

YEREVAN STATE MEDICAL UNIVERSITY AFTER M. HERATSI

NODAR SULASHVILI

**PECULIARITIES OF PROFESSIONAL AND CAREER
IMPROVEMENT STRATEGY FOR PHARMACISTS**

DISSERTATION

**Dissertation for the degree of Candidate of Pharmaceutical Sciences
(Doctor's Academic Degree in Pharmacy / PhD in Pharmacy)**

On specialty 15. 00.01 - Pharmacy

Scientific supervisor:

The Pharmacy Science Doctor M. Beglaryan

YEREVAN - 2019

CONTENTS

ABBREVIATIONS.....	3
INTRODUCTION	4
CHAPTER 1.REVIEW OF LITERATURE	11
1.1 Modern condition of the problem and theoretical approaches to the pharmaceutical professionals formation and development in Georgia.....	11
1.2 The role and profession of pharmacists	15
1.3 Pharmacist’s mission gratification and profession improvement strategy	33
1.4 Pharmaceutical care and clinical pharmacy.....	39
1.5 Patient’s safety.....	48
CHAPTER 2. MATERIALS AND METHODS OF RESEARCH.....	51
2.1 Materials of research and the number of respondents	51
2.2 Methods of research.....	54
CHAPTER 3. RESEARCH OVERVIEW, RESULTS, ANALYSIS AND DISCUSSION	56
3.1 Study results overview, assessment and discussion on the bases of using the seven types of questionnaires.	56
3.2 Coupling of the results by the cross analysis.....	113
3.3 General analysis.....	119
SUMMARY	124
CONCLUSIONS.....	130
PRACTICAL RECOMMENDATIONS	132
LITERATURE.....	135
APPENDIX	150

ABBREVIATIONS

BOP	- Board of Pharmacy
B Pharma	- Bachelor's degree in pharmacy
BP	- Blood pressure
EAFP	- European Association of Faculties of Pharmacy
EU	- European Union
FIP	- International Pharmaceutical Federation
GPP	- Good Pharmacy Practice
HIV/AIDS	- Human immunodeficiency virus infection and acquired immune deficiency syndrome
MOH	- Ministry of Health
M Pharm	- Master of pharmacy
NSAID	- Nonsteroidal anti-inflammatory drug
OpenEpi	- Open source epidemiologic statistics for public health
OTC	- Over-The-Counter
Pharm D	- Doctor of pharmacy
Q	- Question
Rx	- Prescription
UN	- United Nations
WHO	- World Health Organization
PhD	- Doctors Academic Degree
FDA	- Food and Drug Administration
YSMU	- Yerevan State Medical University
GTU	- Georgian Technical University
TSMU	- Tbilisi State Medical University

INTRODUCTION

The actuality of the topic

An integral part of the state social security system is to the implementation of the citizens' rights and to protect their health. The grade of health care system partly relies by the provision of quality pharmaceutical care services, of which is largely dependent on the public pharmaceutical organizations' personnel qualifications. In this regard, the professional qualification of pharmacists is under the state control and is one of the objects of the relations' state regulation in the pharmaceuticals field in particular, and medicine in general with the purpose to maintain the highest possible level of pharmaceutical professional's competence throughout their careers with changing demands for professional qualification.

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.

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 drug consumers 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.

The literature analysis showed that a study of individual aspects of the pharmaceutical specialists' professional development is directed to elaborating of the necessary requirements to ensure effective pharmaceutical care, postgraduate education, finding strategies for the better management of pharmaceutical personnel, pharmacists' job satisfaction and issues of their psychosocial adaptation to the emerging market conditions. However, weighable studies aimed at understanding the perspectives of the pharmaceutical specialist in the career aspect and the ways to provide high-quality pharmaceutical care have not been carried out yet.

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 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.

- In this concern a study of the peculiarities of professional and career improvement strategy for pharmacists in Georgia, the pharmacist specialist's professional features, the factors influencing on the pharmacists' profession (occupational) choice and career satisfaction, pharmacists' work satisfaction by the duration of job and income, a balance between the pharmacists' workload and their personal life, professional peculiarities of student pharmacists and the employed pharmacist students; professional peculiarities of the pharmacists with the perspectives of chief (head), peculiarities of pharmacist' professional

features according to the health-care specialists and customers, and professional peculiarities of young pharmacist specialists became of high actuality and the essence of our study. Therefore, should be done analyses of the current situation in pharmacist's profession in Georgia and of the official statistical data, a study of the awareness level regarding the roles, liabilities, duties and responsibilities of pharmacy staff in Georgia;

- Based on the current situation analysis and identifying gaps in the pharmacy system, as well as taking into consideration international regulations and the peculiarities available in Georgia elaboration of the recommendations aimed at solving the existing problems have been encountered. A comprehension of the existing problems solving urgency moved us to perform the given research with the selected appropriate design, which defined such objectives, as assessment and analyzing of the current situation of pharmacist in Georgia, and detection of the gaps and outlines of the Georgian pharmacist system's perspectives. Development and justifying the practical recommendations for improving the professional development of pharmacists and the quality of pharmaceutical care in whole.

Since we have found and analyzed the available source from the foreign literature, it was clear that for such types of the studies that we have chosen were most valuable, acceptable and approved surveys. The following 7 types of questionnaires that developed in 2009 by O. Sokolova V.

- There were used 7 types of approved questionnaires:
1. Questionnaire for the chief pharmacists (410 chief pharmacists participated in the study).
 2. Questionnaire for consumers (customers) of medications (1506 consumers of medications participated in the study).
 3. Questionnaire for the employed pharmacy faculty students (222 employed pharmacy faculty students participated in the study).
 4. Questionnaire for the health-care specialists (307 health-care specialists participated in the study).
 5. Questionnaire for the pharmacist specialists (810 pharmacist specialists participated in the study).
 6. Questionnaire for pharmacy faculty students (319 pharmacy faculty students participated in the study).

7. Questionnaire for the young pharmacist specialists up to 35 years (314 young pharmacist-specialists participated in the study).

The goal and objectives of the research

The goal of the research was to provide a complex study, analysis and evaluation of the professional peculiarities of pharmacists and the pharmaceutical faculty students, to develop a methodological approach for improving the process of professional development and the career improvement strategy of pharmacists.

To get the assigned goal the study objectives include:

1. to reveal the factors and motivations influencing on the professional choice, the process of professional formation, occupational development and career growth process of the pharmaceutical faculty students, pharmaceutical specialists, young pharmacists
2. to conduct of sociological studies of pharmacists, of the chief pharmacists, of the medicines' consumers, of the pharmacy faculty students, young pharmacists, the healthcare specialists and employed students to determine the role of pharmacist, pharmaceutical activities, some specific professional peculiarities, pharmaceutical education and opinion about regulation of the professional pharmaceutical activities (continuous professional education, certification, attestation).
3. to perform a complex investigation of the process of the pharmacists' professional development and adaptation at different stages and characteristics of the working activities
4. to study the satisfaction of pharmacists by professional choice, the work load, duration of work time, income and career
5. to elaborate of the practical recommendations and outlining the perspectives for improving the professional enhancement of pharmacists and the quality of pharmaceutical care in whole.

The scientific novelty of the research

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 customer (consumers/buyers), professional peculiarities of the young pharmacist- specialists, professional peculiarities of the pharmacist-student. To reveals influencing factors for the peculiarities of professional and career improvement strategy for pharmacists.

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 peculiarities of professional and career improvement strategy for pharmacists, pharmacist specialist's professional features, factors which are mostly influence on the pharmacist's occupational choice, pharmacist's professional satisfaction, pharmacist's career satisfaction, pharmacist's work satisfaction, satisfaction by the balance between the pharmacist's workload and his personal life, pharmacist's work satisfaction by the time duration of his job, pharmacist's satisfaction by income.

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. 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 to motivate and to 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 the peculiarities of professional and career improvement strategy for pharmacists in Georgia.

The theoretical and practical value of the research

The dissertation work is adopted as the general and specific theoretical and practical scientific innovation with the developed results of the studies, conclusions and practical recommendations, which can be used:

- By different stakeholders such as state structures, private sectors, pharmacists, students, employers, pharmaceutical companies;
- By scientific and educational sectors: higher educational institutions, the universities' tutorial staff and students as additional literature for pharmaceutical faculties during the educational process procurement;
- By employees of the pharmaceutical industry and pharmacies as the basic set of recommendations for the scientifically methodological framework development for the further investigations of the professional development process;
- By researchers to develop a set of performance criteria for evaluation of the process in questions.

Structure and volume of the thesis

The thesis is set out on 149 pages of printed text and includes: the introduction, 3 chapters: - a review of the literature, a description of the research methods, the results of the research, study results overview, assessment, discussion and analysis. The dissertation contains summary, conclusions, practical recommendations; literature and appendixes. There are 55 tables and 69 illustrations given in the section of research results. The list of bibliography contains 196 sources.

The approbation of the work

The given dissertation was performed by the author in terms of the “About collaboration between the Republic of Armenia and Georgian Ministries of Education and Science” double-sided signed international memorandum in 2013.

The results of the dissertation thesis work were reported at Georgian National Academy of sciences (Tbilisi, Georgia, 2015), at 3-rd international conference on pharmaceutical sciences at Tbilisi State Medical University (Tbilisi, Georgia, 2015) , at YSMU Science week 2017 (Yerevan, Armenia, 2017), at the Department of Pharmaceutical Management of the YSMU (Yerevan, Armenia, 2017), at the Pharmacy Department Council in the University of Georgia (Tbilisi, Georgia, 2018), at the International Conference in Georgian Technical University (Tbilisi, Georgia, 2017), at the International Conference “Healthy Lifestyle-Scientific Evidence and Controversial issues” and “Innovation in Medicine” in Tbilisi State Medical University (Tbilisi, Georgia, 2017), at the International Medical Conference in the University of Georgia (Tbilisi,

Georgia, 2018) , at the International Medical Conference “Healthcare Plus Dedicated to the 100th Anniversary of the Independence of Georgia in the University of Georgia (Tbilisi, Georgia, 2018), at the International scientific medical conference in Davit Agmashenebeli University (Tbilisi, Georgia, 2018), at the X International Conference - "Health and Ecology" In Telavi state University organized by Tbilisi State Medical University (Telavi,Georgia, 2018). The results of the dissertation thesis were declared and passed preliminary defense/ (Approbation) on the academic council session of the Department of Pharmacy in Georgian Technical University (Tbilisi, Georgia, 2018). The final results of the dissertation thesis were declared and passed in Yerevan State Medical University on the “Theoretical medicine" experimental council session and approved by the Scientific coordination council 04.10.2018.

Publications. On the base of the dissertation topic 19 scientific works were published, which reflects the main content of the dissertation work, from them 14 are articles (one of them is in the list of Scopus, 4 others are in the list of Pubmed) and 5 are the theses.

CHAPTER 1. REVIEW OF LITERATURE

1.1 Modern condition of the problem and theoretical approaches to the pharmaceutical professionals formation and development in Georgia

The given scientific research enables us to identify various approaches to the process of professional development in phases, stages, levels and directions. At the same time the specialists' professional formation is an observed as accumulation of the professional knowledge, skills and experience from the beginning of the formation of professional intentions until the end of professional activity [1].

Studying of the accessible literature enabled us to determine the factors influencing on the professional choice of a person: his family position, a position of the school pedagogical collective (mentor and a class teacher), the person's professional and life plans, abilities and manifestations, inclinations, the claim for public recognition, awareness of the particular professional activity [2].

Psychological studies show that the influence of these factors on the vocational choice is different. It was established that a sufficiently high level of education of the mother's or the father's vocational status promotes a deal of the children. The parents' mind about the occupational choice and the influence of the parents is stronger than the influence of teachers and specialists in career counseling, and at the same time, the parents' opinion could act as an inhibiting factor in the occupational development of an individual in the period of his professional orientation [3].

Pharmacists play the main role in serving patients better and helping them to get well as soon as possible. Customers gain when pharmacists are part of their healthcare team; therefore, pharmacists are the medication proficient participants, being involved in enhancing of medication coupling. They are the main qualified drug providers who communicate efficiently with customers to estimate various factors that influence on the consumers' capacity to choose a medication. In the current global situation, when choosing future professional practice, there are pragmatic, realistic, advisable and efficient demand factors for a particular profession. There exist real opportunities for training and employment in pharmacy profession. Pharmacy professionalism has based evidence records and public significance, which young people take into account. In psychological researches it is proven that the discrepancy of the professional interests of an individuum with the needs of society and the possibilities of the personality entails dissatisfaction with the chosen work activity

[4]. A person spends unproductive efforts to coordinate professional knowledge, understanding, practical skills and abilities, for to performs and satisfy their work within the scope of the framework [5].

The next stage of occupational perfection and enhancement of specialists implies adaptation to the work practice and special vocational action, and practical activity: the beginning of independent professional activity and accumulation of experience by young specialists. This phase reflects and reverberates the student's transition to a new type of activity - to occupational work in its various forms under the conditions of a real working situation. Capacity and productivity of formal responsibilities, operative relations, finding oneself in the system of working staff. In the course of adaptation, the system of acquired professional knowledge and skills in the appropriate volume, a connection between the profession and success got, the emergence of interest in the work as self-determination for professional enhancement, perfecting and development begin to play an increasingly important role [6].

Basing on the research it becomes apparent that professional perfection, enhancement and development technique, way and process is taking place by a set of common criteria influencing on its efficiency, performance, efficacy, potency and effectiveness. So, determination of regularities, reflecting its focus and dynamics, i.e. their interest in professional choice, changes in choice-making motivation, growing job satisfaction, increasing desire to acquire more information, knowledge and professional skills and making appropriate adjustments in their career goals, a set of the related common performance criteria for the mentioned are of crucial importance [7]. On the base of specific criteria, it is obvious that formation of characteristic hampering peculiarities includes incomplete correlation of capabilities of an individual to the pharmacist profession needs, insufficient awareness of individual aspects of future activities, the difficulties in adaptation and less satisfaction with the pharmaceutical professionals' work [8].

Considering the fact of lack in knowledge and functions of the pharmaceutical professions in Georgia, which also exists among the health-care specialists, development of a continuous pharmaceutical education system should enhance the professionalism of the pharmaceutical staff [9].

Protection of public health is the major target of pharmaceutical councils. In a wide term that's mission demands pharmacists be present educational facilities for a definite quantity of time

and to satisfy the government authority exam. Pharmacy councils as well set the parameters in case of regulation law violation, the penalties and infractions if a pharmacist loses his license [10]. Pharmacist professions are one of the most regulated health care jobs in the developed countries, and the pharmacist's occupation is one of the most challenging positions. In the developed countries state boards control, monitor, administer and influence on each stage of pharmaceutical activity, inclusive the demands and licensing examination for pharmacists. Every state pharmacy council is provided and staffed of pharmacists, with of different practical spaces – clinics/hospitals networks, separate drugstores or pharmacy networks, industrial pharmacy, and also at least one patient/customer/buyer (non-pharmacist) delegate and in many countries pharmacy council members are established by the ministry of health or Government executive officials [11].

The health care professionals' team in terms of which pharmacists collaborate actively has liability for patients pharmacy care and requires being properly determined. They should adapt their skills, knowledge and attitudes towards on new function and role, which consolidates traditional pharmacy natural sciences with hospital/clinical perspectives of patient healthcare communication and administration skills, thus participating in the medical-related problems meeting [12]. If the pharmacist is admitted as entire part of the public health care group, they would need adoption in the significant respects demanded by the health care occupational who working in these fields: accessibility, responsibility in praxis to common people, an obligation to confidentiality and towards on patient health care. The pharmacists have the necessity to be qualified and hold as well both ambition and goal to entirely integrate into the public health command [13].

In western countries clinician pharmacist, pharmacist and family doctor actively collaborate, what plays an important role in pharmaceutical care. In western countries and in many developing countries a pharmacist profession, as well as the family medicine is a regulated sector in the healthcare system. In pharmacy only, the specialists with higher pharmaceutical education who have graduated from the state-recognized and accredited colleges allowed to work. A pharmacy opening permit is issued only to a person of higher pharmaceutical education, who passed the diploma courses in pharmacy and got the right to open the pharmacy [14]. So, the higher education, as well as the continuing pharmaceutical education, license and periodic certification/accreditation are substantial for pharmacists.

At present in Georgia this regulatory legislative base is not perfect, because the pharmacists' certification, re-certification, accreditation and licensing state programs are not conducted. Today, the pharmacist profession in Georgia is deleted from the health adjustable medical fields. Therefore degree in pharmacy or regarding higher education lose their professional characters and values, and profession of pharmacist specialty turned a position given by the pharmacy owner without the requirement of qualification awarded from the university. Since the higher pharmaceutical education is not a necessity for a pharmacist position in pharmacy in Georgia, very often non-professionals without special medical or pharmaceutical education could get the right to work at a pharmacist position according to pharmacy owner's desire, meanwhile, the pharmacy profession granting needs 4-5 year study at the medical and other universities. At the same time, the problem of Georgian pharmaceutical graduates consists of a possible lack of jobs in the pharmaceutical field because of easy access of other subject specialists. In Georgia a pharmacy pharmacist is interpreted as the only drug-dealer-seller, and basically, pharmacists as regulated medical specialists are ignored in Georgian health care scheme. That is why the higher pharmaceutical education system should be moved to a new model direction, which will be more accentuated on pharmacotherapy, pharmaceutical care, and clinical pharmacy, becoming the most important issue. Hence, in the state health policy, the pharmacist profession's concepts and common principles are to be developed. Together with the efforts to enhance the occupational condition of the Georgian pharmacists, internal and external factors that influence their scale of gratification should be explored in addition in a more population, so that corresponding strategies should be adopted to develop the condition [15]. Also, in order, the qualified pharmacists of Georgia to have the right to work as pharmacists in other EU countries and for recognition of their certificate the pharmacists' registration, licensing, and accreditation of new standards in accordance with the international pharmaceutical programs should be developed and implemented [16]. So, the process of professional development covers a long period of human life (35 - 40 years) and is a rather complex, highly mobile, multifaceted and contradictory process [17]. Meanwhile, emigration, globalization of trade brought nations nearer in conjunction in the pharmacy business, purchase of products, services agreement and in acceptance of educational level, scientific/academic degrees and diplomas. However, this should indicator to quick modifications in the health care system and due to increasing the new challenges like migration travel and resettlement [18].

The referring researches data analysis point to the following conceptual provisions of the specialist's professional development process: the core of professional development is a development of personality in the processes of choosing a specialty, vocational training, mastering the profession and performing professional activities; the process of professional formation of an individual is unique, nevertheless there are distinguishing qualitative features and patterns; professional competence enables a specialist to realize himself/herself fully, giving an opportunity for self-actualization in the pharmaceutical aspect.

1.2 The role and profession of pharmacists

The pharmacist profession is very old. It has changed deeply for many years. Pharmacist occupation is a growing, dynamic and diversified profession. Last years, the role of pharmacists has changed from dispenser-compounder to main pharmacotherapy direction. These include liabilities to assure that the medical supplies are quality, used and provided properly. The property production is chosen, stored, procured, dispensed, distributed, and controlled. Thus, they assist in patients' health. The framework of pharmaceutical praxis presently involves the patient-focused health care together with all the counseling functions, providing information about medicine and controlling the pharmacotherapy, also the technical viewpoint of pharmacy services, inclusive medicines deliver administration [19]. At the patient-focused health care, the main challenge is to meet and identify the necessity of the patients. In communication with patients, the adequate information provision to them is significant in proper drug therapy. Also, pharmacists have an essential investment in patient healthcare via monitoring pharmacotherapy and non-prescribed or rational therapies. It is a further function of monitoring pharmacotherapy. Therefore, pharmacists are able to make significant assistance in patients' health care [20].

Pharmaceutical frame, divisions and occupation are one of the most regularize, the responsible, liable, accountable, answerable profession in the western countries. State councils of pharmacy manage each phase of pharmaceutical education, pharmacy practice and pharmacist' certification, licensing and accreditation frame [21].

The pharmacists' role is expanding in health-care services. That mentioned as a new report from the International Pharmaceutical Federation (FIP). Pharmacy is a gate toward healthcare. Pharmacist supporting population to hold better health. Consideration the present situation of patient interest in health care. 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. It sets out the modern supervisors of the self- healthcare system and deeply changes on the new direction of health care schemes [22].

Responsible administering of drugs involves that healthcare network mediator capabilities and activities are balanced to assure that patients get the right drug, on the proper time, using properly and patient have profited from them. Delivering the right drugs into patients' demands commitment of all representatives, inclusive Government and a desire on how to consolidate private and public interests and mobilize sources. That is significant for the public to be guaranteed that expenses on pharmaceuticals productions are an equivalent cost of cash [23]. On the viewpoint of the pharmacists' comprehensive academically field and their traditionary function in composing, qualifying, delivering and ensuring drugs. A pharmacist is informing customers, consumers and patients on the drug using; they are greatly positioned to suppose professional liability for the monitoring of pharmacotherapy. They are members of the healthcare team immediately engaged in patients' health care services. Their responsibility is to assistance patients in using their drugs, which is impossible to do alone. Thus, in terms pharmacists' profession have been progressed. New type pharmacists have done the work a in more efficient way [24]. Pharmacists holding the higher, university-level education. They understand the biochemical mechanisms of metabolism, mechanisms actions of drugs, medicines pharmacotherapeutic characteristic, side effects of drugs, potential interactions of drug and the argumentations monitoring. It is conjugated of specialized knowledge of biochemistry, anatomy, therapy, physiology, pathology, pharmacology and other pharmacy subjects. The pharmacists explain this particularized knowing when communicating with physicians, patients, another health care providers and public [25].

Being healthcare occupational means of to be a member of a group, which is centered on one purpose: serving with a patient to obtain better health. Pharmacist plays the centric role on the delivering of communication to patients and society about using of medicines. They effectively cooperate with doctor prescribers to assure a general treatment to patients by the delivery information and advice [26]. The pharmacists are involved in a multidisciplinary treatment to the contribution the rational pharmacotherapy. They sufficiently informing patients and common society about the adverse influences of the drugs. They are monitoring these side effects via partnership together with different health care vocational. Pharmacists provide education on

medications, disease states and the lifestyle issues as a part of clinical prevention, as well as educational programs to groups on issues such as drug abuse or others that are an example of population health activities. Pharmacists do counsel on a wide range of health promotion products found in the typical retail pharmacy such as sunscreens, dental hygiene products or vitamin and mineral products. Moreover, pharmacists provide immunization services and participate in screening activities [27].

Though the quantity of pharmaceutical productions on the world market is growing, the approach of vital medicines is till now lacking in a lot of parts of the worldwide. Health care expenses rise and the technological, social, political and economic conditions change have made the health care transformation crucial across the worldwide. The renewed treatments are required reforms at the personal and public levels to ensure effectively, quality and safe pharmacotherapy to the patients in more ever complicated surroundings condition [28].

The pharmacists hold the great condition to satisfy the necessity for health care vocational to ensure effective and safe using of medicines. To do this, pharmacists should suppose higher liability than they at the present time do for the monitoring of pharmacotherapy for the customers, consumers and patients they are serving. That liability goes completely behind the traditional distributing and dispensing practices that have long been the maintenance of the pharmacy activities [29]. Pharmacists liability should be enlarged conclude controlling of the pharmacotherapeutic progression and thereby improve therapeutic outcomes and patients' life quality, advising with doctor prescribers and consolidating with different health care workers and practitioners on behalf of patients [30]. Pharmacists' involvement into pharmaceuticals may consist in drug storage, drug supply, dispensing, manufacturing, formulation, distribution, marketing, quality warranty, licensing, information management, monitoring, development, education, and research. Drug supply and medicine information management system is the main part of pharmaceutical services and proceeds forming the basement of pharmacy activities [31]. The higher pharmaceutical schooling and education hold an appropriate duty and responsibility to generate post-graduate professionals who are qualified and authorized to provide the pharmaceutical care services. Sufficiency results promote to quality warranty by provided that easily approachable working standards [32].

Community pharmacists' activity is at the forefront of medical care, working at their own pharmacies or in the private ones. Pharmacist's job is all about helping the public, as they

participate in the medicines distribution and offering advice to patients and maintaining their health. Pharmacist work is a very demanding occupation in the world. Pharmacists usually are greatly honorable members of the society [33]. Changes in the role of pharmacist and pharmacy community as a medical supplier accelerate along with the fast-moving environment. Today to offer advanced medical services pharmacies deliver educational information at multiple points of contacts and also to raise awareness of the disease are of great importance. These include over the counter (OTC) and the personal care aisle, a pharmacy counter, specialties publications and pickup areas prescription. These innovations are useful not only for customers' pharmacies but also create opportunities for pharmaceutical marketers, measurable return on investment [34]. The educative center of occupational programs and schemes growingly identifies the necessity for the possibility to use the knowledge obtained via simulation laboratories or experiential studying, which needs corresponding faculties and personnel conditions to satisfy these educational necessities. Innovations in faculties and personnel positions with greater consideration to learning, or practice also include accentuation on the research within the framework of PharmD programs. There is a need to encourage the pharmacy's graduates to encounter that, as well as to conducting PharmD degree programs in postgraduate level masters or doctoral scale in philosophy or promoted scientific basement grants for the pharmaceutical, biomedical, clinical, administrative and other fields of researches in the pharmacy direction [35]. In the higher pharmaceutical institutions and academy, the health occupations schooling-education programs should contribute career possibilities for pharmacy faculty post-graduates. Pharmacy schoolmaster must make more energetically engaged at the growth for particular training /educational possibilities to arrange and overlook the newest generation for pharmacy faculty or program personnel positions in higher education institutions. In order to engage pharmacy faculty post-graduates to take part in the scientific research [36]. Pharmaceutical faculty program post-graduate professionals should be supported to research the capacity function and role of various pharmaceutical, medical/health care, academic and educational, research and scientific program schemes for to growth consideration in inter-professional scientific groups upon the health professions formation, teaching and education; which is very significant for the high-quality patient care services [37].

Promotion of long-term education is the cornerstone of the tomorrow pharmaceutical aspect: present students will be leaders into the pharmacy in future, which is very significant for

European Association of Faculties of Pharmacy (EAFP). This meaning that every member engaged in pharmaceutical education formation having a wide liability for mastering new advances, foresight and visions for the training of prospective healthcare professionals. The scientific and academic pharmacy should hold a strong point of view in forecasting significant variations in the global and proceeding strategies for improving learning and studying in pharmacy within the interests of everyone's health. The main significant viewpoints are the perfection of cognition, experience and knowledge in the scientific direction [38].

Being a health practitioner and supplying medications to patients on prescription (Rx) by order of physician pharmacists express deep knowledge of chemistry and pharmacotherapy of different drugs and the way they react to people and interact with each other. Pharmacists accurately measure a package of medicine, providing its appropriate dosage, secure for the patient [39]. Although the pharmacist typically does not choose or prescribe medication, they educate patients on how to take the medication and what reactions or problems should be avoided. Pharmacists as well are noted as druggist/chemists or the health occupational working in the pharmaceutical field, medical sciences, being focused on the effective and safe using of medicines [40]. Since the pharmacist professional is a part of the health care group immediately occupied in patients healthcare management, they should be trained at the higher education institution level for to understanding the pharmacological and biochemical mechanisms of drugs action, the using of drugs and their pharmacotherapeutic specifications, drugs adverse effects, their potential interactions, monitoring and inspection on pharmacotherapy outcomes. The pharmacists interpret and transmit these experiences toward the patients, doctors and another medical professional. Amongst different demands in various land and state for licensing pharmacists should behold several Bachelor degree in pharmacy or Master degree in pharmacy, or Doctoral pharmacy degree in philosophy [41]. The pharmacist positions mostly mentioned as the general community pharmacists (also mention to as first- queue pharmacist).The hospital and clinical pharmacists are to teach and counseling on the proper using drugs, they should deeply know the side effects of medicines. In many countries, pharmacist occupation is subjected to vocational control and regulation [42]. Rely upon the juridical scope of pharmacy praxis; the pharmacists can promote to the modern challenge goal, pharmacist as well known as pharmacist lawgiver. They introduce of specific medications (e.g., immunization) in several jurisdictions. Pharmacists are able

to as well working in a multiplicity of another direction, including the pharmaceutical industry, wholesale trade, scientific research, academic research, insurance company, Government and military [43].

A pharmacist should observe themselves as the main health care services producers who be able to use the clinical experience at various public institutions. Pharmacist should constantly be significant health care producer based on suitability to patients via pharmaceutical direction [44]. That certain function of a provider should never be reduced, as it serves the critical needs of patients (e.g. dispensing and counseling for drug experience in nonprescribed drugs, compoundings, vaccinations, monitoring medical devices, administration of pharmacotherapy) these are not addressed with another health care producers [45]. These does not exclude pharmaceutical services as suppliers at innovative variable directions, like pharmacies situated in outpatient clinics and diverse trade outlets, and also in autonomous practice with a focus on pharmacotherapy management, drug reconciliation, drug counseling or pharmacogenomic in institutions, wherever pharmacists are liable for integration and promotion of the patient healthcare through a lot of different health care producers to facilitate regularity of healthcare and practice based on the research networks [46]. Pharmacy service providers have to view for possibilities to be engaged in the vocational practice of patients care, however they enhance in public care system. For pattern, the variable working practice can change when pharmacist concentrated by ensuring pharmacy care and health care work for the personal and general public [47]. Pharmacy graduates working in the health services of Georgia as pharmacists when improving progressive pharmacy practice directions. The pharmacists should be as supervisors for development pharmaceutical practice in society, at the national and country levels. Pharmacy schoolmaster should assure that pharmacy faculty post-graduates hold the necessary knowing, cognition, practical skills, modern values and practical experiences, in addition confidence assurance and employer mind would be a driving force for perspective changes and otherwise approaches in the framework of pharmacy practice [48]. Clinics, hospitals and other establishments, such as drug-stores, outpatient clinics, drug relation treatment settings, poison, venom, toxic and toxins inspection units, drug information units and long-term care centers may be manageable by the privately or Government. Meanwhile, many pharmacists' working practice in such units may be similar to those performed by community pharmacists. They are working in the different direction of ways [49]. Furthermore, the clinic or

hospital pharmacists have more possibilities to cooperate nearly with the doctor prescribers. Therefore, to contribute the rational prescribing pharmacotherapy in bigger hospitals and clinical pharmacies, the clinical pharmacist specialized and get wide competences having an approach on medical records and be in a position to impact on the drugs choice and drugs dosage regimens. Clinical pharmacist monitoring patients' compliance and pharmacotherapeutic reactions of the drugs, to identify and report about drugs adverse reactions [50]. The clinical pharmacist can more readily than the general pharmacists evaluate and monitor templates of drug usage, and thereby suggest needful changes as a part of drug policy-making councils; inclusive such interested with the selection of antibiotics, antifungal and antiallergic drugs [51]. Such an influence on the composition and preparation of essential medicine list schedule or drug formulary is an advantage to teach other health care vocationals of the rational pharmacotherapy and readily take part in teaching to define the useful or adverse effects of medicines. It is necessary to be engaged under the test of drug effectiveness to assure delivery of the higher capacity and quality production in the performance of the clinical proceeding actions [52].

In 2015 the Pharmacy practice council received the determination of pharmacist as a scientific educated post-graduate healthcare vocational who is specialist in whole viewpoints of the deliver medicines and experts of drugs using [53]. The pharmacists ensure treatment to quality, safe and cost-effective medicines. They dispensing medicines and their answerable use by separate patients and health care networks, to the proper using medicines and drugs adverse effects issued to be known all the health care vocationals. The teaching, education and training involves higher educational-level teaching on the basics pharmaceutical, preclinical and clinical fields, also a scientific academic, theoretical and practical pharmacy directions, or topics related to the connected fields [54].

The public pharmacies provided health care and pharmaceutical care services over the years by providing consultation with patients, delivering a medicine or, if needed, they referring patients to narrow health care occupational, so that a self-health care delivery via pharmacists professionals that means that pharmacies and pharmacists should be whole part of the health care framework [55].

Pharmacists are the health professionals who when dispensing prescribed drugs to patients also provide information about the medicines ordered by doctors; they explain the doctors' instructions to patients, so that people can safely and effectively use these medications [56]. Other

great challenges of pharmacists are to guarantee that drugs are used rationally, i.e. the patients get drugs corresponding to the clinical demands. Drugs doses should be corresponding on patients own personal demands for the determined in length of time [57]. Pharmacists be able to permit patients by involving them in conversation with drug information knowledge, which let patients lead their personal pharmacotherapy treatment with guidelines for keeping better health. While the patients are discovered to a broad diapason of drug info from the pack insertion, advertising resources, advertisement in the mass media, electronic media and via the Internet sources, this information is not anytime precise, completes or fully determined [58]. Pharmacist professionals can assist patients in becoming precisely competent and aware by suggestion suitable testimony- foundation information and on demonstrative to authentic resources. Counseling on prevention of disease and lifestyle variation would contribute public health system by sharing solution on however to get drugs, and also will optimize health outcomes through a concordant approach, reducing the quantity of drug-connected adverse effects, cutting the number of wasted drugs and improving percentage point to pharmacotherapeutic processing and treatment [59].

Pharmacist professionals are the health care workers which mostly approachable to the society. They deliver drugs in correspondence with doctor prescription. When drugs legally permitted (OTC drugs) pharmacist specialist selling them in a drug store without a prescription and they make sure that medicines do not interact in a harmful way. Pharmacist providing feedback of records of the drugs from the patients [60]. Pharmacists' liabilities contain a variety of care services for patients, from the dispensing of drugs to controlling patient health. Pharmacists' advancement to their response to the medication therapy, as they are the medication specialists and finally interested about patients' health condition and wellness [61]. Pharmacists specialists give inspection about the medications composition, inclusive drugs physical, chemical and biological properties. In addition, they are concerned with drugs manufacturing and using, guaranteeing drug clarity, purity, integrity and stability. By means of accurate supply of appropriate products and counseling of patients when drugs dispensing pharmacists provide information on drugs to health care vocationals, patients and the public in general. Pharmacist participating in healthy lifestyle contribution programs they encourage connection with all another health care professionals [62].

The public health interferences, pharmaceutical care services, rational pharmacotherapy and effectual drugs deliver monitoring are the crucial elements of the sustainable, affordable, accessible,

equitable and quality public health care frame that guarantees the safety, effectiveness and high quality of drugs. That is bright that pharmaceutical services and pharmacy are a considerable part of the health care segment transformation process [63]. In this regard pharmacist functions and role needs to be redetermined and orienteering again. Pharmacists hold the capacity to develop pharmacotherapeutic results, patients' health quality and patients' lifestyle within accessible sources. Therefore, pharmacist should consider as the significant part of the health care frame. According to new tendencies, a pharmaceutical care service is the main point in public health progress [64].

A pharmacist is taking an important role to support people in obtaining better outcomes of the pharmacotherapy. Results for health care are improved and costs are reduced when they are involved in pharmaceutical assistance, treatment of patients and patient care. Pharmacist talks to people face-to-face without an appointment, communicating efficiently to assess points that can influence a patient's decision to get medicine. Pharmacists are drug professionals in the healthcare command and are working in a broad variety of medical institutions, having a flexible regimen of work [65].

So, there are several roles and function of pharmacists they serve: to obtain, prepare, secure store, dispense, distribute, administer, dispose and inspection of the pharmaceutical production; to ensure effective pharmacotherapy monitoring; to develop and maintain occupational practice; to promote and enhancement of efficiency of the public health system. That functions can be changed for every personal pharmacist rely on their practical liabilities [66].

Pharmacists have a lot of public health functions that can benefit from their unique experience which may include pharmacotherapy, pharmaceutical care and pharmacy assistance. The centralized location of the pharmacist in the community and clinical expertise is important for public health practice, pharmacological training and pharmaceutical care integration. Encouraging cross-training will also increase the resources and help fit the demands of the workforce in the scope of pharmaceutical, health care and public health services [67]. Purpose of the American Public Health Association has strongly underlined the function of the druggist in the health sector. Via trans-disciplinary approaches, it is assumed that the pharmacist's contribution to public health care, health education, disease prevention, health promotion and health quality will help in achieving optimal public health outcomes [68].

Pharmacists' professions proceed to fit more clinically centered health care vocations with increased liabilities for pharmacy care services. Pharmacist profession finding of explicitly routes for labor resources perfection connected with vocational confession and credentials of practicing is considerable approval. These introduce is obviously potential for recognition and collaboration of forwarding abilities for the pharmacy labor resources [69]. Development and warranty of capability and competency it is proportionate with an innovative and highly qualified working practice, which is an obvious signal to the public that pharmacists' professionals hold these competencies. Pharmacists' occupational confession, credentials, ability and skill guaranteed specialization be existed integral parts of the capacity, skill, ability and proficiency demonstration. To develop a common and shared understanding of "specialization" and "advanced practice" all these are in patients' interest, for assurance public health system and pharmaceutical occupation. The elements mentioned above are the fundamental challenges for prospective workforce enhancement in pharmacy [70].

Rational Pharmacotherapy is the remainder as exclusion quite than regulation. More than half of those people receive medicines incorrectly. So, in the world raising anxiety, that overall increase of antimicrobial resistance microorganisms, which is a generality problem of the health system. Day by day, pharmacist profession becoming extremely patient-centered and oriented to hospital/ clinical direction with increased liabilities and duties for pharmaceutical care services at clinics and hospitals. The clinical surroundings are the worldwide tendency in pharmacy. Accordingly, the obviously routes for labor resources enhancement connected with pharmacists occupational confession and testimonial becomes considerable approbation [71].

Today there are a lot of broad varieties of new generics and analogical productions, which are used in medicine, inclusive radio-pharmaceuticals, high-technology biological production, biotechnologically derived drugs, the mixed grouping of medical devices. Several of them require specific pharmaceutical knowing on using and hazards. Pharmacist professionals have gradually who held the further mission to assure the best of service and the quality of the production that they deliver [72].

The fundamental truth of effectual medicine can be working only when there's an effective drug control applied with equable validity to as well on develop and developing regions. However, again and again, in less full facilities, insufficiencies in the supply of fundamental health care

services are an assessment to shortage within the drug dispensation network [73]. When only pharmacist specialists are approved as a significant part of the healthcare brigade the needful sustaining services can be managed with the demanded higher professional level. In western developed countries need highly qualified pharmacists specialists for drug delivering. Health devices are irreplaceable for the multiplicity of contemporary health care technique engineering, therefore in western countries; there are big demand for high skilled pharmacists professionals [74].

Although pharmacists most likely operate as a part of an interdisciplinary team rather than independent capability. In every specific country the vocational challenges could be an effectively managed factor of the health care frame as it gets submission within the superior ranks of management in both private and Government levels, and if pharmacists get pharmaceutical education at the higher educational university level [75]. The opinion of state management is the essential significance from the administration. This not only contributes the vocational opportunity and also influence on the study program curriculum and the scientific academic standards needful for the licensing, certification and registration of the official personnel, and gives the best accessible warranty that all policy approvals inclusive possibility of assessment would be controlled emphatically to state demands. In the same way, the pharmacists have undisputed roles and functions at different levels in state drug regulation and registration settings. Accountabilities of the administering authorities are to assure that all production is submitted to its check, control and inspection. The pharmaceutical productions should be corresponding to admissible standards of safety, efficacy and quality. All placements and practices employed to manufacturing, store and distribution of that productions obey with demands to ensure the proceeding correspondence to standards until they are supplied to the conclusive consumer [76]. The lower administering authorities will seldom if ever, assume autonomous, exhaustive evaluations of separate productions efficacy and safety. At these cases, the executive and industrial liabilities falling within its sphere are mostly of pharmaceutical character and directed toward primarily concerned to quality warranty. However, in the latest analysis, where pharmacy settings its direction as an occupation, within the health care establishments and in public, therefore pharmacists will promote in supreme quantum healthy life promotion and extremely positive influence on patients' health and welfare [77]. Pharmacists' professionals hold particularized lore, information and experience of the administration. The characteristic of medicines more and more complicated and healthcare

surrounding drives them nearer to the doctor prescribers. According to those pharmacists was becoming an origin of independent information about the pharmacotherapeutic variations and treatment outcomes, both new challenges contain positive and negative aspects. All of this also brings pharmacists nearer to customer/consumer and patients in public as easily approachable pharmacists not only of medicines, and also of health- connected data, information and records. Pharmacists' primary education should aim them to assume their skills and abilities, and to supply professional skilled consultation on the treatment of small illness and the acceptance of healthy lifestyles, healthy diet. As well contribute health care services with comprehension needful to identify the concerns of the customer/consumer and patient, to directing the patient to the family doctor or medical practitioner and insurance company according to their need [78].

Pharmacy and drugstore are skillful in different practice directions — public pharmacies, clinic pharmacies, hospital pharmacies, prolonged health care objects, the pharmaceutical factories, insurance companies, pharmaceutical email services, managed care centers, and Government: Ministry of Health, Ministry of Defense, veterinary and animal departments, health care service points, and public care health departments [79]. Pharmacists hold wide medication and pharmaceutical education and deep professional competencies; in addition, their qualification, skill, and experience are delivering on health care, healthy lifestyle and wellness services. The chronic diseases administrations are growingly be found that pharmacists' contributions could perfect the patients' health. There are also clinical pharmacists who make practical assistance to public health sector over the stages, even out of ever connecting immediately with patients. Some pharmacist working in the pharmaceutical company or pharma industry or higher education institutions, or associated in the research laboratory. In laboratory pharmacist doing production perfection, testing products quality control and promote high-quality products [80].

Under care model doctors in the total lead the healthcare command, even so pharmacists continuous the patient care after that the prescription had been written by the physician. Pharmacist supplying the right medicine, they identifying drugs right dose and the correct times when medicine to be taken, labeling drug clearly, and registering potential side effects of the medicines. That's all are duty of the pharmacist with prominent responsibilities. However, nowadays medicines are much more complicated than they were before. Based on with biotechnologies, genetic, gender, genomes, and composing pharmacotherapy should become more individualized for patients in the next

decade. Every new prescription needs pharmacist's review in interaction with other drugs and foods, so that records approachable for the patient [81].

The pharmacist professionals' function and role simultaneously extending and increasing the drugs' safety. Also growing pharmacist critical responsibility in practical working. The pharmacist's goal is also teaching the patient about the medicine, they should be confident, that patient knows drug' name, the purpose of the drug, when and how drug to be taken, how is possible to minimize drugs interactions with other medicines Rx or OTC. The pharmacist should give information to the patient about drug and foods interaction, and about drug optimal storage condition. In some cases, the pharmacist should explain to the patient about the side effect of drugs, even doctor prescriber had explained, because maybe the patient does not listen or cannot hear it. Therefore, pharmacies and pharmacists last critical checkpoints for prevention drugs errors [82].

Community pharmacists hold the considerable role in medication counseling and health education as they are frequently the main checkpoint of communication with patients and care within the healthcare sector. Pharmacists are playing a vital function and role in assist patients in delivering pharmaceutical care services. For example, it is assumed that more than half of all patients holding hypertension disease, and many patients do not control regularly their blood pressure. [83]. Pharmacists are nobly appropriate to observe patients on those medications and support them to get proper pharmacotherapy treatment. In USA and EU people are checking blood pressure in the pharmacy according to their need. It is obvious how it is comfortable to check blood pressure (BP) in pharmacy with a pharmacist or automatic BP checking machines. Thus, patients could control blood pressure numbers and the pharmacist can explain what the numbers mean. It is especially very helpful service to the patients. Pharmaceutical care services give an ideal possibility to participate patients in the pharmaceutical care scheme without any charges [84].

