshold. When as a result of the test the confidence coefficient is less than 0,05 ($p < 0,05$), so an interconnection availability between the variables is asserted;

- Calculation of measures of central tendency and dispersion (arithmetical mean, median, and standard deviation) for summarizing and assessment of data.

- Determination of the specific gravity (%).

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. In order to create a motivated subject, the implemented research scientific purpose was underlined, and definite indications on the questionnaires filling order were provided. 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 on the Bioethics Committee sessions of the YSMU after M. Heratsi and the positive conclusion was got.

Results and discussion: On the basis of performed study results the following have been founded:

Mostly essential pharmaceutical activity issues for the respondents' (pharmacists) majority were: new drugs, generic drugs, chemical and brand names of them; psychology of communication (relationships) with customers; issues of pharmacotherapy of certain diseases, pharmacology, pharmacodynamics, pharmacokinetics and pharmaceutical care (See tabl.1). It is apparent, that in the higher pharmaceutical education universities programs should be emphasized on the following subjects: pharmacotherapy, pharmacology, pharmaceutical care, clinical pharmacy and drugs toxicity.

Table 1.

Mostly essential pharmaceutical activity issues for the respondents (pharmacists)

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The most essential (relevant) for respondents issues of pharmaceutical activity (several answers were possible)	count	Percent (%)	P
1. New drugs, generic drugs, chemical and brand names of drugs	18	4.0	6
2. Psychology of communication (relationships) with customers	78	9.0	5
3. Issues of pharmacotherapy of certain diseases	41	6.8	6
4. The safety, effectiveness and quality of the drugs	58	8.9	6
5. Pharmacology, pharmacodynamics and pharmacokinetics issues	72	0.6	7
6. The normative legal regulation of pharmaceutical activity	64	4.9	4
7. Drug technology issues	41	9.8	2
8. Pharmacognosy	10	3.6	1
9. Pharmaceutical organization and economics and pharmaceutical business	54	9.0	1
10. Pharmaceutical management and marketing	81	4.7	3
11. Pharmachemistry	0	1.1	1
12. Toxicology	6	1.9	1
13. Clinical pharmacy	67	3.0	3
14. Pharmaceutical care	87	0.1	6
15. Pharmaceutical analysis	7	.5	9
16. Toxicological chemistry	0	.2	6
17. Pharmaceutical technologies	6	0.6	1
18. Nutrition	5	1.7	1
19. Pharmaceutical cosmetics and perfume	78	2.0	2
20. Social pharmacy and Public Health	46	8.0	1
21. Computer technology and pharmaceutical information	40	7.3	1
22. Phytotherapy	32	6.3	1
23. Routes of drug administration	83	2.6	2

24. Drug forms and drug design	58	9.5	1
25. Drugs' toxic effects	96	4.2	2
26. Rules of drug administration	37	9.3	2
27. Cost-effectiveness and cost-benefits of drugs	24	5.3	1
28. Terms and conditions of storage of drug (conditions and shelf-life)	59	2.0	3

A large majority of respondents' (pharmacists) consider that the Government should make the certification of pharmacists. As revealed, it is very important that the occupation of pharmacist should become regulated health profession. To raise pharmacists' sepecialists' professionalism, Government should make the certification of higher pharmaceutical education pharmacists. That is very essential for pharmacist's professional perfection, for successful higher pharmaceutical education, for pharmacist self-realization, for pharmacist's career advancement, for to exist pharmaceutical continuous professional education, for pharmacist professional growth, for pharmacist job gratification, for pharmacist career satisfaction, for pharmacists much higher status between health care specialists. Pharmacist certification is essential for pharmacists economic (material) welfare , for allows pharmacists to realize fully the received knowledge from higher education institution in work by the full extent, for to have private pharmaceutical activity, for pharmacists vocational development , for correspondence of pharmacist qualification to work, for further improvement perspective for pharmacists' professional promotion, for possibility to career enhancement strategy, for to realized by the full extent pharmacist professional capabilities, skills and habits, for occupational growth, for pharmacists professional satisfaction, for career enhancement perspective, for satisfaction of income (salary). Therefore, pharmacists' certification should start immediately and pharmacist vocation should become regulated health profession like family doctors.

Therefore, the role of pharmacist is underlined in healthcare system. For the higher quality healthcare and pharmaceutical services education level is of great matter. The study provided showed that the health of patients was directly related to the professional education level of pharmacist. Therefore, pharmacist should have appropriate higher pharmaceutical education, higher professional knowledge in pharmacology, pharmaceutical care, pharmacotherapy, clinical pharmacy and other professional subjects.

The pharmacist should possess deep and steady knowledge in pharmacology, pharmacotherapy, toxicology, pharmaceutical care, clinical pharmacy, pharmacokinetics, pharmacodynamics, basics of medicine and other pre-clinical and clinical subjects. Such knowledge can be obtained only from higher pharmaceutical education institutions. Therefore, pharmacist working on pharmacist position must have exclusively the higher pharmaceutical education.

The respondents'-public health specialists' majority considered that the pharmacists' functions in a pharmacy consisted in realization of drugs and instruments of medical purpose and providing information about drugs to the population. Less than half part of the respondents considered it to be in ultimate care about the patients' health and wellness, the drugs dosage and dispensing. About one third part of the public health specialists considered it to be in creation, development, production and sale of drugs, medical devices, instruments for medical purposes and healthcare products. About one third of the health specialists considered the pharmacists to be experts of drugs; about one third of them – to be inform of customers in cost-effectiveness and cost-benefits of drugs, the rest part of them considered that pharmacists help in selection of analogue of drugs (See tabl.2). According to that pharmacist job should become regulated and more authorized in health care system.

Table 2.

The public health specialists' opinion about the pharmacist's functions in pharmacy

Functions performed by pharmacists in pharmacy (no more than 5 answers)	ount	P ercent %
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1. Realization of drugs and tools (instruments) of medical purpose	64	3.4	5
2. Creation, development, production and sale of drugs, medical devices, instruments for medical purposes and healthcare products	10	5.8	3
3. Providing information about drugs to the population	65	3.7	5
4. Pharmaceutical care	7	5.1	2
5. Experts of drugs	02	3.2	3
6. Ultimate care about the patients' health and wellness	31	2.7	4
7. Dosage and dispensing of drugs	24	0.4	4
8. Informing the customers in pharmacotherapy direction	07	4.9	3
9. Informing the customers in cost-effectiveness and cost-benefits of drugs	8	8.7	2
10. Helping customers in offering or selection of OTC drugs	7	5.1	2
11. Informing the customers about drug design and drug forms	7	2.1	1
12. Informing the customers about drugs' generic, chemical and brand name	9	2.7	1
13. Informing the customers about drugs' effectiveness, safety and toxic effects	6	1.5	2
14. Informing customers about routes of drug administration	0	8	9.
15. Informing customers about rules of drug administration	5	1.4	1
16. Helping in selection of analogue of drugs	7	1.6	3

The respondents' public health specialists' majority considered that the pharmacists' functions in a pharmacy consisted in realization of drugs and instruments of medical purpose and providing information about drugs to the population. Less than half part of the respondents considered it to be in ultimate care about the patients' health and wellness, the drugs dosage and dispensing. About one third part of the public health specialists considered it to be in creation, development, production and sale of drugs, medical devices, instruments for medical purposes and healthcare products. About one third of the health specialists considered the pharmacists to be experts of drugs; about one third of them – to be inform of customers in cost-effectiveness and cost-benefits of drugs, the rest part of them considered that pharmacists help in selection of analogue of drugs (See tabl.3). According to that pharmacist job should become regulated and more authorized in health care system.

Table 3.

The public health specialists' opinion about the pharmacist's functions in pharmacy

Functions performed by pharmacists in pharmacy (no more than 5 answers)	ount	ercent %	P
1. Realization of drugs and tools (instruments) of medical purpose	64	3.4	5

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2. Creation, development, production and sale of drugs, medical devices, instruments for medical purposes and healthcare products	10	5.8	3
3. Providing information about drugs to the population	65	3.7	5
4. Pharmaceutical care	7	5.1	2
5. Experts of drugs	02	3.2	3
6. Ultimate care about the patients' health and wellness	31	2.7	4
7. Dosage and dispensing of drugs	24	0.4	4
8. Informing the customers in pharmacotherapy direction	07	4.9	3
9. Informing the customers in cost-effectiveness and cost-benefits of drugs	8	8.7	2
10. Helping customers in offering or selection of OTC drugs	7	5.1	2
11. Informing the customers about drug design and drug forms	7	2.1	1
12. Informing the customers about drugs' generic, chemical and brand name	9	2.7	1
13. Informing the customers about drugs' effectiveness, safety and toxic effects	6	1.5	2
14. Informing customers about routes of drug administration	0	.8	9
15. Informing customers about rules of drug administration	5	1.4	1
16. Helping in selection of analogue of drugs	7	1.6	3