As a member of the healthcare command, the pharmacist could promote disease management program system, by evolving interesting of new models care directions [85].

Pharmacists are doing the main role in delivering healthcare services both in rural and urban region, particularly via public pharmacy wherever doctors are not approachable or too expensive for satisfying the health needs and medical services [86]. Currently, pharmacists had enlarged their functions from exclusively dispensing to pharmaceutical care directions. They maximize the profit and safety of the drug. All day long, pharmacists are detained with the liability to assure that

patients' get safe drug and using medicine is not harmed for health [87]. The quantity of medicines in the drug-store has risen significantly in the 21 centuries. The pharmacists are offering and bringing practical novelty and also important issues in controlling rational pharmacotherapy and drugs' quality. In western developing countries those striving provide qualified health care system and the pharmaceutical care services are significant new type challenges in the modern world [88].

Nowadays being focused on drug delivery toward a more including center on patient care services, the pharmacist's goal is to assure that pharmacotherapy is appropriately indicated, the safest possible, the most effectual and comfortable for the patient. Under engaging direct liability for separate patient's drug- associated necessities, pharmacists could make a wonderful contribution to the result of pharmacotherapy treatment and thus improving the patients' quality of life. This new type of treatment called pharmaceutical care [89]. Pharmacists need to master the new roles, skills and attitudes whether they are to become parts of interdisciplinary health care division, in addition the supplemented profits whether they can give via their vocational contribution. This also explores the challenges that pharmacist's image and the indefinite opportunities approachable to them for supposing principal function, roles and character in patient-centered and public health striving. In several cases these challenges can switch on an extension of pharmacist practical roles. On another occasion they may demand pharmacists to adopt the new functions, that before previously considered for the framework of traditionary pharmaceutical working practice [90].

The pharmacotherapy is the generality often used the form of treatment interference in every health care working practice direction. Their make use of has full-grown brightly, that the people have aged. The predominance of chronically disease has expanded and new types recent infective diseases have appeared and the diapason of effectual drugs has expanded. As well as, progressively so-called modern challenge life type drugs, use on treatments for a disease like flu, alopecia, dry skin, allergy, wrinkles, cough, erectile dysfunction, pain management and so on [91]. Unfortunately, more often drugs can be getting in new environments and be offered and held by the non- pharmacists. The compounding has been substantially changed under the private manufacturing of approximately all formulations. Unfortunately, the medicines may be bought in big supermarkets, at markets, or in drug stores and also be acquired via the Internet. Unfortunately, medicines may be sold by medical representatives, or medical practitioners. Nowadays it is easily possible to dispensed medicines by computerized dispensing machine devices [92].

The responsibility of pharmacist as health division vocational for the working practice has other majority challenges in the health care delivery. In traditionary communications among the doctor prescribers and the pharmacist as a medicine delivery, the doctor prescriber was responsible for the outcomes of pharmacotherapy issues. The condition is turning in quickly by developing the health care settings. The proceeding practical pharmaceutical care supposes, the pharmacist to be accountable, liable and answerable for patients' health care, and public will not only recognize that hypothesis but holding the pharmacist profession to it [93].

Pharmacists supply vocational services in a range of direction in answer to regional, cross national, public, local and international necessarily an order of priorities with a center on people or/and separate patients. The pharmaceutical health care and public health division concludes pharmacy services to people, like regional, local and international guidelines and pharmacotherapy treatment record or protocols, medicines using approval review and assessment, state, public and national medicine policies and lists of vital medicines, pharmaco-vigilance, as well as needs assessment and pharmaco-epidemiology [94].

The term 'pharmaceutical services' first used in 1992 to represent all the services that pharmacist requires resolving a patient's pharmacotherapy issues. Pharmaceutical services variety from the delivery information about medicines to patient counseling to the spread and dispensing of drugs. Patient counseling services would be coupled into model standard daily intercommunion with patients under the public pharmacy frame. The same way, opportunely, timely, properly and rightly drug delivering is needed to assure the supply of pharmaceutical care services [95].

Proceeding practice of pharmaceutical care is new, the keywords of which are accountable and answerable of delivering services and on determined pharmacotherapeutic results. Wherever pharmacists are revising and reconsidering prescription issuing by doctor prescriber or a patient medication protocol. Pharmacist professionals are speaking to a patient about the responding symptoms and indication; they are estimating necessities, assigning a priority and making a schedule to satisfy these requirements [96]. The practical pharmaceutical care performs obviously the pharmacist's liability and accountability to the consumer, customer and patient towards the prevention of drug-associated diseases. In pharmaceutical care working practice, pharmacist estimates a patient's drug- associated necessities, and after defines if one or more pharmacotherapy problem issues are still exists and, if so, pharmacist operates toward the patient and another health

care vocationals for develop, realize, control and testing a pharmaceutical care scheme. The pharmaceutical care scheme should be maintained as easy as possible, that should achieve to determine the practical pharmacotherapy problem issues and could direct to appropriate divisions of the state, public or regional evidence framework guidelines and protocols [97]. The proceeding of pharmaceutical care services is a future patient focused working praxis within a centered on preventing, learning, determining, recognizing, solving and excluding pharmacotherapy problem issues. These goals are obtained by patient health care procedures which contain several phases: evaluation of the patient's pharmacotherapy necessities; extension and elaboration of health care outline to satisfy those demands; implementation of the pharmaceutical health care schedule; and evaluation and examination of the health care scheme. Pharmacists demand an upper level of understanding, knowing cognition and practical skills to supply pharmaceutical care services and institutional framework to contribute these services provide. An above-mentioned institutional structure should refer the patients who could not be controlled at a special level of pharmaceutical health care to other scales, wherever the optimum pharmaceutical care services can be ensured. Finally, patients must profit from corresponding pharmacotherapy, also the pharmacist would have a useful influence on the patients' families, friends and the public, where they live, acting, studying and working [98].

Pharmacists as the experts in drug fields should constantly know an available and confidence resources of counseling and pharmacotherapy treatment. Presently, their promotion to health care system is not only helping patients in using of medicines, but also they are a member of the division of clinical determination, decision making and advanced field medical professionals. The public pharmacies and drug-stores are accessible all daytime and comfortable for the majority of the population to consultation with a pharmacist, receive proper information about treatment without the necessity of any appointment. Patients can see the pharmacist in drug-stores any time that has a significant positive influence on public health in general [99]. All above mentioned creates pharmacies the essential gateway for supporting with sick patient and society. Self pharmacotherapy treatments of general diseases are in great request. Because raising diapason of quality, effective and safe medicines makes accessible from the licensed drug-stores, without the necessity of a physician's prescription. Pharmacist specialists must assure that patient and population can approach drugs, medicines or various medical or pharmaceutical consultation and

advice easily. The pharmacist consultation is assessable for patients and people at any time and any place according to patients' own choosing [100].

The services of pharmaceutical care are a foundation new conception in the pharmacy practice which appeared about 50 years ago, in the last century. Pharmaceutical care determines that all pharmacy practitioners should suppose liability and accountability on the results of the pharmacotherapy of their patients [101]. The conception of pharmaceutical care as well involves an emotional obligation to the welfare, prosperity, well-being and health of patients as persons who need and deserves pharmacists' sympathy, interest, concern and believe. Anyway, pharmacists frequently fail to take liability for that size of health care, and as the outcomes, they may not sufficient testimony to control, check, regulate and revision the given type of care. To take such type of liability is very significant to preceding modern style pharmaceutical care practice [102]. The pharmaceutical care practice could be offered to persons and people. Public basis pharmaceutical care practices make use of epidemiological and demographic evidence information to create drug formularies or lists of medicine. The higher quality of pharmaceutical care needs to enhance and control pharmaceutical and drug policies, manage and develop pharmacy chains, prepare, evaluate, resolve, dissolve, and analyze reports about drug costs and drug utilization. To conduct drug utilization revisions should consult, advise and educate special providers on drug policies, drug institutional regulations and other pharmaceutical associated procedures. Also, without personal pharmaceutical care practice, nevertheless, no health care system could lead pharmacotherapy and control drug associated sickness effectively and efficiently. The people foundation functions recognized upward necessity to take place either before or after. Patients should get and ensure useful evidence-based information, but this could not completely substitute patients particular pharmaceutical care practice [103]. Drug-associated diseases happened often even together with medicines which are in drugs systems' formulary or vital list medicines, since these drugs are frequently prescribed, controlled, administered or taken improperly. All patients want qualified pharmaceutical services at any time when they are getting medicines and for every patient useful pharmacotherapy maintain is determined as vital specific. That involves of personal pharmacotherapy specification, achieving conformity (contract between personal patient and various health care provider or insurance companies on the therapeutic result and however it may be obtained) and also monitoring activities of the critical patients [104]. For every particular patient's

pharmacotherapy treatment, the pharmacist should perfect pharmaceutical care schedule along with the doctor and with a patient. At this situation, patients could assist in useful results and participating of the liability for own health care and not depending exclusively on health caregivers and providers [105]. The pharmaceutical care services do not exist separately from another health care service, but it should be provided in cooperation with patients, doctor-physicians, nurses, various medical staff, pharmacists, medical insurance division and another health care giver-producers. Pharmacists' professionals should be accountable, liable and answerable directly to patients for the health care or drug cost, pharmacotherapy outcomes, delivering drugs quality and all pharmaceutical care services [106].

Pharmacist specialists hold scientifically educated understanding, with deep pharmaceutical and medical knowledge; they are post-graduate healthcare occupational and high skilled expert specialists in all the viewpoints of the delivering and using medicines. Pharmacists ensure to accession cost-effective, safe and high-quality medicines. The levers for the modification of the higher institutional pharmaceutical schooling and education are multiply ranged, with growing in format, character, nature and depth [107]. The massive political, economic, public, national and civil situation influencing of the health care system division in many countries, which also should have positive or negative effects on the pharmaceutical care practice. Due to modern demands, it is quite obvious, higher pharmaceutical education systems are needed deep and radical changes. The function, duty and role of pharmacists and pharmaceutical personnel demand to re-evaluated and overestimated. According to the modern challenges, the higher pharmaceutical educational institutions need to develop pharmacy faculty study programs curriculum, which should obviously determine learning and education results. Current study results will aid to lead pharmacy program and curriculum enhancement. The higher pharmaceutical educational results could make use of as renewed educational institutional framework to such an extent consolidates and integrates pharmaceutical and medical sciences, occupational characteristics, professional practical skills, inter professional working practice, and high professionalism at new main division of pharmaceutical care direction, public health and health care systems governance and whole modern pharmacy practice [108]. The institutional educational modification, revision and restructure would demand not only a comprehensive pharmacy program curriculum, but also a majority obligation to pharmaceutical faculty perfection and enhancement. Also, pharmacy programs' syllabuses need

modernization according to modern health care and pharmaceutical care challenges in the worldwide. Therefore, should train and prepare new types of tutors and mentors to educate pharmacy faculty students and pharmacists via various types of informative, experiential and practical skill materials. Properly distributed and allocated institutional educational opportunities, possibilities, potentials, capacities and study resources need modification. Higher pharmaceutical institutions, universities higher pharmacy schools and colleges should be created according to modern medical demands globally. It is very important to establish and estimate new practical models, which should make use within developing modern health care surroundings. Higher pharmaceutical educational programs must be focused on the demands of the purpose public and audience. Higher pharmaceutical programs, curriculum, program goals, methods for attaining learning outcomes, study results, study program, teaching process characteristics, course content and syllabuses, teaching methods, study materials, learning resources, reading materials, participant type of assessment, course assessment and quality assurance should be in modern standards. All this will ensure that would greatest need for pharmacy faculty post-graduates in the worldwide [109].

1.3 Pharmacist's mission gratification and profession improvement strategy

Job gratification on the whole determined as an individual's attitude toward their work. While there are different interpretations of work gratification, the conception of job satisfaction can be completely determined as the point of the degree to what grade person' and people like the work. There are principal understandings that work gratification involves multidimensional and multi-profile components [110]. This is an especially significant interaction on job satisfaction conception, because of its connections to absence from work and job turnover associated with mental and physical welfare, wealth, prosperity, well-being, and health. Accordingly, it will be useful to health employees, workers and employers. If recognizing, identifying and developing specific peculiarities of the working way of life, that related to higher job gratification. So contrariwise, to determining, recognizing and minimizing characteristics that related with low job gratification or work dissatisfaction are emphasized [111].

Working gratification is a level of favorableness and comfortable environment, where the health workers and employees mind and view their workplace. It is a significant promoting coefficient towards an individual person's motive force, motivation and efficiency. Work

gratification is an index factor that effects whether the worker will stay in their working position or search job in somewhere else. The lower degree of work gratification is immediately associated with the lower life gratification [112]. Labor gratification influences the life and lives of all workers, inclusive health care employees. Both work motivation and satisfaction are playing an essential function and role in work conservation and growing capacity, efficiency and productiveness of health care employees whether in turn develops health care division effectiveness. With an increase in work-related activities there is a direct or indirect influence on the work quality and job satisfaction [113]. Hardship in the retaining of health care system, clinical and pharmacy personnel have very low, lower and average income in different nations, states and regions. It already makes insufficient health care services with the more breakable and fragile condition. Therefore, pharmacists' gratification with the job influences not only the pharmaceutical workers and employers, but also it makes an important impact on the patients who get the pharmacists' services. When the employees feel, consider, and understand that his/her values, meaning, importance and significance are implemented and fulfilled, within the work, their relationship, attitude, respect and gratification towards own work will be much confident, assured and positive [114]. Though, with mention into job dissatisfaction or gratification refereed and mentioned few fields, whichever may effect on work gratification, like labor environment, working condition, working design, laboring sector and another internal and external enforcements. In occasions of job dissatisfaction in such fields' pharmacist employment efficiency, capacity, effectiveness and quality is highly affected to work satisfaction. The different significant field mention to physical, psychological, mental and emotional health inclusive tension, stress, alcohol, depression, drug addiction, cognitive degradation and additional hurtful addictions [115].

Pharmacist's job satisfaction is a complex phenomenon, implying a relationship between pharmacist job satisfaction and motivation [116]. The positive correlation between job satisfaction, productivity and motivation encourages employee depending on the level of job satisfaction and work in a certain way. Job gratification is described at this point as a pleasant or positive emotional state of evaluation of their work or work experience. Results of the pharmacist job satisfaction form a perception content by performing tasks or execution of own important values provided that to an extent comparable to their needs [117]. Pharmacists experience job gratification when they fulfill the needs or considerations important in their work. Job gratification is an emotional and affective

response to the various aspects of work. Reviews of pharmacists showing that received workload, working hours per week and new information technology can gain impact on pharmacist work gratification [118]. Pharmacist's occupational gratification or discontents are playing a considerable role in a lot of viewpoints of general public pharmacy practice. Poor job satisfaction is directly related to the implementation, mostly for vocational such as pharmacists. Specific effectiveness, performance and efficacy issues may contain incorrectly filling prescriptions, missing medicine interactions and having low support for patients, so it is significant to understand that pharmacist efficiency, effectiveness, performance and potency can cause damage, harm and injury to the patient health or even death. Thus, career satisfaction is a very important factor in human motivation and performance [119].

The main change presently influencing on working practice represents an introduction of additional independent variables, who prescribing of drug information for the pharmacists. Independent prescribing is an element of diagnosis and drug selection; in the latter case, undergraduate programs will include additional training needed to predict responsibilities. Presently Georgian pharmacists must have the scientific abilities and skills in the right to practice efficiently and effectively. In Georgia there are a mix of theoretical, scientific and practical skill in grades spaced no hospital/clinical vocational working practice. The European Union (EU) template is usually included 1-3 years focusing on fundamental pharmaceutical and medical science with 4-5 years focusing on the hospital/clinical viewpoints [120]. There is another problem of post-graduates employability issues. Nowadays the obtained pharmaceutical degree almost actually ensures employment status. With regard to increase the quantity of higher pharmaceutical educational institutions, pharmacies schools and programs that opening in Georgia, and accordingly increase the number of pharmacy post-graduates. So in this situation, pharmacists' employment status could be changed. These would have particular consequences: in this regard can be unemployed graduates, which will have high competition conditions for job seeking. Therefore, hopefully this will develop the quality standards of the pharmacist occupation and maintenance low pharmacist practitioners unemployment. In the Long-term result, though, the more prospective students should apply for higher pharmaceutical educational study programs. Therefore, they may stop to ensure the employment status after pharmacy faculty graduation; thus, the quantity, quality and value of perspective candidates may fall down [121]. Another problem is a question of competence. There

are not generally recognize scoped frameworks of competences, abilities, skills, and quality standard for registration pharmacists should be in the same way as it is for doctors, pediatrics, urologists, dentists, gynecologists, opticians to ensure uniformity of competency-based skills [122]. Pharmacy scope, capacity, expertise and skill are based on theory rather than practice. It is necessary for the students to show knowing, science and cognition of medicine dosing and the professional skill for drug dispensing and delivering. Only instead of a holistic approach for realizing professional ability, skill and capacity to fulfill necessary results of an issue, like provision drug information, consultancy to patients, restricted diagnostics, pharmacotherapy advices and so on. In addition, it is highly disputed and discussion for the performance of pharmaceutical competences and skills assessment [123].

Many studies related to the work were conducted between pharmacists in different regions and countries. In Georgia very few explore has been carried out of the job satisfaction for pharmacists specialists. Satisfaction with a job or with career means to be content with their working lives. Career satisfaction can be defined as a level of general happiness of empirically chosen professions [124]. Job satisfaction is related to the current situation and depends on many factors, including market conditions, place of work and other dynamic effects. A person can feel very certain by choosing the right profession but be unsatisfactory by current work experience [125]. And vice versa, the current situation at work can have many positive features but be not entirely satisfying as a career choice. Job gratification is a subjective variable, which defies easy quantification. Job gratification is decidedly connected to community pharmacists' career satisfaction. Literature, dealing with the technical aspects of the measurement of work and career satisfaction is also extensive, even if restricted to pharmacy studies and in-depth review is outside the scope of this report. Several specific issues are of direct relevance to the study reported here. The professional job gratification may be determined in different ways, with a diversity of matter and formulations. Although, there are not references, standard and model method to determine work gratification [126]. The explorers also have accentuated the measuring of work gratification that can be a multipurpose evaluation. Accordingly, however it should not be a conventional definition of employee's gratification at the different viewpoint of a work. First assessment of job satisfaction can be done using questionnaires, the elements of which can be considered a facet based, including

free things to assess: the respondent's global sense of satisfaction, job or career without reference to any particular aspect of the work [127].

Job satisfaction has traditionally been determined in two ways. The first approach is to measure job satisfaction to facet-free design. This approach measures the global human satisfaction, assessing their overall or total satisfaction, and not their satisfaction with various aspects of their work [128]. The second approach is to measure client satisfaction on a few specific aspects of the work, usually those, which may be modified or altered in order to improve job satisfaction. Dimensions are classified as internal or external. In internal aspects workers' feeling and sense of peculiarities, singularities or activities are associated with the working functions that pharmacist execute (i.e. autonomy in job, interesting, valuable and intricate job). External dimensions that are the workers' significance of the situation or surroundings in which pharmacist employees performed their job. The characteristics of the work are determined by the external events (i.e. remuneration, benefits, workload, and supervision) [129].

If the pharmacist dissatisfied with his/her career, he has the potential to increase the turnover of job satisfaction. A pharmacist was found negatively associated with turnover of jobs, i.e. pharmacists' specialists low working gratification is probably to refuse the working positions [130]. Work gratification affects not only health care workers like a pharmacist in their working place and a work position, but also have opportunity and possibility, to influence more another viewpoints of their life conditions. Studies show that it is the powerful relationship among work gratification and entire life gratification, so that is not satisfied with the work definitely influences on life outside the workplace [131].

Members of the pharmacy faculty should be encouraged to participate in inter-professional education programs. Scientific and academic pharmacy direction and other pharmaceutical educational programs should be encouraged to pharmaceutical faculty students. A necessity for well-trained professionals to satisfy needs of pharmacy faculty institutions and faculty personnel for a growing number of higher pharmaceutical institutions, pharmacy colleges and pharmacy schools involve it to be well equipped with practical and simulation laboratory and with higher educational standard policy documentation [132].

General pharmacists as well taking over clinical functions and roles that traditionally have been established by the physicians, like monitoring of diabetes and asthma diseases, in addition,

monitoring (BP) blood pressure. Pharmacist as well as aid patients' and people to stop smoking, altering food diet to make society healthier and giving counsel about sexually transmitted diseases and sexual health issues [133]. Some general pharmacists hold their private pharmaceutical business and take pleasure in the financial and fiscal control issues. Those pharmacists have liabilities of their pharmacy personnel and personnel. Another pharmacists working for big pharmacy networks of the road and street pharmacies and they can move within the set framework of the pharmaceutical company networks. At the present time, a plurality of the network public pharmacists hold certificates for vaccinates the ill patients versus infection diseases like pneumonia and influenza. Many pharmacy owners have national, state and public admitted authority figure in pharmacy monitoring, wherever was regions of some diseases: inflectional diseases, disease mileage, seasonal allergies, diabetes mellitus, anticoagulation therapy, high blood pressure monitoring and pharmacotherapy, high blood cholesterol levels testing, monitoring and treatment. There are a lot of another peculiarities of the pharmaceutical care and patient care services, inclusive the stop of smoking, counseling of sexually transmitted diseases, recommendation of specific herbs in various diseases pharmacotherapy and another alternating pharmacotherapy and various screening test scheme for discovering high blood cholesterol level, diabetes mellitus, osteoporosis, monitoring blood pressure and detection, monitoring and treatment different diseases. With the help of pharmacists specialists to the patients for the suppose more effective function and role in the health care and pharmaceutical care services. For example, for pain treatment pharmacists commonly offer nonsteroidal anti-inflammatory drugs (NSAID) [134].

There is restricted preparatory studies examining the viewpoints what affect of pharmacists work gratification. A continuing pharmaceutical education, training and salary got in pharmacy were determined to exist considerable predictor variables of the job and career gratification amongst the pharmacists' specialists [135]. Otherwise, multiplier factors conclude related controls, interpersonal interactions, including contact with patients and colleagues relations, compensation, property and pharmacy practice conditions. An impact of the demographic and social features like sex, age, knowledge and education grade on the work gratification of community pharmacist is yet not fully studied and are controversial in the literature [136].

As previously discussed research have proved the deficiency of work gratification will have negatory consequences for health care, pharmaceutical care, patient safety and all care services.

Sometimes it may be exactly become motivate driving force to get out of work or profession all together. Although on that reason pharmaceutical labor gratification studies and research are significant for recognizing the particular weakness, meanwhile the maximum strengths result in a better and safer experience for all pharmacists [137].

Most studies on the factors influencing on laboring gratification for general pharmacists make use of tools improved, tested and used in a clinical environment, that can't t taking multiplier factors at the sphere for the pharmacies [138]. In addition, previous studies have determined the satisfaction of one agenda and the restricted quantity of assessment scope in more researches that evaluate overall viewpoints of the pharmacist work life. therefore, they can not adoption and taking the various aspects of working gratification's multi-profile structure [139]. In the end, several types of research were approachable that the tools of other settings for measuring community pharmacies are not subjected to the verge of available standardized tools. Meanwhile, this explores have been using a restricted number of people examples, so there is an upward need to maintenance the actuality and validity of determined tools at the pharmaceutical divisions [140].

The acknowledgment, acceptance and identification of job satisfaction study research shows the main point of factors such as: precede, success happiness, well-being and financial stability from the workplace. Everyone has its own motivation and personal, professional and specific needs from the job; accordingly, it is difficult to agree with all. There are consecutive in the theory of Maslow's motivation of work gratification, wherever the "cognition" factor is placed in the supreme degree and may be obtained just only after that, the psychological and social safety requirements were satisfied [141]. In contrariwise the "patient contact" was the comfortable point to support. It may happen as when the public network settings pharmacists have much patient communication that promotes multi-faceted interactions. Studies have shown that the meaning of the pharmacist multi-faceted cooperation and interactions define goal and purpose to remain in the work [142].

1.4 Pharmaceutical care and clinical pharmacy

Pharmaceutical care practices occur at various grades and levels. The endpoint of productivities of all health care and pharmaceutical care services is to be advantage and profit for patients under the perfecting and supporting on their health. Working practice with separate patient levels contain entire complexion of monitoring and giving all pharmacotherapy such as: health care, pharmaceutical care and inclusive clinical pharmacy services. On that degree, the solutions have

been done for challenges of pharmaceutical care and are sorting the following: prioritize of health care, patient assessment and follow up according to their health cases demand and monitoring pharmacotherapeutic results [143].

Pharmacists have a different and gainful career, with possibilities for pharmaceutical care, science study and innovations. They could work in uncountable occupational directions. Many pharmacists work in the drugstores and deliver consultancy to customers/patients for the take of prescribed and over the counter (OTC) drugs. The pharmacists are working in various another healthcare conditions also, inclusive clinics, care houses, special care points, control health care institutions, the pharmaceutical companies, pharmacy industries, higher pharmaceutical educational institutions pharmacy colleges, schools and the insurance companies. Pharmacists are acting main leader functions and roles in whole possibilities of the healthcare division.

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 pharmacotherapy 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 [144]. 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 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 [145]. 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 [146].

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 [147]. 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 [148].

Though the quantities of pharmaceutical productions in the worldwide are increasing, approach to vital medicines is yet deficient in most parts of the universe. Arising expenses of health care services, restricted fiscal sources, deficiency of human potential in the health care system, unskillful, inefficient and incompetent health sector, the enormous load of illness and modification in the technological, social, emigrational, public, political and economic surroundings are common or various in many countries, lands and regions [149]. So, change of psychological, mental social, technological, human, political and economic environment made necessary health care transformation and reorganization everywhere worldwide. The modern types of treatment are required at personal and at public levels to guarantee modern, effectual, safe and reliable pharmacotherapy services to the patients in an ever extremely complicated situation [150].

For parallel with the development of pharmaceutical infrastructure and job creation, there is a growing reputation of the pharmaceutical specialties. Most of the pharmaceutical specialties are the clinical pharmacists [151]. For many years, after the prosperous, useful and beneficial demonstration the clinical pharmacy services, plan, outline and conception in western countries like Europe, Canada, Great Britain, United States, Japan, Australia, South Africa and New Zealand, and remain part of the universe has pursued fit in modification of pharmaceutical practices and services [152]. Together with adopting those new conceptions these regions and states as well demand to transformation and modification of the existing higher pharmaceutical educational program curriculum to provide the needful teachings, education, instructions and study trainings, in order that prospective pharmacy divisions professionals and practitioners will be holding with the requested evidence information, knowledge, knowing and cognition in clinical skills. The influences of these modifications were strict sufficiently what even countries missing and have

deficient of suitable health infrastructure design and training types of equipment were aspiring to produce prospective trained pharmacists in these intentions [153]. It is testified, that the undergraduate pharmacy degrees in accordance with multiplicity, such as: Bachelor degree of Pharmacy, Master degree of pharmacy (Pharm M) and Doctor degree of pharmacy (Pharm D) offered to the developing countries. In Georgia, like in western countries, European Union, Canada, Australia, United States, Japan, South Africa, New Zealand and many various developed countries, the profession of a clinical pharmacist is considered to become successful [154]. Higher pharmaceutical educational study programs in developing countries change substantially from analogous study programs suggested in western countries such as European Union, Britain, Canada, the USA, Japan, Australia, Iceland and New Zealand, [155]. The fundamental causes for distinctions in Western countries are the distinctions in necessity, requirement vocational reference, pharmacy practice and the health care system. Likewise, pharmaceutical care and clinical pharmacy are tightly associated conceptions, though there are distinctions amongst the occupational development frames which determine the peculiarities [156]. For example, the Great Britain Clinical Pharmacy Association declares that the clinical pharmacy comprising theoretical knowing, and understanding, practical skills, values and attitudes needed by pharmacists to promote to individual patient and public, health care and pharmacy care services [157]. European Association of Clinical Pharmacy determines that, it as a health care specialty which characterizes the performance activities and health care delivering services of the clinical pharmacists are promoting and developing the rational and proper pharmacotherapy, rational using of pharmaceutical productions and medical devices [158]. Although, the USA College of clinical pharmacy in abbreviated determination describes and reports, that the clinical pharmacy is the field of modern pharmacy challenges with the knowledge, evidence information and practical skills of rational pharmacotherapy using medicines. Clinical pharmacy practice includes the knowledge of pharmacotherapy, pharmaceutical care and first pharmaceutical aid; it combines health care direction with special therapeutic knowing, understanding, cognition, acquired habits and assessment for the goal of providing rational and optimal patient treatment results [159].

The basic connections in pharmaceutical care are a jointly useful interchange, in that individual patient gives framework and power to the providers. The provider supplied commitment and competence to the individual patient. The pharmaceutical care essential purposes, methods,

practical skills and connection are improving day by day. It should continue functioning, practice and enhancement regardless of any frame [160].

Health care costs increase by 100% to 200% annually, the volume of medication takes up a significant segment, and effective medication management and the patient care issues become urgent. As a result, the functioning of a clinical pharmacist as a specialist in the public health care system is required for human health protection in the private or public insurance companies, which will raise the demand for clinical pharmacist as a specialist in the area. Insurance companies work should be focused on the relationship between the clinic and pharmacy institutions with highly qualified specialists [161].

The fundamental core of clinical pharmacy is a supply of pharmaceutical care services to the individual patient and is larger develop format of clinical and hospital pharmacy maintenances to improve, enhance and simplify the appointment aspects of drugs, to decrease the likelihood of medical errors, unsafe and unwarranted use of subscribed drugs [162]. It is important to research the pharmaco-economical issues in clinical pharmacy, consisting of identification, measurement and comparison of the drug therapy costs and consequences for public healthcare divisions. The possibility of a pharmaco-economic assessment is supreme because of the studying outcome are going to be strongly dependent on the selected prospect. Public, economic, political, humanistic, demographic and clinical results will be valued and considered with the help of pharmaco-economic frame making particular solution whensoever's it would be eventual and feasible [163]. In present day public health arrangement drives pharmaco-economic processes; it can put into practice for effective drug formulary administration, separate patient treatment, treatment policy definition and distribution of the resourcefulness. Caused by to ensure the high-quality patient health care via the minimum costly direction, the clinicians should have enhanced strategic purposed at comprising expenses [164]. Character patient care should not be concessional meanwhile trying to decreases expenses. Medical services, pharmaceutical services and pharmaceutical productions supplied currently by healthcare occupational there should demonstrate pharmaco-economic significance, what are balances of political, economic, humanistic, public and clinical results. Pharmaco-economics is able to ensure rational and systemic value for that evaluation [165]. Pharmacy health care professionals are directly connected with the patient and their relatives involved in the drug issue and the appointment of treatment (medicines obtained without a prescription). It is

comprehensive and necessary information to allow the use of medication, adverse events and efficacy. All the above-mentioned determine the function and role of a pharmacist into patient health care quality and safety protection [166].

In several countries pharmacy occupation has developed to the station at where the clinical pharmacy with patient centered care practice is no longer the exclusion, but the regulation policy for the majority pharmacists' specialist is common. Still, clinical pharmacy is still now practiced exceptionally in-patient regulation settings. Clinics and hospitals wherever approach to patient information data and medical division is available to make qualified treatment [167]. The medical protocol and remark, also prominent as the patient case or card-file, it is a law paper inclusive hospital and clinical distinct recognition data information, original history of patient and physical assessment and inspection, every daily progression remark made by health care vocational who operate with the patients in counseling, nursing care records, medical laboratory outcomes, assessment and diagnostic manipulations record, diet guidance and therapist, cardiologist, radiologist and surgery regards. Most patient cases as well conclude division orders for pharmacotherapy treatment and clinical pharmacy progression regards on drug dosing, pharmacokinetic, pharmacotherapeutic and other corresponding therapeutic notes, records, remarks and counseling [168].

The clinical pharmacy demands deep principal cognition and knowing of therapeutics, general medicine and diagnostics, an advantage knowledge of disease processes, understanding of pharmaceutical productions, deep knowledge in professional pharmaceutical directions, deep and comprehensive knowledge in pharmaceutical care, pharmacology, pharmaceutical assistance and pharmacotherapy. As well as, clinical pharmacy demands solid connection skills with deep knowing of medical and pharmaceutical terminology, medicine inspection abilities, delivering of drug data information, therapeutic project scheme capabilities. Also, require professional skills to evaluate and justify laboratory and physical specification records [169]. Pharmacological dosing, controlling drugs adverse pharmacotherapeutic effects, monitoring and checking of particular professional skill and provide care services assured by clinical pharmacists specialists. Globally, the clinical pharmacy objective is to maximize the clinical effects of using drugs and choose an effective treatment for each patient individually. Monitoring of the treatment course helps to reduce the risk

of adverse events, to offer the best therapeutic alternative, and to reduce the economic costs of treatment [170].

According to the “world health organization” (WHO) reformed medicine policy strategies received under the “world health assembly” in the beginning of 1986, the world health organization (WHO) arranged 2 assemblies about definition a function, role and duty of pharmacist professional, in 1988 in New Delhi, India and in 1993 in Tokyo, Japan. That was ensued under the admission, in 1994 of May, at “World Health Assembly Resolution WHA47.12” about a function and role of a pharmacist in maintenance and help of the “world health organization” (WHO) reformed new drug (medicine) policy and strategics [171].

The “International Pharmaceutical Federation” (FIP) in 1992 evolved norm and standards for pharmaceutical care services according to the headline of “Good pharmacy practice” (GPP) in hospital, public, general and clinical pharmacy adjustments and regulations. Ensuring and succeeding the reference-guidance of the world health organization (WHO) assessor and expert specialists commission and the maintenance of “International Pharmaceutical Federation” (FIP) conference in 1997, the “International Pharmaceutical Federation” and “world health organization” FIP/WHO developed the mutual record on “Good pharmacy practice” (GPP), that was issued in April of 1999. By collaboration with world health organization (WHO) first edition the practice manual handbook “Developing Pharmacy Practice, a Focus on Patient Care,” was neglected in 2006. The changing need pharmacists expose a recent model for the pharmaceutical working practice and present access to the pharmaceutical care services [172]. “Good pharmacy practice” (GPP) is the pharmacy working practice that satisfy with the demands of a population which make using of pharmacy and the pharmacists’ services to ensure rational, optimum, high quality and testimony-based care maintenances. To maintain challenged pharmacy practice is significant to have recognized and declared a state, public, national, civil or political framework of the quality guidelines, standards and policy. Good pharmacy practice (GPP) contains norms, references, models and standards whether frequently transcend that set down via the national legal system. In addition, regulation and legislation rarely provide exact regulations, instructions and directions regarding however the pharmaceutical services have to be to satisfy the public or national demands. Accordingly, state, national or public, pharmaceutical occupational society and associations have essential function and role in the adjustment of norms, models and standards for Good pharmacy

practice (GPP), whichever concludes the quality administration framework standards and strategically projects and schemes for proceeding and upcoming pharmaceutical care practice and pharmaceutical services [173]. It is as well admitted, acknowledged and declared that in upcoming and proceeding state standards and norms for Good pharmacy practice (GPP) consideration should be paid to both of necessarily of public care services users and the holding capacitance of state, public or civil care divisions, for maintenance the challenging pharmaceutical/pharmacy services [174]. The standards must identify and distinguish the originality of various pharmaceutical practice adjustments such as: general and clinic/hospital pharmacy. As well as, however, pharmaceutical productions, medicines, pharmaceutical and medical services have necessities to change. The norms and standards should confess, accept and recognize for developing practice regulation and ensure these proceeding services with governance without minus influencing the evolutionary character of new pharmaceutical practice. Simultaneously foundation and base should be determined the new health care and pharmacy care practice policies, under the lower standards, that if its performance, pharmaceutical working and practice cannot be regarded “pharmacy practice” totally and, accordingly, should not be absolved [175].

While creating minimal norms and standards on good pharmacy practice (GPP) and international pharmaceutical federation (FIP) underlines or accentuation the significance of initially determining the function and roles performed under the pharmacists as supposed by individual patient and public. The corresponding roles and functions, for pharmacists, have are the direct accountability, obligation and responsibility. So, there is a necessity to be definite within the framework of every function and role. Minimal state, public, national and civil standards should be set according to the demand to show and demonstrate expertise in established of performances sustaining every role and function of pharmacist [176]. The Minimal state, public, national and civil standards for every action are the framework on methods, processes techniques, wherever demands are appropriate. Should be determining suitable local demands of the pharmaceutical working practice surroundings, and should be defining state, public and national occupational tendencies, intentions, ambitions and inclinations [177]. The whole state, public and national pharmaceutical occupational associations and societies should as well fit these functions and roles according to the own demands. The pharmacy performances schedule is able to next determined and accessed via

frame detectors for good pharmaceutical practice within state, public and national scope and can be suspended with convenient and comfortable practice regulation precedence and superiorities [178].

The sickness orienteering pharmaceutical care services are taking into consideration to be lighter and easily for pharmacists' professionals and to personnel relatively to the pharmaceutical care assistance. In western countries there are continuous and regular disputes and negotiation about if it is correctly allowable to restrict the supply of pharmaceutical care services to grouping of patients with determined features and do not ensure the pharmaceutical care services to another like: "Human immunodeficiency virus infection" (HIV) and "Acquired immune deficiency syndrome" (AIDS), coronary heart disease, diabetes, hypertension, lipid management, sexually transmitted diseases monitoring, asthma and so on [179].

The concrete norms and standards of Good Pharmacy Practice (GPP) can be advanced within a state, public, national or civil occupational pharmaceutical institution framework foundation. Reaching certain norms and standards of Good Pharmacy Practice (GPP) for every state nationality and people within those references and guidance has demand for a significant time period and intension. These regulations should not be creating later, because it has essential value for new modern pharmacy practice development [180].

European pharmaceutical care network was established in 1995 (Pharmaceutical Care Network Europe). It cooperates with the WHO and UN (United Nations) on perfection, enhancement, implementation and realization of pharmaceutical care services and appropriate pharmaceutical practice issues. Namely, in 2013 the Europe pharmacy and pharmaceutical care network ("The Network of Pharmaceutical Care in Europe") together with international experts developed a new definition of pharmaceutical care services and determination of the pharmacist's function and role in patient health care services, which can be achieved through optimization of medicines to improve health status [181].

These circumstances of the pharmaceutical sector in the health care system are patient-oriented, efficient and cost-reaching to better health. In fact, in space of the health system under the conditions, such as universal health care, insurance, medicine and basic public health development, pharmaceutical care is a new challenge of the pharmaceutical sector. It has to create a harmonious environment and balance to be able to administer the health condition of the people and public in

terms of pharmacotherapy. It should be able to supply each individual with benefits of healthcare business industry, state and public healthcare, also can regulate its weak and negative aspects [182].

Across the influence on separate patients' nation health division in the state should develop the pharmaceutical care and the healthcare systems' efficiency, productivity, capacity, cost-effectiveness and quality. Enhancements in the micro level influence and impact on the general context in the macro-level. The society gain more advantage and profit, while human and people possess upward health care system. Finally, people as well will profit and advantage when in the health care frame occur broad enhancements. The pharmaceutical services and pharmacists' participation in patient focused health care were connected with better and perfect health, better economic results, and a better quality of life. All this will decrease in drug-associated unfavorable side effects, morbidity and mortality [183]. The present consideration, review and regard explored the efficiency and effectiveness of pharmacist vocational services from viewpoint of customers, consumer and patients results, and wherever probable the potential economical advantage, profit and gain. It is the primary discovering and detecting example of the importance of services multiplicity, enclosing regularity of proceeding health care after that patient discharge from the clinic or hospital. Training, teaching and instruction to customers, consumers, patients, all health care professionals, all doctor/physicians and other medical practitioners. Generally, that revise and regard shows that there are a significantly high-quality records and evidenced data information, into support the meaning, importance, value, significance and sense of occupational pharmaceutical practices and to all pharmacy services for perfecting patient health condition, results and ensure rational pharmacotherapy setting in the society, appropriate medication using and proper drug therapy settings [184].

1.5 Patient's safety

Patient's right, security and safety should be in the order of priorities for all health division occupational, such as pharmacists. Pharmacists care about better health, welfare, common well being and prosperity of people. It was determined that very essential the prophylaxis and prevention of the patients from the error, damage, harm, injury and detriment. These also inclusive via medical mistakes, faults and errors. The determination of damage, harm, injury and detriment hold temporal or constant, continuous and regular disruption of the human body's structure and functions, that demanding armed intervention. As well the medical error leading to fatal cases. From ancient times

to the present day, pharmacists had been the guardians' contrary of the venoms, poisons, toxins, viruses, and all the substances that can damage, harm and injury individual patients, state, nation, people and the society. Today, especially more than ever, the pharmacists' professionals are more liable and answerable; to assure just that, as the patient get the medication, the drug will not be a reason of damage, harm and injury [185]. This is the pharmacists' goal and objective; to be confident the patient understand and be aware of the drug name, the medical purpose of drug use, goal of this medicine, when and how it should be received, how is it possible to minimize drug interactions with another medicines like Over The Counter (OTC) or Prescription drug (Rx) and nutrition, as well drugs' optimal safekeeping and storage conditions [186].

Pharmacists are approachable in all healthcare environments: in-patient, outpatient and society adjustments. Pharmacists are accessible to view customers/patients at comfortable times all daytime of the week, in morning, evening and weekend hours, and beyond a purpose. As emphasized in 2009 of November, the intervention of pharmaceutical services and pharmacist in the use of the medicines has vital value. Accordingly, pharmacists' role in improving the safety of patient more increased. Pharmacists' participation for the security and safety of patients could be as soon as possible during the prescribing stage and before the introduction of medication. In several cases, pharmacists were maintained under the special programs and actions of the state, national or public associations. This comprehensive work carried out by pharmacy student, junior pharmacist, or some IT pharmacists, this pharmaceutical and IT programs interaction was directed to patient safety. When emphasizing on medicine, medication and drug errors, the International Pharmaceutical Federation (FIP) generally mentioned on the definition of the Coordination Board for Error; -Error alert about the treatment mistake (Alert). It is preventive development that can result in improper use of medicines or harm to the patient. Suchlike development should be connected to pharmacist occupational practice, medical productions, medical and pharmaceutical manipulation and schemes; inclusive prescription, messaging, production labeling, nomenclature, drug packaging, prescription, administration, distribution, training, teaching, controlling, pharmacotherapy and monitoring of drug using [187].

Everywhere purpose of the drug safety issue is to decrease the drug and medication mistakes, faults and errors. The drug and medication connected damage, harm and injury should decrease by 50% in the near future globally. That plan and goal are encouraged and promote

performance, productivity and capacity to create and establish the new drug policies and special propaganda and protection of public pharmaceutical societies and associations worldwide. This propaganda is very important for high quality health care services in local, regional and international level and could responsible in safety and security ensure of the; health care professionals, patients, medicines, health divisions, pharmaceutical services, safe pharmacotherapy and medication practices. For preventing errors and the harm results, should ensure that the suitable patient get the appropriate drugs, proper drug dose, through the right route of administration, at the appropriate time. The issue goals are to improve in every phase of the pharmacotherapy and drug using, enclosing; drugs prescribing, medicines counseling, medicines distribution, drugs dispensing, monitoring of drug storage, controlling of pharmacotherapy and drug using. The World Health Organization (WHO) goals are to ensure governance and enhance prospects, intention, strategies and instruments to assure that pharmacotherapy and drug using process is safety for the patients and in all public health care services. Those preconditions are corresponding and directing the pharmacists' function and role in patient safety [188].