Less than half part of the respondents' public health specialists considered that the level of basic training of pharmacists was not corresponding to the contemporary requirements (See fig.1). According to the sociological study results of the public care specialists it is obviously, that all pharmacists should have higher pharmaceutical education from the state recognized and accredited higher education institutions and universities. Pharmacists' specialty should become a regulated health care profession. According to that Government should make certification, licensing and accreditation of pharmacist professionals.

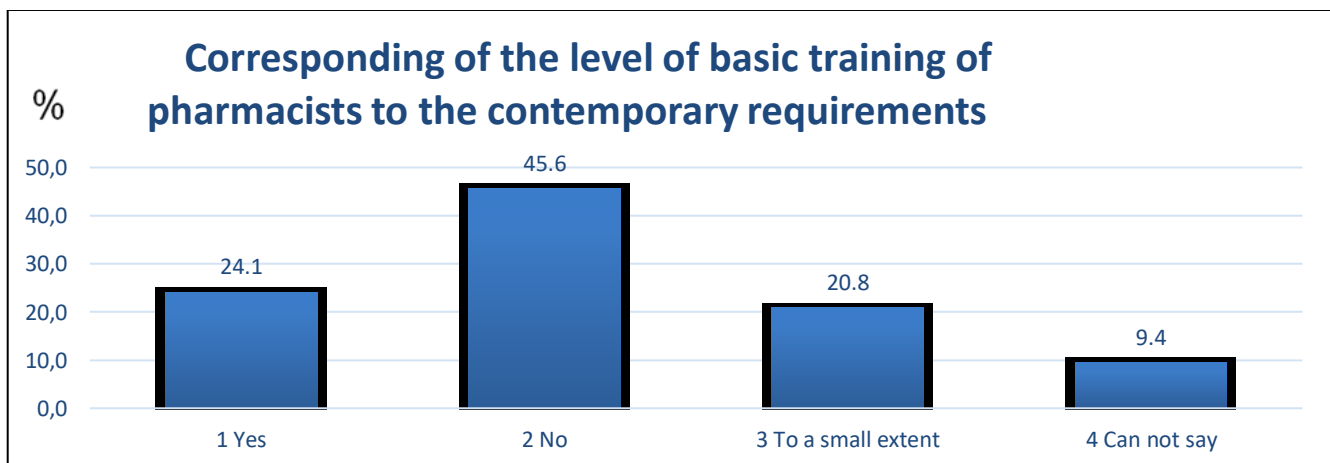


Figure 1. The respondents' opinion about pharmacists' basic training level correspondence to the contemporary requirements

The respondents' public health specialists' 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 (See tabl.4). From the 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.

Table 4.
The respondents' (public health specialists) opinions about the issues for pharmacists necessary for the further regular studies or trainings

The issues for pharmacists necessary for the further regular studies or trainings (several answers were possible)	ount	Perce nt %
1. New drugs	87	60.9
2. Psychology of communication with customers	03	33.6
3. Issues of pharmacotherapy of certain diseases	97	64.2
4. Safety and effectiveness of drugs	54	50.2
5. Pharmacology and pharmacotherapy	24	73.0
6. Normative legal regulation of pharmaceutical activity	4	30.6
7. Drugs toxicity	64	53.4
8. Drugs dosage	12	36.5
9. Routes of drug administration	10	35.8
10. Drug forms	1	19.9
11. Drug design	3	14.0
12. Rules of drug administration	23	40.1
13. Drugs generic, chemical and brand names	7	18.6
14. Selection of OTC drugs	08	35.2
15. Cost-effectiveness and cost-benefits of drugs	6	31.3

The respondents' public health specialists' large majority considered necessity of provision of cooperation between pharmacists and physicians on the issues of pharmacotherapy. The pharmacist must provide information to doctor about new drugs pharmacotherapy, the generic replacement drugs, the cost-effectiveness and cost-benefits of drugs, drugs' generic, chemical and brand names. In our opinion and vision cooperation

between pharmacists and physicians on the issues of pharmacotherapy is positively reflected on patients' health and has great importance for provision higher quality health care service for patients' safety.