CHAPTER 2. MATERIALS AND METHODS OF RESEARCH

2.1 Materials of research and the number of respondents

Based on the request of YSMU the information from MOH of Georgia about pharmacists, pharmacies, pharmaceutical factories, pharmaceutical wholesales, the medical and pharmaceutical activities in Georgia and the pharmacist diploma were received.

➤ Official information from MOH of Georgia got comprises:

- There are 1345 wholesale pharmaceutical facilities in Georgia;
- There are 780 wholesale pharmaceutical facilities in Tbilisi;
- There are 4493 pharmacies in Georgia;
- There are 1737 pharmacies in Tbilisi;
- There are 81 pharmaceutical manufacturings in Georgia;

➤ By the beginning of 2007 the certified pharmacists' number in Georgia was:

- Pharmacist analysts-16;
- Pharmacist organizers-2333;
- Pharmacist technologists-80;
- Pharmacist toxicologists-16;
- General pharmacists-324.

✓ The total number of pharmacists was: $16+2333+80+16+324=2769$.

➤ Currently in Georgian higher education system includes following Academic Education Levels:

➤ The Bachelor Pharmacist (The Bachelor's Degree in Pharmacy), The Master Pharmacist (The Master's Academic Degree in Pharmacy), Doctor's Academic Degree of PhD in Pharmacy. Before 2007 in Georgia it was two post-graduate Academic Scientific Degrees in Pharmacy: Candidate of Pharmaceutical Sciences and Doctor of Pharmaceutical Sciences. Before 2007 in Georgia the higher pharmaceutical education system was contained 5 years, Nowadays the pharmacists' diploma with 5 years of higher pharmaceutical education from the higher education institution equalized with the Master's Academic Degree in Pharmacy.

➤ Before 2005 in Georgia were colleges and secondary professional / technical colleges.

- Since 2007 the pharmacist's profession has been removed from the list of regulated health care professions. But currently in Georgia on pharmacist positions in drugstores working specialists who obtained the Bachelor's or Master's Academic Degree in Pharmacy from the higher education institution.
- Official information about pharmacy faculties' students in Georgia was:
 - The pharmacy students in Tbilisi State Medical University 719;
 - The pharmacy students in Georgian Technical University 375;
 - The pharmacy students at the University of Georgia 57.
- ✓ The total pharmacy students' number was: $719+375+57=1151$.
- The research objects were materials of sociological study, which included:
 - Surveys with the pharmaceutical and medical professionals;
 - Surveys with students of the faculty of pharmacy;
 - Surveys with the drug store customers and visitors;
 - Surveys with public health specialists;
 - Surveys with the young pharmacist specialists (up to 35 years).

The questionnaires developed by Sokolova have been used by many international researchers who have published articles and received positive reviews. These questionnaires were approved in 2009 in Russia (Yaroslavl Medical University). Sokolova's questionnaires were recommended by the ethics committee of the YSMU and approved by the YSMU Scientific Coordination Council. Dr. Sokolova's Questionnaires applied within the study were translated from Russian into Georgian and English [189].

- 7 types of approved questionnaires there were used (Respondents were randomly selected):
- Questionnaire for chief pharmacists: 410 chief pharmacists were participated in the study and 410 surveys were on paper based.
- Questionnaire for consumers (customers) of medications: 1506 consumers of medications were participated in the study and 528 surveys were paper-based and 978 surveys were computer-based.
- Questionnaire for the employed pharmacy faculty student: 222 employed pharmacy faculty students were participated in the study and 222 surveys were paper-based;

- Questionnaire for health-care specialists: 307 public health specialists were participated in the study and 307 surveys were paper-based;
- Questionnaire for pharmacist specialist, 810 pharmacist specialists were participated in the study. 707 surveys were paper-based and 103 surveys were computer-based;
- Questionnaire for pharmacy faculty students: 319 pharmacy faculty students were participated in the study and 261 surveys were paper-based and 58 surveys were computer-based;
- Questionnaire for the young pharmacist specialists up to 35 years: 314 young pharmacist specialists were participated in the study and 314 surveys were paper-based.

➤ Together with this the following was applied:

- Legislation and regulations (laws, Government regulations, MOH orders);
- Statistical information about the pharmacists and about pharmacy faculty students in Georgia;
- Data and information from the MOH of Georgia of register work pharmacist staff;
- Data and information about the pharmacy faculty students from main pharmacy faculty departments in Georgia;
- Tables, column diagrams and drawings, illustration in which percentage and/or quantitative shares are clearly shown.

✓ 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.

- Responsible pharmacist-in some drug-stores there were pharmacist who was responsible instead of chief pharmacist when head pharmacist was not in a drugstore or chief pharmacist was on vacation, or in some psychotropic drugstores responsible pharmacists were answerable, accountable and responsible for the turnover of psychotropic medicines.
- Senior pharmacist-in some drug-stores senior pharmacist were the deputies of the chief pharmacist.
- Authorized pharmacist obtained Master Degree in pharmacy -in some psychotropic drugstores authorized pharmacists, were answerable, accountable and responsible for the turnover of psychotropic medicines.

- Chief pharmacist was head and principal of the drug stores. Chief pharmacists were governing, leading, guiding, managing the drug-stores.
- Manager pharmacist in some drug-stores there were manager pharmacist, who had the same responsibility, liability and duty as chief pharmacist.
- On the position of mentor (tutor) the experienced professional pharmacist -in some drug-stores there were chief pharmacist or manager pharmacist or senior pharmacist or responsible pharmacist or the deputies of the chief pharmacist.

2.2 Methods of research

Marketing 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 marketing 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.

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 marketing 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.

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.

During the research there were used various publications of specialists, dedicated to investigation of problems related to professional formation, laws and legal acts, Governmental decisions for this area regulation; the sociological research has been done by using questionnaires.

➤ The research implementation required the following sub studies:

1. Study of the level of awareness regarding the roles and responsibilities of pharmacists' staff in Georgia;
2. Identification of urgent problems of pharmacists, the chief pharmacists and the young pharmacist specialists in Georgia;
3. Identification of the main problems of pharmacists from the point of view of the public health specialists in Georgia, as well as the medications' consumers (customers/buyers) in Georgia;
4. Identification of the basic problems of pharmacists from the point of view of the pharmacy faculty students and the employed pharmacy faculty students in Georgia.

With the help of statistical methods used during the investigation a number of studies were performed:

- 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 on 20.03.2014 and 19.12.2017, in regard of what the positive conclusion was got.

CHAPTER 3. RESEARCH OVERVIEW, RESULTS, ANALYSIS AND DISCUSSION

3.1 Study results overview, assessment and discussion on the bases of using the seven types of questionnaires.

Study of pharmacist specialists

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

The vast majority of pharmacist specialists were female (See ill.1). It is important that the pharmacy as the work place to become more attractive for the male pharmacists.

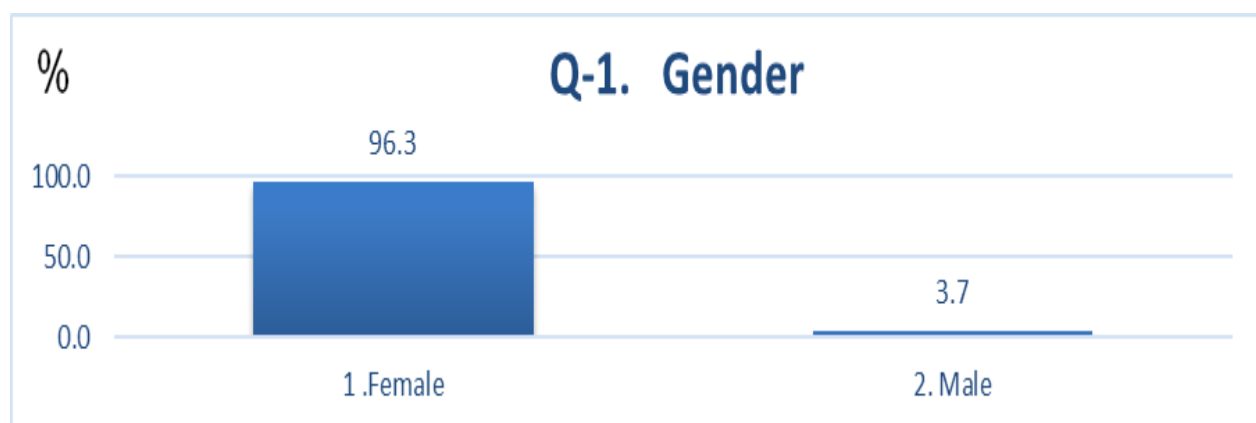


Illustration 1. Distribution of respondents (pharmacist specialists) by gender

Age of the pharmacists ranged from 21 to 70 years. Majority of pharmacist specialists were from 26 to 45 years old (See ill.2). It is important that, the elderly pharmacists might be more actively involved in the work of the pharmacy.

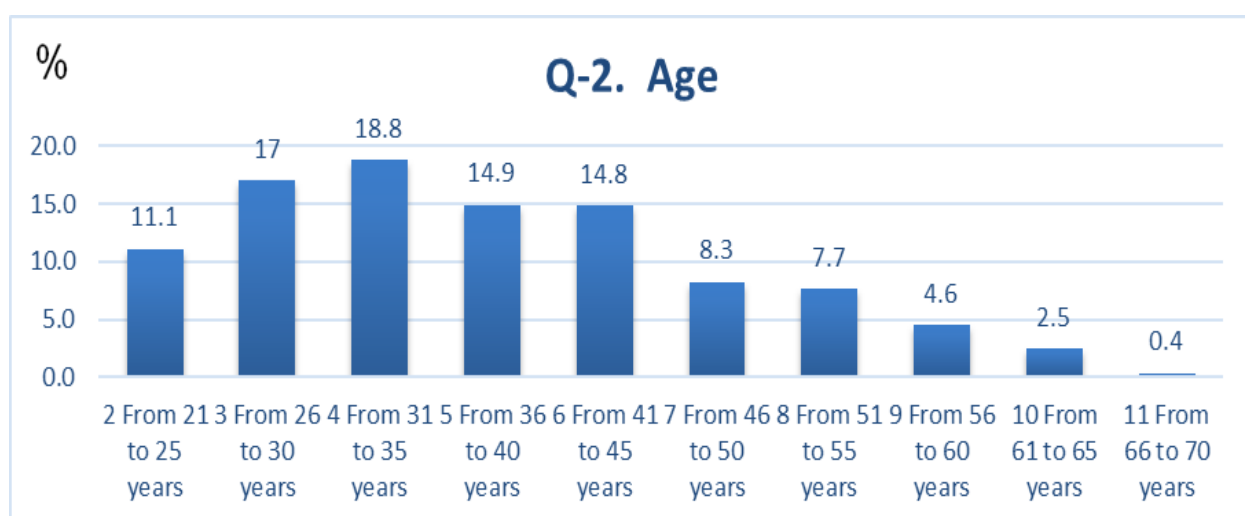


Illustration 2. The respondent's (pharmacist specialists) age

By the education 0.2% of pharmacists had secondary professional education, 0.4 % - college education, 96.4% - higher education and 3% - postgraduate degree (PhD studies or Doctoral studies). The vast majority of respondent pharmacists owned higher pharmaceutical education (See table.1). It will be much desirable that, pharmacist' job in pharmacy work place become more attractive for postgraduate PhD degree pharmacists.

Table 1.

The respondents' (pharmacist specialists) education

Education	Frequency	Percent (%)
1. Secondary professional	2	0.2
2. College	3	0.4
3. Higher pharmaceutical	781	96.4
4. Postgraduate degree in pharmacy: PhD studies or Doctoral studies	24	3.0
Total	810	100.0

Majority of the respondent pharmacist specialists obtained pharmacist qualification in 5 years of higher education. About a quarter of them obtained Bachelor – pharmacist qualification (Bachelor's Degree in Pharmacy-B Pharma), about one seventh of them obtained Master – Pharmacist qualification (Master's academic degree in pharmacy). About three quarters of the respondent pharmacists obtained certified pharmacist qualification by the MOH of Georgia (See tabl.2). It is necessary to start pharmacists' certification to improve the pharmaceutical care.

Table 2.

Qualification of the respondents (pharmacist specialists)

Qualification (1 or more answers)	Count	Percent (%)
1. Pharmacist' s assistant	5	0.6
2. Pharmacist with 5 years of higher education	557	69
3. Bachelor–Pharmacist (Bachelor's Degree in Pharmacy)	196	24.2
4. Master –Pharmacist (Master's academic degree in pharmacy)	108	13.3
5. Certified Pharmacist by the MOH of Georgia	583	72.0
6. Candidate of pharmaceutical sciences	5	0.6
7. Academic Degree PhD in Pharmacy	2	0.2

Majority of total length of the work experience of respondent pharmacists ranged from 5 to 25 years (See ill.3).



Illustration 3. Length of the work experience of respondents (pharmacist specialists)

The vast majority type of pharmaceutical organization jobs of respondent pharmacists was pharmacy, being as a major place for pharmacists' employment (See ill.4).

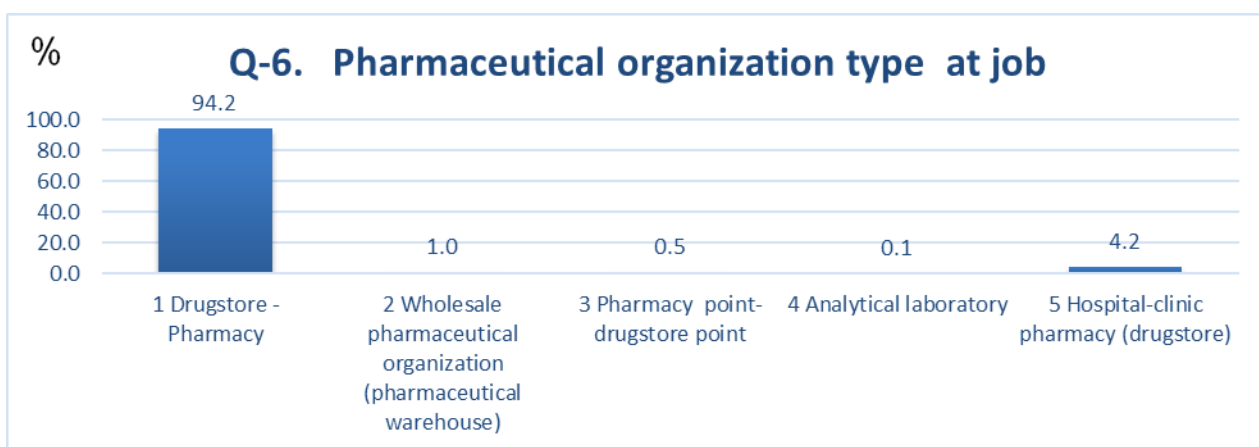


Illustration 4. Pharmaceutical organization type at job of the respondents (pharmacist specialists)

By the network belonging type at job 32.8% of the pharmacists worked at pharmacies, 67.2% of them worked at pharmacy network. The majority of respondent pharmacists worked in pharmacy network, while the minority of them - in pharmacies (See ill.5).

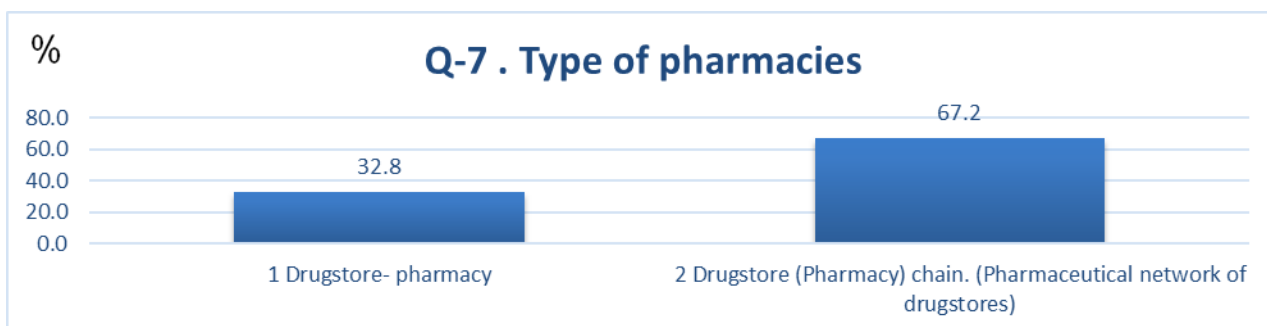


Illustration 5. Types of pharmacies of the respondents pharmacist specialist (discrete and network ones)

The current job for a vast majority respondent (pharmacist specialists) was named by the position of pharmacists (See tabl.3).

Table 3.

Current position of the respondents (pharmacist specialists)

Q-8. Position (could be chosen 1 or more answers)	Count	Percent (%)
1. Technical assistant	1	0.1
2. Pharmacist' s assistant	2	0.2
3. Consultant of cosmetics and hygiene	3	0.4
4. Intern pharmacist	3	0.4
5. Pharmacist	789	97.41
6. Responsible pharmacist	74	9.1
7. Senior pharmacist	46	5.7
8. Authorized pharmacist	8	1.0
9. Chief pharmacist	16	2.0
10. Manager pharmacist	23	2.8
11. Deputy (vice) manager pharmacist	20	2.5

The majority of employment time length on current position of respondent pharmacist ranged from 3 to 10 years (See ill.6).

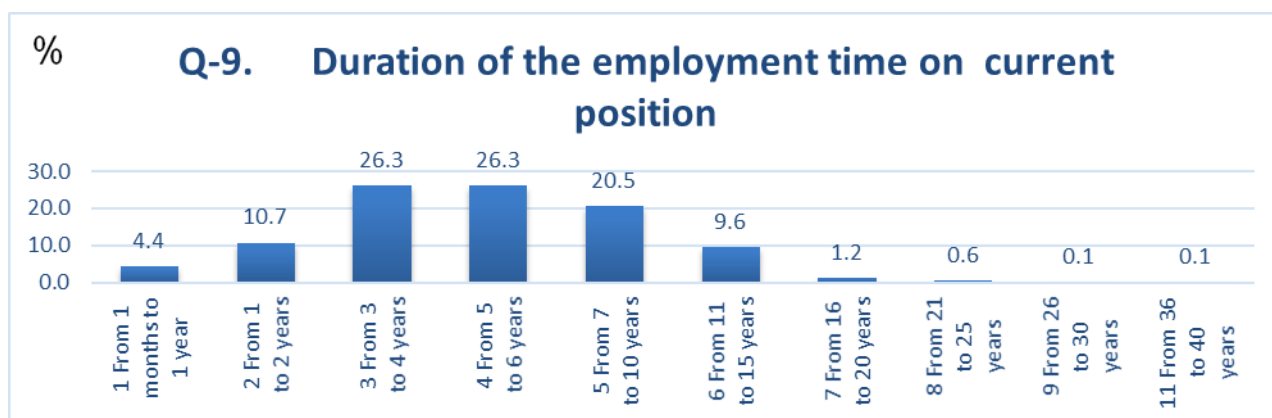


Illustration 6. Duration of the employment time on current position of the respondents (pharmacist specialists)

It is more efficient that the potential pharmacists choose their future profession only according to their wishes, personal desire, awareness based on their own trends, aspirations and inclinations.

The main underlying motives, while making professional (occupational) choice of respondent pharmacist were: desire to obtain high-quality professional education (training)-44.8%, guarantee to be employed 42.6%, interest in a profession-39.4%, the desire to care for the health of people-43% (See tabl.4,5).

Table 4.

Factors, mostly influenced on the respondents' (pharmacist specialists) profession choice

Q-10. The most influence on the profession choice (one answer is accepted)	Frequency	Percent (%)
1. Parents' advices (or will)	186	23.0
2. Teachers' advices	32	4.0
3. Advice of an expert-specialist of professional orientation (of career guidance)	28	3.5
4. The desire to obtain a profession in compliance of own trends, aspirations and inclinations	108	13.3
5. There was nowhere to go	15	1.9
6. Dissatisfaction with the first education	18	2.2
7. Personal desire	306	37.8
8. Specialty love from childhood	117	14.4
Total	810	100.0

Table 5.

Underlying motives while making professional choice of the respondents (pharmacists)

Q-11. Underlying motives while making the professional choice (more than 5 alternatives are acceptable)	Count	Percent (%)
1. Desire to obtain high-quality professional education (training)	363	44.8
2. Prestige of the profession (specialty)	202	24.9
3. Existence of capabilities to the certain kind of activity	251	31.0
4. Family tradition	94	11.6
5. The desire to develop own capabilities, aspirations and inclinations	200	24.7
6. The desire to be included in a student community as a special social environment	120	14.8
7. The desire to expand horizons (desire to widen own range of vision)	145	17.9
8. The desire to extend carefree period of life	116	14.3
9. Opportunity to take high social position	143	17.7
10. Guarantee to be employed	345	42.6
11. The desire to achieve a certain level of material well-being (security)	127	15.7
12. Possibility of further social advancement (promotion)	210	25.9
13. The desire to achieve self- respect in a view of others	128	15.8
14. Striving interests to acquire certain circle of connections, contacts with friends and acquaintances	102	12.6
15. Deferring from military service	3	0.4
16. The desire to have needful social well-being	53	6.5
17. Interest in a profession	319	39.4
18. The desire to be useful to people	152	18.8
19. The desire to care for the health of people	348	43.0
20. The desire to receive (medical) pharmaceutical education	219	27.0

A little bit more than half of respondent pharmacists (pharmacist specialists) were satisfied of professional choice; about a quarter of them were partially satisfied of professional choice (See tabl.6). As it revealed we advise for pharmaceutical companies to make study of their own pharmacists' motivations, aspirations, tendency, intention, ambition, desire and wish for professional choice. In our opinion it is significant and can make influence for pharmacist qualification, professional motivation, occupational enhancement, career improvement strategy and for the quality of pharmaceutical care services.

Table 6.

Satisfaction of professional (occupational) choice of respondents

Q-12. Satisfaction with the professional choice and profession (variants of answers)	Frequency	Percent (%)
1. Yes, I am satisfied with my professional choice. (Yes, I am satisfied with my profession)	467	57.7
2. Partially	205	25.3
3. I have doubts with my professional choice (I have doubts around my profession)	36	4.4
4. I am disappointed with my professional choice (I am disappointed with my profession)	49	6.0
5. No	53	6.5
Total	810	100.0

More than one third of respondent pharmacists were not satisfied with professional career, about one third of them were partially satisfied with professional career (See ill.7). It is significant, that pharmaceutical companies make study of their own pharmacists' satisfaction with professional career. The pharmaceutical companies should study a combination of all factors that affect the satisfaction with professional career.

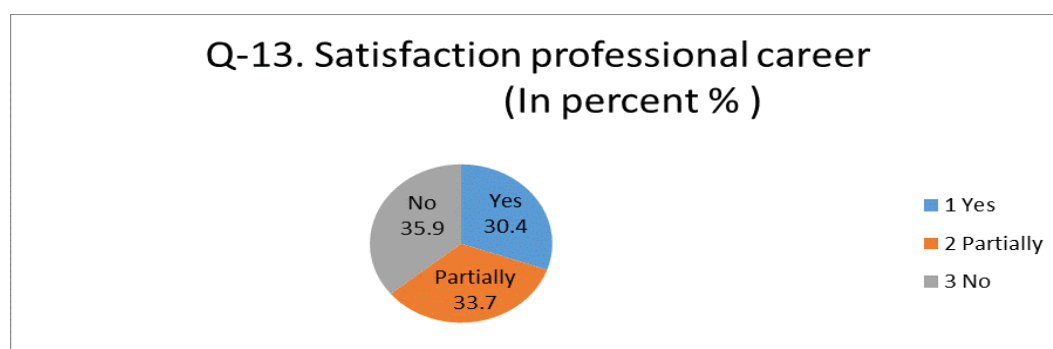


Illustration 7. Satisfaction professional career of the respondents (pharmacist specialists).

About a quarter of respondent pharmacists were not satisfied with work; more than one third of them were partially satisfied with work (See ill.8).

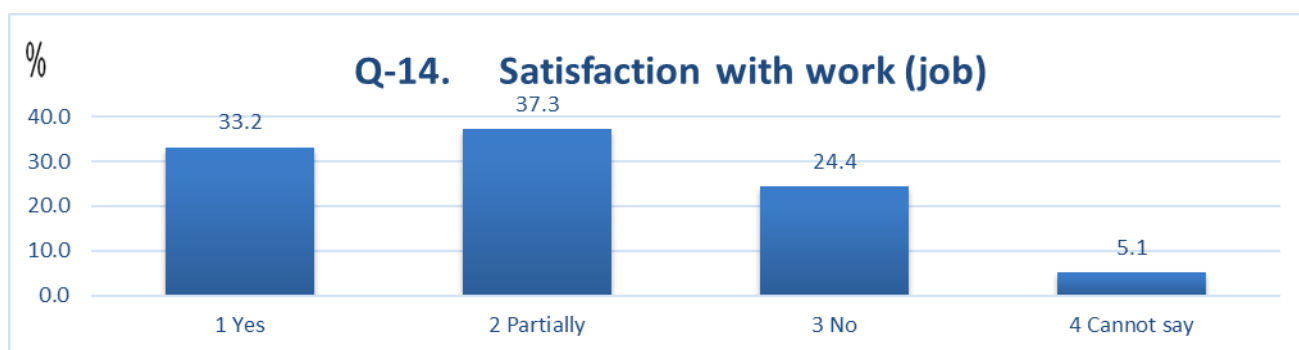


Illustration 8. Satisfaction with work of the respondents (pharmacist specialists)

Base on study results it is considerable, that pharmaceutical companies make study of pharmacist's work satisfaction. The pharmaceutical companies should determine the combination of factors that affect on the pharmacists' work satisfaction. Therefore, we recommend to the pharmaceutical companies to study and analysis features of main factors that influences on the pharmacists' job gratification.

Table 7.

Report of impacting factors, which influenced on the respondents (pharmacist specialists) work satisfaction, estimated under the 5- point scale system

Q-15. Estimation of the impacting factors influenced on the work satisfaction (estimation for each factor)	Mean	Median	Std. Deviation
q15_1 The content of work	4.03	4.00	1.061
q15_2 Position held	3.92	4.00	1.025
q15_3 Correspondence of qualification to work	4.09	4.00	1.009
q15_4 Correspondence of nature of work to my capabilities, aspirations, and inclinations	4.10	4.00	0.990
q15_5 Existence of perspective for professional promotion	3.85	4.00	1.171
q15_6 Existence of perspective for career promotion	3.81	4.00	1.204
q15_7 The possibility to enhance improve qualifications	4.03	4.00	1.085
q15_8 - Existence of a high degree responsibility for the work results	4.02	4.00	1.124
q15_9 Regimen of work	3.66	4.00	1.145
q15_10 Labor salary	2.43	3.00	1.253
q15_11 Existence of the system of benefits scheme for employees	3.52	4.00	1.243
q15_12 Support and assistance of a manager (chief)	4.17	5.00	1.090
q15_13 Direct relationships with manager	4.24	5.00	1.062
q15_14 Relationships to colleagues	4.57	5.00	0.815

During the research we found and evaluated some impacting factors which have influenced on the work satisfaction of pharmacist specialists. These factors were: the content of work, position, correspondence of qualification to work; correspondence of the work nature to capabilities, aspirations, and inclinations of pharmacist; existence of perspectives for the professional promotion (enhancement) and the career promotion; the possibility to improve qualifications; existence of a high degree of responsibility for the work results, regimen of work, labor salary; existence of the system of benefits scheme for employees; support and assistance of a manager (chief); direct relationships with manager and colleagues (See tabl.7).

About a quarter of respondent pharmacists (pharmacist specialists) have realized professional capabilities, skills and habits partially; less than 50% of them - of own potential; about half of them have realized professional capabilities, skills and habits partially; more than 50% of them - of own potential (See ill.9). Pharmaceutical companies should create constructive working conditions for pharmacists to maximally realize their professional capabilities, skills and habits. This will increase the quality of pharmaceutical care in pharmacies.

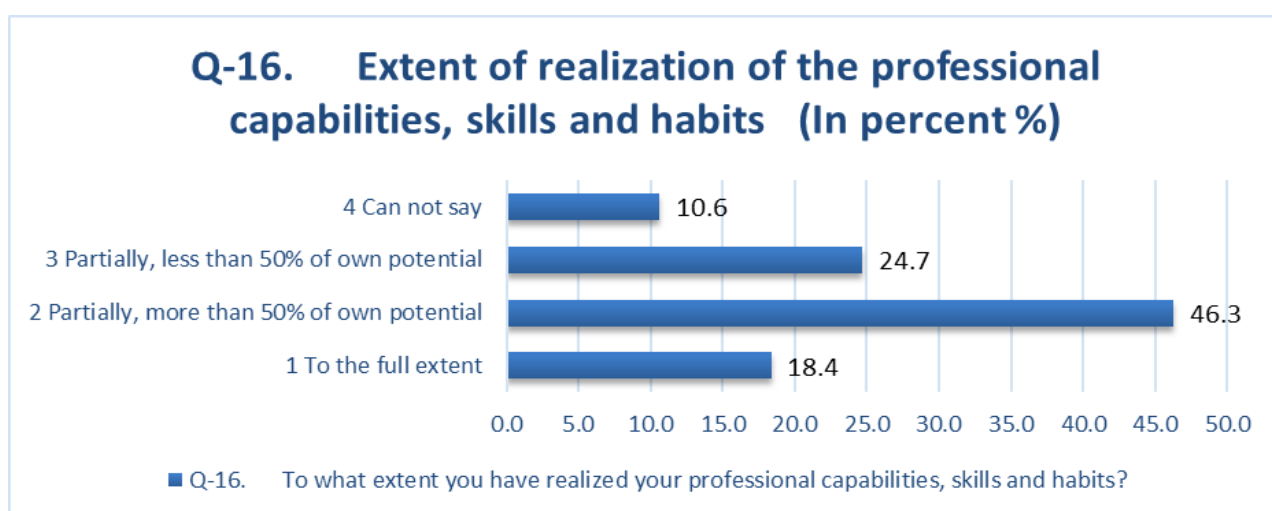


Illustration 9. Extent of the respondents' (pharmacist specialists) realization of the professional capabilities, skills and habits

During the research there were found and evaluated the factors, influencing on the pharmacists' professional development: interesting and valuable (informative) work; the favorable (prosperous) psychological climate within the colleague's team; possibility of the career growth; possibility of the professional education or training; the social importance of the profession; independence in work (See tabl.8).

Table 8.

Report of factors, influencing of the respondents' (pharmacist specialists) professional development evaluated under 5-point scale system

Q-17.Evaluation of the factors, influencing on the professional development of the respondents (evaluation for each factor)	Mean	Median	Std. Deviation
q17_1 Interesting and valuable work	4.03	4.00	0.967
q17_2 The favorable psychological climate within the colleagues team	4.04	4.00	1.008
q17_3 The possibility of career growth	3.90	4.00	1.075
q17_4 The possibility of professional education or training	4.15	4.00	0.969
q17_5 The social importance of the profession	4.11	4.00	1.010
q17_6 Independence in work	4.08	4.00	1.036

The respondents (pharmacist specialists) ' majority considered that education should not be ceased; the minority of them - that it is possible to cease education after getting specialist diploma (degree) or the specialist certificate (See ill.10). On our view it is of the crucial necessity that all the pharmacists should realize, reconsider and understand the importance of continuous pharmaceutical and medical education in constantly. Further diploma pharmaceutical education is a very important factor for the upper qualification of pharmacists and essential index for the high-grade of pharmaceutical care.

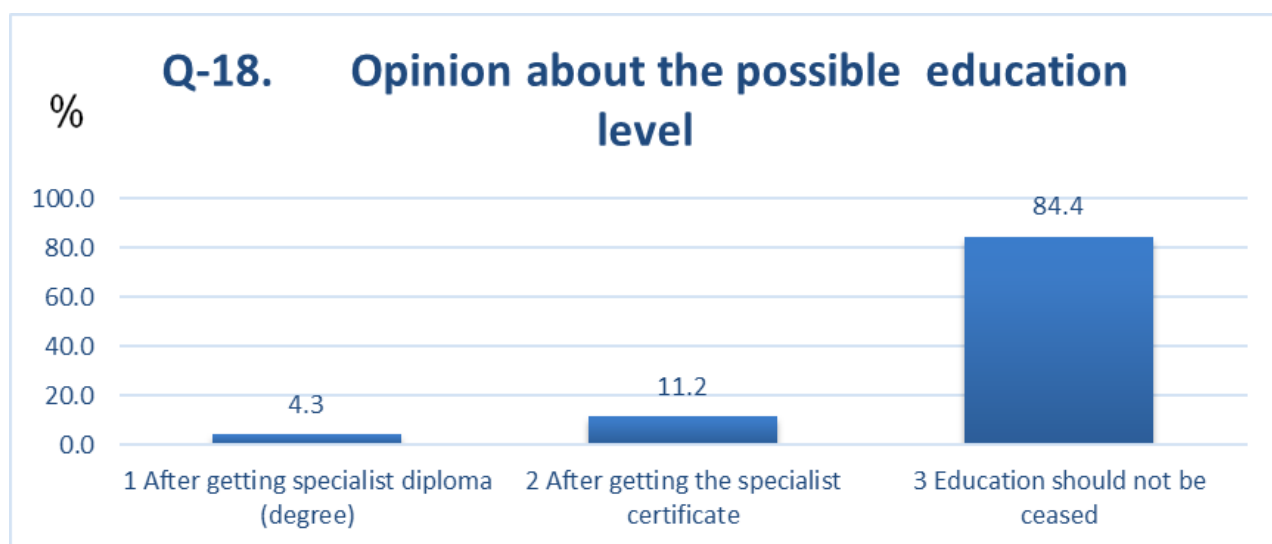


Illustration 10. The respondents' (pharmacist specialists) opinion about the possible education level

The minority of respondent pharmacists had not used knowledge in their practice, obtained from professional publications; less than half of them had partially used that knowledge (See ill.11).

It is very important that pharmacists have to use knowledge obtained from the professional publications, journals and the modern pharmaceutical literature in their practice.

Q-19. Opinion of respondents about their knowledge, obtained from professional publications used in the practice (In Percent %)

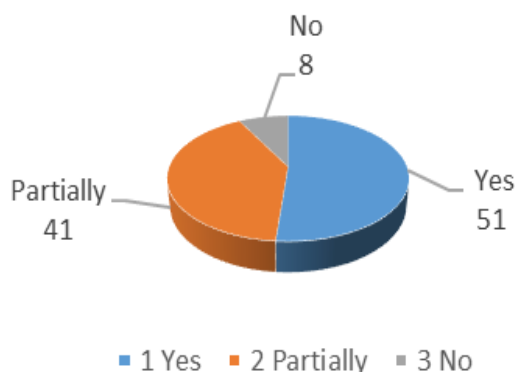


Illustration 11. Opinion of the respondents about their knowledge, obtained from professional publications used in the practice

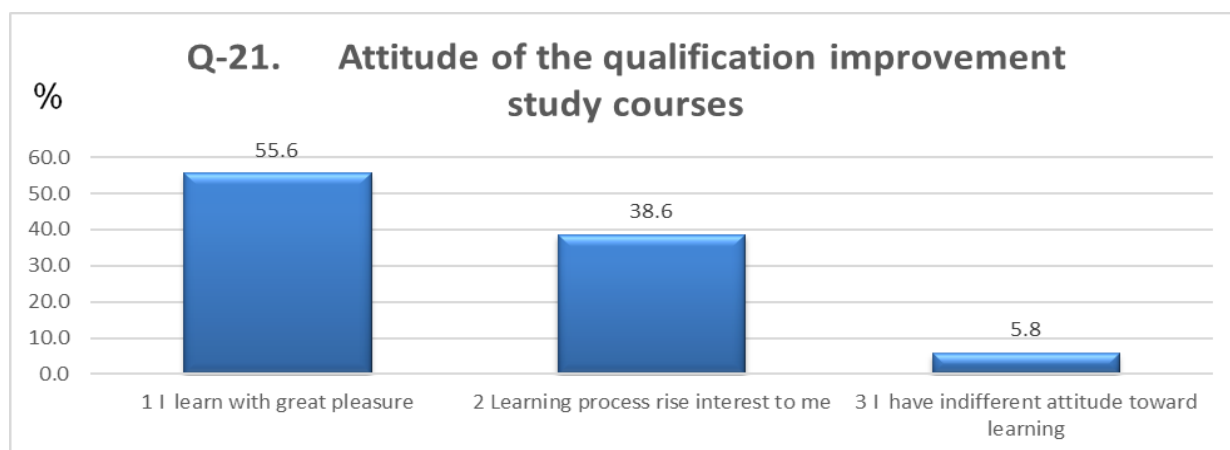
Mostly essential pharmaceutical activity issues for the respondents' (pharmacist specialists) majority were: new drugs, generic drugs, chemical and brand names of them; psychology of communication (relationships) with customers; issues of pharmacotherapy of certain diseases, pharmacology, pharmacodynamics, pharmacokinetics and pharmaceutical care (See tabl.9). 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.

The minority of respondents (pharmacist specialists) had neutral attitude toward learning and qualification upgrading (improvement) study courses (See ill.12). The professional trainings, complementary educational programs, skill enhancement learning instruction, professional workshops are appear to be very necessary for the further professional advancement , vocational development and for occupational improvement strategies.

Table 9.

Mostly essential pharmaceutical activity issues for the respondents (pharmacist specialists)

Q-20. The most essential (relevant) for respondents issues of pharmaceutical activity (several answers were possible)	Count	Percent (%)
1. New drugs, generic drugs, chemical and brand names of drugs	518	64.0
2. Psychology of communication (relationships) with customers	478	59.0
3. Issues of pharmacotherapy of certain diseases	541	66.8
4. The safety, effectiveness and quality of the drugs	558	68.9
5. Pharmacology, pharmacodynamics and pharmacokinetics issues	572	70.6
6. The normative legal regulation of pharmaceutical activity	364	44.9
7. Drug technology issues	241	29.8
8. Pharmacognosy	110	13.6
9. Pharmaceutical organization and economics and pharmaceutical business	154	19.0
10. Pharmaceutical management and marketing	281	34.7
11. Pharmachemistry	90	11.1
12. Toxicology	96	11.9
13. Clinical pharmacy	267	33.0
14. Pharmaceutical care	487	60.1
15. Pharmaceutical analysis	77	9.5
16. Toxicological chemistry	50	6.2
17. Pharmaceutical technologies	86	10.6
18. Nutrition	95	11.7
19. Pharmaceutical cosmetics and perfume	178	22.0
20. Social pharmacy and Public Health	146	18.0
21. Computer technology and pharmaceutical information	140	17.3
22. Phytotherapy	132	16.3
23. Routes of drug administration	183	22.6
24. Drug forms and drug design	158	19.5
25. Drugs' toxic effects	196	24.2
26. Rules of drug administration	237	29.3
27. Cost-effectiveness and cost-benefits of drugs	124	15.3
28. Terms and conditions of storage of drug (conditions and shelf-life)	259	32.0

**Illustration 12.** Attitude of the respondents to qualification upgrading (improvement) study courses

A large majority of respondents' (pharmacist specialists) consider that the Government should make the certification of pharmacists (See ill.13). 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.

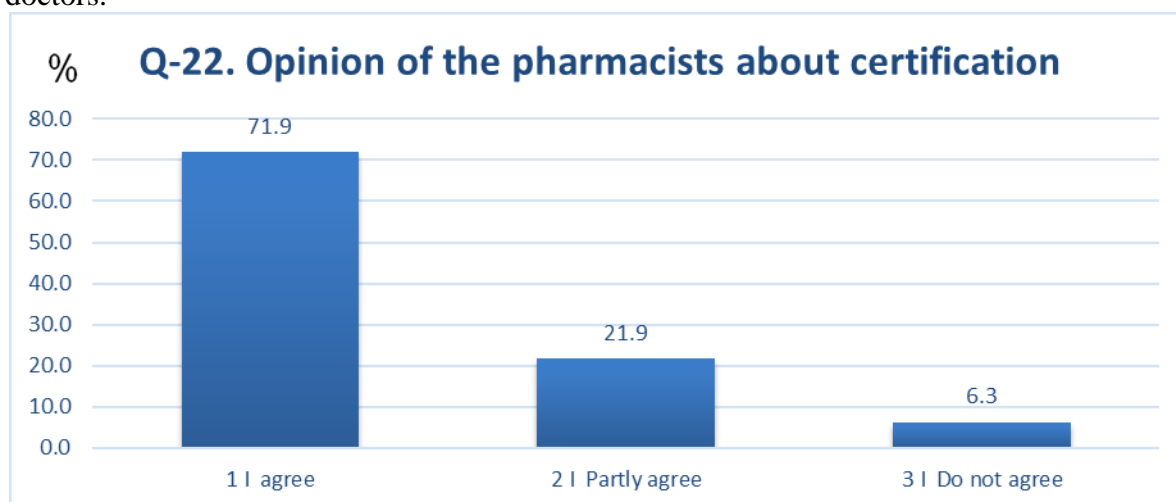


Illustration 13. Opinion of the respondents (pharmacist specialists), on the question- if the pharmacists' certification should done by the Government.

Less than half of respondent pharmacists are engaged in planning of professional career, more than a third of respondent pharmacists are engaged partially in planning of professional career (See ill.14).

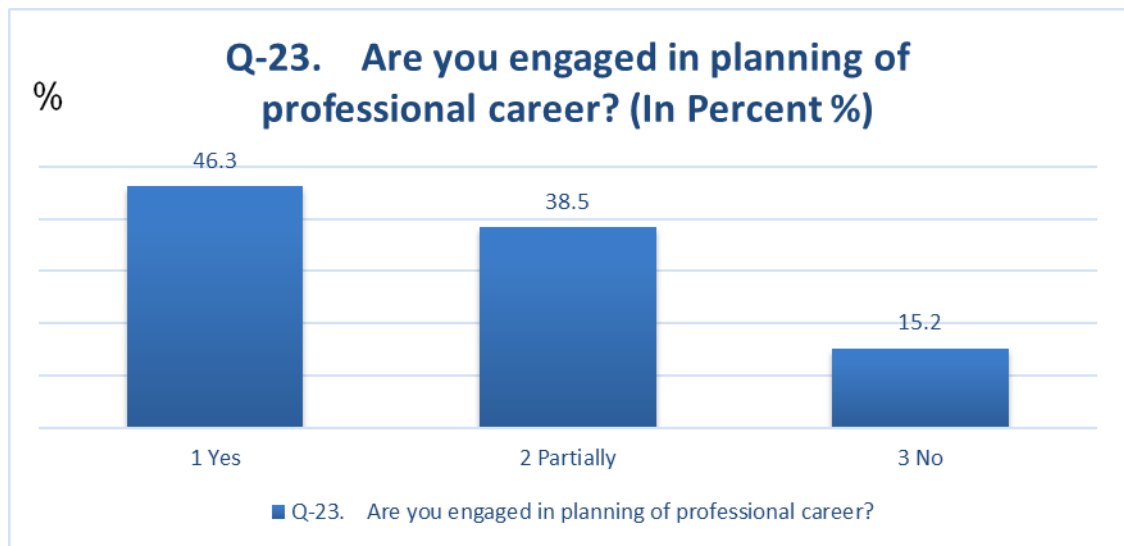


Illustration 14. The respondents (pharmacist specialists) engagement in planning of professional career

During research were found and evaluated goals that achieve as a result through professional career for pharmacists. These goals for pharmacist were obtain more power and authority, much higher status, independence, self-realization, power, economic (material) welfare, professional growth and career advancement (See tabl.10).

Table 10.

Report of the respondents (pharmacist specialists) on the question – “What goals do you want to achieve as a result through professional career?”

Q-24. What goals do you want to achieve as a result through professional career? (Please evaluate each of the chosen option by 5 point scale system)	Mean	Median	Std. Deviation
q24_1 Obtain more power and authority	3.71	4.00	1.245
q24_2 Much higher status	3.84	4.00	1.203
q24_3 Independence	3.88	4.00	1.253
q24_4 Self-realization	4.08	5.00	1.203
q24_5 Power	3.16	3.00	1.449
q24_6 Economic (material) welfare	4.51	5.00	0.877
q24_7 Professional growth	4.54	5.00	0.858
q24_8 Career advancement (growth)	4.50	5.00	0.937

More than one third of respondent pharmacists are not satisfied with the balance between the workload and personal life, less than one third respondent pharmacists are partially satisfied with the balance between the workload and personal life (See ill.15). The balance between the workload

and pharmacist's personal life should be more harmonized, comfortable, convenient, resourceful and more poised. That flexibility will further improve pharmacists' work ability and motivation toward the job.

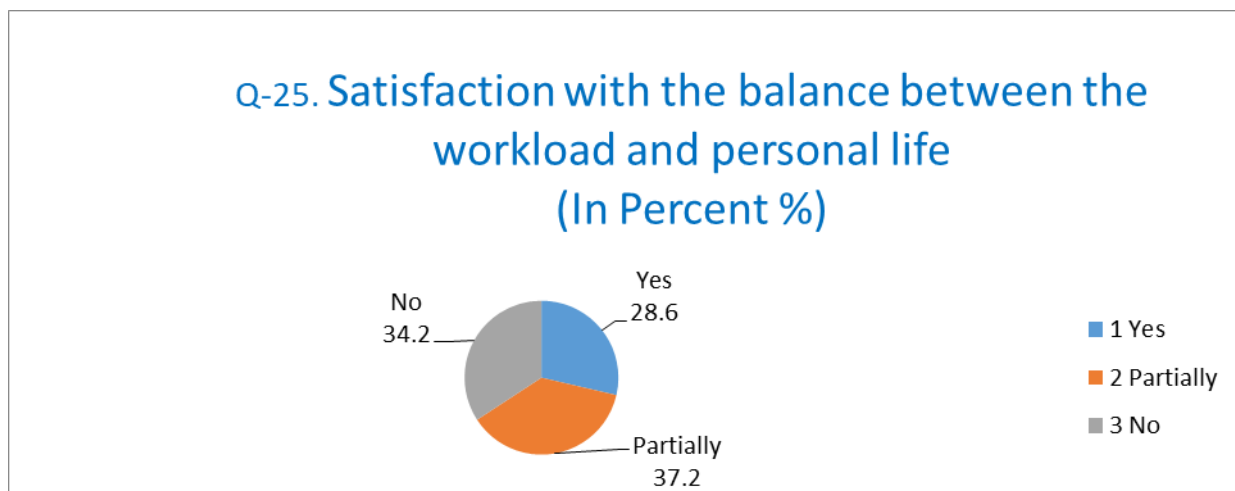


Illustration 15. The respondents' (pharmacist specialists) satisfaction with the balance between the workload and personal life

Less than half of respondent pharmacists are not satisfied with the time duration of job, more than one third of respondent pharmacists are partially satisfied with the time duration of job (See ill.16). It is very important that pharmaceutical companies have created such working schedule and working conditions for pharmacists, which will contribute to improve pharmacists' satisfaction according the time duration of job. That flexibility working schedule and working conditions will further enhance pharmacists' work ability and motivation toward the job. These factors will improve the quality of pharmaceutical care in pharmacies.

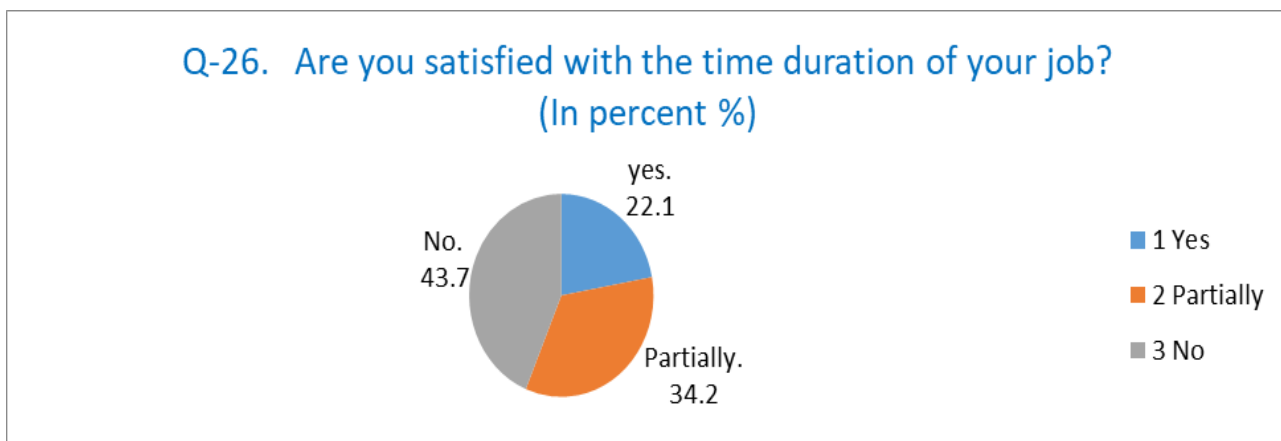


Illustration 16. The respondents' (pharmacist specialists) satisfaction with the time duration of job

The Majority of the respondents are not satisfied with income, a quarter of them are partially satisfied with income (See tabl.11). It should be noted, that pharmacist's satisfaction with income is a very sensitive factor that has a significant impact on the quality of pharmaceutical services performed in pharmacy. Therefore, pharmacist salary should be increased [191] according pharmacist specialist' professional competences, occupational motivation, theoretical and practical knowledge, in our opinion pharmacist satisfaction with income could be enhance and regulate via creation pharmacists' periodic certification, licensing and accreditation systems in Georgia.

Table 11.

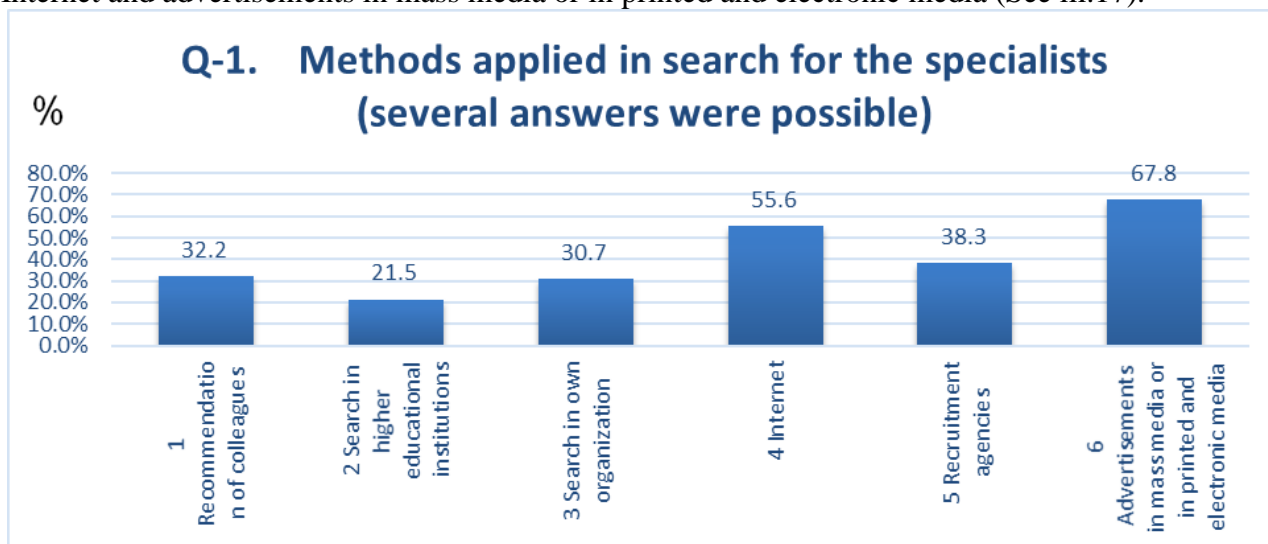
Satisfaction of the respondents (pharmacist specialists) with income

Q-27. Are you satisfied with your income?	Frequency	Percent (%)
1. Yes	83	10.2
2. Partially	206	25.4
3. No	521	64.3
Total	810	100.0

Study of chief pharmacists

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

The majority of the respondent chief pharmacists searching for the specialists applied Internet and advertisements in mass media or in printed and electronic media (See ill.17).



Illustrations 17. The methods respondents applied in search for the specialists

The main time length required for searching of pharmacist specialists on vacant position by respondent chief pharmacists was up to 3 months (See ill.18).

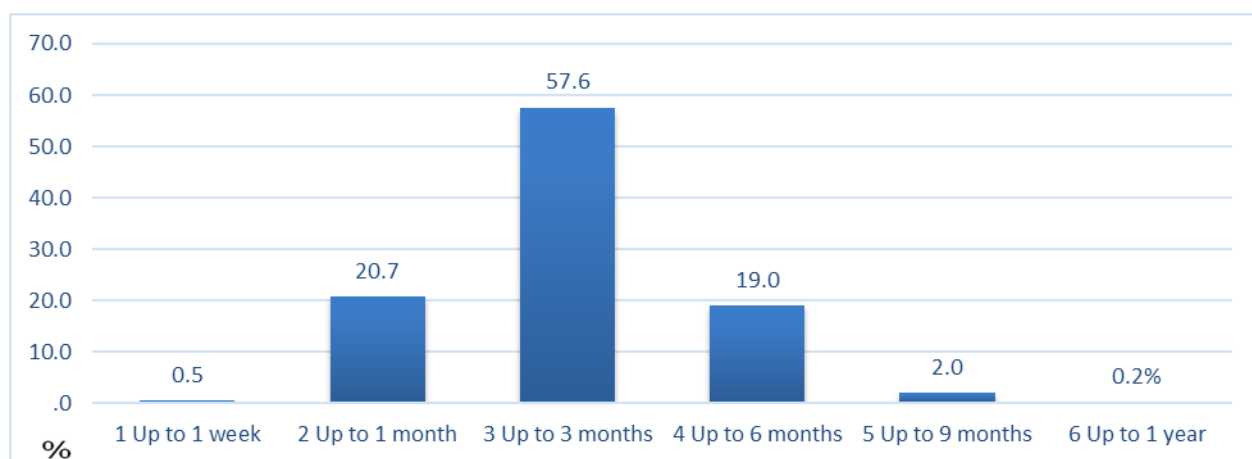


Illustration 18. Time required for searching of specialists on vacant position for the respondents (chief pharmacists)

The majority of the respondents (chief pharmacists) considered that main qualities, capabilities and skills required for pharmacist specialists were ability to make decision fast and love towards their profession.

Less than half part of chief pharmacists considered that main qualities, capabilities and skills required for pharmacist specialists were flexibility while changing the labor functions, ability to build up relations with people and high level of culture (See tabl.12).

Table 12.

The respondents' opinion about qualities, capabilities and skills required for specialists

Q-3. The qualities, capabilities and skills required for specialists (several answers were acceptable)	Count	Percent (%)
1. High intelligence level	46	11.2
2. Professional competency	120	29.3
3. Flexibility while changing the labor functions	166	40.5
4. Ability to make decision fast	254	62.0
5. Love towards the profession	210	51.2
6. Sense to get innovation	89	21.7
7. Ability to build up relations with people	179	43.7
8. High level of culture	186	45.4
9. Culture of speech	89	21.7
10. Orientation towards the creative work (focus on creativity)	108	26.3
11. High motivation to work	67	16.3

The majority of respondent chief pharmacists considered that main personal features required for a young specialist was attentiveness. Less than half of respondent chief pharmacists considered that personal features required for a young specialist was ability to work in a team, purposefulness, ability to learn, kindness, politeness and higher motivation to work (See tabl.13).

Table 13 .

The respondents' opinion about personal features required for a young specialist

Q-4. The personal features required for a young specialist (several answers were acceptable)	Count	Percent (%)
1. Goodwill or amiability	83	20.2
2. Initiative ability	153	37.3
3. Ability to work in a team	195	47.6
4. Purposefulness	176	42.9
5. Ability to learn	203	49.5
6. Kindness and politeness	175	42.7
7. Attentiveness	215	52.4
8. High motivation to work	162	39.5

The majority of respondent chief pharmacists' requirements for a young specialist were: working experience, higher education and recommendations. About one third part of respondent's requirements and demands for a young specialist were proximity of place of residence to working place, marital status, plan for career development and high motivation to work (See tabl.14). We concluded that higher pharmaceutical education was necessary precondition to start work on the pharmacist position. As it found pharmacist should have attentiveness, ability to learn, ability to work in a team, purposefulness, kindness and politeness, high motivation to work.

Table 14.

The respondents' requirements for a young specialist.

Q-5. The requirements demanded from a young specialist (several answers were acceptable)	Count	Percent %
1. Working experience	218	53.2
2. Proximity of place of residence to working place	131	32.0
3. Marital status	131	32.0
4. Children	76	18.5
5. Higher pharmaceutical education	240	58.5
6. Recommendations	209	51.0
7. Plan for career development	141	34.4
8. High motivation to work	131	32.0

The majority of respondent chief pharmacists considered that necessary time period for adaptation of a young specialist ranged from 9 months till up to 1 year (See ill.19).

The majority of chief pharmacists considered that the mostly essential difficulties in professional adaptation of young employees were lack of professional knowledge and also of special skills (computer skills and etc).

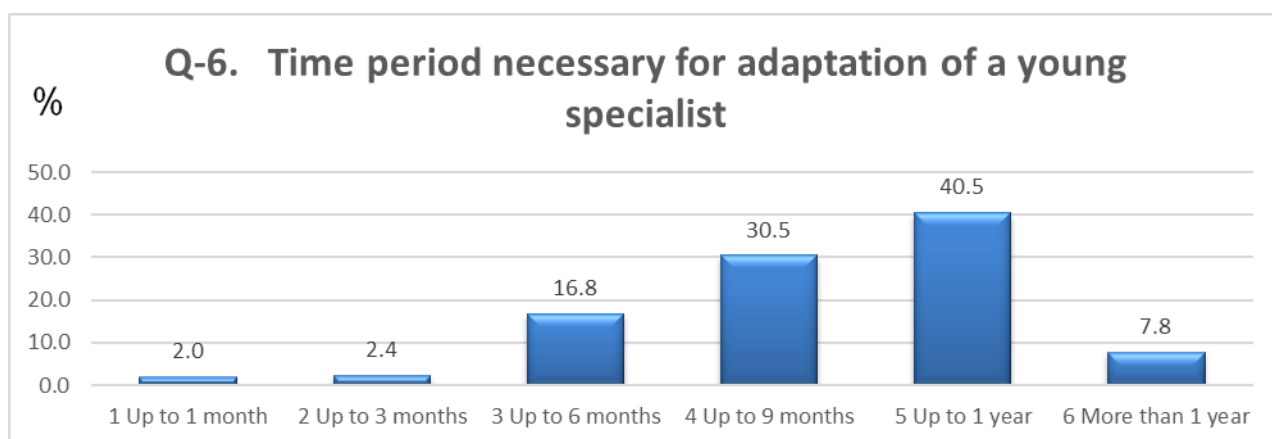


Illustration 19. The respondents' opinion about the time period necessary for adaptation of a young specialist

Less than half part of respondents considered that the mostly essential difficulties in professional adaptation of young employees were difficulties with adaptation within the colleagues' team, difficulties in relationship with administration (leadership), non-compliance of a job with own ideas (See tabl.15). According to that university pharmacy program should be more orientated to special skills, which gives possibility and capability to pharmacists to use gained professional knowledge in practical situation.

Table 15.
The respondents' opinion about the mostly essential difficulties in professional adaptation of young employees

Q-7. The most essential difficulties in professional adaptation of young employees (several answers were acceptable)	Count	Percent %
1. Lack of professional knowledge	250	61.0
2. Lack of computer skills or other special skills/ certain peculiar specific skills	271	66.1
3. Difficulty with adaptation in to collective (within the colleagues team)	139	33.9
4. Difficulties in relationship with administration (leadership)	196	47.8
5. Non-compliance of a job with own ideas	164	40.0
6. Having excessive ambitions	90	22.0

The chief pharmacists' majority considered that most effective forms of professional assistance while adaptating of the specialist to work were independent practical activity and personal conversation. Less than half part of respondents considered that most effective forms of professional assistance while adapting of the specialist were discussion on work of young employees within the colleagues' team and on special training programs. About one third each of them considered necessary to work with a mentor, internship and qualification upgrading courses (See tabl.16).

Table 16.

The respondents' opinion about the most effective forms of professional assistance while adaptation of the specialist

Q-8. The most effective forms of professional assistance while adaptation of the specialist (several answers were possible)	Count	Percent %
1. Independent practical activity	262	63.9
2. Working with a mentor	142	34.6
3. Internship	137	33.4
4. Discussion of work of young employees within the colleagues team	196	47.8
5. Personal conversation	293	71.5
6. Qualification improvement upgrading courses	120	29.3
7. Special training programs	169	41.2

During research there were found and evaluated the chief pharmacists' factors having an influence on the professional development of young specialists. These factors were: interesting and valuable work, the favorable psychological climate within the team of colleagues, possibility of career development, social importance of profession, and independence in work, professional education, professional trainings (See tabl.17).

Table 17.

Report about the respondents' opinion regarding the professional development of young specialists

Q-9.The directions of acting by chief pharmacists for professional development of young specialists (each factor was evaluated by 5-point system)	Mean	Median	Std. Deviation
q9_1 Interesting and valuable work	4.64	5.00	0.813
q9_2 The favorable psychological climate within the team of colleagues	4.38	4.50	0.732
q9_3 Possibility of career development	4.13	4.00	1.024
q9_4 Social importance of profession	4.10	4.00	1.028
q9_5 Independence in work	3.76	4.00	1.186
q9_6 Professional education or professional trainings	4.25	5.00	0.956

A large majority of the respondents considered necessity the Government makes certification of pharmacists (See ill.20).

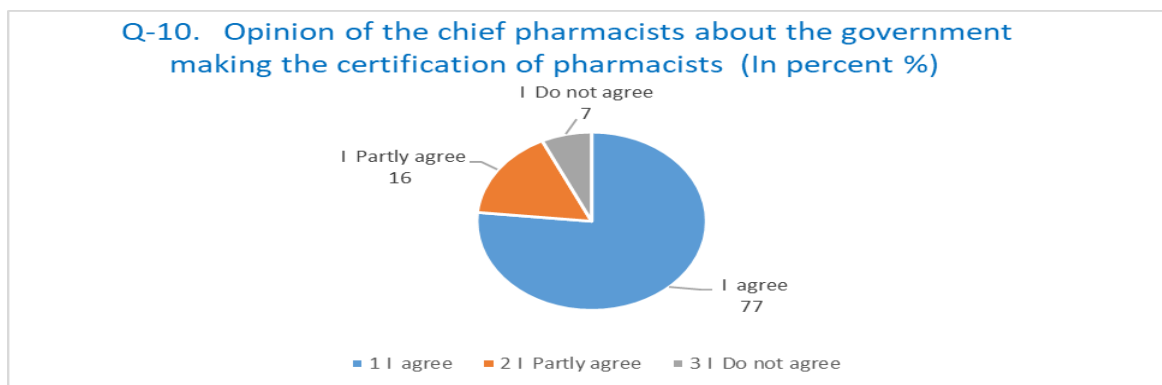


Illustration 20. The respondents’ opinion about certification of pharmacists by the Government

Like other regulated medical specialties, such as specialty of family doctor, pediatrician or therapist, the pharmacist specialty should also become regulated health profession. Therefore, the Government should make pharmacists’ certification. That is very important and significant for guarantee of the higher quality pharmaceutical services and for the patients’ safety.

Study of the medication consumers (buyers)

On the basis of the performed study results it was found that:

More than half part of the medication buyers was female, Less than half of consumers (customers) of medications were male. (See ill.21).

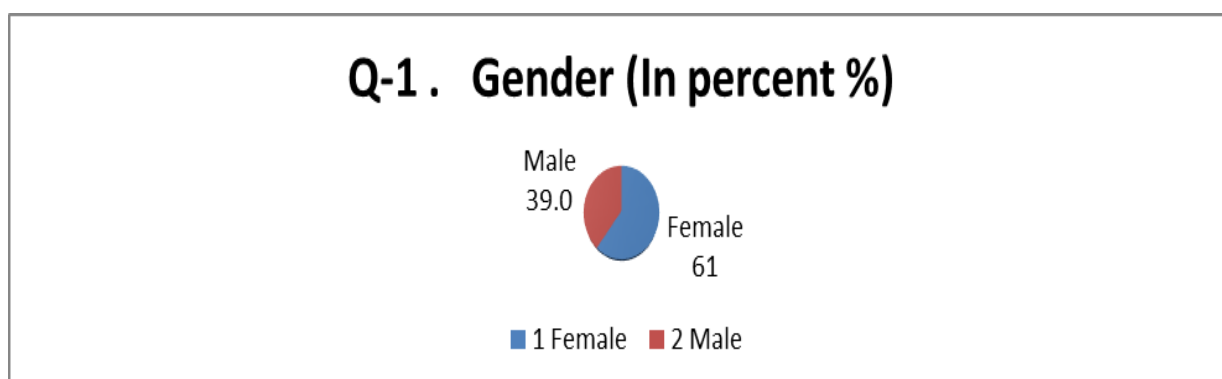


Illustration 21.The respondents’ gender

The medication consumers’ age ranged from 18 to 85 years (See ill.22).

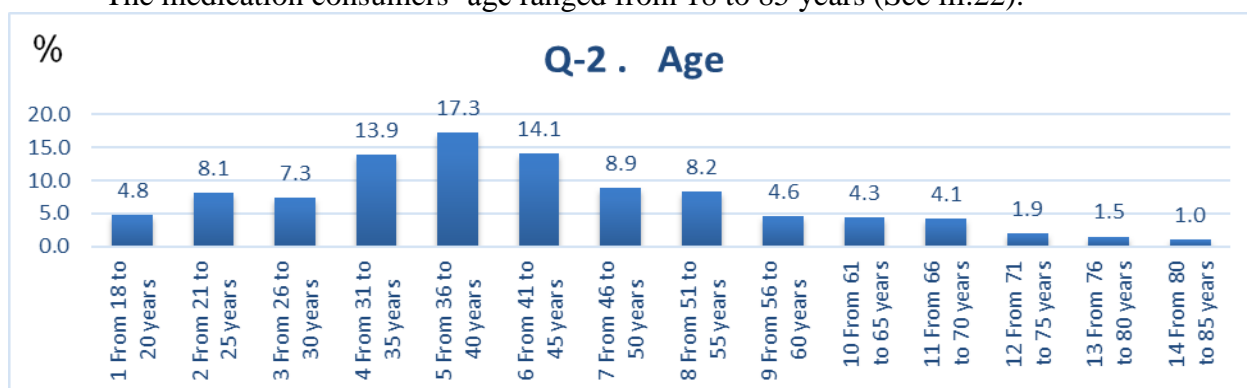


Illustration 22. Respondents’ age

The majority of the medication consumers were married (See ill.23).

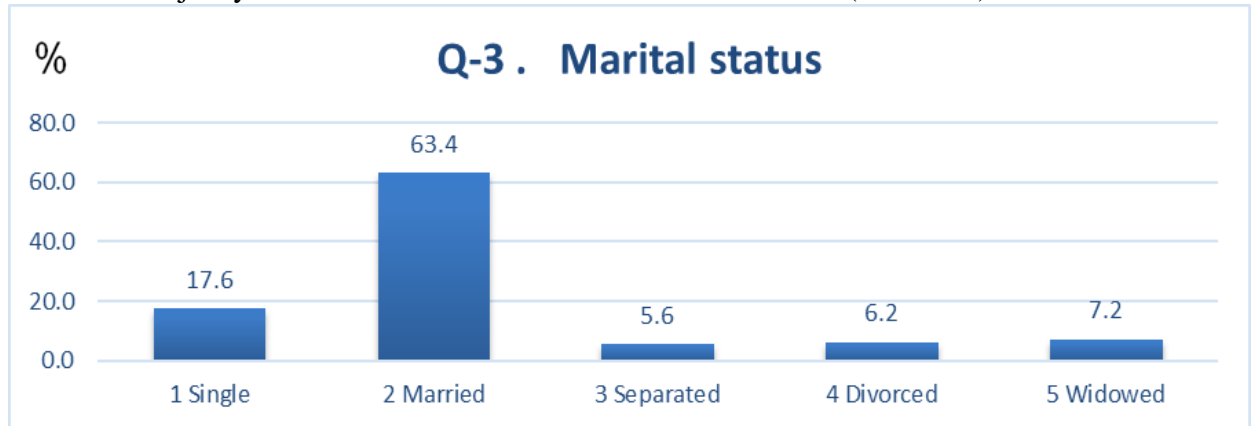


Illustration 23. The respondents' marital status

The majorities of respondents have obtained higher education (See ill.24).

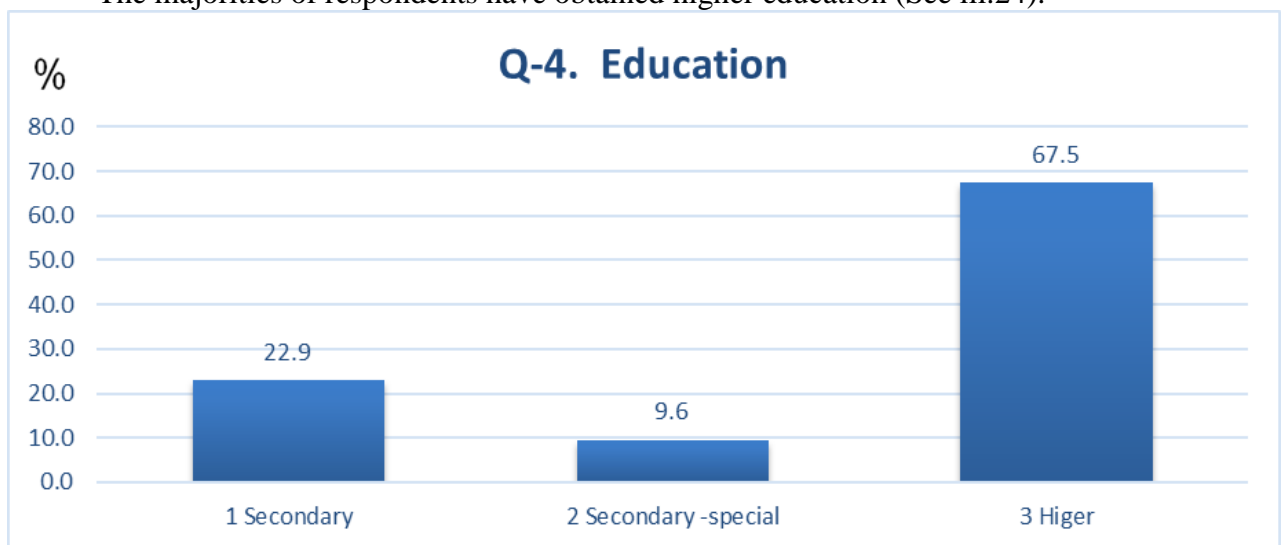


Illustration 24. Education level of the respondents

The Social status of respondent consumers (customers) of medications belonged to all social classes (See ill.25).

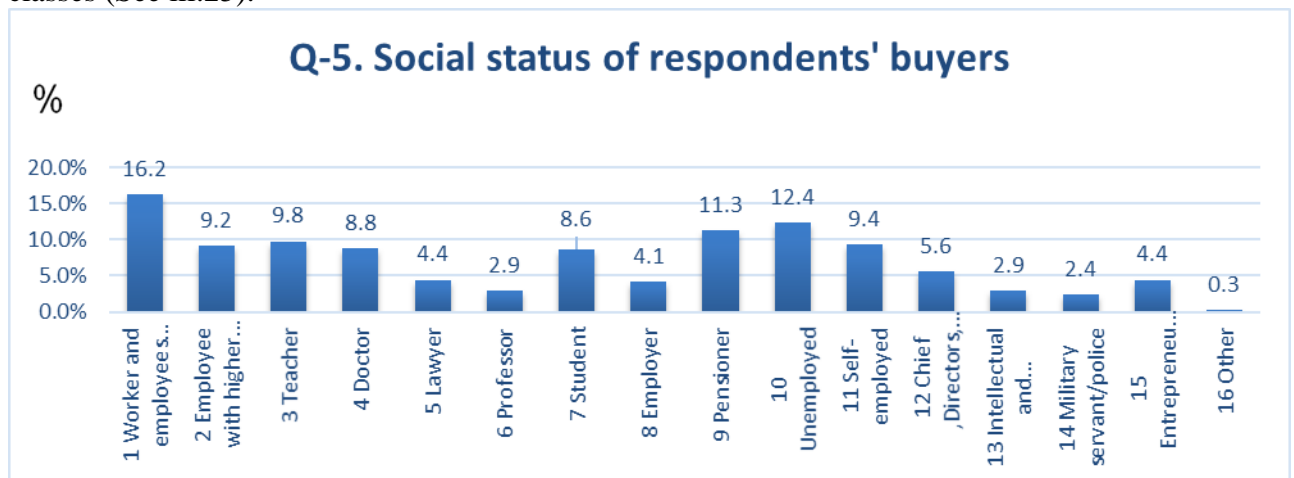


Illustration 25. The Social status of respondent consumers/buyers

About one third parts of the respondents visit pharmacy as often as needed (See ill.26).

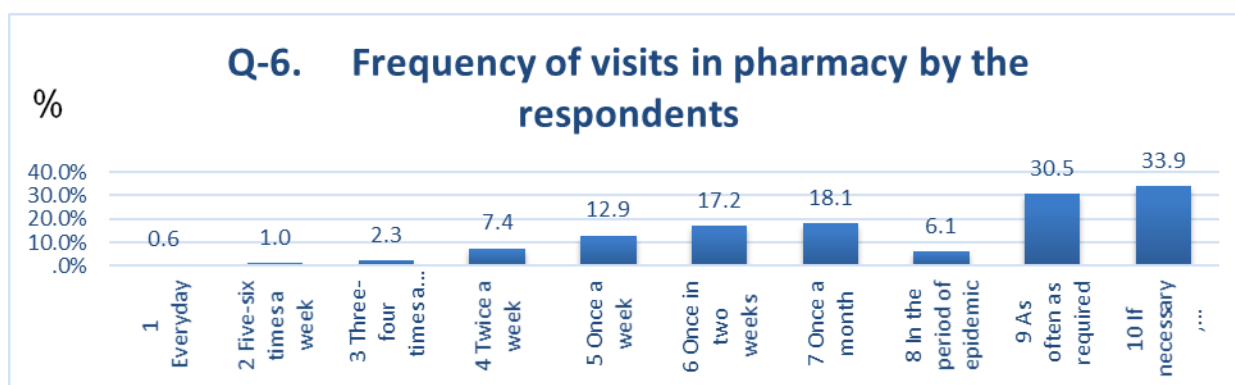


Illustration 26. Frequency of visiting in pharmacy of the respondents

The majority of respondents applied into the pharmacy for acquiring medications (See tabl.18). So, the pharmacist professional qualification, knowledge and professional competencies are very important to provide good pharmaceutical service.

Table 18.

Products that respondents purchase frequently in pharmacies

Q-7.The products purchased frequently in pharmacies (several answers were possible)	Count	Percent (%)
1. Medications (drugs)	1310	87.0
2. Optics	170	11.3
3. Medical devices -products of medical purpose	177	11.8
4. Mineral water	283	18.8
5. Cosmetics and parfumery products	359	23.8
6. Disinfectants	473	31.4
7. Personal hygiene items	567	37.6
8. Medical and dietary nutrition	183	12.2
9. Biologically active additives-food supplements (nutritional, dietary)	217	14.4
10. Patient care items	223	14.8
11. Child nutrition	337	22.4

The majority of the medication consumers determined the main factor while drug choosing process to be recommendation of a physician. Less than half part of respondents determined the main factor while choosing the drugs to be the doctor's prescription and advice of a pharmacist (See ill.27). Therefore, the role of pharmacist is significant in the healthcare system. For the higher quality healthcare and pharmaceutical services, the pharmacist's appropriate education level is of crucial importance. It was shown that the health of patients was directly related to the professional

education level of pharmacist. Therefore, pharmacist should have eligible higher pharmaceutical education.

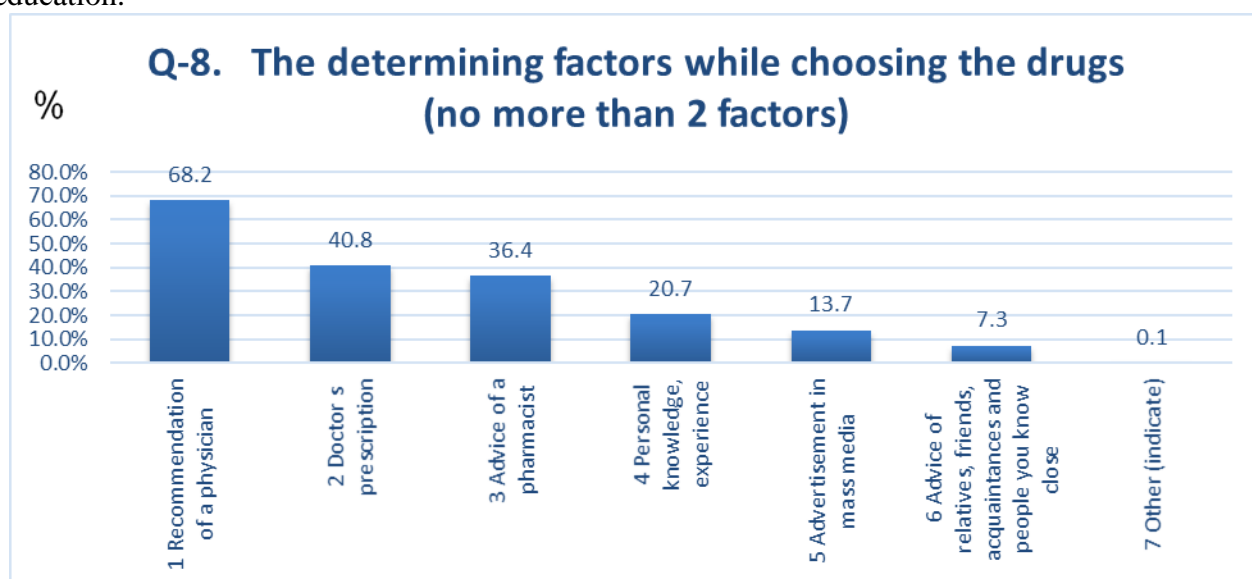


Illustration 27. The determining factors while respondents choose the drugs

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.19).

Table 19.

The mostly significant factors while respondents choose a pharmacy

Q-9. 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

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.

For the majority of respondents mostly asked the pharmacists about the rules of drugs intake and prices of drugs. For the less than half part of the respondents mostly asked about the drugs' adverse effects and quality. For about the one third of them mostly asked about help in selection of analogue of drugs, indication/contraindication of drugs, the terms and conditions of their storage (conditions and shelf-life), the drugs dosage, rules of drug administration and selection of OTC drugs (See tabl.20).

Table 20.

The respondents' mostly asked questions to pharmacists

Q-10. The questions mostly asked to pharmacists (several answers were possible)	Count	Percent (%)
1. About rules of intake of medications	950	63.1
2. About adverse effects of medications	625	41.5
3. About prices of medications	925	61.4
4. About help in selection of analogue of medication	449	29.8
5. About quality of medications	640	42.5
6. About availability of medications in a pharmacy	399	26.5
7. About indication/contraindication of medications	471	31.3
8. About terms and conditions of storage of drugs (conditions and shelf-life)	464	30.8
9. About medications dosage	505	33.5
10. About routes of drug administration	292	19.4
11. About drug forms	289	19.2
12. About drug design	130	8.6
13. About drugs toxic effects (toxicity)	297	19.7
14. About principles of pharmacotherapy	55	3.7
15. About rules of drug administration	386	25.6
16. About drugs generic, chemical and brand names	156	10.4
17. About selection of OTC drugs	409	27.2
18. Some specific information about drugs	380	25.2
19. Effectiveness of drug	312	20.7
20. About drugs action and their interactions	284	18.9
21. About drugs safety	321	21.3
22. About cost-effectiveness of drugs	51	3.4

Therefore, 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 majority of respondents considered that the required quality for pharmacist was professional competency. Less than half part of the respondents considered it to be a readiness for relationships (communication-contact), patience, endurance and stamina, amiability or kindness and high professionalism (See tabl.21). Studies have confirmed that professional competency was mandatory for pharmacist specialists. Being a hallmark the pharmacists' professional competency could be achieved by adopting of higher pharmaceutical education and certification of pharmacist specialists.

Table 21.

The required qualities for pharmacist in the respondents' opinion

Q-11. The qualities required for pharmacist (pharmaceutical professionals in the pharmacy) (3 possible answers)	Count	Percent (%)
1. Readiness for communication-contact	714	47.4%
2. Professional competency	891	59.2%
3. Patience, endurance and stamina	630	41.8%
4. Amiability or kindness	710	47.1%
5. Ability to build up relations with people	376	25.0%
6. Vocational particular skills	503	33.4%
7. Friendliness (goodwill)	415	27.6%

The vast majority of the medication consumers considered that the Government should make the certification of pharmacists (See ill.28).

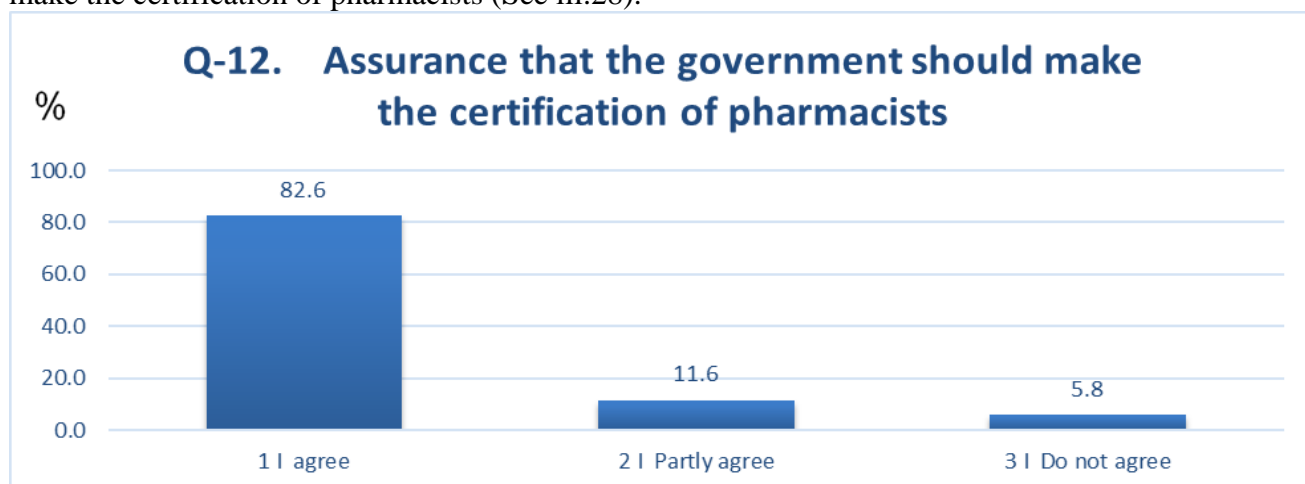


Illustration 28. Respondents' opinion about the pharmacists' certification by the Government

It should be noted that in developed countries, as well as in many developing countries pharmaceutical specialty is regulated profession, as family medicine. In the western country's pharmacist as a family doctor, needs higher pharmaceutical education, diploma and continuous pharmaceutical education, pharmaceutical license and periodic accreditation. Only the pharmacists

with higher pharmaceutical education have the right to work at the pharmacist position in the pharmacies. In the pharmacists' certification programs should be only involved pharmacists who have graduated pharmaceutical faculties from the state recognized and accredited universities. The higher pharmaceutical education and the pharmacist specialists' certifications programs are guarantee for higher professionalism of pharmacist specialists and of higher pharmaceutical service provision in pharmacies.

Study of health-care specialists

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

The majority of respondent public health specialists were female. Age of the respondent public health specialists ranged from 21 till 75 years.

The respondents' work duration ranged from 2 till 50 years. The job position of respondent public health specialists was from all main health care and public health specialty directions.

The vast majority of the respondents considered that the professional activity of pharmacist is of great importance for the society (See tabl.22).

Table 22.

Opinion of the respondents (public health specialists) about importance of the pharmacist professional activity

Q-6.Assurance of the respondents in importance of the pharmacist professional activity for the society	Frequency	Percent (%)
1. Yes	291	94.8
2. No	9	2.9
3. To a small extent	7	2.3
Total	307	100.0

More than a half of respondents considered that the sense of the work of pharmacist is optimization of quality of life for people, related to health by providing the pharmaceutical care. Less than a half of respondents considered that work of pharmacist is timely, proper and qualitative supply with pharmaceutical products to the population and hospitals/clinics (See tabl. 23).

Table 23.

The respondents' opinion of the meaning of pharmacist work

Q-7. The sense of the pharmacist work	Frequency	Percent (%)
1. Timely, proper and qualitative provision of the population and hospitals/clinics with pharmaceutical products	120	39.1
2. Optimization of quality of life for people related to health by providing the pharmaceutical care	187	60.9
Total	307	100.0

The respondents' 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.24). According to that pharmacist job should become regulated and more authorized in health care system.

Table 24.

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

Q-8. Functions performed by pharmacists in pharmacy (no more than 5 answers)	Count	Percent %
1. Realization of drugs and tools (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. Providing information about drugs to the population	165	53.7
4. Pharmaceutical care	77	25.1
5. Experts of drugs	102	33.2
6. Ultimate care about the patients' health and wellness	131	42.7
7. Dosage and dispensing of drugs	124	40.4
8. Informing the customers in pharmacotherapy direction	107	34.9
9. Informing the customers in cost-effectiveness and cost-benefits of drugs	88	28.7
10. Helping customers in offering or selection of OTC drugs	77	25.1
11. Informing the customers about drug design and drug forms	37	12.1
12. Informing the customers about drugs' generic, chemical and brand name	39	12.7
13. Informing the customers about drugs' effectiveness, safety and toxic effects	66	21.5
14. Informing customers about routes of drug administration	30	9.8
15. Informing customers about rules of drug administration	35	11.4
16. Helping in selection of analogue of drugs	97	31.6

The respondents' majority considered that importance in work of pharmacist was in personal realization as a specialist, receiving remuneration and provision of necessities of life. The respondents' minority considered it to be in relief of pain in suffering of people (See ill.29).