More than half part of the respondents' public health specialists considered that pharmacist is not in charge of treatment as a physician, meanwhile about a quarter of the public health specialists considered a pharmacist to be in charge of that (See fig.2). Properly educated pharmacist can minimize and reduce the mistakes made by a doctor in the recipe. That has a great importance and value for provision higher quality health care service for patients' safety.

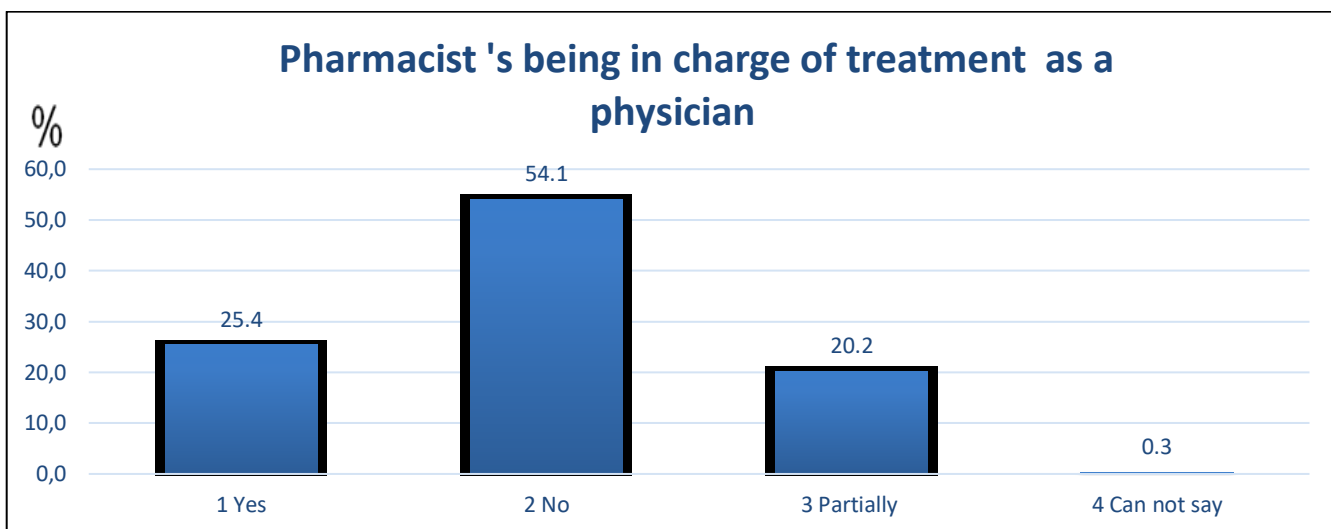


Figure 2. The respondents' (public health specialists) opinion about pharmacist's being in charge of treatment as a physician

To 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. 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. Opinion that certification of pharmacists should be mandatory was more common among health care specialists than among chiefs (Chi-square = 45.2, $p < 0.001$) and among pharmacists (Chi-square = 68.9, $p < 0.001$), but the there was no statistically significant difference between chiefs and pharmacists. It was more common also among patients /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, $p < 0.001$).

Statistically significant was association between patients' educational level and their opinion about the necessity of pharmacists' certification ($p < 0.04$): patients with higher education considered certification of pharmacists as mandatory more often than did patients with secondary education. Chi-square test of independence revealed that pharmacists more often than students mentioned mission (the desire to obtain a profession in compliance of own trends, aspirations and inclinations, personal desire, specialty love from childhood) as the main motive of their professional choice (65.5% versus 55.8%). Difference was statistically significant with Chi-square=9.9, $p < 0.002$. The difference between pharmacists and young specialists and young specialists and students wasn't statistically significant. The percentage of satisfied with professional choice respondents was the highest among students (97.7%). It was higher also in young specialists (82.2%) in comparison with pharmacists (57.7%). Differences were statistically significant for comparisons of all pointed out groups of respondents ($p < 0.001$). (See Tabl.5).

Table 5.

Respondents' opinion about pharmacists' certification

Cross tabulation

Do you think that the Government should make the certification of pharmacists?	Do you think that the Government should make the certification of pharmacists?			Total
	1. I agree	2. I partially agree	3. I Do not agree	
Chief Pharmacists	76.6%	16.3%	7.1%	100.0%
Customers	82.6%	11.6%	5.8%	100.0%
Employed Students	95.9%	3.6%	0.5%	100.0%
Public Health Specialists	94.8%	4.6%	0.7%	100.0%
Pharmacist specialists	71.9%	21.9%	6.3%	100.0%
Average	81.2%	13.5%	5.2%	100.0%

First time were complex studied professional peculiarities of the pharmacists per vision by pharmacists specialists, professional peculiarities of the employed pharmacist-student, professional peculiarities of the pharmacists by vision of the chief -pharmacist, peculiarities of professional for pharmacists via per vision of the health-care specialist, pharmacists' professional features as per view of the patients, professional peculiarities of the young pharmacist- specialists, professional peculiarities of the pharmacist-student. To reveals influencing factors for the features of the role, innovations, occupational and educational perfection vistas of pharmacists' profession in the scope of the development of pharmaceutical care direction in Georgia. In result of the study and evaluation of the pharmacist's professional peculiarities news, objectively reasoned comprehension of the problems in this field has been adopted, which became a base for developing recommendations. In particular, for the first time the following have been studied and established: The role, innovations, occupational and educational perfection vistas of pharmacists' profession in the scope of the development of pharmaceutical care direction in Georgia.

First time the process of professional formation of pharmacists in the scope and context of pharmaceutical care, including the stages of professional development was studied and scientifically established. First time the most influence factors for the pharmacist's professional formation were identified. Deepen defined the role of pharmacist and the specific features for the pharmaceutical specialists' formation at various stages were studied and identified. On the bases of comprehensive studied was revealed, that pharmacist specialists in contradistinction to other medical specialists like physicians, dentists etc do not have continuous education, periodic certification and licensing. Pharmacists' profession removed from the regulated and certified health professional members' team.

The results of our study have been shown and substantiated, that the pharmacists, as well as doctors and stomatologists, who are obliged to take part in the mandatory certification by the Government, in order to improve the responsibility on their own professional specialization for motivate and improve their vocational knowledge and skills with the help of continuous education. It would be promoted, that pharmacist to become more responsible, accountable and liable on for enhance their professional knowledge, skills and competencies. All the above mentioned first time we conducted a comprehensive and deep study of the scientific research for specificities of the role, innovations, occupational and educational perfection vistas of pharmacists' profession in the scope of the development of pharmaceutical care direction in Georgia.

CONCLUSIONS: On the base of the performed studies the following conclusions have been formulated:

So, to raise pharmacists' sepecialists' professionalism, Government should make the certification of higher pharmaceutical education pharmacists. That is very essential for pharmacist's professional perfection, for successful higher pharmaceutical education, for pharmacist self-realization, for pharmacist's career advancement, for to exist pharmaceutical continuous professional education, for pharmacist professional growth, for pharmacist job gratification, for pharmacist career satisfaction, for pharmacists much higher status between health care specialists. Pharmacist certification is essential for pharmacists economic (material) welfare , for allows pharmacists to realize fully the received knowledge from higher education institution in work by the full extent, for to have private pharmaceutical activity, for pharmacists vocational development, for correspondence of pharmacist qualification to work, for further improvement perspective for pharmacists' professional promotion, for possibility to career enhancement strategy, for to realized by the full extent pharmacist

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professional capabilities, skills and habits, for occupational growth, for pharmacists professional satisfaction, for career enhancement perspective, for satisfaction of income (salary). Therefore, pharmacists' certification should start immediately and pharmacist vocation should become regulated health profession like family doctors. The pharmacist should possess deep and steady knowledge in pharmacology, pharmacotherapy, toxicology, pharmaceutical care, clinical pharmacy, pharmacokinetics, pharmacodynamics, basics of medicine and other pre-clinical and clinical subjects. Such knowledge can be obtained only from higher pharmaceutical education institutions. Therefore, pharmacist working on pharmacist position must have exclusively the higher pharmaceutical education, to provide higher quality pharmaceutical care services.