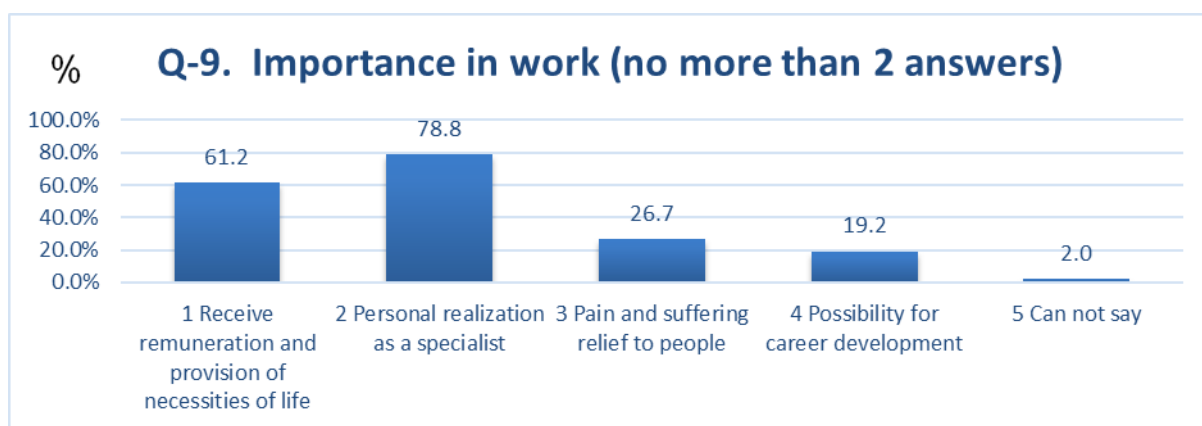


Illustration 29. Important issues in work for the respondents' (public health specialists)

Less than half part of the respondents considered that the level of basic training of pharmacists was not corresponding to the contemporary requirements (See ill.30). 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.

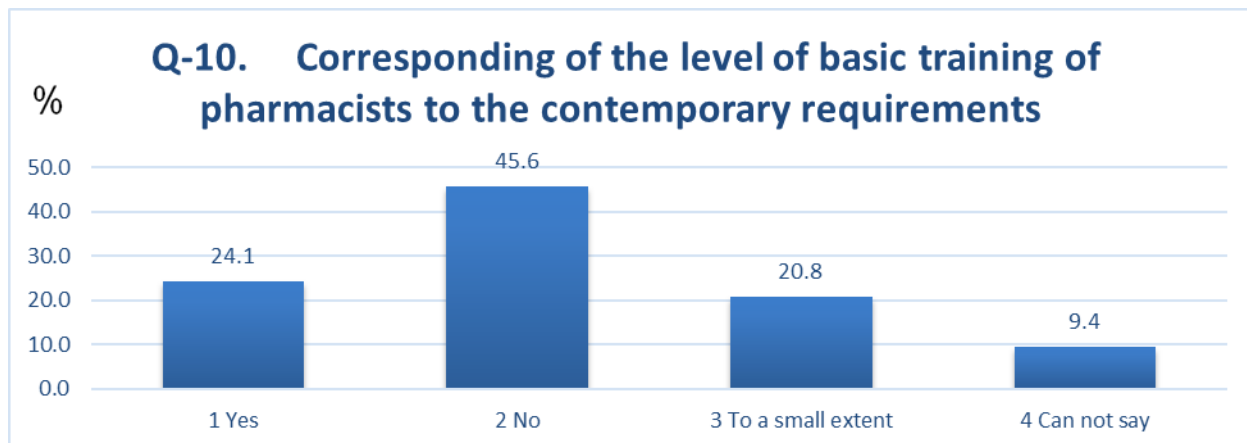


Illustration 30. The respondents' opinion about pharmacists' basic training level correspondence to the contemporary requirements

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 (See tabl.25). 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 25.

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

Q-11. The issues for pharmacists necessary for the further regular studies or trainings (several answers were possible)	Count	Percent %
1. New drugs	187	60.9
2. Psychology of communication with customers	103	33.6
3. Issues of pharmacotherapy of certain diseases	197	64.2
4. Safety and effectiveness of drugs	154	50.2
5. Pharmacology and pharmacotherapy	224	73.0
6. Normative legal regulation of pharmaceutical activity	94	30.6
7. Drugs toxicity	164	53.4
8. Drugs dosage	112	36.5
9. Routes of drug administration	110	35.8
10. Drug forms	61	19.9
11. Drug design	43	14.0
12. Rules of drug administration	123	40.1
13. Drugs generic, chemical and brand names	57	18.6
14. Selection of OTC drugs	108	35.2
15. Cost-effectiveness and cost-benefits of drugs	96	31.3

Approximately half part of the respondents was not familiar to the concept of pharmaceutical care; while more than a quarter of the public health specialists were well familiar to the concept of pharmaceutical care (See ill.31).

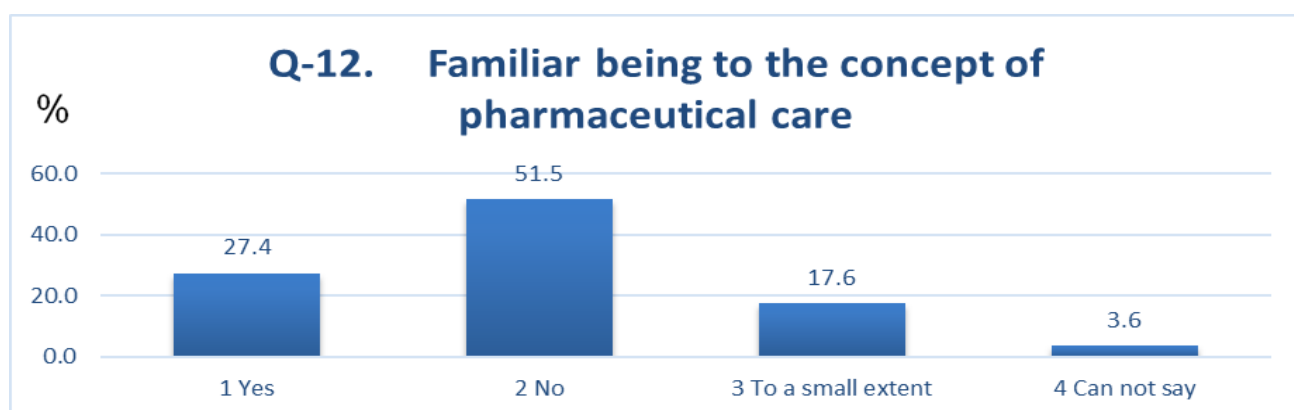


Illustration 31. The respondents' (public health specialists) cognition of the concept of pharmaceutical care.

The respondents' large majority considered necessity of provision of cooperation between pharmacists and physicians on the issues of pharmacotherapy (See ill.32). 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.

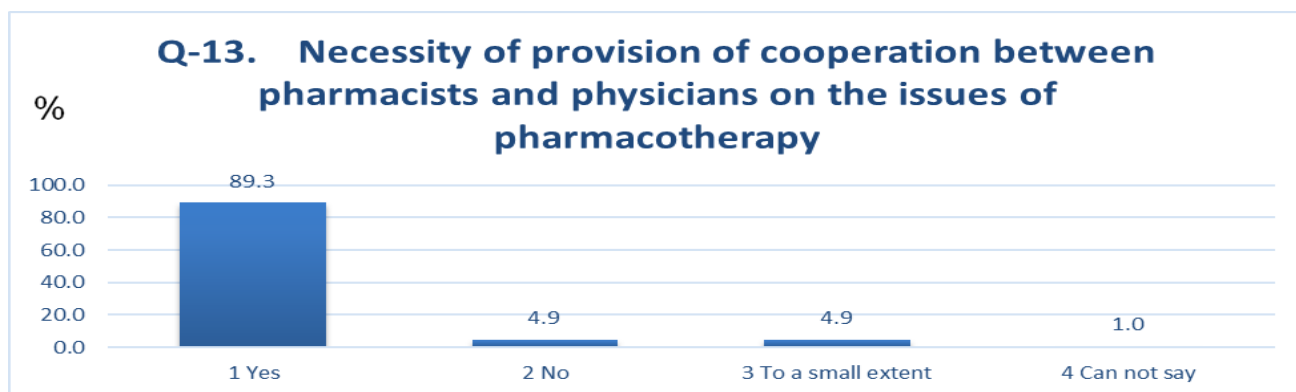


Illustration 32. The respondents' opinion about the necessity to provide cooperation between pharmacists and physicians on the issues of pharmacotherapy

More than half part of the respondents 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 ill.33). 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.

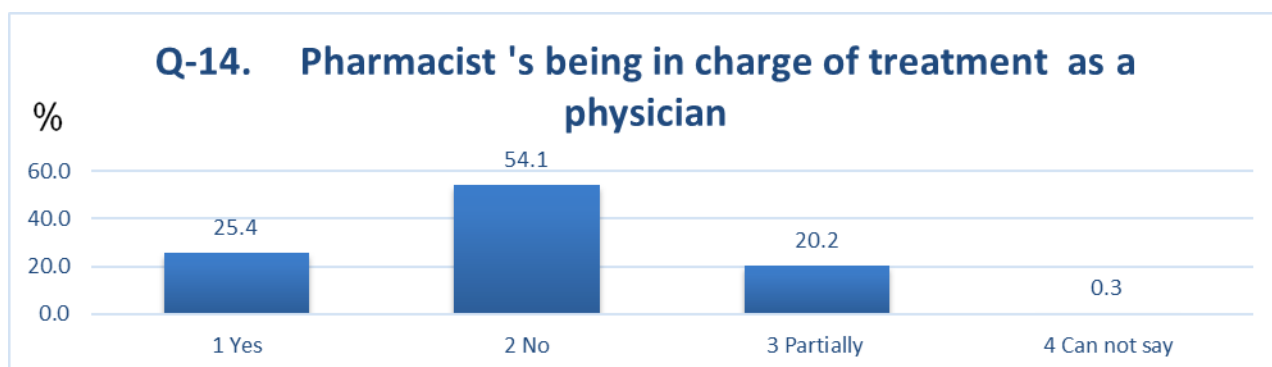


Illustration 33. The respondents' (public health specialists) opinion about pharmacist's being in charge of treatment as a physician

The respondents' vast majority considered that pharmacist should provide assistance in teaching patients to understand the prescribed drugs intake rules (See ill.34). According to that higher quality pharmaceutical service could be only provided by the pharmacist specialists of higher

pharmaceutical education, graduated from the authorized, accredited and licensed by the state higher education institutes and universities.

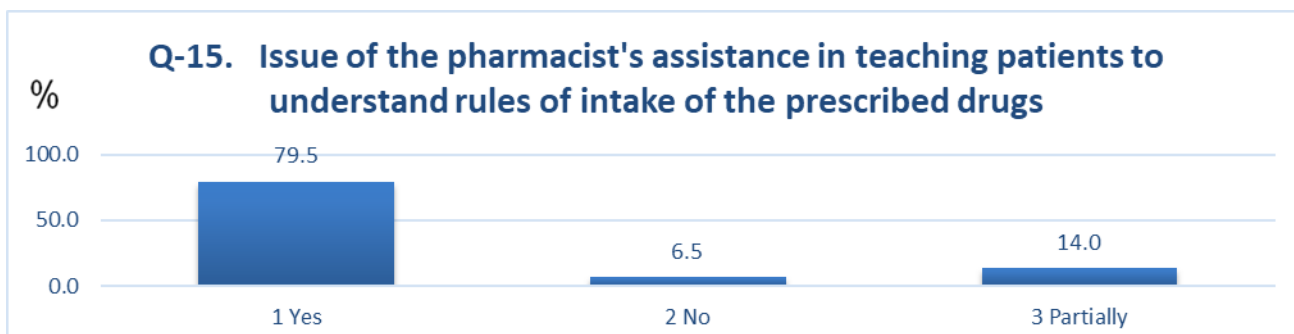


Illustration 34. The respondents' (public health specialists) opinions about providing assistance by pharmacist in teaching patients to understand rules of intake of prescribed drugs.

To provide contribution and assistance in teaching of patients to understand the prescribed drugs intake rules, pharmacist specialists 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.

About half part of the respondents considered that pharmacist is not responsible for registration of adverse effects of the drugs, while less than a third part of them considered pharmacist to be responsible for that (See ill.35). By legislation one of the functions of pharmacist is to register the side effects of drugs, what is very essential for patients' safety [190]. It should increase the awareness of pharmacist as the health professional.

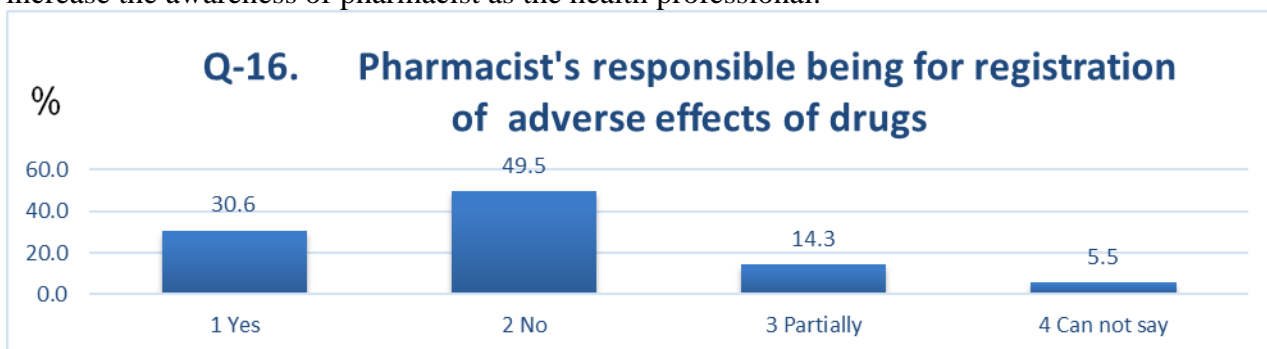


Illustration 35. The public health specialists' opinion about the pharmacist's responsible being for registration of side effects of drugs

The respondents' vast majority considered that the Government should make the certification of pharmacists (See tabl.26). It is very essential and important that higher pharmaceutical educated pharmacist specialists 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.

Table 26.

The respondents' (public health specialists) about the issues of certification of pharmacists by the Government

Q-17.Assurance in necessity of the Government certification of pharmacists	Frequency	Percent (%)
1. I agree	291	94.8
2. I partially agree	14	4.6
3. I do not agree	2	0.7
Total	307	100.0

Thus, the pharmacists' specialty should become a regulated health care profession. According to that Government should make certification, licensing and accreditation of pharmacist professionals. About a quarter of the respondents considered that pharmacist is in charge of the treatment as a physician. Properly educated pharmacist can minimize and reduce the mistakes made by the doctor in the recipe. That has a great importance and value for provision of higher quality health care services for patients' safety.

Study of pharmacy faculty students

On the performed study results basis, the following have been founded:

The pharmacy faculty students' age mainly ranged from 17 to 25 years. Their courses varied from Bachelor I-IV Course. The respondents' majority was represented by females and just about less than one fifth - by males.

The respondents' majority made professional choice at the age 15-18 (See tabl.27). When choosing pharmacists' specialty, the potential students should be aware of the pharmacist occupational peculiarities, the public and medical importance of the pharmaceutical profession.

Table 27.

Time when the respondents (students) made their professional choice

Q-5.Age when the professional choice was made	Frequency	Percent (%)
1. Before I was 11	28	8.8
2. At the age of 11-12	6	1.9
3. At the age of 13-14	12	3.8
4. At the age of 15-16	65	20.4
5. At the age of 16-18	163	51.1
6. At the age of 19-20	12	3.8
7. At the age of 21-22	1	0.3
8. At the age of 23-25	1	0.3
9. At the age of 26-28	1	0.3
10. Exactly before enrollment to university	30	9.4
Total	319	100.0

More than a quarter of respondents considered that the factors influenced on the respondents' professional choice mostly were: parents' advice (or will), profession correspondence to their aspiration and inclination, interest in profession (See tabl.28). When potential students choosing a pharmacist specialty, they should have a free choice opportunity for being maximally responsible for their position in the health sector. The potential pharmacy student should be ready for permanent learning forever.

Table 28.

Factors mostly influenced on the respondents' (students) professional choice

Q-6. Factors mostly influenced on the students' professional choice (only one answer)	Frequency	Percent (%)
1. Parents' advice or will	82	25.7
2. Teachers' advices	14	4.4
3. Worker-specialist's advice	23	7.2
4. Friends advice	12	3.8
5. Relatives or acquaintances' advice	11	3.4
6. Correspondence of this profession to the respondent's aspiration and inclination	93	29.2
7. Interest in profession	84	26.3
Total	319	100.0

The students' majority got prepared for entrance exams with tutors and just one third of them - in the high school. The respondents' minority had passed pre-study training courses (See ill.36). Therefore, in the high school the training programs, study curriculums, learning syllabuses, study textbooks should be created in a requested correspondence to ensure high level of the potential students' education. The high school should ensure that the student acquired high level of education. On the basis of high school knowledge, the pupil should be able to pass the examinations for the universities successfully.

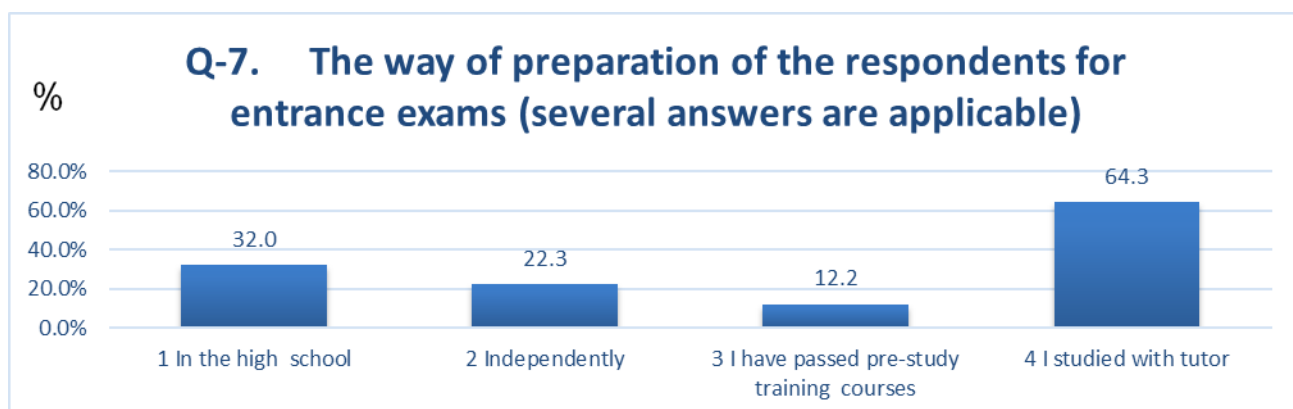


Illustration 36. The ways the respondents (students) prepared for entrance exams

The respondents' majority was driven by a desire to obtain a high-quality professional training while electing the given direction of education; about half part of them – by a guarantee to

be employed; and less than their half - by a desire to develop own capabilities, aspirations and inclinations, a desire to expand horizons and interest in profession, a desire to be included in a student community as a special social environment (See tabl.29). When potential students choosing a pharmacist specialty they should have an opportunity to make a free choice, because pharmacist' profession is a very responsible specialty in the health sector. When choosing pharmacists' specialty the potential students should be aware of the pharmacist occupational peculiarities, the public and medical important role of the pharmaceutical profession.

Table 29.

The respondents (students) underlying motives while electing the given direction of education

Q-8. The students underlying motives while electing the given direction of education (no more than 5 answers are applicable)	Count	Percent (%)
1. Desire to obtain high-quality professional training	171	53.6
2. Prestige of specialty	84	26.3
3. Existence of abilities to the given type of activity	73	22.9
4. Family tradition	28	8.8
5. Desire to develop own capabilities, aspirations, and inclinations	127	39.8
6. Desire to be included in a student community as a special social environment	95	29.8
7. Desire to expand horizons	115	36.1
8. Desire to extend carefree period of life	59	18.5
9. Opportunity to take high social position	51	16.0
10. Guarantee to be employed	159	49.8
11. Desire to get high level of material well-being (security)	86	27.0
12. Possibility to develop further social promotion	91	28.5
13. Desire to obtain self-respect in the eyes of others who are close to me	34	10.7
14. Desire and interests to obtain certain circle of contacts, connection with friends	32	10.0
15. Deferring from military service	6	1.9
16. Desire to have needed social well-being	43	13.5
17. Interest in a profession	127	39.8
18. Desire to be useful to people	69	21.6

The respondents' large majority was satisfied with their professional choice. The students' majority was in general familiar with terms of separate areas for professional activities (See ill.37). It is too necessary that pharmacy faculty students are being known and aware of the main and

fundamental aspects of pharmacist's occupational activity. This has a great importance for career and professional advancement.



Illustration 37. The degree of familiar being of the respondents with separate areas of the professional activity

For the respondents' majority interest issues regarding to future work were the labor have to serve, system of employment condition, rate of wage (salary of labor). For about one third of them it was the work content, labor conditions, necessary equipment and demand for such specialists at the labor market (See tabl.30). Therefore, pharmacists should have appropriate salary, proper working conditions and good employment opportunities. In our opinion pharmacists' higher pharmaceutical/professional theoretical and practical knowledge from higher education institutions, upper occupational skills and pharmacist certification, licensing and accreditation system is the guarantee for higher demand for pharmacist specialists from wide range of medical, pharmacaceutical and other health sector directions.

Table 30.
The respondents' (students) interest issues regarding to the future work

Q-11. The main interests in regard to the future work (several answers were possible)	Count	Percent (%)
1. The work content	109	34.2
2. Labor conditions and necessary equipment	114	35.7
3. Labor salary system and rate of wage	213	66.8
4. The collective peculiarities at workplace	75	23.5
5. Employment opportunities	56	17.6
6. Demand for such specialist at the labor market	99	31.0

The respondents' large majority learnt with great pleasure and about one tenth of the students were indifferent to learning (See ill.38). All the pharmacy faculty students should realize and understand that learning is very important for career and professional advancement, pharmacist's professional perfection and further professional success.

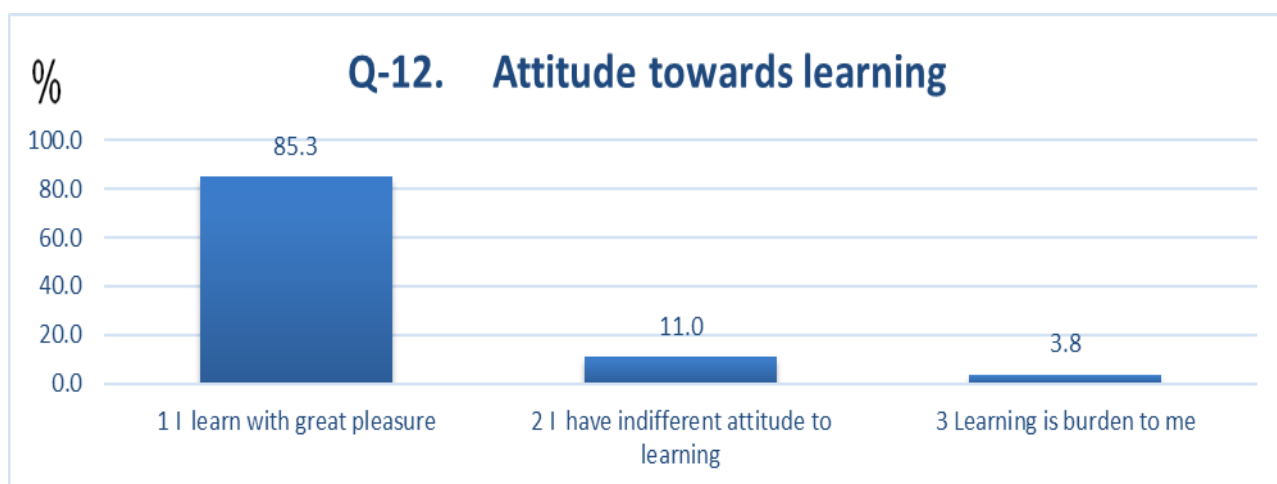


Illustration 38. The respondents' (students) attitude towards learning.

The respondents' large majority did not like to change the chosen specialty; while more than one tenth of them would like to change chosen specialty. (See ill.39).

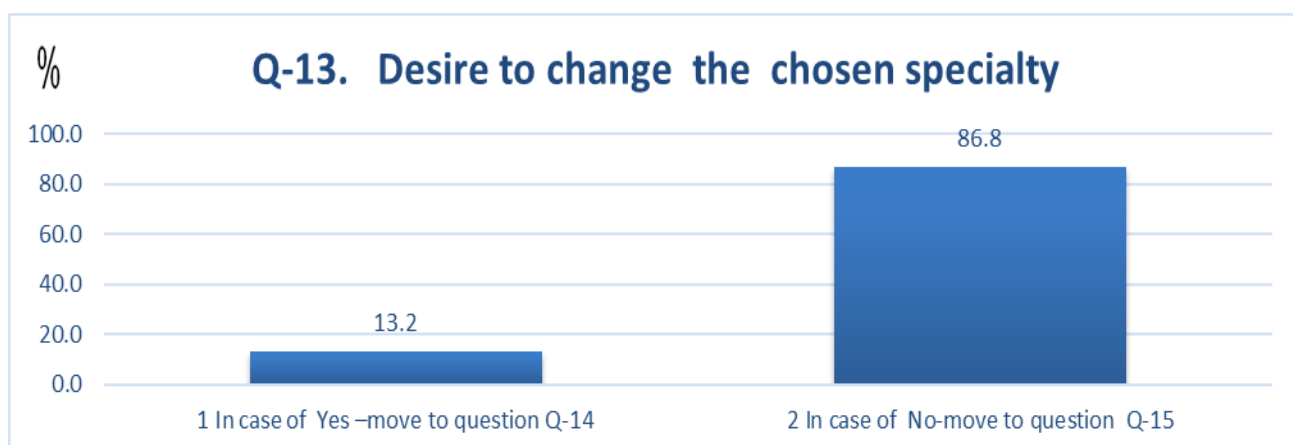


Illustration 39. The respondents' (students) opinion for changing the chosen specialty

Less than half part of them noticed the main reason for changing direction of learning was that their future profession/work were not correspond to their aspirations, inclinations and affections. About one third of them remarked that the given profession/work was not interesting to them and about one tenth of them noticed that they were not satisfied with the quality of education.

Less than half part of the respondents knew clearly where to work after graduating; while less than half part of them knew it roughly (it may be changed), and less than one fifth part of them did not know where to work after graduation at all (See ill.40).

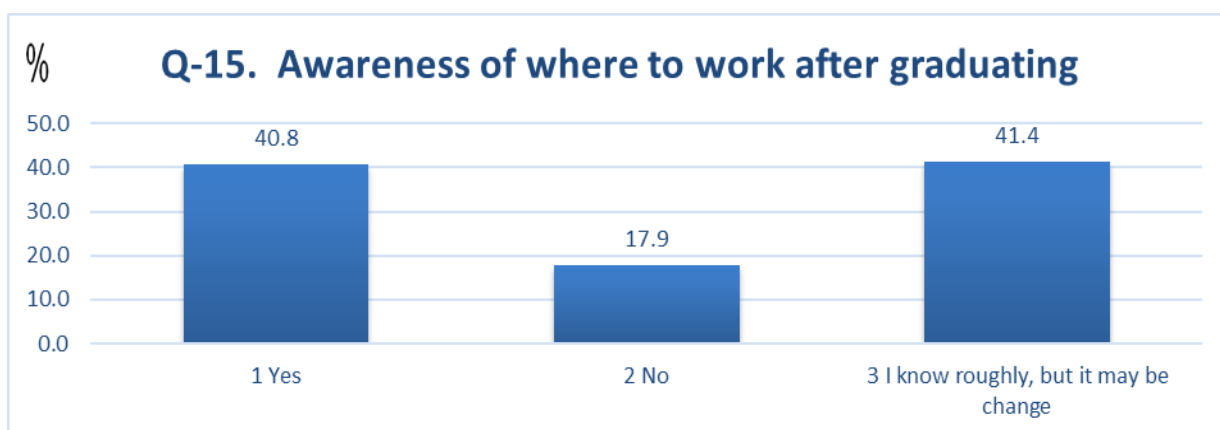


Illustration 40. The respondents' (students) opinion about where to work after graduating

The respondents' majority engaged in search of the future work by specialty (See tabl. 31).

Table 31.

The respondents engaging in search of the future work by specialty

Answers	Frequency	Percent (%)
1. Yes	202	63.3
2. No	117	36.7
Total	319	100.0

The pharmacy faculty students' majority was not working currently and just about one third part of them was working currently by specialty (See ill.41).

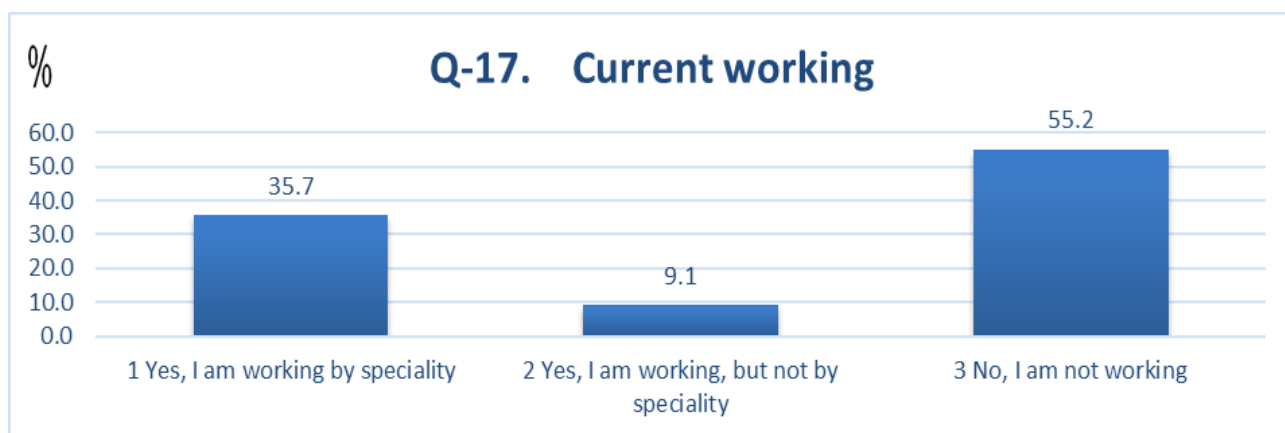


Illustration 41. The respondents (students) current working pattern

The students' majority preferred highly-paid work and a work with possibility of self-improvement or self- development. About one third of the respondents preferred work enabling full realization of the received knowledge. Less than one third of pharmacy faculty students preferred work needful for the society (See ill.42).

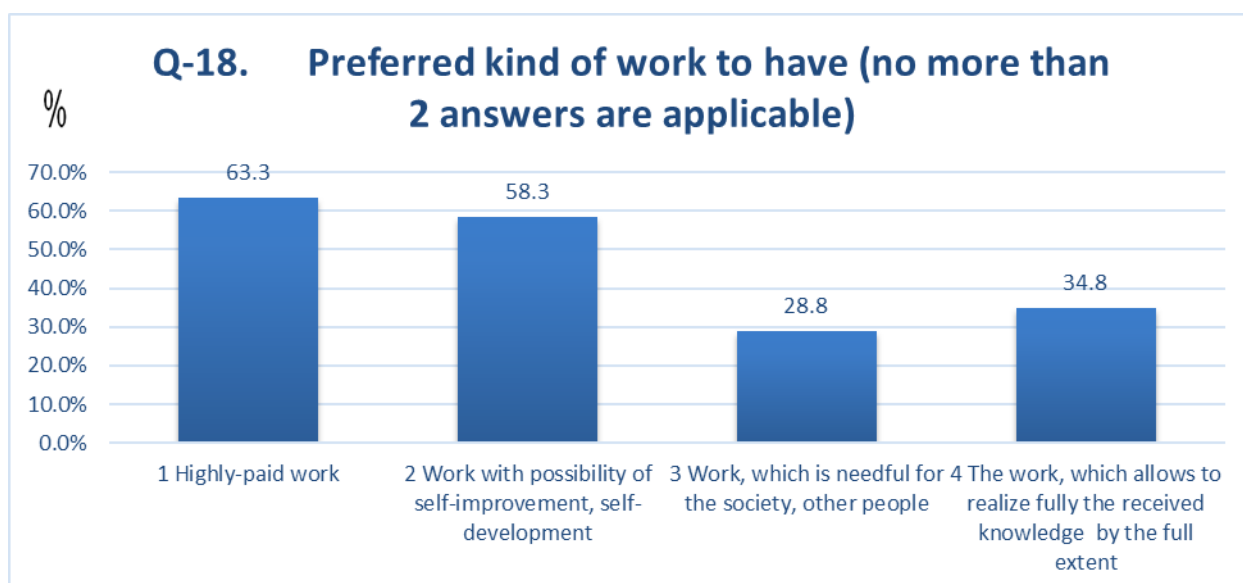


Illustration 42. Kind of work preferred by the respondents (students)

The respondents' majority were planning to find a job after graduation according to the offer from an employer, while less than a half of them - according to recommendations of friends, acquaintances or using Internet, and less than one third of respondents - according to advertisements in mass media (See tabl.32).

Table 32.

The respondents' (students) planning to find a job after graduation

Q-19. The students' planning to be employed after graduation (several answers were possible)	Count	Percent (%)
1. Recommendations of friends, acquaintances, someone known	129	40.4
2. Offer from an employer	202	63.3
3. Advertisements in mass media	99	31.0
4. Recruitment agencies	64	20.1
5. Private pharmaceutical activity	97	30.4
6. Using Internet	119	37.3

The respondents' majority had an intention to work by the obtained specialty after graduating university, and about one third of the students - to continue postgraduate studies (See ill.43). In contemporary situation it is very important for pharmacist specialists to have master and also PhD degree in pharmacy. Post graduated pharmaceutical education is significant for the further occupational enhancement, career and professional advancement, pharmacist professional perfection and the next professional success in pharmacy.

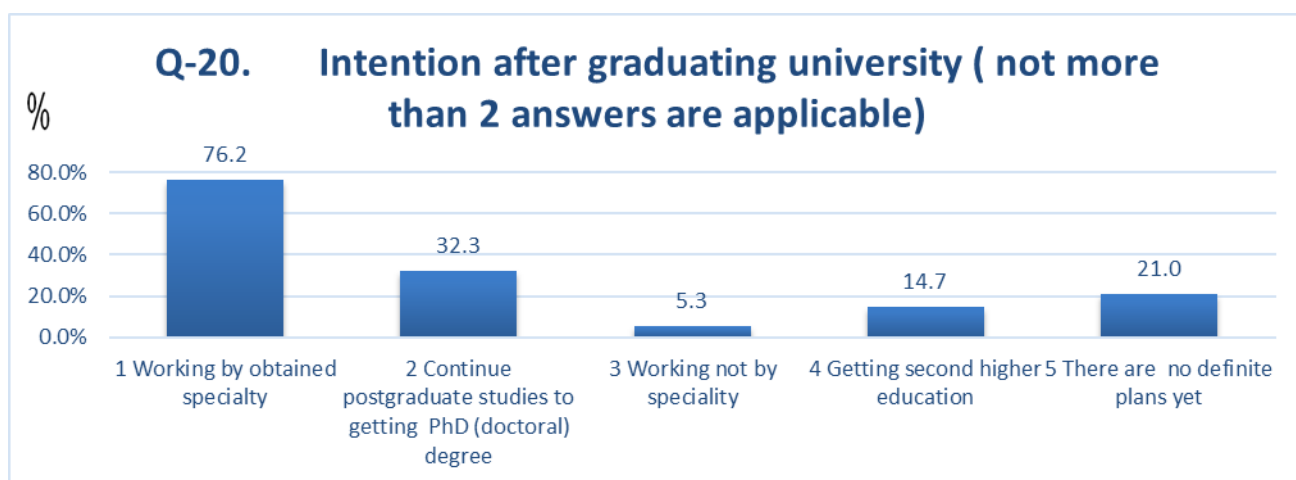


Illustration 43. The respondents' (students) intention after graduating university

For about the half part of the respondents the most attractive areas of activity were pharmacies (See tabl.33). In this respect pharmacists should have proper education in main medical and pharmaceutical fields to provide higher quality pharmaceutical care service in pharmacies, substantial for patients' safety. Pharmacy is the most attractive work place for pharmacists. Therefore, pharmacists' accreditation, certification and licensing existence are of crucial importance.

Table 33.

The respondents' (students) answers on the question "What spheres of activity are the most attractive to you? "

Q-21. The most attractive areas of activity	Count	Percent (%)
1. Scientific-teaching	14	4.4
2. Pharmacy	150	47.3
3. Wholesale pharmaceutical organization	40	12.6
4. Administration bodies	51	16.1
5. Pharmaceutical factory	58	18.3
6. Analytical laboratory	44	13.9
7. Work of medical representative	52	16.4

On the question about the respondents' opinion of the possible level to stop education the pharmacy faculty students' more than one tenth answered after getting higher education; their 87.8% - answered that education should not be interrupted (See tabl.34). All pharmacy faculty students should know and understand that medical and pharmaceutical education is a continuous process forever. After getting higher education it is substantial to deepening knowledge in different directions in pharmacy. Therefore, pharmacists' periodic accreditation, certification and licensing existences are very essential and significant.

Table 34.

The respondents' (students) answers on the question
 "In your opinion, at what level it is possible to cease education? "

Q-22. The level it is possible to interrupt education.	Frequency	Percent (%)
1. After getting higher education	39	12.2
2. Education should not be ceased	280	87.8
Total	319	100.0

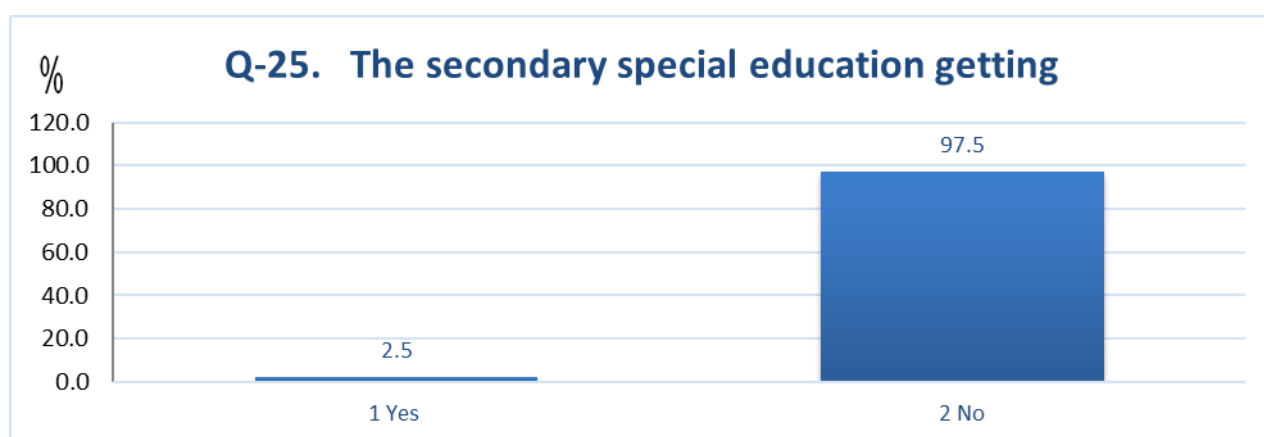
During research the factors, influencing on the pharmacy faculty students' professional development were found and evaluated. These factors included interesting and valuable work, the favorable psychological climate within the colleagues' team, possibility of career development, professional training, social importance of profession and independence in the work (See tabl.35).

Table 35.

Report on the factors having influence on the respondents' professional development

Evaluation of factors, influencing on your professional development (evaluated under the 5-point scale system)	Mean	Median	Std. Deviation
q23_1 Interesting and valuable work	4.20	4.00	0.865
q23_2 Favorable psychological climate within the colleague's team	3.48	4.00	1.141
q23_3 Possibility of career development	4.22	5.00	0.991
q23_4 Professional training	4.25	5.00	0.978
q23_5 Social importance of profession	4.02	4.00	1.037
q23_6 Independence in the work	4.28	5.00	0.962

The pharmacy faculty students' vast majority did not get secondary special education (See ill. 44).

**Illustration 44.** The students' opinion about having secondary special education

Respondent pharmacy faculty students' opinion about supposedly prospective monthly salary after graduation (See ill. 45). The majority of respondent pharmacy faculty students selected supposedly prospective monthly salary after graduation ranged from 200 \$ to 400 \$ limits ranges.

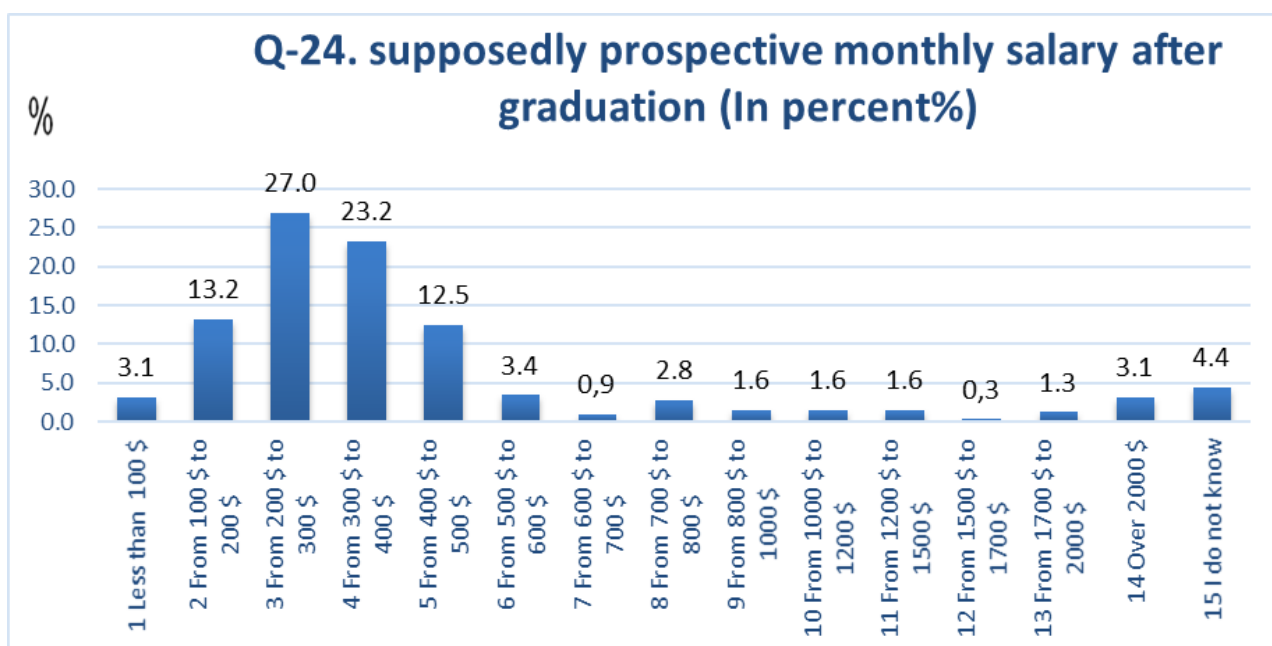


Illustration 45. Respondents' selected supposedly prospective monthly salary after graduation.

Respondents' pharmacy faculty students' parents occupation includes all major social classes, about one third of them were unemployed.

Study of young pharmacist specialists (up to 35 years)

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

The respondents' vast majority (young pharmacist specialists) were of higher education (See tabl.36).

Table 36.

The respondents' education.

Q-1. Education	Frequency	Percent (%)
1. Secondary professional	1	0.3
2. College	1	0.3
3. Higher	312	99.4
Total	314	100.0

The respondents' vast majority worked in pharmacy (See ill. 46).