REFERENCES:

1. Krass I. Ways to boost pharmacy practice research. *The Pharmaceutical Journal* 2015;(2). Pp-15-41.
2. Parthasarathi G. A Textbook of Clinical Pharmacy Practice: Essential Concepts and Skills // Universities Press India Private Limited; 2 edition (January 18, 2017); pp. 26-37.
3. Franklin B. D. & van Mil J. W., Defining clinical pharmacy and pharmaceutical care // *Pharm World Science* 2005;27(3): p. 137-144.
4. N. Sulashvili; Peculiarities of professional and career improvement strategy for pharmacists' republic of Armenia ministry of education and science; Yerevan state medical university; Dissertation; Dissertation for the Scientific Degree of PhD in Pharmaceutical Sciences; On specialty 15.00.01 – Pharmacy; YEREVAN – 2019; Pp 1-175;
5. N. Sulashvili, M. Beglaryan, N. Alavidze, L. Gabunia, I. Pkhakadze, T. Okropiridze, M. Sulashvili, G. Pkhakadze; Legal and regulatory scope, and identify the main challenges and opportunities of Georgian pharmacists. REPUBLIC OF ARMENIA ISSN 1829-040X, ORCID: 0000-0001-9263-6791, BULLETIN OF THE MEDICAL INSTITUTE AFTER MEHRABYAN, VOL. 9 TOM, YEREVAN 2020, Pp 88-104.
6. Shane P. Desselle, David P. Zgarrick, Greg Alston; *Pharmacy Management: Essentials for All Practice Settings* // Fourth Edition; 2016, pp. 329-347.
7. Sulashvili N. The Features of Professional Career Improvement Strategy and Job Satisfaction among pharmacists // *Business-Engineering Journal*. - Business Engineering in Pharmacy. №2, 2014. Tbilisi, Georgia, pp. 195-199.
8. Sulashvili N., Kvizhinadze N., Maisuradze I. Pharmacist professional features in Georgia. // Conference of young scientists. Thesis collection. Georgian National Academy of Sciences. 18-19 May 2015. Tbilisi, Georgia, pp. 81-82.
9. Sulashvili N., M Beglaryan. Pharmacist mission gratification and profession improvement strategy. // Black sea scientific journal of academic research conference newsletter. (Medicine, Pharmacy sciences). Volume 26. November 2015. Tbilisi, Georgia, pp. 10-12.
10. Sulashvili, N., Beglaryan M. Professional features for employed pharmacy faculty students in Georgia. // *The New Armenian Medical Journal Supplement*. YSMU Science Week 2017 Conference. November 27-December 1, Vol.11, №3, 2017, Yerevan, Armenia, p. 40.
11. Sulashvili, N., Beglaryan M. Vocational peculiarities of young pharmacist professionals // *International scientific journal Intellectual*. №35, 2018. Tbilisi, Georgia. pp. 96-104.
12. N. Sulashvili, M. Beglaryan; Pharmacist Occupational Features, Regulations Framework and Profession Enhancement Challenges of Pharmaceutics. *Caucasus Journal of Health Sciences and Public Health*; E ISSN 2449-2450; ISSN 2449-2647; The University of Georgia Publishing House. www.caucasushealth.ge; Official Journal of the University of Georgia and Iv. Javakhishvili Tbilisi State University with Support of the Arctic University of Tromsø/Norway. Volume 4, Supplement 8, July 20-24, 2020; Pp 31-36.
13. N. Kvizhinadze, D. Tophuria, N. Intskirveli, N. Sulashvili; Study of Factors Affecting on Population's Health Improvement. *Caucasus Journal of Health Sciences and Public Health*; E ISSN 2449-2450; ISSN 2449-2647; The University of Georgia Publishing House. www.caucasushealth.ge; Official Journal of the University of Georgia and Iv. Javakhishvili Tbilisi State University with Support of the Arctic University of Tromsø/Norway. Volume 4, Supplement 8, July 20-24, 2020; Pp 42-45.
14. Thomas R. Brown; By Thomas R. Brown - *Handbook of Institutional Pharmacy Practice* // 4th (fourth) Edition; American Society of Health-System Pharmacists (December 1, 2006); pp. 65-71.