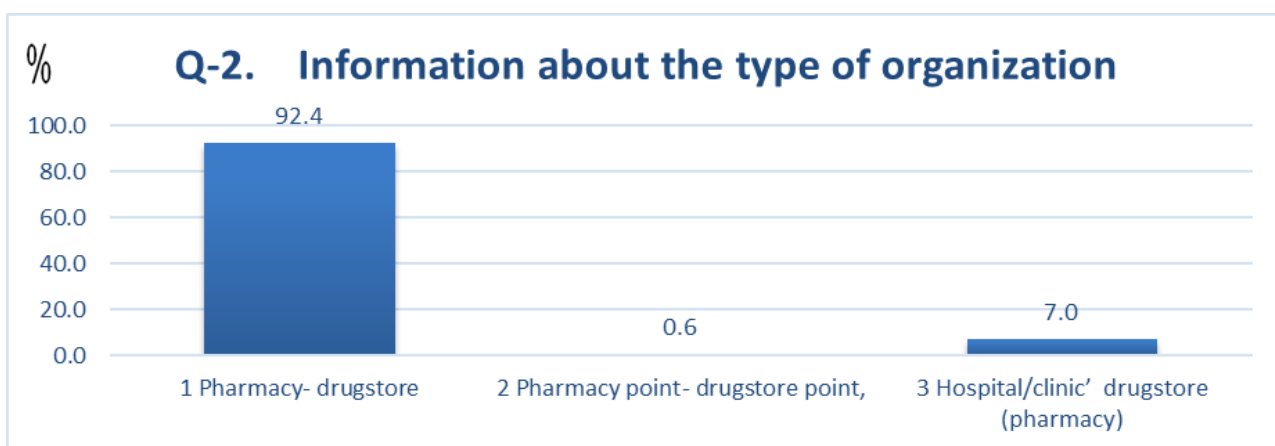


Illustration 46. Type of the respondents' organization

The majority of the respondents' period of work varied from 3 years to 15 years (See ill.47).

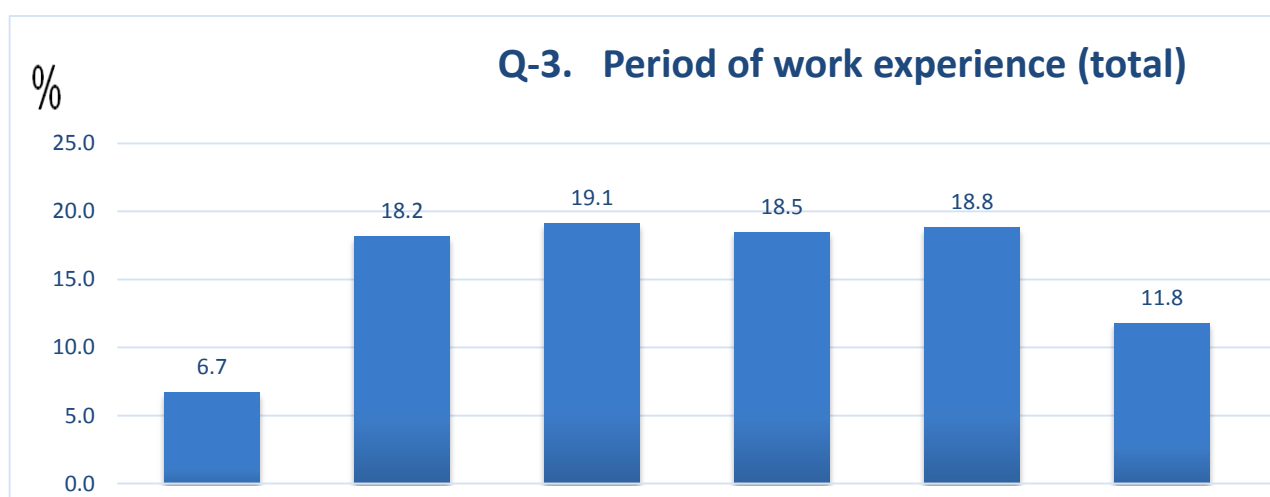


Illustration 47. Period of work of the respondents

The young pharmacist specialists' majority made professional choice at the age of 15-18. While choosing specialty, it is very important that a potential student had been aware of essence of the profession, aim of the specialty, purpose and tasks of the profession, importance and description of the specialty (See tabl.37).

Table 37 .

The time when the respondents made their professional choice

Q-4.The respondents' age when making their professional choice.	Frequency	Percent (%)
1. Before I was 11	8	2.5
2. At the age of 11-12	9	2.9
3. At the age of 13-14	19	6.1
4. At the age of 15-18	198	63.1
5.Exactly before enrollment to higher education institution	80	25.5
Total	314	100.0

About one fifth part of the respondents defined following most influencing factors on the profession choice: parents' advices (or will); the ability to obtain a profession in compliance with own aspirations and inclinations personal desire; interest in profession (See tabl.38). In this concern it is very significant, that potential student before choosing professions have some information about main fields of profession, because understanding, knowledge, awareness of the profession is the main factor to make right decision on occupational choice. Potential student before choosing profession should have some information about description and goal of the specialty in order to express personal interest in profession according to own aspirations and inclinations.

Table 38.

Factors mostly influenced on the respondents 'profession choice

Q-5. The most influencing factors on the profession choice (only one answer is accepted)	Frequency	Percent (%)
1. Parents' advices	55	17.5
2. Teachers' advices	22	7.0
3. Advice of an expert of career guidance	42	13.4
4. Ability to obtain a profession in compliance with own aspirations and inclinations	67	21.3
5. Nowhere to go	2	0.6
6. Dissatisfaction with first education	4	1.3
7. Personal desire	62	19.7
8. Interest in profession	60	19.1
Total	314	100.0

About half part of the young pharmacist specialists while making their professional choice were driven by the following motives: the desire to expand the horizons, desire to extend carefree period of life, desire to get a certain level of economic well-being (security), and the possibility to further social advancement. About one third of the respondent mentioned the desire to obtain high-quality professional training, desire to be useful (in service) of people, a guarantee to be busy, an opportunity to take high social position (See tabl.39). Considering the pharmacist' profession is one of the most influencive specialty in the health sector the potential students should have an opportunity to make a free choice when choosing the pharmacist's specialty. They should be ready for permanent learning forever and aware of the pharmacist occupational peculiarities, the public and medical importance of the pharmaceutical profession.

The young pharmacist specialists' vast majority were satisfied with their professional choice, since the pharmacist's profession is extremely demanded specialty and thus of good prestige (See ill.48).

Table 39 .**Underlying motives of respondents while making professional choice**

Q-6. The underlying motives while making the professional choice (not more than 5 alternatives are accepted)	Count	Percent (%)
1. Desire to obtain high-quality professional training	95	30.3
2. Prestige of profession	67	21.3
3. Existence of capabilities to the given type of activity	77	24.5
4. Family tradition	25	8.0
5. Desire to develop own capabilities, aspirations, and inclinations	27	8.6
6. Desire to be included in the student community as a special social environment	94	29.9
7. Desire to expand the horizons	158	50.3
8. Desire to extend carefree period of life	134	42.7
9. Opportunity to take high social position	123	39.2
10. Desire to get a certain level of economic well-being (security)	147	46.8
11. Possibility of further social advancement	146	46.5
12. Desire to obtain self-respect among the surrounding people (others around to me)	73	23.2
13. Desire, interest to obtain certain circle of contacts with friends and acquaintances	73	23.2
14. Deferring from military service	2	0.6
15. Desire to have the necessary social well-being (benefits)	25	8.0
16. Desire to be useful in service to people	97	30.9
17. Guarantee to be busy	111	35.4
18. Interest in a profession	45	14.3

Pharmacist's specialty is a good opportunity to young specialists to take high social position, to get a certain level of economic well-being, a guarantee to be busy and have further social advancement. Pharmacists' profession gives chance to be useful to people and to obtain self-respect among the surrounding people.

**Illustration 48.** Satisfaction of the respondents' with their occupational choice

About one third of the respondents were not satisfied with job, while their about one third part was partially satisfied with job (See ill.49).



Illustration 49. Satisfaction of respondents with the work

The most impacting factors influencing on the young pharmacists' work satisfaction were found and evaluated during the research. These factors included the correspondence of qualification to work, correspondence of the work nature to capabilities of personality, existence of perspective for professional promotion, possibility to qualifications enhancement, existence of high degree of responsibility for the result of work, information about affairs of the company and of the staff activity, working conditions, existence of the labor contract of working regimen and salary, existence of benefits' scheme for employees, support and assistance of the chief, direct relations with manager(s), relations with colleagues, possibility for the career enhancement (See tabl.40).

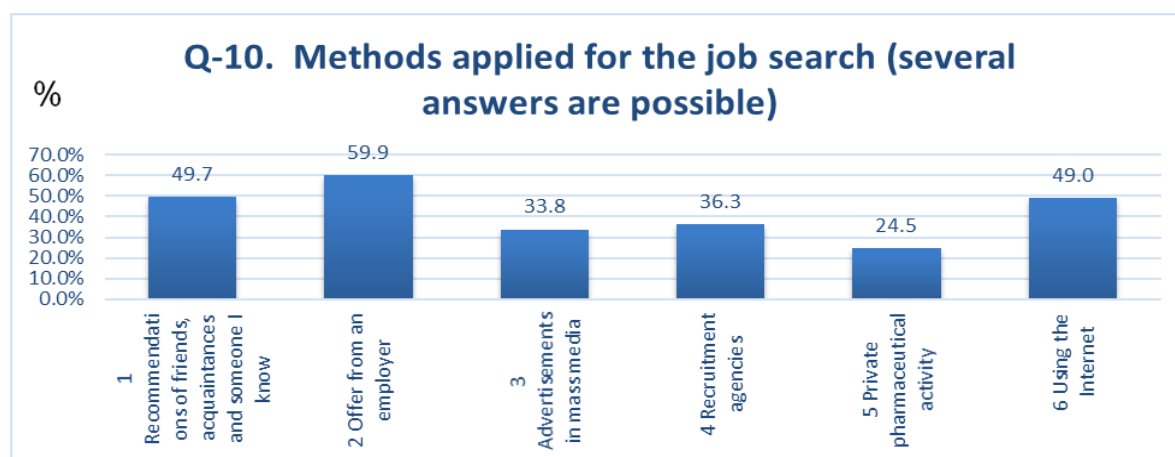
The young pharmacist specialists' majority regarding the job search issue applied an offer got from an employer. About half of the respondents considered the recommendations of friends and acquaintances, using Internet; and about one third part of them applied advertisements in mass media and recruitment agencies (See ill.50).

According to that, a pharmacist specialist should have deep and systemized knowledge in pharmacy to become high professional and competent specialist, so the competitive and demanded specialists in the health sector.

Table 40.

The report of impacting factors - influenced on respondents' work satisfaction

Report on the question about estimation of the impacting factors, which have an influence on the work satisfaction (estimate each factor under the 5- point scale system).	Mean	Median	Std. Deviation
Q9_1 Correspondence of the got qualification to work	4.65	5.00	0.603
Q9_2 Correspondence of the work nature to capabilities of personality	4.42	5.00	0.721
Q9_3 Existence of perspective for professional promotion	4.21	4.00	0.907
Q9_4 Possibility to qualifications enhancement	4.13	4.00	0.895
Q9_5 Existence of high degree of responsibility for the result of work	3.87	4.00	1.141
Q9_6 Information about affairs of the company and the colleagues' activity	4.09	4.00	0.946
Q9_7 Working conditions	3.67	4.00	1.127
Q9_8 Existence of the labor contract	3.66	4.00	1.102
Q9_9 Working regimen (schedule)	3.25	3.00	1.140
Q9_10 Salary	2.65	3.00	1.053
Q9_11 Existence of benefits' scetch for employees	2.25	2.00	1.145
Q9_12 Support and assistance of the chief (manager)	3.41	4.00	1.223
Q9_13 Direct relations with the chief	3.44	4.00	1.185
Q9_14 Relations with colleagues	4.04	4.00	0.937
Q9_15 Possibility to career enhancement	3.89	4.00	0.962

**Illustration 50.** Methods the respondents applied in the job search process

For the majority of young pharmacist specialists, the required time to find a job ranged from 1 to 3 months (See ill.51). To contribute in becoming competitive and high demanded specialist in the health sector the high-grade pharmaceutical education is a prerequisite for professional advancement.

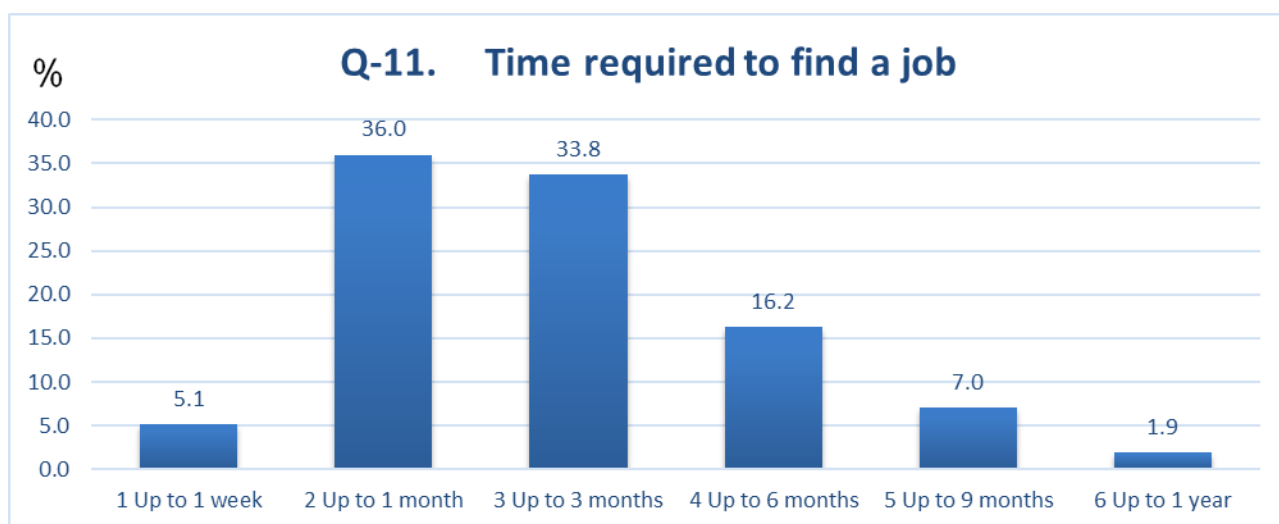


Illustration 51. Required time for the respondents to find a job. Source – the study results

For the majority of respondent young pharmacist specialists to be adopted and assimilated to a new job position the required time ranged from 3 to 9 months (See tabl.41). According to that in pharmacy educational program syllabuses should be also orientated on practical skills. That would be a good chance for junior pharmacists to mastering in a short time on the new job position.

Table 41.
Required time for the respondents to mastering under the conditions of a new job position

Q-12.The time mastering under the conditions of a new job position	Frequency	Percent (%)
1. Up to 1 month	11	3.5
2. Up to 3 months	104	33.1
3. Up to 6 months	141	44.9
4. Up to 9 months	44	14.0
5. Up to 1 year	13	4.1
6. More than 1 year	1	0.3
Total	314	100.0

For the respondents' majority the main difficulties during the professional adaptation were the lack of special skills (principals of marketing, computer skills and etc.), adaptation within the staff collective. For less than the half of respondents the main difficulties were lack of the professional knowledge and difficulties in relationship with administration (See tabl.42). According to that in pharmacy educational program the eligible practical skills should be emphasized. Therefore, pharmaceutical educational programs curriculum needs deepening the credits of the crucially important subjects for professional adaptation of young specialists in pharmacies.

Table 42.

The major important difficulties for respondents during the professional adaptation process

Q-13. The main difficulties during the professional adaptation (several alternatives)	Count	Percent (%)
1. The lack of the professional knowledge	134	42.7
2. The lack of special skills (principals of marketing, computer skills and etc.)	216	68.8
3. Difficulty in adaptation within the colleague's team	173	55.1
4. Difficulties in relationship with a leadership	124	39.5
5. Non-conformity of a job with own ideas	64	20.4

The young pharmacist specialists' majority considered that the mostly effective forms of professional assistance during the young specialists' adaptation period was work with a mentor in a way of personal conversation. In this regard less than half of the respondents considered that discussion of work with young employees within the colleagues' team, existence of special programs and trainings on professional orientation were the most effective forms (See ill.52). Therefore, mentor staff positions and special training programs on professional orienteering should exist in all pharmaceutical companies for effective adaptation of young specialists.

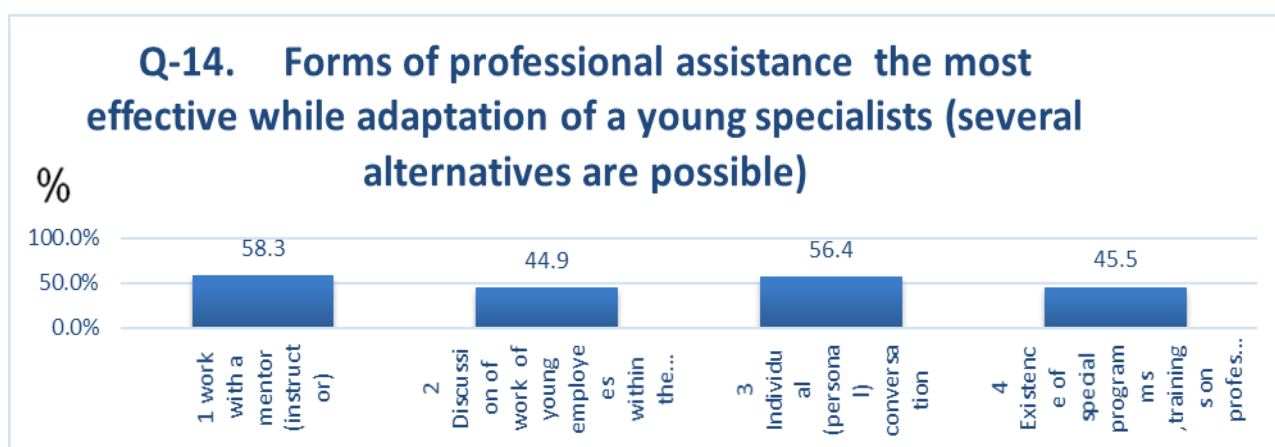


Illustration 52. The respondents' opinion about the most effective forms of professional assistance while adaptation of a young specialist

The young pharmacist specialists' majority considered that required time for mastering the professional skills ranged from 3 to 6 months (See ill.53). For the perfect professional realization, a presence of the practical skills on the basis of good knowledge is substantial. That would be a good chance for junior pharmacists to mastering in a short time on the new job position.

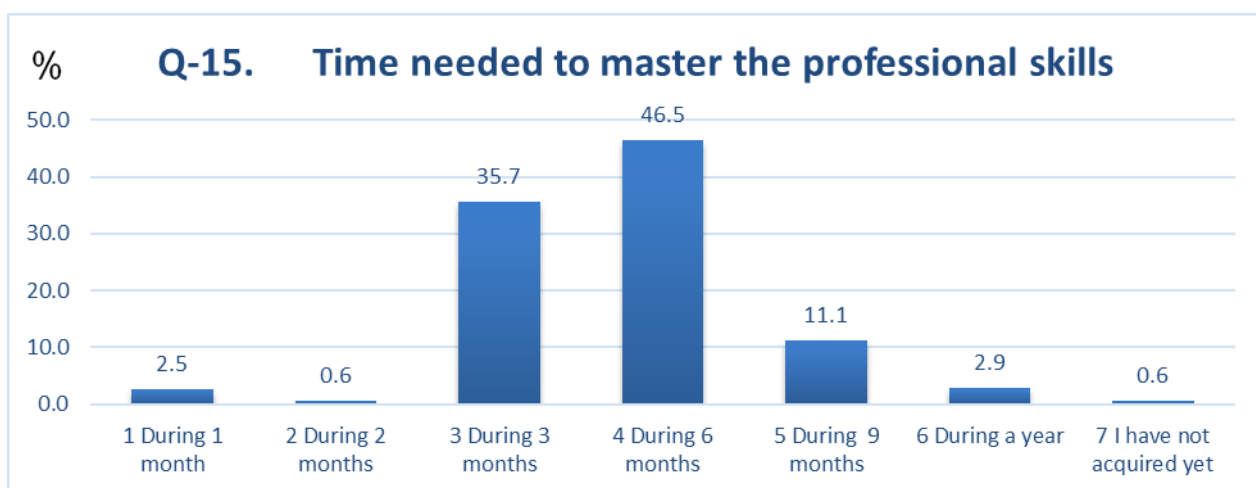


Illustration 53. The time of professional skills mastering required for the respondents

The young pharmacist specialists' majority considered the required time of colleagues' assistance in work ranged from 3 months to 1 year (See ill.54). Therefore, the mentor-instructor staff positions and special training programs on professional orienteering should exist in all pharmaceutical companies for effective adaptation of the young specialists.

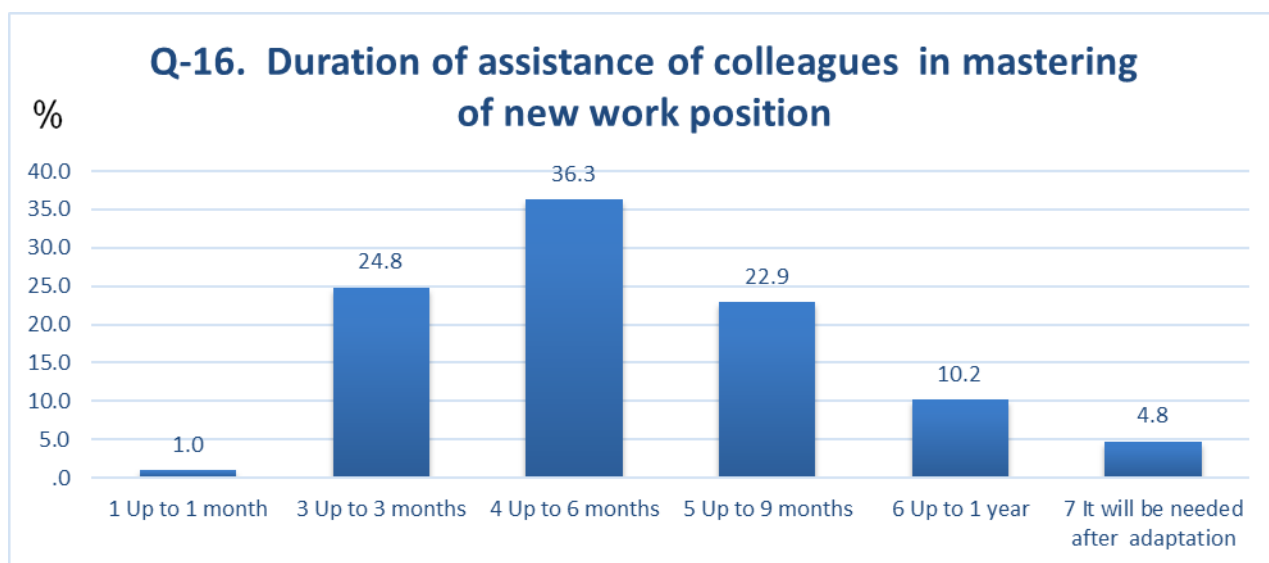


Illustration 54. The respondents' opinion about the required time of colleagues' assistance in their work

The majority of respondents considered that they partially have realized their professional capabilities, skills and habits (See tabl.43). Therefore, all pharmaceutical companies must create proper working environment, constructive working conditions and great opportunities for pharmacists to realize their professional capabilities, skills and habits at the full extent.

Table 43.

To what extent respondents have realized their professional capabilities, skills and habits

Q-17. To what extent is realization of the professional capabilities, skills and habits	Frequency	Percent (%)
1. At the full extent	26	8.3
2. Partly, more than 50% of own potential	125	39.8
3. Partly, less than 50% of own potential	161	51.3
4. Can not answer	2	0.6
Total	314	100.00

Source – the study results

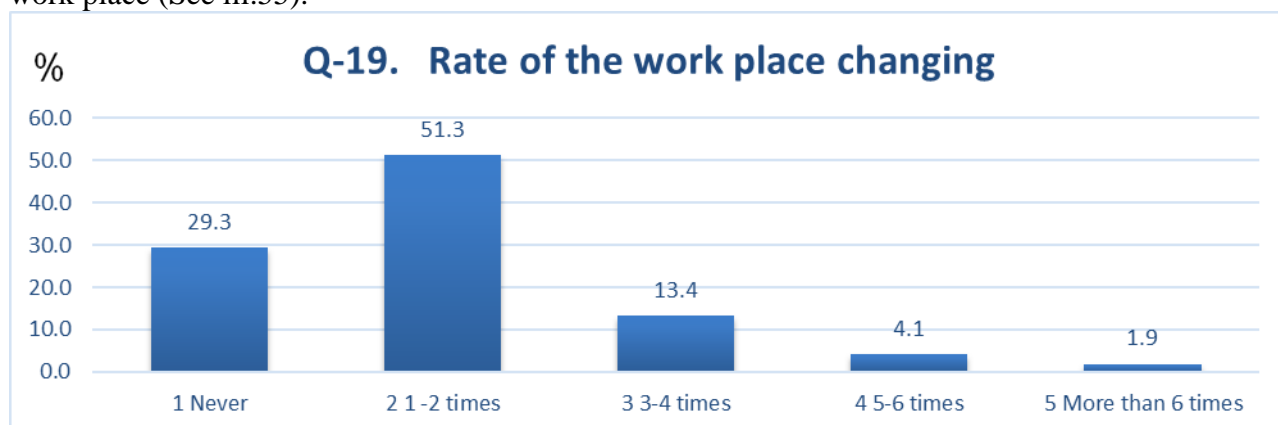
During the research the impacting factors influenced on the young pharmacist specialists' professional development were found and evaluated. They included interesting and valuable work, the beneficial psychological climate within the colleagues' team, the possibility of career development, professional education, the social importance of profession and independence in work (See tabl.44).

Table 44.

Report on the factors influencing on the respondents' professional development

Factors, having an influence on the professional development (evaluate each factor under the 5-point scale system)	Mean	Median	Std. Deviation
Q18_1 Interesting and valuable work	4.20	4.00	0.824
Q18_2 Favorable psychological climate within the colleagues' team	4.18	4.00	0.798
Q18_3 Possibility of career growth	3.96	4.00	0.863
Q18_4 Professional education (training)	4.04	4.00	0.904
Q18_5 The profession's social importance	4.07	4.00	0.960
Q18_6 Independence in work	4.12	4.00	0.959

The young pharmacist specialists' majority noted that 1-2 times they have changed their work place (See ill.55).

**Illustration 55.** Opinion of the respondents about their work place changing frequency

The respondents' vast majority did not change their profession (See ill. 56).

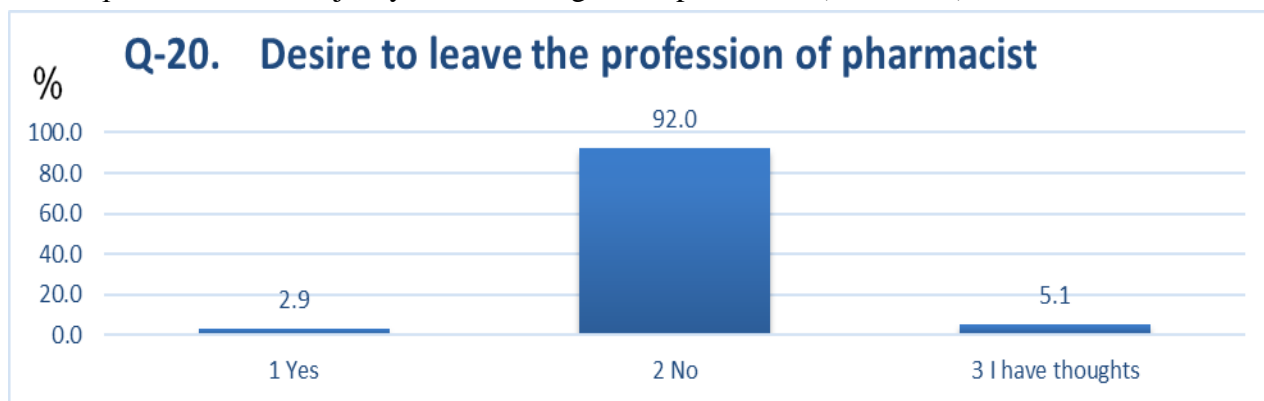


Illustration 56. Opinion of the respondents about likelihood of their profession leaving

The respondents' vast majority considered that for successful work their knowledge was not enough in the subjects of pharmacology, pharmacotherapy, clinical pharmacy and pharmaceutical care (See ill.57). Therefore, In our opinion at university pharmacy programs and syllabuses need upgrade, adaptation and fit on new demands reality. In pharmacy faculty programs there should increase credits in the following subjects: pharmacology, pharmacotherapy, clinical pharmacy and pharmaceutical care. Above mentioned complex would help formation of the highly qualified pharmacist specialist with deep and systematic knowledge. It is obvious that the contact hours in the pharmacology, pharmacotherapy, clinical pharmacy and the pharmaceutical care subjects within the pharmaceutical education programs should be increased to ensure deep and systemic knowledge for the successful work.

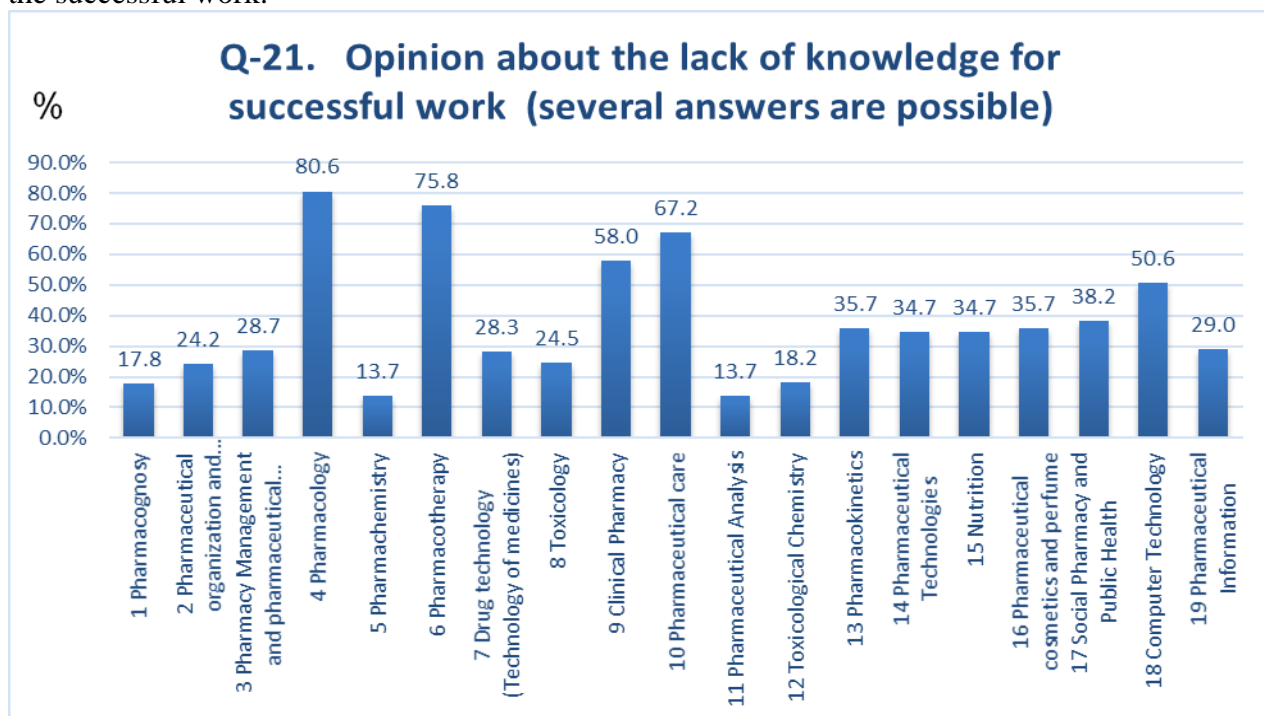


Illustration 57. The respondents' opinion about the lack of knowledge for their successful work

Study of employed pharmacy faculty students

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

The employed pharmacy faculty student respondents' age ranged from 18 to 25 years (See ill.58).

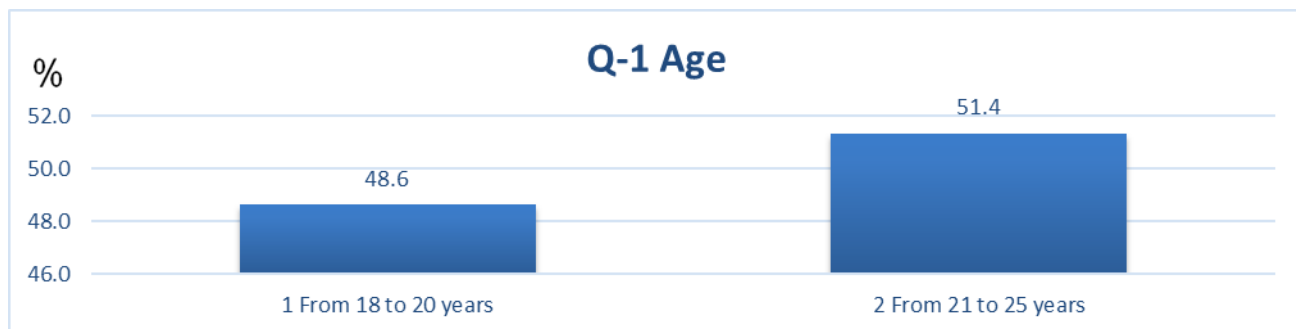


Illustration 58. The respondents' age

The employed pharmacy faculty students were of the Bachelor I - IV courses (See ill. 59).

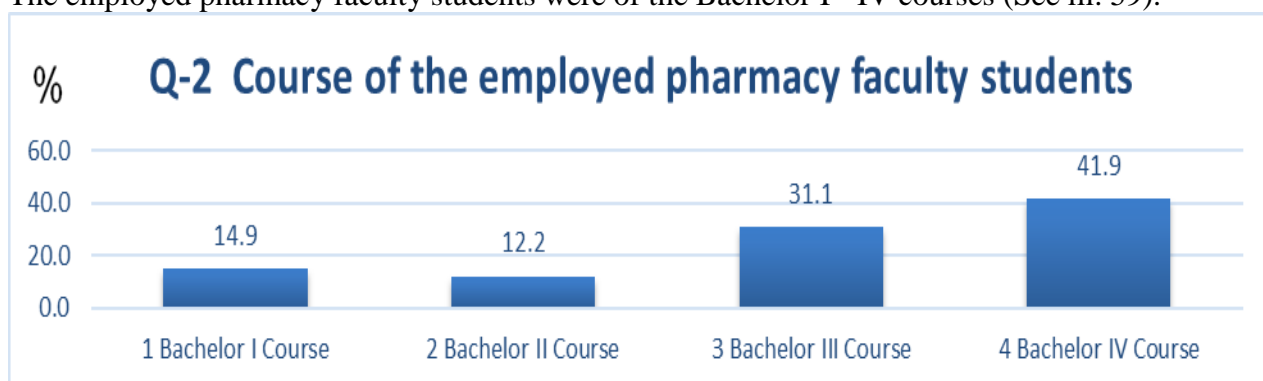


Illustration 59. The respondents' course

The respondents' great majority was female (See tabl.45).

Table 45.

The respondents' gender

Q-3 Gender	Frequency	Percent (%)
1. Male	34	15.3
2. Female	188	84.7
Total	222	100.0

Source – the study results

The employed pharmacy faculty students' large majority were working currently in correspondence with their specialty (See ill.60). Obviously, there is a great demand for student pharmacists by the pharmaceutical companies. According labor law of Georgia any person has permission to work above 16 ages [193]. According Law of Georgia on Higher Education Pharmacist students do not have any work restrictions [194].

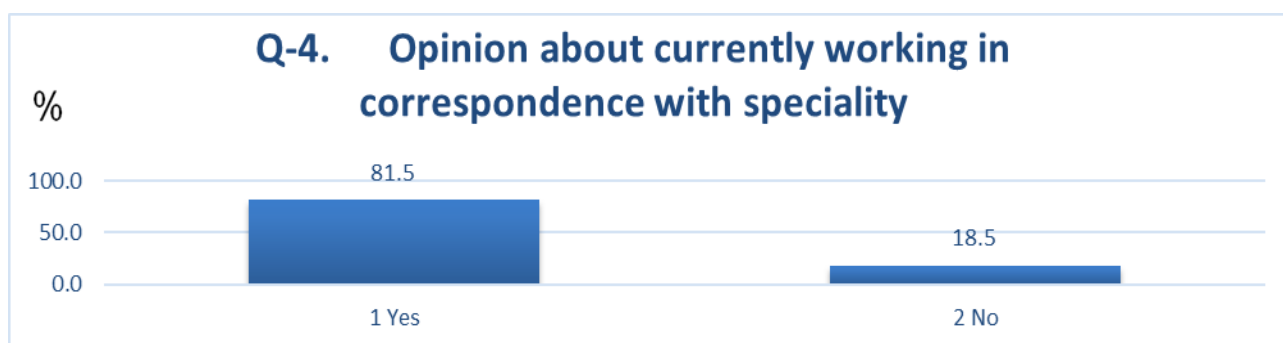


Illustration 60. The respondents' current working position being in correspondence with specialty

The respondents' vast majority was satisfied with their professional choice (See tabl.46), as the pharmacist profession is a very demanding specialty and has the high prestige. Pharmacist's specialty is a good opportunity to young specialists to take a high social position and get a certain level of economic well-being, guarantee to be busy and the possibility of the further social advancement. Pharmacists' profession enables becoming useful to people and obtaining self-respect among the surrounding people.

Table 46.

Satisfaction of the respondents with professional choice

Q-5. Satisfaction with the professional choice	Frequency	Percent (%)
1. I am satisfied with my professional choice	217	97.7
2. I am partly satisfied with my professional choice	3	1.4
3. I am not satisfied with my professional choice	2	0.9
Total	222	100.0

A little bit less than half of the respondents did not change their attitude toward study. About a quarter of them disposed little time for studying, while about one fifth part of them began studying with a great interest. More than one tenth part of the respondents thought that study moved to the second place (See ill.61). Apparently, it is too important to keep the golden balance between studying and working, since deep and steady knowledge got in the university is a prerequisite for the successful practical activities and successful career.

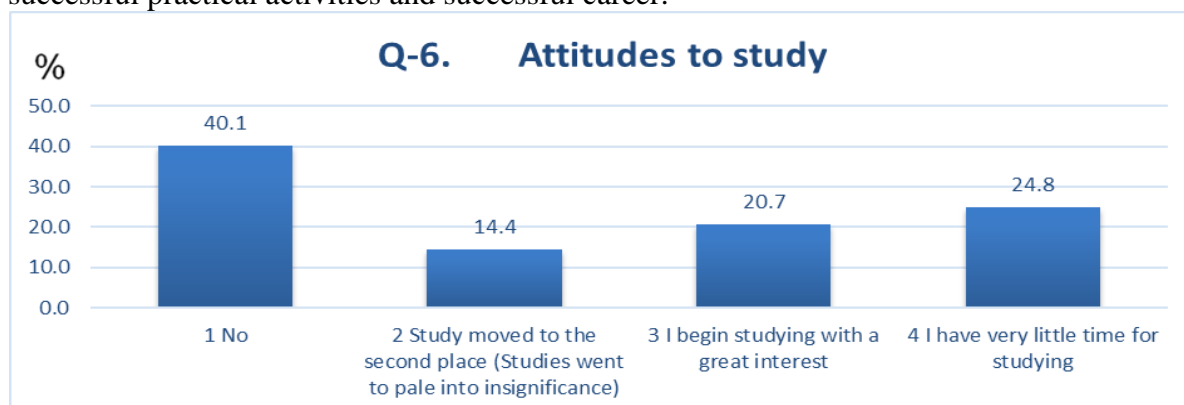


Illustration 61. The respondents' opinion about a change of their attitude to study

The employed students' majority considered that the reason for their employment was lack of financial resources in the family; while less than half of the respondents considered it to be the post-graduate recruitment, an additional income for personal needs, as well as the study fee. About one third part of them thought that the reasons for employment were interests in work, acquisition in the practical skills and gaining hands-on experience (See ill.62). Work and practical experience are very important, however for students learning and studying process in the universities should not be replaced by a job in any situation. Deeper and systematic pharmaceutical knowledge is guarantee to establish higher competitive pharmacist professionals



Illustration 62. The respondents' reasons and motivations for employment

Less than half of the respondents considered that being employed did not impede in study, meanwhile about one fifth of them considered that it partially impeded the study (See ill.63). It is of the great significance to find a balance between studying and working processes by means of good organizing all the deliverables, although in some situations work impeded in the university study.

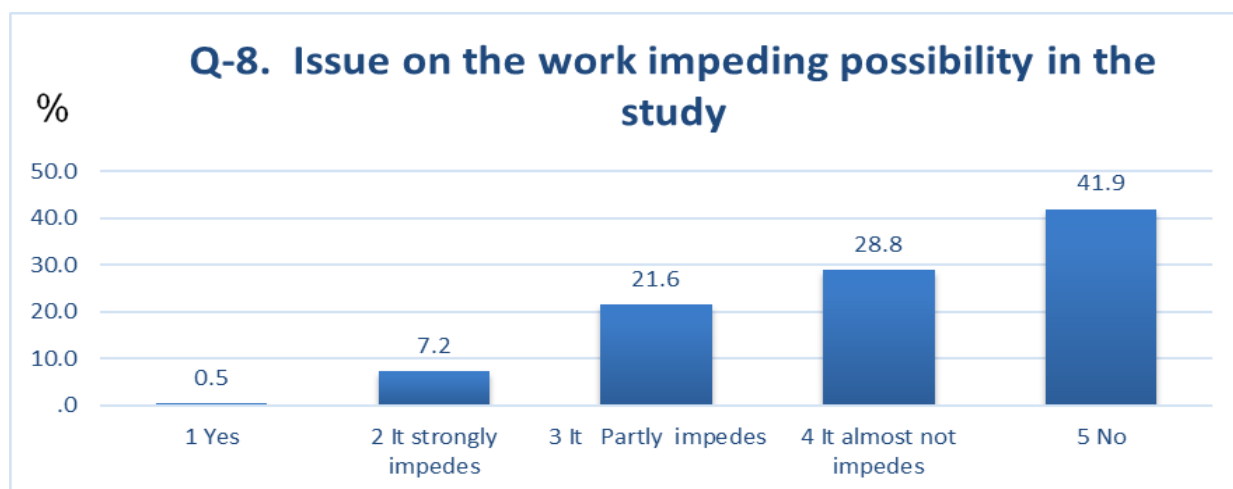


Illustration 63. Answers of the respondents on the question about the work possible impeding in the study

The respondents' majority noted that they practically were not missing classes. More than a quarter of the respondents mentioned that they missed the classes' minority (See ill.64). The steady theoretical base for work is as important, as the practical experience. So, awareness of this necessity makes the employed students provide more serious attitude to studying process at the universities and not miss the classes. Basic medical and pharmaceutical knowledge pharmacy faculty students are getting in the university. Therefore, work or any practical experience in pharmacy cannot replace bases of theoretical and practical knowledge from education institutions in medical and pharmaceutical directions.

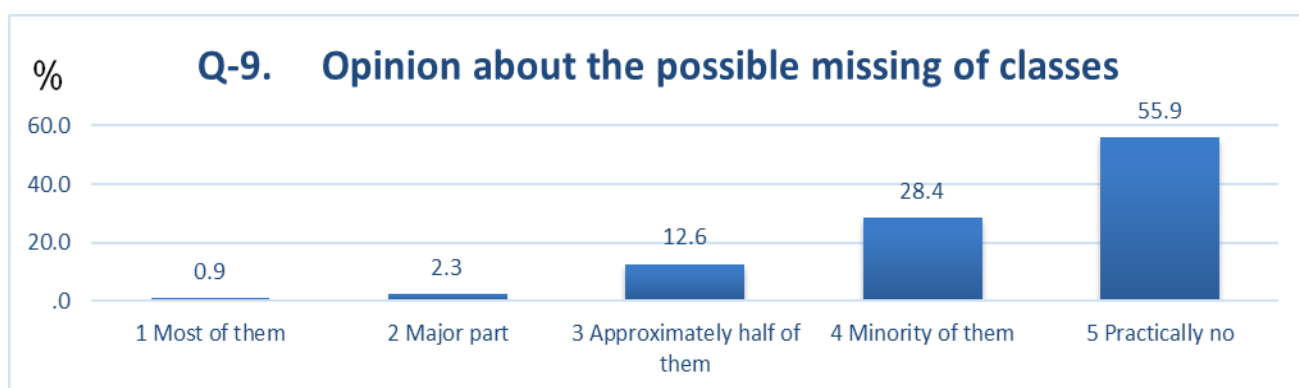


Illustration 64. Answers of the respondents on the question about the classes missing possibility

The employed pharmacy faculty students' majority considered that working days per week ranged from 2-5 days (See ill.65). Therefore, it is of benefit that the employed students could work in a more flexible and convenient schedule per week to prevent missing lectures at the university and to avoid of excessive work load. Flexible working schedule is very significance for the employed students' academic and professional success.

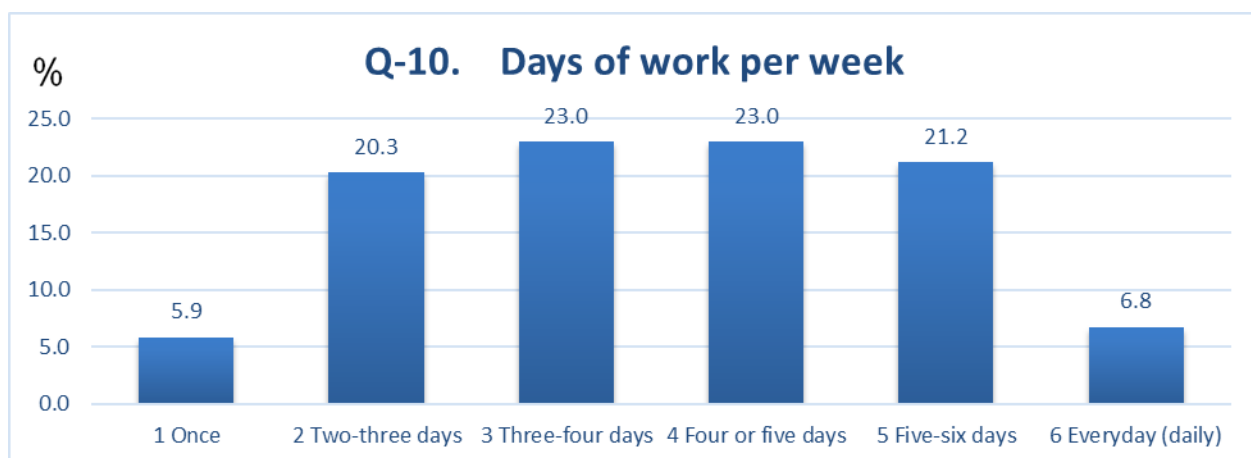


Illustration 65. Answers of the respondents on the question about the days of their work per week

Less than half of the respondents worked in the evening shifts; about one-fifth of them worked in the afternoon or night; and less than the one-fifth part of them - in the daytime (See ill.66). Flexible working schedule is very significant for the employed pharmacy faculty students' academic and professional success by a proper designing working hour daily.

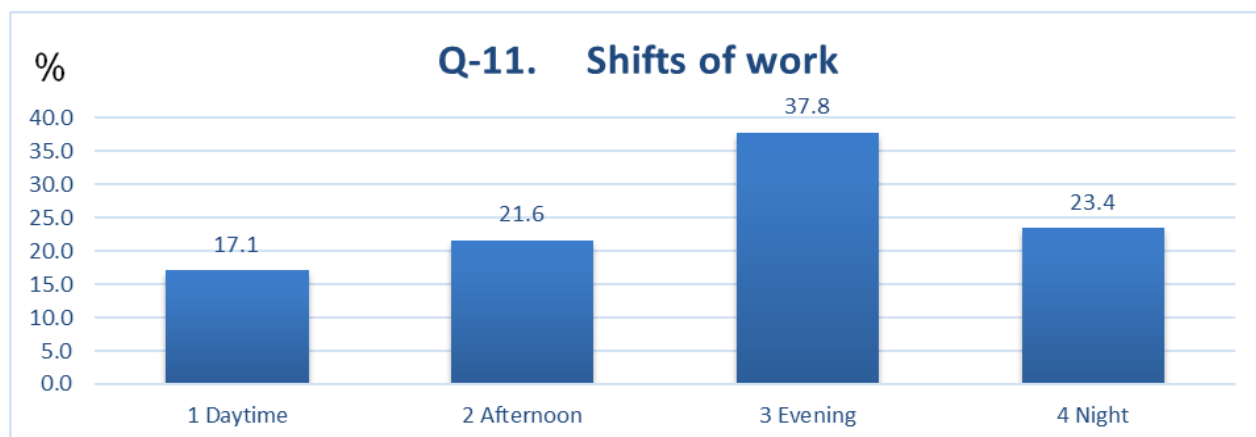


Illustration 66. Answer of the respondents on the question about the shifts of work

The employed pharmacy faculty students' majority considered that study is quite important, while the minorities of respondents did not (See tabl.47). Therefore, learning and getting acquisition in knowledge are principal for the successful being in the pharmacist's profession; anyway, there are objective stipulations for the students to be employed to meet their needs.

Table 47.

Answers of the respondents on the question about importance of work versus study

Opinion of importance	Frequency	Percent (%)
1. Work	35	15.8
2. Studies	187	84.2
Total	222	100.0

Less than half of the employed pharmacy faculty students considered that work did not affect academic achievements, meanwhile their more than one third part were sure that work definitely affected academic achievements (See ill.67). It is obvious, that combining employment with the study at the university mostly does not affect on the employed students' learning process and academic success. Meanwhile conjoin working with the study at the university somehow had worse impact on employed pharmacy students' academic perfection [195,196].

The employed pharmacy faculty students' vast majority considered that the Government should make the certification of pharmacists (See tabl.48) to raise professional standards licensing and certification of pharmacists.

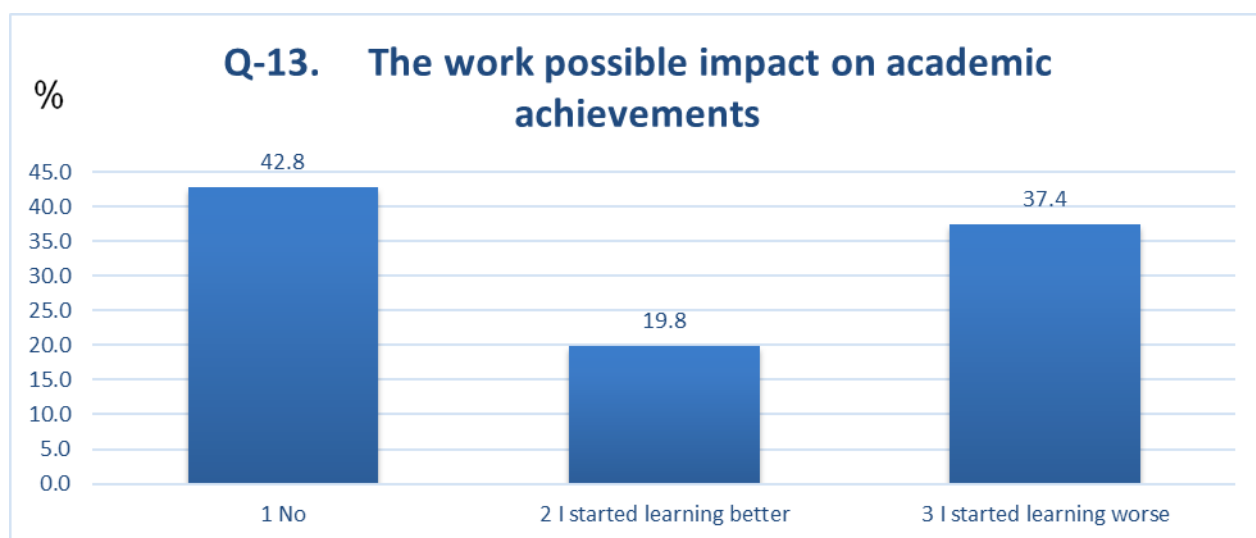


Illustration 67. Answers of the respondents on the question about the work possible impact on the academic achievements

The certification of higher pharmaceutical education pharmacists is very essential for the pharmacist's professional perfection, for pharmacists' career enhancement, for vocational advancement and it is main determine detector factor for pharmacist professionalism level. Pharmacist position should become regulated health profession as the member of other health profession team (but now unfortunately pharmacist specialists are not member of regulated health teams) [192]. Pharmacists' periodic licensing, certification and accreditation should increase pharmacists' professionalism level and is guarantee upper quality pharmaceutical care. All above mentioned is indicator factor of the health care system service quality.

Table 48.

Respondents' opinion if the Government necessity to make the certification of pharmacists

Q-14. Opinion about a necessity of the Government to make the certification of pharmacists	Frequency	Percent (%)
1. I agree	213	95.9
2. I partially agree	8	3.6
3. I do not agree	1	0.5
Total	222	100.0

The employed pharmacy faculty students' vast majority are engaged in planning of their professional career (See ill.68).

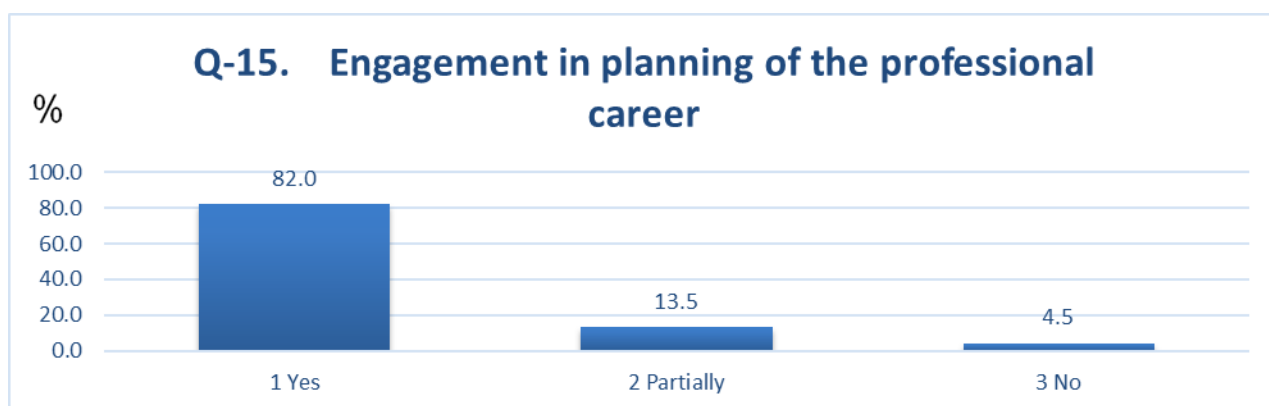


Illustration 68. The respondents' opinion about being engaged in planning of their professional career

For pharmacist's successful professional career, the permanent continuous education is very significant. Continuous pharmaceutical education raises the professional qualifications of pharmacist staff. This will increase the pharmacist's professional qualification and professional competency, which is essential for assurance in the permanent demand in pharmaceutical market field.

3.2 Coupling of the results by the cross analysis

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

Chi-square test of independence 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 pharmacists' position and their satisfaction with professional career and job. Holding high positions was 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.

Analysis showed also that increasing years in the current position was 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 positive opinion about importance of continuing professional development was also associated with 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 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, $p<0.001$). Pharmacists who were satisfied with their income were more often satisfied also with their job and career.

There wasn't statistically significant association between main motive of professional choice and job satisfaction in all three observed groups (pharmacists, young specialist and students).

Coupling the data of respondents answers' analysis of the questions "Indicate your sex" (Q1) and „Are you satisfied with your professional choice? “ (Q12) it became apparent that variables are gender dependent ($P=0.008$), there is a statistically significant differences between two groups, that means that the male pharmacists were less satisfied with their professional choice or profession, rather than the female pharmacists (See tabl.49).

Table 49.

Satisfaction of professional choice of the respondent pharmacists according to their gender

Crosstab			
Satisfaction of professional choice of the respondent pharmacists			
Q12 Are you satisfied with your professional choice? Are you satisfied with your profession?	Q1 Indicate your sex		Total Percent (%)
	1. Female	2. Male	
1. Yes, I am satisfied with my professional choice	59.19%	19.00%	57.70%
2. Partially	25.70%	15.00%	25.30%
3. I have doubts with my professional choice	4.33%	6.30%	4.40%
4. I am disappointed with my professional choice	5.57%	17.20%	6.00%
5. No	5.22%	42.50%	6.60%
Total	100.0%	100.0%	100.0%

Chi-Square Tests			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-square	13.727 ^a	4	0.008

Coupling the data of respondents answers' analysis of the questions "Indicate your sex" (Q1) and "Are you satisfied with your professional career? “ (Q13) it became apparent that variables are gender dependent ($P=0.001$), there is a statistically significant differences between two groups, that means that the male pharmacists were less satisfied with their professional career, rather than the female pharmacists (See tabl.50).

Table 50.

Satisfaction professional career of respondent pharmacists according gender

Crosstab			
Satisfaction professional career of respondent pharmacists			
Q13. Are you satisfied with your professional career?	Q1 Indicate your sex		Total
	1 Female	2 Male	
1. Yes	30.88%	18.00%	30.40%
2. Partially	33.95%	27.20%	33.70%
3. No	35.17%	55.00%	35.90%
Total	100.0%	100.0%	100.0%

Chi-Square Tests			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-square	23.884 ^a	2	0.001

Coupling the data of respondents answers' analysis of the questions "Indicate your sex" (Q1) and "Q14 Are you satisfied with your work (job)? " (Q14) it became apparent that variables are gender dependent ($P=0.024$), there is a statistically significant differences between two groups, that means that the male pharmacists were less satisfied with their work, rather than the female pharmacists (See tabl.51).

Table 51.

Satisfaction with work of the respondent pharmacists according gender

Crosstab			
Satisfaction with work of respondent pharmacists			
Q14 Are you satisfied with your work?	Q1 Indicate your sex		Total
	1 Female	2 Male	
1. Yes	44.00%	22.65%	33.20%
2. Partially	39.90%	11.90%	37.30%
3.No	11.80%	62.15%	24.40%
4. Cannot say	4.40%	3.30%	5.10%
Total	100.0%	100.0%	100.0%

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-square	24.261 ^a	3	0.024

Coupling the data of respondents answers' analysis of the questions "Indicate your sex" (Q1) and „Are you satisfied with the time duration of your job? “ (Q26) it became apparent that variables are gender dependent ($P=0.048$), there is a statistically significant differences between two

groups, that means that the male pharmacists were less satisfied with the time duration of work, rather than the female pharmacists (See tabl.52).

Table 52.

Satisfaction with time duration of work of the respondent pharmacists according gender

Crosstab			
Respondent pharmacists' satisfaction with the time duration of job			
Q26. Are you satisfied with the time duration of your job?	Q1 Indicate your sex		Total
	1 Female	2 Male	
1. Yes	22.38%	14.70%	22.10%
2. Partially	34.10%	36.70%	34.20%
3. No	43.51%	48.60%	43.70%
Total	100.0%	100.0%	100.0%
Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-square	19.775 ^a	2	0.048

Coupling the data of respondents answers' analysis of the questions "Indicate your sex" (Q1) and „Are you satisfied with your income? “ (Q27) it became apparent that variables are gender dependent ($P=0.019$), there is a statistically significant differences between two groups, what means that the male pharmacists were less satisfied with income, rather than the female pharmacists (See tabl.53).

Table 53.

Satisfaction of the respondent pharmacists with income according gender

Crosstab			
Satisfaction of the respondent pharmacists with income according gender			
Q27. Are you satisfied with your income?	Q1 Indicate your sex		Total
	1 Female	2 Male	
1. Yes	10.59%	0.00%	10.20%
2 .Partially	25.48%	23.30%	25.40%
3. No	63.82%	76.70%	64.30%
Total	100.0%	100.0%	100.0%
Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-square	13.314 ^a	2	0.019

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 medications, of the employed students, of the healthcare specialists and pharmacists considered, that Government should make certification of

pharmacists ($P < 0.000$) There are statistically significant points between variables. (See Table 54) or (See Illustration 69).

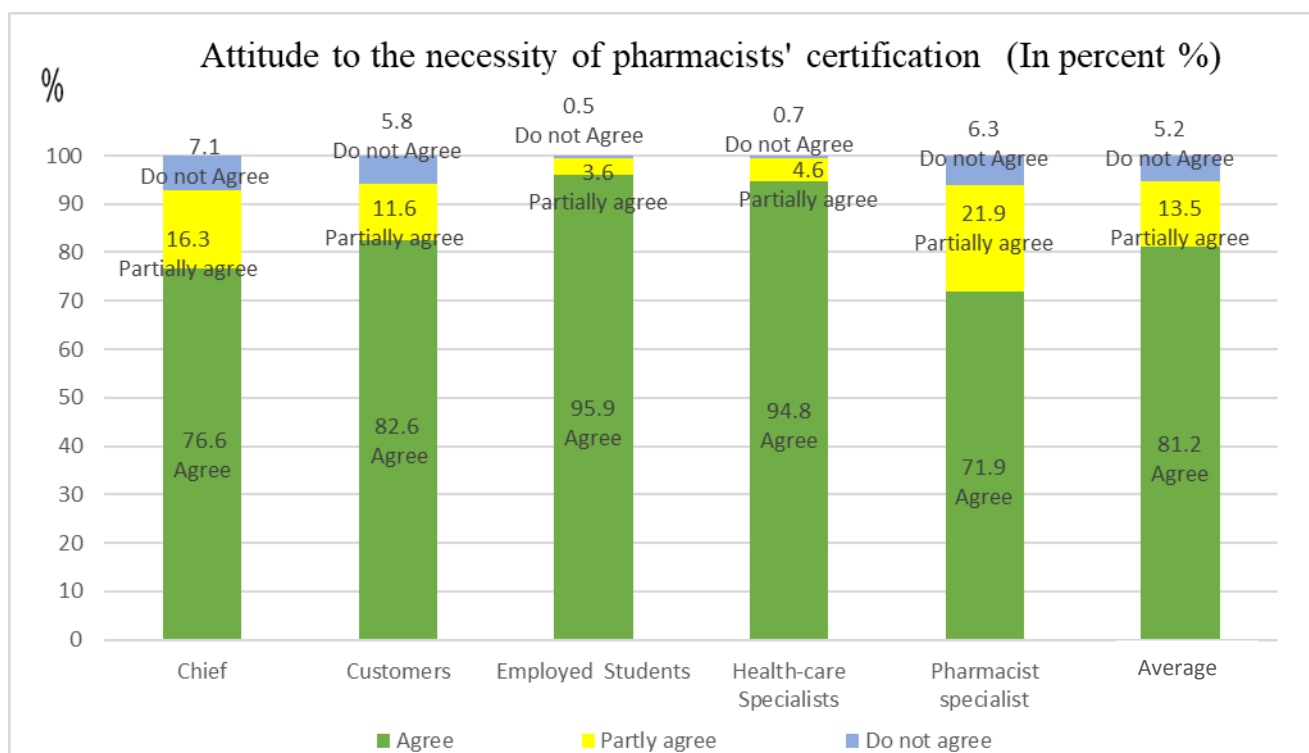


Illustration 69. Attitude to the necessity of pharmacist certification.

Table 54.

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%
Health-care 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%

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	132.625 ^a	8	0.000

Coupling the data of respondents answers' analysis of the questions "Indicate your sex" (Q1) and „Do you think that the Government should make the certification of pharmacists? “ It was

obvious that there was not a significant difference between the variables ($P=0.556$) There is no statistically significant attitude between sex and variables (See tabl.55), this means that, (“Q1 Gender”) and „Q12 Do you think that the Government should make the certification of pharmacists? “. So Answers are not dependent on sex.

Table 55.

Consumers of medications opinion about pharmacists’ certification according gender

Gender Cross tabulation				
Do you think that the Government should make the certification of pharmacists?		Q1 Gender		Total
		1. Female	2. Male	
Do you think that the Government should make the certification of pharmacists?	1. I agree	83.4%	81.3%	82.6%
	2. I partially agree	11.0%	12.6%	11.6%
	3. I Do not agree	5.6%	6.1%	5.8%
Total		100.0%	100.0%	100.0%

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-square	1.173 ^a	2	0.556

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 customers /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.

In order to have the opportunity to compare the main motive of professional choice among three observed groups (pharmacists, young specialist and students) all answers to the above-mentioned question were divided into two groups. “The desire to obtain a profession in compliance of own trends”, “Aspirations and inclinations”, “Personal desire” and “Specialty love from childhood” answers have been included in answer group with conditional name ”mission” and all other answers of respondents (“Parents’ advice or will”, “Teachers’ advice”, “Advice of an expert-

specialist of professional orientation”, “Absence of place to go” and “Dissatisfaction with the first education”) have been included in answer group “advice”.

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 ($p<0.001$).

3.3 General analysis

On the basis of performed study results the following have been found:

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 pharmacist specialists. Pharmacists' professional competency can be achieved by adopting of higher pharmaceutical education and by certification of pharmacist specialists. The higher pharmaceutical education, pharmacist specialists' 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.

To increase the pharmacist's professional qualification, professionalism, professional knowledge and competency the higher pharmaceutical education universities programs should more emphasize the mentioned subjects. 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.

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.

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.

To obtain more power and authority, much higher status, independence, self-realization, power, economic welfare, professional growth, career advancement the Government and private pharmaceutical companies should increase the salaries of pharmacists and the system of benefits' scheme for the pharmacist employees. The working conditions of pharmacists should be improved; the labor conditions should become more constructive for the pharmacist, providing more beneficial psychological climate within the collective and the possibility of career growth should be accessible to all pharmacists. The pharmacist's work schedule should become more flexible, and the job duration time per week should be reduced on the more effective for pharmacist's labor design. The flexibility will further improve pharmacists' workability and motivation toward the job, and also contribute to improve pharmacists' satisfaction according to the time duration of a job.

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 imperfection 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.

On the basis of the theoretical and logical analysis the structure and composition of the factors have been developed, considering the objective (external), subjective (internal) and universal factors, which influence on the professional formation of the pharmacist. These factors comprised the content of work, position, correspondence of qualification and nature of work to capabilities, aspirations and inclinations of the pharmacist, the existence of perspective for professional promotion. The existence of perspectives for career promotion, the possibility to enhance qualifications, a high degree of responsibility for the work results, regimen, labor salary and the system of benefits scheme for employees, support and assistance of a manager, direct relations with manager and colleagues serve the essential base for the pharmacists' successful work. The unity of criteria for pharmacist professional formation, for the common professional formation (characteristic to all stages) and the specific professional formation (characteristic to the separate stage) had been developed.

The study of the professional adaptation of pharmacists indicated that inadequate professional knowledge, improper performance of the acquired professional skills were the main reasons for imperfect pharmaceutical care supply. The majority of the pharmaceutical organizations' heads and also the young specialists considered the coexistence of a mentor (experienced professional pharmacist) as the main factor of professional improvement for pharmacists' professional adaptation. The pharmacists' personnel must show stirring involvement in sharing their cognition, understanding, science, skill and contributing partnership and cooperation within the colleagues and other health care professionals in pharmacy direction.

It is quite significant, that pharmaceutical companies regularly perform study of pharmacists work satisfaction. The pharmaceutical companies should determine combination of factors that affect on the pharmacists' work satisfaction. Pharmaceutical companies should create favorable working conditions for pharmacists to enable the maximal realization of the pharmacists' professional capabilities, skills and habits. A balance between the workload and pharmacists

personal life should be more harmonized, convenient, resourceful and more poised. This will increase the quality of pharmaceutical care in pharmacies.

It should be noted, that pharmacist's satisfaction with income is a very sensitive factor that has a significant impact on the quality of pharmaceutical services performed in pharmacy, so the pharmacists' salary should be revised and increased.

It should be noted that in developed countries and in many developing countries pharmaceutical specialty is regulated profession alike the family medicine. In western countries 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' position in the pharmacies. On the pharmacists' certification programs should be only involved pharmacists who have graduated pharmaceutical faculties from state recognized and accredited universities.

SUMMARY

On the base of the performed studies the following summary has been formulated:

1. The data analysis revealed that the main part of the pharmacists had done their professional choice considering some from 20 motives: high-quality education getting opportunity (44,8%), the desire to care of the people health (43%), guarantee to be employed (42.6%), interest in a profession (39.4%). Other motives were: existence of capabilities of the certain kind of activity (31%), the desire to receive pharmaceutical education (27%), possibility of further social advancement (25.9%), prestige of the profession (24.9%), The desire to develop own capabilities, aspiration and inclinations (24.7%). All the rest motives had insignificant percent and were not of consideration.
2. The professional choice of the pharmacists was also made under the influence of the following factors: personal desire (37.8%), parents' advice (23%), love to specialty from childhood (14.4%) and own potential capabilities and tendencies (13.3%). An insignificant part of the specialists made their decision on specialty choice according to their teachers' advice or the specialists on the professional orientation (less than 4%). The pharmacy faculty students made their professional choice under the influence of the following factors: correspondence of the profession to aspiration and inclination (29.2%), interest in profession 26.3(%) and parents' advices (25.7%).
3. More than half of higher pharmaceutical education pharmacists' were satisfied with professional (occupational) choice, a quarter of higher pharmaceutical education pharmacists' were partially satisfied with professional (occupational) choice. While pharmacy faculty students' vast majority were satisfied with professional (occupational) choice. The majority of higher pharmaceutical education pharmacists' specialists were female; among them the largest majorities were working on the pharmacist position at the drugstore (pharmacy). More than half of the pharmacists (57.7%) were satisfied with professional choice, a quarter of them (25.3%) were partially satisfied with professional choice. While young pharmacists vast majority (82.2%) were satisfied with professional choice. Less than a third (30.4%) of the pharmacists were satisfied with professional career, about one third of the pharmacists

(33.7%) were partially satisfied with professional career, a bit of more than one third of the pharmacists (35.9%) were not satisfied with their professional career. About one third of the pharmacists (33.2%) were satisfied with work, a little bit more than one third of them (37.3%) were partially satisfied with work, about a quarter (24.4%) of the pharmacists were not satisfied with work. Less than one third of the pharmacists (28.6%) were satisfied with the balance between the workload and personal life; more than one third of pharmacists (37.2%) were partially satisfied with the balance between the workload and personal life, and about one third of the pharmacists (34.2%) were not satisfied with the balance between the workload and personal life. Less than a quarter of the pharmacists (22.1%) were satisfied with the time of job duration, about one third of the pharmacists (34.2%) were partially satisfied with the of job time duration, more than a third of pharmacists (43.7%) were not satisfied with the time of job duration. The vast majority of the pharmacists (64.3%) were not satisfied with income, a quarter of the pharmacists (25.4%) were partially satisfied with income, less than one tenth of the pharmacists (10.2%) were satisfied with income.

4. One third of the pharmaceutical faculty students (35.7%) worked on their specialty in pharmacies, and 97.7% of them were satisfied with their professional choice. They considered that owing to flexible regimen of managing, in general, being engaged in work did not disturb leaning, and moreover, somewhat helped in the process of study as per the respondent's main consideration, meanwhile 21.6% of working students consider that work partly impeded in the study. Near the half of pharmacy faculty students the most attractive areas (spheres) of activities are- pharmacy- drugstore. The vast majority of pharmacy faculty students consider that education should not be ceased. Pharmacy faculty students' more than a third was working by specialty.
5. A little less than a fifth of higher pharmaceutical education pharmacists have realized professional capabilities, skills and habits to the full extent, A little bit less than half of higher pharmaceutical education pharmacists have realized professional capabilities, skills and habits partially, more than 50% of own potential, about a quarter of higher pharmaceutical education pharmacists have realized professional capabilities, skills and habits - partially, less than 50% of own potential . At the same time the vast majority of the pharmacists and

health care specialists noted that pharmacists' knowledge in disciplines, such as the pharmacology, pharmacotherapy, pharmaceutical care and clinical pharmacy were a lack or insufficient for the successful work. Health care specialists vast majority think that pharmacists are in need of additional- further regular study in the above mentioned directions. Approximately half of the respondents considered that just 50% of their own potential was realized at the work position. Anyway, the overwhelming majority of the young pharmacists would not like to leave their profession. The vast majority of young pharmacist specialists' consider that in pharmacology, in pharmacotherapy, in pharmaceutical care, in clinical pharmacy their knowledge is a lack or is not enough for successful work.

6. Little more than a third of consumers (buyers) of medications (36.4%) were choosing the medications by the advice of a pharmacist; more than half of consumers of medications (59.2%) considered, that for pharmacists a professional competency is essentially required. A vast majority (63.1%) of consumers (customers) of medications ask to pharmacists about rule and routes of intake of drugs (medications). While more than one third of them (36.3%) consider that qualification of pharmacists is a very important factor when customers choosing drug-stores. The medication consumers (59.2%) mainly considered that the professional competence was of crucial importance for pharmacists. The overwhelming majority of the medication consumers (63.1%) and the healthcare specialists (53.7%) considered that the pharmacists in main provide the drugs information to the population. More than half (60.9%) of the health care specialists consider the essence of pharmacist's work was a capability to optimize the quality of life of people, related to health by providing the pharmaceutical care. Less than half (45.6%) of health-care specialists' consider that the level of basic training of pharmacists are not corresponding to the contemporary requirements. Meanwhile, the vast majority of health care specialists (89.3%) considered that it was necessary for the provision of cooperation and collaboration between pharmacists and physicians on the issues of pharmacotherapy. The vast majority of health-care specialists' considered, that a pharmacist should provide assistance in teach patients to understand rules of intake of prescribed 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, pharmacology, pharmacotherapy and drugs (medications) toxicity.

7. The vast majority of the pharmacists (84.4%) considered that for full pharmaceutical activity it is necessary to provide continuous professional education; therefore, higher pharmaceutical education pharmacists consider that professional education should not be ceased. The vast majority of pharmacy faculty students consider that education should not be ceased. Pharmacy faculty students' more than a third was working by specialty. The huge part of the pharmacists (55.6%) consider the continuous professional education is essential for the career growth and professional development, which enables getting information of new drugs and updated knowledge of some diseases' pharmacotherapy, pharmacology and the pharmaceutical care. At the same time, the minority of respondent pharmacists (8%) had not used knowledge obtained from the professional publications and literature in their practice, while less than half of them (41%) had partially used. Competent pharmacist specialist who is capable of providing qualified pharmaceutical care (assistance) is formed in the professional training process.
8. A large majority of chief pharmacists (76.6%), vast majority of consumers of medications (82.6%), of the vast majority of the employed pharmacy students (95.9%), the large majority of the healthcare specialists (94.8%) and a big majority of pharmacists (71.9%) considered that the Government should imply the pharmacists' certification in the way acting for other medical specialists. That is very essential for pharmacists' professional perfection, for self-realization, for career advancement, for continuous professional education, for professional growth.
9. On the base of the statistical, theoretical and logical analyses the structure and composition of the factors, (the content of work; position held; correspondence of qualification to work; correspondence of nature of work to capabilities, aspirations, and inclinations; existence of perspective for professional enhancement; existence of perspective for career promotion; possibility to enhance and improve qualifications; existence of a high degree of responsibility for the result of work; regimen of work; labor salary; existence the system of benefits scheme for employees; support and assistance of a manager; direct relations with chief; relations to

colleagues) that influencing on the pharmacists' professional formation, occupational development and the pharmacists' career growth process was developed , revealed and evaluated.

10. The young pharmacists' inquiry had revealed the following factors of adaptation difficulties in the workplace: lack of the professional knowledge, incompatibility performance of the acquired profession, improperness of the work realities to their imagined outlines, as well as a complexity of adaptation to the stuff. The study of the professional adaptation of pharmacists showed that inadequate professional knowledge, incompatibility performance of the acquired profession, the harder adaptation to the staff is the main reasons for incomplete (imperfect) pharmaceutical care (assistance). The main way of helping them in their process of adaptation and professional coming to being in working position was the work together with a mentor (the experienced professional pharmacist) according to the pharmaceutical organizations' managers and the young specialists (58.3%). The vast majority heads of pharmaceutical organizations and young specialists consider the coexistence of a tutor (experienced professional pharmacists) as the main factor of professional improvement for pharmacists. The vast majority of young pharmacist specialists would not like to leave the profession. The majority of young pharmacist specialists consider that their knowledge in pharmacology (80.6%), in pharmacotherapy (75.8%), in pharmaceutical care (67.2%), in clinical pharmacy (58%) is a lack or not enough for successful work. The study of pharmacists' professional formation, occupational development and professional adaptation of pharmacists showed that inadequate professional knowledge, incompatibility performance of the acquired profession, the harder adaptation to the staff is the main reasons for incomplete (imperfect) pharmaceutical care (assistance).
11. 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, $p<0.001$). Pharmacists who were satisfied with their income were more often satisfied also with their job and career.

12. 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 health care specialists, than among chiefs (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 customers/buyers 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 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.

CONCLUSIONS

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

1. The main part of the pharmacists had done their professional choice considering some from 20 motives: high-quality education getting the opportunity, the desire to care of the people health, guarantee to be employed, interest in a profession. The professional choice was also made under the influence of the following factors: personal desire, parents' advice, love to specialty from childhood and own potential capabilities. The factors, professional formation, occupational development and career growth process influencing on the pharmacists', were revealed and evaluated.
2. The majority of the pharmacists' specialists were female; among them, the largest majorities were working on the pharmacist position at the pharmacy.
3. About a quarter of the pharmacists have realized professional capabilities, skills and habits - partially. The vast majority of the pharmacists and health care specialists noted that pharmacists' knowledge in disciplines, such as the pharmacology, pharmacotherapy, pharmaceutical care and clinical pharmacy were insufficient for the successful work. The vast majority of the pharmacists, students and health care specialists considered that for full pharmaceutical activity, the career growth and professional development it is necessary to provide continuous professional education.
4. The opinion that certification of pharmacists should be mandatory was more common among health care specialists, than among chiefs and pharmacists. The necessity of pharmacists' certification was stated more often by employed students, than by pharmacists. It was more common also among customers/buyers than in pharmacists. Statistically significant was association between the buyers' educational level and their opinion about the necessity of pharmacists' certification: customers with higher education considered certification of pharmacists as mandatory more often, than did buyers (patients) with secondary education.
5. The young pharmacists' inquiry had revealed the factors of adaptation difficulties in the workplace. The main way of helping them in their process of adaptation and professional coming to being in a working position was the work together with a mentor (the experienced

professional pharmacist). The vast majority of young pharmacist specialists would not like to leave the profession.

6. More than half of the pharmacists (57,7%) were satisfied with professional choice, while young pharmacists' - vast majority (82,2%). 30,4% of the pharmacists were satisfied with a professional career, 33,2% - with work, 28,6% - with the balance between the workload and personal life, 22,1% - with the time of job duration, 10,2% -with income. One third of the pharmaceutical faculty students worked in pharmacies, and 97, 7% of them were satisfied with their professional choice.

7. Chi-square test of independent has revealed:

- Statistically, significant association was revealed between the pharmacists' position and their satisfaction with professional career and job. Holding high positions was associated with increased career and job satisfaction, but not to professional choice satisfaction. It showed also that long terms of work experience in the current position were associated with lower career and job satisfaction.
- 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. Having a positive opinion about the importance of continuing professional development was also associated with increased job and 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. Pharmacists who were satisfied with their income were more often satisfied also with their job and career.

PRACTICAL RECOMMENDATIONS

Based on the performed studies and elaborated conclusions some recommendations can be formulated, namely:

1. To raise the professional standards the Government should make the certification of higher pharmaceutical education pharmacists, which is very essential for pharmacists' professional perfection, the higher pharmaceutical education pharmacists' self-realization and also their career advancement, for the pharmaceutical continuous professional education provision, for pharmacists' professional growth, their job and career satisfaction. This implementation will ensure the pharmacists' much higher status among the healthcare specialists, this is very important for pharmacist economic welfare and career advancement, also enable realization of the received knowledge and the professional capabilities and skills in work at the maximal extent, as well as get satisfaction with the profession, job and salary, which is in their turn is essential to provide a high correspondence of the pharmacists' qualification to work and an opportunity to have a private pharmaceutical activity. The Government should organize the preparation and implementation of the pharmacists' registration, certification and accreditation regulations scheme for pharmacist staff. All the above mentioned should raise awareness on the essence of pharmacists' profession and pharmacist' functions among medical personnel and the general public.
2. Suggest likable careers in the drugstore/pharmacy – especially in vision and sight of the male pharmacists. The Government and pharmaceutical companies should create promotional conditions for male pharmacists, to make the pharmacist profession more attractive and acceptable for men. It is very important for career growth, for the satisfaction of balance between the workload and man's personal life, satisfaction of salary, job and pharmacist's profession and perspectives for career promotion. More highly consider the economical interests, care and attention and of the pharmacist workers while making pharmacy/pharmacist occupational politics determinations.
3. The Government and private pharmaceutical companies should take care for professionalism, authority and power of pharmacist position making improvements in increasing the salaries of

pharmacists and the system of benefits scheme for employees' pharmacists. Pharmacists working conditions should be improved, labor conditions should become more advisable for pharmacist and pharmacist's regime (schedule) of work should become more flexible. The pharmacists' work duration time per week should be reduced and the more flexible work schedule should be developed, the labor contract should be more benevolent for pharmacist to ensure the more constructive for pharmacist conditions. Creation of the most appropriate psychological climate within the collective is a necessary basement for the career growth. The balance between the workload and pharmacist's personal life should be more harmonized, comfortable, convenient, resourceful and more poised. That flexibility will further improve pharmacists' work ability and motivation toward the job. That flexibility working schedule and working conditions will further enhance pharmacists' work ability and motivation toward the job. These factors will improve the quality of pharmaceutical care in pharmacies.

4. Because the pharmacist's professional activity is very important for the society, the higher education institutes must also update the pharmaceuticals educational programs to meet the needs by increasing the credits (hours) in pharmacology, pharmacotherapy, pharmaceutical care and clinical pharmacy.
5. Develop a partnership between doctors and pharmacists furthermore with different healthcare vocationals. Should be maintenance the great function and role of pharmacists' professionals in medicines administration for patients and contribute with doctors for review, rethink, reconsideration and inspection in the all fields of pharmacy. It is necessary to provide deep cooperation between pharmacists and physicians on the issues of pharmaceutical care, clinical pharmacy and rational pharmacotherapy, general pharmacotherapy and other health care challenges. Enhance pharmacists role and function by way of health care occupationals and promote toward their furthermore perfection. Those should be advanced the confident and image of the pharmacist in the public.
6. The state should take care of the profession of pharmacist authority. Through the support of the state, should increase the authority and social importance of the pharmacist profession in the health care system. Pharmacist profession should become more power and authority, the

pharmacist should have a much higher status in the health care system, and this is achieved then, when the pharmacist profession will move into the regulated health professions list.

7. The Government should support for preparation and implementation of continuous education courses aimed at raising the professional qualifications of pharmacist staff. Pharmaceutical education should become continuous to increase the pharmacist's professional qualification, professionalism, professional knowledge and competency. It has the crucial importance that the level of basic training of the pharmacist should become correspond to the contemporary requirements; the developed continuous pharmaceutical education programs should be accessible for all pharmacists. The qualification upgrading study courses of the professional education or professional training courses should be a part of compulsory requests for all pharmacists. Pharmacist's education process should not be stopped. Should enhance the higher pharmaceutical education system. Should perfect and extend continuing pharmaceutical education. Thus, developing a continuous pharmaceutical education system and also encouraging the research activity regarding into all fields of pharmaceutical practice will enhance the professionalism of the pharmaceutical personnel. Should be corresponding the higher educational institution and practical pharmaceutical education for pharmacists on presently and tomorrow demands. Ensure higher quality pharmacy schooling and teaching and advancement education suggestions.
8. The pharmacist should be responsible to registrate the drugs' side (adverse) effects and professional defects of drugs they provide, as they are responsible for the health state of the population, being a member of the healthcare system.
9. The Governmental issues and universities (in Georgian study sector) should provide support and assistance to the translation the professional pharmacist literature with its following application in the educational programs. International professional publications in pharmacy should be more accessible and required for all pharmacists.
10. Encourage and development post-graduated – PhD pharmacy education system, support for research into all the pharmaceutical scientific fields directions activities.

LITERATURE

1. Joint Partners Credentialing Task group (JPCT). A Report for the Royal Pharmaceutical Society and the wider Profession Evidence - based recommendations: credentialing of practitioners // London: Royal Pharmaceutical Society; 2013.
2. Council on Credentialing in Pharmacy (CCP). Credentialing and privileging of pharmacists: // A resource paper from the Council on Credentialing in Pharmacy. American Journal of Health-System Pharmacists, 2014.
3. Климов, Е.А. Психология профессионального самоопределения / Е.А.Климов. - М.: Изд-во Московского университета, 2005. — 347с.
4. Багдасарьян, Н.Г. Послевузовские ожидания студенческой молодежи [Текст] / Н.Г.Багдасарьян, А.А.Немцов // Социологические исследования. - 2003. - №6. - С.113 — 119.
5. Moultry A. A mass merchandiser's role in enhancing pharmacy students' business plan development skills for medication therapy management services // Am J Pharm Educ. 2011;75:133.
6. Ellaway, R.H., Cooper, G., Al-Idrissi, T., Dube, T., & Graves, L. (2014). Discourses of student orientation to medical education programs // Medical Education Online, 19, 10.3402/meo.v19.23714. <http://doi.org/10.3402/meo.v19.23714>.
7. Ragsdale M. Mueller J. Plan, do, study, act model to improve an orientation program // J Nurs Care Qual. 2005; 20; pp. 268–272.
8. The Young Pharmacists - Characterization of Portuguese Pharmacists // Lisbon: Ordem dos Farmacêuticos; 2012; pp.12-29.
9. Susan A. Cantrell, Letters from rising pharmacy stars: Advice on creating and advancing your career in a changing Profession // Jan 1, 2017, American society of health-system pharmacists; 1 edition; pp.135-178.
10. Guidance on Continuing Professional Development (CPD) for the Pharmacy Profession Accreditation Council for Pharmacy Education // Updated January 2015. [(Accessed on September 2017)]; Available online: <https://www.acpeaccredit.org/pdf/CPDGuidance%20ProfessionPharmacyJan2015.pdf>.
11. Tjin A. Tsoi SL, de Boer A. Croiset G. Koster A. S. Kusurkar R. A. Factors influencing participation in continuing professional development: a focus on motivation among pharmacists. // J ContinEduc Health Prof. 2016; 36(3); pp.144–150.

12. Bryant L.J. M., Coster G., Gamble G. D., McCormick R. N. General practitioners' and pharmacists' perceptions of the role of community pharmacists in delivering clinical services. // *Res. Soc. Adm. Pharm.* 2009; 5; pp.347–362.
13. Cruthirds D. L. Hughes P. J. Weaver S. Value of pharmacy services to the healthcare system: an interdisciplinary assessment // *Int J Pharm Pract.* 2013;21(1):38–45.
14. Wongwiwatthanakit S, Popowich N. G. Applying the ARCS model of motivational design to pharmaceutical education // *Am J Pharm Educ.* 2010; 64: pp. 168–196.
15. Casserlie, L. M., &Mager, N. A. D. (2016). Pharmacists' perceptions of advancing public health priorities through medication therapy management // *Pharmacy Practice*, 14(3), pp.792-798.
16. Guidance on Continuing Professional Development (CPD) for the Pharmacy Profession Accreditation Council for Pharmacy Education; // Updated January 2015. [accessed on November 2017]; Available online:
<https://www.acpeaccredit.org/pdf/CPDGuidance%20ProfessionPharmacyJan2015.pdf>.
17. World Health Organization (WHO) Framework for action on inter professional education and collaborative practice // Geneva: WHO; 2010.
18. Atkinson J., Rombaut B., The 2011 PHARMINE report on pharmacy and pharmacy education in the European Union // *Pharm. Pract.* 2011;9: pp. 169–187.
19. State C. E. Requirements for Pharmacists; Updated October 2014. [accessed on October 2017]; Available online: <http://www.medscape.org/public/pharmcestaterequirements>.
20. Herbert K. E., Urmie J. M., Newland B. A, Farris K. B.. Prediction of pharmacist intention to provide Medicare medication therapy management services using the theory of planned behavior // *Res Social Adm Pharm.* 2006;2(3): pp. 299–314.
21. General Pharmaceutical Council. Future Pharmacists: Standards for the Initial Education and Training of Pharmacists // London: GPhC; pp. 2011.
22. International Pharmaceutical Federation (FIP). A Global Competency Framework for Services Provided by Pharmacy Workforce, Version 1. The Hague: FIP; 2012.
http://www.fip.org/files/fip/PharmacyEducation/GbCF_v1.pdf. Accessed June, 2016.
23. Roberts A. S., Benrimoj S., Chen T.F., Williams K. A., Aslani P. Implementing cognitive services in community pharmacy: A review of facilitators used in practice change // *Int. J. Pharm. Pract.* 2006;14: pp. 163–170.
24. Fred Weissman, James Pinder, Mark Berns; Pharmacy practice and tort Law,Mc Graw-Hill Education / Medical; 1 edition (February 8, 2016); pp.125-197.

25. McConnell K. J., Newlon C. L., Delate T. The impact of continuing professional development versus traditional continuing pharmacy education on pharmacy practice // *Ann Pharmacother.* 2010; 44: pp. 1585–1595.
26. The Role of the Pharmacist in the Health Care System. (2016). Retrieved from <http://apps.who.int/medicinedocs/en/d/Jh2995e/1.3.html> A World Health Organization resource.
27. Marialice S. Bennett; How to Implement the Pharmacists' Patient Care Process // *American Pharmacists Association*; 1 edition (March 15, 2015); pp. 38-54.
28. Joint Commission of Pharmacy Practitioners. Pharmacists' Patient Care Process. 2014. http://www.accp.com/docs/positions/misc/JCPP_Pharmacists_Patient_Care_Process.pdf. Accessed 20 November 2015.
29. MacLaren R., McQueen B.R., Campbell J. Clinical and financial impact of pharmacy services in the intensive care unit: pharmacist and prescriber perceptions // *Pharmacotherapy.* 2013; 33: pp.401-10.
30. Kimberly A. Galt Pharm. D. FASHP, Michael Galt; Patient-Centered Care for Pharmacists; // *American Society of Health-System Pharmacists*; 2 edition (February 20, 2012); pp. 94-136.
31. International Pharmaceutical Federation and World Health Organization. joint FIP/ WHO guidelines on good pharmacy practice: standards for quality of pharmacy services // The Hague and Geneva: International Pharmaceutical Federation and World Health Organization, 2011.
32. Wortley F. Rudd; *Pharmaceutical Education (Classic Reprint)* // *Forgotten Books* (November 5, 2017), pp. 375-439.
33. Rutter P. Role of community pharmacists in patients' self-care and self-medication // *Integrated Pharmacy Research and Practice.* 2015; 4: pp. 57-65.
34. International Pharmaceutical journal. FIP Roundtable: how to ensure best use of non-prescription medicines? // *International Pharmaceutical Journal.* 2012; 33(3): pp. 24-5.
35. American Pharmacists Association, Board of Pharmaceutical Sciences of the International Pharmaceutical Federation, American Association of Pharmaceutical Scientists // "*Journal of Pharmaceutical Sciences*" Vol. 93, No. 11; Nov. 2004; pp.81-169.
36. Wortley F. Rudd; *Pharmaceutical Education (Classic Reprint)* // *Forgotten Books* (November 5, 2017); pp. 64-185.
37. Mullins C. D., Blatt L., Gbarayor C. M., et al. Health disparities: a barrier to high-quality care. *American journal of Health System Pharmacy* 2005; 62(18): pp. 1873-1882.

38. Ahmed Fathelrahman, Mohamed Izham Mohamed Ibrahim, Alian A. Alrasheedy, Albert Wertheimer; Pharmacy Education in the Twenty First Century and Beyond // Global Achievements and Challenges; Academic Press; 1 edition 2017; pp. 241-356.
39. Michael Posey L., Abir Kahaleh A.; Pharmacy: An Introduction to the Profession // American Pharmacists Association; 3 edition (August 26, 2016); pp. 49-87.
40. American Society of Health-System Pharmacists // ASHP Best Practices 2014-2015 (ASHP, Best Practices of Hospitals & Health-System Pharmacy); pp. 519-568.
41. Robert McCarthy; Introduction to Health Care Delivery: A Primer for Pharmacists // Jones & Bartlett Publishers; 4 edition (April 13, 2007); pp. 445-469.
42. Jean-Venable R. Goode , Lynne M. Roman, Kristin W. Weitzel; Community Pharmacy Practice Case Studies; American Pharmacists Association // 1 edition (February 28, 2009); pp. 209-226.
43. Jennifer A. Reinhold, Grace L. Earl; Clinical Therapeutics Primer: Link to the Evidence for the Ambulatory Care Pharmacist // Jones & Bartlett Learning; 1 edition (October 1, 2012); pp. 269-341.
44. Hoai-An Truong, James L. Bresette and Jill A. Sellers; The Pharmacist in Public Health: Education, Applications and Opportunities (Aug 30, 2010); pp. 325-364.
45. Dr. Patrick J. Bryant PharmDFSCIP, Dr. Heather A. Pace PharmD; The Pharmacist's Guide to Evidence-Based Medicine for Clinical Decision Making // ASHP; 1 edition (August 31, 2008); pp. 56-79.
46. Robert J. Cipolle, Linda M. Strand , Peter C. Morley; Pharmaceutical Care Practice: The Patient-Centered Approach to Medication Management // McGraw-Hill Education / Medical; 3 edition (April 10, 2012); pp. 459-506.
47. Colleen Doherty Lauster , Sneha Baxi Srivastava; Fundamental Skills for Patient Care in Pharmacy Practice; Jones & Bartlett Learning //1 edition (April 8, 2013); pp. 211-275.
48. Richard R. Abood; Pharmacy Practice and the Law (Pharmacy Practice & the Law); Jones & Bartlett Publishers; 5 edition (August 13, 2007); pp. 215-269.
49. Larry E., Boh M.S., Pharmacy Practice Manual: A Guide to the Clinical Experience (Formerly Clinical Clerkship Manual) // LWW; Second edition (March 15, 2001); pp. 632-687.
50. McDonald R., Cheraghi-Sohi S., Sanders C., Ashcroft D. Professional status in a changing world: The case of medicines use reviews in English community pharmacy // SocSci Med. 2010; 71; pp. 451–458.

51. Role of Dispensers in Promoting Rational Drug Use.(n.d.). Retrieved June 8, 2017, from http://archives.who.int/PRDUC2004/RDUCD/Session_Guides/role_of_dispensers_in_rational_d.htm
52. Lynn Eschenbacher; Pharmacy Clinical Coordinator's Handbook // American Society of Health-System Pharmacists (April 11, 2016); pp. 118-186.
53. Hoai-An Truong , James L. Bresette, Jill A. Sellers ;The Pharmacist in Public Health: Education, Applications and Opportunities; American Pharmacists Association; 1 edition (August 10, 2010); pp. 312-429.
54. Gaughan D. Pharmaceutical Society of Ireland- the pharmacy regulator: the role of the pharmacist in self care // Dublin: Pharmaceutical Society of Ireland, 2009.
55. Robert L. McCarthy; Kenneth W. Schafermeyer; Introduction to Health Care Delivery // A Primer for Pharmacists; Jones & Bartlett Learning; 3 edition (April 2004); pp. 589-609.
56. American Society of Health-System Pharmacists; Concepts in social pharmacy // American Society of Health-System Pharmacists; 2 edition (April 1, 2017); pp. 369-407.
57. Rajesh Krishna; Dose Optimization in Drug Development (Drugs and the Pharmaceutical Sciences) // CRC Press; 1 edition (May 1, 2006); pp. 44-156.
58. The American Pharmacists Association and the National Association of Chain Drug Stores Foundation (APhA and NACDSF) // Medication Therapy Management in Pharmacy Practice: Core Elements of an MTM Service Model (on-line); 2008. Available from: www.accp.com/docs/positions/misc/CoreElements.pdf.
59. Competency Development and Evaluation Group (CoDEG). Advanced To Consultant Level Framework, A Developmental Framework For Pharmacists Progressing to Advanced Levels of Practice // London: Competency Development and Evaluation Group; 2009.
60. Patrick Malone, Karen Kier and John Stanovich; Drug Information: A Guide for Pharmacists, Fourth Edition ;(McGraw-Hill)) (Aug 17, 2011); pp. 69-89.
61. Rivkin A., Hongjun Y. Evaluation of the role of the critical care pharmacist in identifying and avoiding or minimizing significant drug-drug interactions in medical intensive care patients // J Crit Care. 2011;26(1): pp. 104-115.
62. Kimberly A., Galt Pharm. D. FASHP and Michael Galt // Patient-Centered Care for Pharmacists; (Feb 20, 2012); pp.123-129.
63. Reis TM, Guidoni CM, Giroto E, Rascado RR, Carvalho MP, Cruciol JM. Pharmaceutical care in Brazilian community pharmacies: pharmacy knowledge and practice // Afr J Pharm Pharmacol. 2015; 9(9): pp. 287–294.

64. Westerlund T., Björk H.T. Pharmaceutical care in community pharmacies: Practice and research. // *Ann. Pharmacother.* 2006; 40: pp.1162–1169.
65. Chisholm-Burns M. A, Lee J. K, Spivey C. A, et al. U.S. pharmacists' effect as team members on patient care: systematic review and meta-analysis // *Med Care.* 2010; 48(10): pp. 923-33.
66. Colleen Doherty Lauster, SnehaBaxiSrivastava; *Fundamental Skills for Patient Care in Pharmacy Practice* // Jones & Bartlett Learning; 1 edition (April 8, 2013). pp. 115-157.
67. Lauster Colleen Doherty, SnehaBaxiSrivastava; *Fundamental Skills for Patient Care in Pharmacy Practice*; Jones & Bartlett Learning // 1 edition (April 8, 2013); pp. 219-241.
68. Bruce Berger, *Communication Skills for Pharmacists: Building Relationships, Improving Patient Care*; American Pharmacists Association // 3 edition (January 30, 2009); pp.126-149.
69. Jennifer A. Reinhold and Grace L. Earl; *Clinical Therapeutics Primer* // *Link To The Evidence For The Ambulatory Care Pharmacist* (Sep 17, 2012); pp. 36-45.
70. Rivkin A., Hongjun Y. Evaluation of the role of the critical care pharmacist in identifying and avoiding or minimizing significant drug-drug interactions in medical intensive care patients // *J Crit Care.* 2011; 26(1); pp. 104-107.
71. Avery A.j., Rodgers S., Cantril I jA, Armstrong S., Cresswell K., Eden M., et al. A pharmacist-led information technology intervention for medication errors (PINCER):a multicentre, cluster randomized, controlled trial and cost-effectiveness analysis // *Lancet.* 2012 Apr; 379(9823):pp.1310-1319.
72. Lynn Eschenbacher; *Pharmacy Clinical Coordinator's Hand book* // American Society of Health-System Pharmacists (April 11, 2016); pp. 65-116.
73. Geralyn Frandsen EdDRN, Sandra Smith Pennington PhD RN // *Abrams' Clinical Drug Therapy: Rationales for pharmacy Practice*; LWW; Eleventh, North American edition (November 8, 2017); pp. 987-1012.
74. *The Role of the Pharmacist in the Health Care System.* (2006) // Retrieved from <http://apps.who.int/medicinedocs/en/d/Jh2995e/1.6.2.html>.
75. Ashley W. Ells (Author), Justin Sherman; *Community and Clinical Pharmacy Services* // *A step by step approach.*; McGraw-Hill Education/Medical; 1 edition (April 30, 2013); pp. 45-156.
76. Kenneth R. Baker; *Medication Safety: Dispensing Drugs Without Error* // Delmar Cengage Learning; 1 edition (May 10, 2012); pp. 12-35.
77. Moore T.J., Furberg C.D., Mattison D.R., Cohen M. R. Completeness of serious adverse drug event reports received by the US Food and Drug Administration in 2014. // *Pharmacoepidemiology, Drug Safety.* 2016; 25(6): pp. 713–718.

78. Jeri J. Sias and Susana V. James; Spanish for the pharmacy professional (English and French Edition) // American Pharmacists Association; 1st edition (January 30, 2009); pp. 35-79.
79. Robert P. Navarro; Managed Care Pharmacy Practice 2nd Edition // Jones & Bartlett Learning; 2 edition (December 25, 2008); pp. 336-389.
80. World Health Organization; Quality Assurance of Pharmaceuticals 2017: WHO Guidelines, Good Practices, Related Regulatory Guidance and GxPs Training Materials // World Health Organization; 2017 edition (January 11, 2018); pp. 51-59.
81. Mari J. Wirfs PhD MN APRN ANP-BC FNP-BC CNE; The APRN's Complete Guide to Prescribing Drug Therapy Springer Publishing Company; 1 edition (April 25, 2017); pp. 548-613.
82. Consumer Health care Products Association's Clinical/Medical Committee // White paper on the benefits of OTC medicines in the United States. Pharmacy Today 2010; (Oct); pp. 68-79.
83. Patrick M. Malone , Karen L. Kier , John Stanovich Jr. , Meghan J. Malone; Drug Information A Guide for Pharmacists 5/E (Malone, Drug Information); McGraw-Hill Education / Medical; 5 edition (August 11, 2014); pp. 1116-1169.
84. Sarrieff A., Gillani W.S., Abdel G., Babiker R. M., Pharmacist perception to importance and self-competence in pharmacy practice // Int J Pharm Stud Res. 2010; 1(2); pp. 1–21.
85. Judith E. Thompson, Lawrence W. Davidow; A Practical Guide to Contemporary Pharmacy Practice 3rd Edition; Lippincott Williams and Wilkins; 3rd edition (January 24, 2009); pp. 456-488.
86. 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. 65-74.
87. John P. Rovers; A Practical Guide to Pharmaceutical Care // A Clinical Skills Primer; American Pharmacists Association; 3 edition (March 7, 2007); pp. 126-184.
88. Victor Cohen Pharm. D. BCPS CGP; Safe and Effective Medication Use in the Emergency Department/American Society of Health-System Pharmacists; 1 edition (January 1, 2009); pp. 145-178.
89. National Council on Patient Information and Education. What is your self-care persona 'Rockville: National Council on Patient Information and Education, 2015.
90. Richard R. Abood (Author), Kimberly A. Burns; Pharmacy Practice and the Law // Jones & Bartlett Learning; 8 edition (December 16, 2015); pp. 406-459.
91. Joseph T. Di Piro, Robert L. Talbert, Gary C. Yee, Cary R. Matzke, Barbara G. Wells. L. Michael Posey // Pharmacotherapy: A Pathophysiologic approach, 8 e. Chapter 1.

92. Joseph Price Remington, Ernest Fullerton Cook; The Practice Of Pharmacy: A Treatise On The Modes Of Making And Dispensing Official, Unofficial, And Extemporaneous Preparations, With Descriptions Of // Intended As A Hand-book For Pharmacists;Sagwan Press (February 9, 2018); pp. 309-318.
93. John P. Rovers, Jay D. Currie; A Practical Guide to Pharmaceutical Care // A Clinical Skills Primer; American Pharmacists Association; 3 edition (March 7, 2007); pp. 217-226.
94. Bahri P. Public pharmacovigilance communication: a process calling for evidence-based, objective-driven strategies // Drug Safety, 2010; 33(12); pp. 1065-1079.
95. Rhonda M. Jones Pharm D; Patient Assessment in Pharmacy Practice // LWW; Third edition (September 1, 2015); pp. 214-236.
96. Nathaniel M. Rickles, Albert I. Wertheimer, Mickey C. Smith; Social And Behavioral Aspects Of Pharmaceutical Care // Jones& Bartlett Learning; 2 edition (March 25, 2009); pp. 278-342.
97. John Sexton, Chris Green, Gareth Nickless; Pharmaceutical Care Made Easy: Essentials of Medicines Management in the Individual Patient // Pharmaceutical Press; 1 edition (August 4, 2006); pp. 45-114.
98. Gregory M. SuslaPharm DFCCM, Anthony F. Suffredini MD FCCM, Dorothea McAreavey MD FACC // Handbook of Critical Care Drug Therapy; LWW; Third edition (June 9, 2006); pp. 254-287.
99. Karen Lynn Whalen; Medication Therapy Management, Second Edition; McGraw-Hill Education / Medical; 1 edition (April 5, 2017); pp. 429-456.
100. Thomas L. Lenz Pharm DMA; Lifestyle Modifications in Pharmacotherapy // LWW; 1 edition (June 1, 2007); pp. 336-345.
101. William N. Tindall, Marsha K. Millonig; Pharmaceutical Care: Insights from Community Pharmacists (Pharmacy Education Series) // Routledge; 1 edition (October 29, 2002); pp. 15-39.
102. Patrick Malone, Karen Kier, John Stanovich; Drug Information: A Guide for Pharmacists (Malone, Drug Information) // McGraw-Hill Medical; 3 edition (April 20, 2006); pp. 616-628.
103. Dr. Patrick J. Bryant Pharm. D. FSCIP and Heather A. Pace Pharm. D. Pharmacists Guide to Evidence-Based Medicine for Clinical Decision Making by (Jan 1, 2008); pp. 136-148.
104. Marie A. Chisholm-Burns and Terry L. Schwinghammer; Pharmacotherapy Principles and Practice, Fourth Edition; McGraw-Hill Education / Medical; 4 edition (March 29, 2016); pp. 1236-1345.
105. Paul Rutter FFRPS MR PharmSPhD; Community Pharmacy: Symptoms, Diagnosis and Treatment // Elsevier; 4 edition, 2017); pp. 156-209.

106. Robert J. Cipolle, Linda Strand, Peter Morley, Robert Cipolle; *Pharmaceutical Care Practice: // The Clinician's Guide*; McGraw-Hill Medical; 2 edition 2004; pp. 245-306.
107. Syed Imran Ahmed, Syed Shahzad Hasan, and Mohammad Azmi Hassali // *Clinical Pharmacy and Pharmaceutical care: A need to Homogenize the Concepts-American Journal of Pharmaceutical Education*. 2012; pp. 15-36.
108. University of the Sciences in Philadelphia; Remington // *The Science and Practice of Pharmacy*; LWW; Twenty-First edition (May 19, 2005); pp. 1456-1519.
109. Duggan C. Reforming educational career development for practitioners in the UK, presented at Trends in Pharmacy Education // European Association of Faculties of Pharmacy Meeting, September, 2007.
110. Saari L. M., Judge T. A. Employee attitudes and job satisfaction // *Hum Resour Manage*. 2004; pp. 65-69.
111. Locke E. A., What is job satisfaction? // *Organ Behav Hum Perform* 2009; 4; pp. 309–336.
112. Spector P. E., *Job Satisfaction: Application, Assessment, Causes and Consequences*. London: // SAGE Publications; 2011; pp. 78-82.
113. Faragher E. B., Cass M., Cooper C. L., The relationship between job satisfaction and health: a meta-analysis // *Occup Environ Med* 2005; 62; pp. 105–112.
114. Elsevier. Qualitative insights into job satisfaction and dissatisfaction with management among community and hospital pharmacists 2011; pp. 145-149.
115. Seston E., Hassell K., Ferguson J., Hann M. Exploring the relationship between pharmacists' job satisfaction, intention to quit the profession, and actual quitting // *Res Social Adm Pharm*. 2009; 5(2): pp. 121-32.
116. Cooper C. L., Rout U., Faragher B. Mental health, job satisfaction and job stress among pharmacists // *BMJ*. 2009; 298(6670); pp. 366-370.
117. Jain V., Priya R., Shubhi R., Preeti S., Ashuthosh P., Yashumati R. Evaluation of job satisfaction and social identity of pharmacists // *Ind J Pharm Prac*. 2013; 6(1); pp. 47-58.
118. Hardigan P., Carvajal M. Job satisfaction among practicing pharmacists: a Rasch analysis. // *The Internet Journal of Allied Health Sciences and Practice*. 2007; pp. 98-102.
119. Maio V., Goldfarb N. I., Hartmann C. W., Pharmacists' job satisfaction: variation by practice setting // *P & T*. 2004; pp. 123-127.
120. Lau W.M., Pang J., Chui W. Job satisfaction and the association with involvement in clinical activities among hospital pharmacists in Hong Kong // *Int. J. Pharm. Pract*. 2011; 19; pp. 253–263.

121. Bond C.A., Raehl C.L., Pharmacists' assessment of dispensing errors: Risk factors, practice sites, professional functions, and satisfaction // *Pharmacotherapy*. 2001; 21; pp. 614–626.
122. Royal Pharmaceutical Society. Professional Standards for Hospital Pharmacy Services. // London; 2014.
123. David Tipton; Professionalism, Work, and Clinical Responsibility in Pharmacy // Jones& Bartlett Learning; 1 edition (March 15, 2013); pp. 205-269.
124. Seston E., Hassell K., Ferguson J., Hann M. Exploring the relationship between pharmacists' job satisfaction, intention to quit the profession, and actual quitting // *Res Social Adm Pharm*. 2009; pp. 52-59.
125. Lerkiatbundit S. Predictors of job satisfaction in pharmacists // *J SocAdm Pharm*. 2000; pp. 41-48.
126. Payakachat N., Ounpraseuth S., Ragland D., Murawski M.M., Job and career satisfaction among pharmacy preceptors // *Am J Pharm Educ*. 2011; pp. 136-142.
127. McPherson G. S., Davies J. G., Bewick V., Bhudia A., Identification of factors affecting job and career satisfaction in pharmacists // *Pharm J* 2009; pp. 263-266.
128. Iaffaldano M. T., Muchinsky P. M., Job satisfaction and job performance // A meta-analysis. *Psychol Bull*. 2015; 97(2); p. 251.
129. Aziri B. Job Satisfaction: A Literature Review // *Manag Res and Prac*. 2011; 3(4); pp. 77-86.
130. Akram Ahmad, Muhammad Umair Khan¹, Ramadan Mohamed Elkalmi, Shazia Qasim Jamshed Anantha Naik Nagappa, Isha Patel and Rajesh Balkrishnan.). Job Satisfaction among Indian Pharmacists // An Exploration of Affecting Variables and Suggestions for Improvement in Pharmacist Role. *Pharmaceutical Education*, 10. Retrieved 2015.
131. Hardigan PCM. Application of Rasch rating scale model to analysis of job satisfaction among practicing pharmacists // *J Am Pharm Assoc* 2008; pp. 54-57.
132. Robert S. Beardsley, Carole L. Kimberlin, William N. Tindall; Communication Skills in Pharmacy Practice // A Practical Guide for pharmacy Students and Practitioners; LWW; 6th edition 2011); pp. 85-112.
133. Guirguis L. M., Lee S. Patient assessment and documentation integrated in community practice: chat, check, and chart // *Journal of the American Pharmacists Association* 2012; 52(6); pp. 241-51.
134. Suzy Cohen (Author); The 24-Hour Pharmacist: Honest Advice and Amazing Cures from America's Most Trusted Pharmacist (Hardcover) // Rodale Press (2008); pp. 65-78.
135. Koustelios A., Tsigilis N., The relationship between burnout and job satisfaction among pharmacist. a multivariate approach // *EurPhys Ed Rev* 2005;11(2); pp. 189–203.

136. Carvajal MJ, Hardigan PC. Pharmacists' sources of job satisfaction: inter-gender differences in response // *Am J Pharm Educ.* 2010; pp. 223-229.
137. Noel M.W., Hammel R.J., Bootman J.L. Job satisfaction among hospital pharmacy personnel // *Am. J. Health-Syst. Pharm.* 2007; 39; pp. 600–606.
138. Mak V.S., Clark A., March G., Gilbert A.L. The Australian pharmacist workforce: Employment status, practice profile and job satisfaction // *Aust. Health Rev.* 2013; 37; pp. 127–130.
139. Kerschen A. M., Armstrong E. P., Hillman T. N. Job satisfaction among staff, clinical, and integrated hospital pharmacists // *J. Pharm. Pract.* 2006; 19; pp. 306–312.
140. Hassell K., Seston E., Shann P. Measuring job satisfaction of UK pharmacists: A pilot study. // *Int. J. Pharm. Pract.* 2007;15; pp. 259–264.
141. Al Khalidi D., Wazaify M. Assessment of pharmacists' job satisfaction and job related stress in Amman // *Int. J. Clin. Pharm.* 2013; 35; pp. 821–828.
142. Sangsiry S.S., Ngo C. Factors affecting job satisfaction among pharmacists // *Hosp. Pharm.* 2003; 38; pp. 1037–1046.
143. Susan M. Stein D.H.Ed. M.S. B.S.Pharm; *Boh's Pharmacy Practice Manual // A Guide to the Clinical Experience*; LWW; Fourth edition (April 22, 2014); pp. 236-318.
144. Hepler C. D., *Clinical pharmacy, pharmaceutical care, and the quality of drug therapy.* // *Pharmacotherapy* 2004; 24(11); pp. 1491–1498.
145. John Sexton, Chris Green, Gareth Nickless; *Pharmaceutical Care Made Easy: Essentials of Medicines Management in the Individual Patient* // Pharmaceutical Press; 1 edition (August 4, 2006); pp. 74-89.
146. John P. Rovers, Jay D. Currie (Author), Harry P. Hagel, Randy P. McDonough, Jenelle L. Sobotka // *A Practical Guide to Pharmaceutical Care* 2nd Edition; APhA Publications; 2 edition (April 8, 2003); pp. 45-89.
147. Siddiqui et al; *A Textbook of Hospital and Clinical Pharmacy (For Degree Course)* // CBS Publisher & Distributors P Ltd ; 1st edition (January 1, 2011); pp. 16-78.
148. Parthasarathi G., Karin Nyfort-Hansen, Milap C Nahata (Eds.), Parthasarathi G., Milap C. Nahata // *A Textbook of Clinical Pharmacy Practice: Essential Concepts and Skills*; University Press (May 1, 2012); pp. 198-219.
149. Bruce Lubotsky Levin, Peter D. Hurd, Ardis Hanson; *Introduction to Public Health in Pharmacy* // Jones & Bartlett Learning; 1 edition (July 24, 2007); pp. 236-289.
150. American College of Clinical Pharmacy. The role of clinical pharmacy // *Pharmacotherapy* 2008;28(6); pp. 816–827.

151. Ashley W. Ells (Author), Justin Sherman; Community and Clinical Pharmacy Services: A step by step approach; Mc Graw-Hill Education / Medical; 1 edition (May 22, 2013); pp. 319-326.
152. Michael Ira Smith, Albert I. Wertheimer, Jack E. Fincham; Pharmacy and the US Health Care System; Pharmaceutical Press // 4th Revised edition edition (April 15, 2013); pp. 402-426.
153. Martin Stephens; Hospital Pharmacy // Pharmaceutical Press; 2nd Revised edition edition (March 28, 2011); pp. 225-239.
154. Royal Pharmaceutical Society (RPS). Foundation Pharmacy Framework, a Framework for Professional Development in Foundation Practice across Pharmacy // London: Royal Pharmaceutical Society; 2014.
155. Van Mil J. F., Schulz M., Tromp TFD. Pharmaceutical care, European developments in concepts, implementation, teaching, and research: a review // Pharm World Sci. 2014; 26 (6); pp. 303–321.
156. International Pharmaceutical Federation (FIP). Continuing Professional Development/Continuing Education in Pharmacy // Global Report 2014. The Hague: International Pharmaceutical Federation; 2014.
157. Clinical Skills for Pharmacists: A Patient-Focused Approach // 3 edition (Tietze, Clinical Skills for Pharmacists) by Karen J. TietzePharmD (Mar 31, 2011).
158. Red-Hot Careers; Clinical pharmacist RED-HOT Career Guide; 2592 REAL Interview Questions // Create Space Independent Publishing Platform 2017; pp. 216-242.
159. Karen J. TietzePharmD; Clinical Skills for Pharmacists: A Patient-Focused Approach, 3e (Tietze, Clinical Skills for Pharmacists) // Mosby; 3 edition (March 31, 2011); pp. 64-96.
160. Foppe J. W. van mil, PhD, Martin Schulz, PhD: A Review of Pharmaceutical Care in Community Pharmacy in Europe 156 Harvard Health Policy Review // Vol.7, No 1, spring 2006.
161. American College of Clinical Pharmacy; Pharmacotherapy Preparatory Review and Recertification Course // American College of Clinical Pharmacy, 2017 edition; pp. 655-689.
162. Michael Gabay; The Clinical Practice of Drug Information; Jones& Bartlett Learning // 1 edition (March 23, 2015); pp. 65-86.
163. James Ritter, Lionel Lewis, Timothy Mant (Author), Albert Ferro; A Textbook of Clinical Pharmacology and Therapeutics // 5Ed (A Hodder Arnold Publication). CRC Press; 5 edition (April 27, 2008); pp. 25-68.
164. European Directorate for the Quality of Medicines & healthcare: Pharmaceutical Care, Policies and Practices for a Safer // More Responsible and cost-effective Health System, 2012.

165. Ashley W. Ells (Author), Justin Sherman; Community and Clinical Pharmacy Services: A step by step approach; McGraw-Hill Education / Medical; 1 edition 2013; pp. 225-233.
166. Eric Christianson, Alissa Grimes, Melissa Christianson; Pharmacotherapy: Improving Medical Education Through Clinical Pharmacy Pearls // CreateSpace Independent Publishing Platform (June 29, 2015); pp. 45-87.
167. Roger Walker BPharm PhD FRPharmS FFPH (Editor), Cate Whittlesea BSc MSc PhD MRPharmS // Clinical Pharmacy and Therapeutics, 5e (Walker, Clinical Pharmacy and Therapeutics); Churchill Livingstone; 5 edition (October 7, 2011); pp. 326-342.
168. Michelle McCarthy (Editor), Denise R. Kockler; Oxford American Handbook of Clinical Pharmacy (Oxford American Handbooks of Medicine) // Oxford University Press; 1 edition (December 2, 2009); pp. 535-567.
169. Kaboli P. J., Hoth A. B., Mc Climon B. J., et al. Clinical pharmacists and inpatient medical care: a systematic review // Arch Intern Med 2006; 166; pp. 955–964.
170. Dooley M. J., Allen K. M., Doecke C. J., et al. A prospective multicenter study of pharmacist initiated changes to drug therapy and patient management in acute care Government funded hospitals // Br J Clinical Pharmacology 2004; 57; pp. 513–521.
171. Leguelinel-Blache G., Arnaud F., Bouvet S., et al. Impact of admission medication reconciliation performed by clinical pharmacists on medication safety // Eur J Intern Med 2014; 25; pp. 808–814.
172. International Pharmaceutical Federation. Statement of Policy. Medicines Information for Patients. The Hague: FIP; 2008. [cited 2017 jan 12] Available at: http://www.fip.org/www/uploads/database_file.php?id=290&table.
173. Terry Jacobs, Andrew A. Signore; Good Design Practices for GMP Pharmaceutical Facilities, Second Edition (Drugs and the Pharmaceutical Sciences) // 2 edition (August 19, 2016); pp. 126-129.
174. 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.
175. Mary E. Mohr RPhMS; Standards of Practice for the Pharmacy Technician (Lww Pharmacy Technician Education) // LWW; Student edition (January 20, 2009); pp. 312-336.
176. International Pharmaceutical Federation. FIP Statement of Policy: Medicines Information for Patients. The Hague: FIP; 2008. Available at: http://www.fip.org/www/uploads/database_file.php?id=290&table id.
177. Krass I. Ways to boost pharmacy practice research. The Pharmaceutical Journal 2015;(2).

179. 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.
180. Franklin B. D. & van Mil J. W., Defining clinical pharmacy and pharmaceutical care // Pharm World Science 2005; 27(3): p. 137.
181. Shane P. Desselle, David P. Zgarrick, Greg Alston; Pharmacy Management: Essentials for All Practice Settings // Fourth Edition; 2016, pp. 329-347.
182. Michael Gabay; The Clinical Practice of Drug Information; Jones& Bartlett Learning // 1 edition (March 23, 2015); pp. 312-324.
183. Kumanov I. K., The challenging paradigm of pharmaceutical care // Scripta Scientifically Pharmaceutics. 2016;2(2): pp. 25–30.
184. Ohta Y., Sakuma M., Koike K., Bates D.W., Morimoto T. Influence of adverse drug events on morbidity and mortality in intensive care units: the JADE study // Int J Qual Health Care. 2014;26: pp. 573-578.
185. Royal Pharmaceutical Society. Emergency Supply // A guidance on professional practice. London: Royal Pharmaceutical Society) 2011.
186. Robert Wachter, Kiran Gupta; Understanding Patient Safety, Third Edition; McGraw-Hill Education / Medical; 3 edition (November 23, 2017); pp. 245-258.
187. Patrick Waterson; Patient Safety Culture: Theory, Methods and Application // CRC Press; 1 edition (November 3, 2014); pp.145-168.
188. The Medication Safety Officer's Handbook Paperback May 1, 2013; American society of health-system pharmacists; 1 edition (may 1, 2013; pp. 169-267).
189. World Health Organization; WHO Training Modules on Good Manufacturing Practices (GMP): A Resource and Study Pack for Trainers // World Health Organization; 2nd edition (August 30, 2007).
190. Соколова О. В. Совершенствование процесса профессионального становления фармацевтических работников в системе фармацевтической помощи: дисс. канд. фармац. наук. – М., 2009. – 132 с.
191. Law of Georgia on Medicines and Pharmaceutical Activities. Law of Georgia № 1586. SSM I; №26; 27.08.2009, Article 149. Chapter X. Monitoring of side effects of the drug <https://matsne.gov.ge/ka/document/view/29836>
192. Average monthly nominal earnings wages in Georgia http://geostat.ge/index.php?action=page&p_id=149&lang=eng
193. Healthcare specialists in Georgia http://geostat.ge/index.php?action=page&p_id=197&lang=eng
194. The Labor Low of Georgia. <https://matsne.gov.ge/ka/document/view/1155567>

195. Law of Georgia on Higher Education<https://matsne.gov.ge/ka/document/view/32830%23>
196. Latif D. A. Model for Teaching the Management Skills Component of Managerial Effectiveness to Pharmacy Students // *Am J Pharm Educ.* 2002; 66; pp.377–380.
197. Schulz G.M. Improving your new resident orientation program. A perspective from the University of Missouri-Columbia // *J Surg Educ.* 2007; 64; pp.124–127.

Appendix 1

Questionnaire for the Chief Pharmacists

We appreciate your participation in the study in advance. Respondent's answers altogether without mention of name and with other data of participants of the study will be published in scientific literature. Survey is anonymous.

This questionnaire is conducted with chief, head (manager) to identify the peculiarities of adaptation of young pharmacist specialists. Please circle your acceptable answer(s) or write your version of answer(s).

Q-1. What methods have you applied in the search for specialists? (You can indicate several answers)

1. Recommendation of colleagues
2. Search in higher educational institutions
3. Search in own organization
4. Internet
5. Recruitment agencies
6. Advertisements in mass media or in printed and electronic media
7. Other (indicate)

Q-2. How much time do you need for searching of specialists on vacant position?

1. Up to 1 week
2. Up to 1 month
3. Up to 3 months
4. Up to 6 months
5. Up to 9 months
6. Up to 1 year

Q-3. What qualities, capabilities and skills are required for specialist to have? (Indicate several answers)

1. High intelligence level
2. Professional competency
3. Flexibility while change of labor functions
4. Ability to make decision fast
5. Love towards (their) profession
6. Sense to get innovation
7. Ability to build up relations with people
8. High level of culture
9. Culture of speech
10. Orientation towards on creative work (focus on creativity)
11. High motivation to work

Q-4. Which personal features are required for a young specialist to have? (Indicate several answers)

1. Goodwill or amiability
2. Initiative ability
3. Ability to work in a team
4. Purposefulness (sense of purpose)
5. Ability to learn
6. Kindness and politeness
7. Attentiveness (considerateness)
8. High motivation to work

Q-5. Which requirements do you demand from a young specialist? (Indicate several answers)

1. Working experience
2. Proximity of place of residence to working place
3. Marital status
4. Children
5. Higher education
6. Recommendations
7. Plan for career development

8. High motivation to work

Q-6. In your opinion, what time period is necessary for adaptation of a young specialist?

1. Up to 1 month
2. Up to 3 months
3. Up to 6 months
4. Up to 9 months
5. Up to 1 year
6. More than 1 year

Q-7. Choose the most essential difficulties in professional adaptation of young employees (You can indicate several answers)

1. Lack (shortage) of professional knowledge
2. Lack (shortage) of special skills (computer knowledge and others)
3. Difficulty with adaptation within the colleagues team
4. Difficulties in relationship with a chief management (leadership)
5. Non-compliance of a job with own ideas
6. Having excessive ambitions

Q-8. Which forms of professional assistance is the most effective while adaptation of the specialist? (Indicate several answers)

1. Independent practical activity
2. Working with a mentor (instructor)
3. Internship
4. Discussion of work of young employees within the colleagues team in the collective
5. Personal conversation
6. Qualification improvement or upgrading courses
7. Special programs (trainings)

Q-9. In which directions are you acting in terms of professional development of young specialists? (Evaluate each factor under 5-point system)

1. Interesting and valuable work

1	2	3	4	5
---	---	---	---	---
2. The favorable psychological climate within the team of colleagues (in collective)

1	2	3	4	5
---	---	---	---	---
3. Possibility of career development

1	2	3	4	5
---	---	---	---	---
4. Social importance of profession

1	2	3	4	5
---	---	---	---	---
5. Independence in work

1	2	3	4	5
---	---	---	---	---
6. Professional education or professional training

1	2	3	4	5
---	---	---	---	---

Q-10. Do you think that the Government should make the certification of pharmacists?

1. I agree
2. I Partly agree
3. I Do not agree

Appendix 2

Questionnaire for consumers (customers) of medications

We appreciate your participation in the study in advance. Respondent's answers altogether without mention of name and with other data of participants of the study will be published in scientific literature. Survey is anonymous.

The questionnaire is conducted with a view to identify opinion of drugs (medications) consumers about in pharmacists' professional activity. Please circle your acceptable answer(s) or write your version answer(s).

Q-1 . Gender

1. Female
2. Male

Q-2 . Age

1. From 18 to 20 years
2. From 21 to 25 years
3. From 26 to 30 years
4. From 31 to 35 years
5. From 36 to 40 years
6. From 41 to 45 years
7. From 46 to 50 years
8. From 51 to 55 years
9. From 56 to 60 years
10. From 61 to 65 years
11. From 66 to 70 years
12. From 71 to 75 years
13. From 76 to 80 years
14. From 80 to 85 years
15. 86 years and older

Q-3 . Marital status

1. Single
2. Married
3. Separated
4. Divorced
5. Widowed

Q-4. Education

1. Secondary
2. Secondary - special
3. Higher

Q-5. Your social status

1. Worker and employees without higher education
2. Employee with higher education, official –clerk
3. Teacher
4. Doctor
5. Lawyer
6. Professor
7. Student
8. Employer
9. Pensioner
10. Unemployed
11. Self-employed
12. Chief, director, manager, administrative employee
13. Intellectual and employees with higher education
14. Military servant/police
15. Entrepreneur, businessman

16. Other
- Q-6. How often do you visit pharmacy?**
 1. Everyday
 2. Five-six times a week
 3. Three-four times a week
 4. Twice a week
 5. Once a week
 6. Once in two weeks
 7. Once a month
 8. In the period of epidemic
 9. As often as required
 10. If necessary, according to the needs
- Q-7. What products do you purchase frequently in the drugstore (pharmacy)? (You can indicate several answers)**
 1. Medications-drugs
 2. Optics
 3. Medical devices - products of medical purpose
 4. Mineral water
 5. Cosmetics and perfumery products
 6. Disinfectants
 7. Personal hygiene items - hygiene products
 8. Medical and dietary nutrition
 9. Biologically active additives- Food (nutritional, dietary) supplements
 10. Patient care items
 11. Child nutrition
 12. Other products (indicate)
- Q-8. Name the determining factors while choosing the drugs (medications) (No more than 2 factors)**
 1. Recommendation of a physician
 2. Doctor's prescription
 3. Advice of a pharmacist
 4. Personal knowledge, experience
 5. Advertisement in mass media
 6. Advice of relatives, friends, acquaintances and people you closely know
- Q-9. Mark the most significant factors while choosing a drugstore (pharmacy) (You can indicate no more than 5 answers)**
 1. Service culture
 2. Wide range of products
 3. Possibility to receive consultation about drugs (medications) with a physician/ a pharmacist
 4. Reasonable prices
 5. High qualification of personnel
 6. Convenient (comfortable) location of the drugstore (pharmacy)
 7. Absence of queues
 8. Friendly staff
 9. The existence of high-quality drugs
- Q-10. What are questions mostly you ask to pharmacists? (You can indicate several answers)**
 1. About rule of intake of drugs
 2. About adverse effects of drugs
 3. About prices of drugs
 4. About help in selection of analogue of drugs (medications)
 5. About quality of drugs
 6. About existence of drugs in a drugstore
 7. About indication/contraindication of drugs
 8. About terms and conditions of storage (conditions and shelf-life)
 9. About drugs' dosage
 10. About routes of drug administration
 11. About drug forms

12. About drug design
13. About drugs toxic effects(toxicity)
14. About principles of pharmacotherapy
15. About rules of drug administration
16. About drugs generic, chemical and brand names
17. About selection of (Over-the-counter) OTC drugs
18. Information about drug
19. Effectiveness of drug
20. About drug's action and drugs interactions
21. About drugs safety
22. About cost-effectiveness and cost-benefits of drugs

Q-11. In your opinion, what qualities are required for a pharmacist (pharmaceutical professionalism the drugstore) to have? (Select 3 possible answers)

1. Readiness for relationship (communication-contact)
2. Professional competency
3. Patience, endurance and stamina
4. Amiability or kindness
5. Ability to buildup relations (communication-contact) with people
6. High professionalism
7. Friendliness (goodwill)
8. Other (indicate)

Q-12. Do you think that the Government should make the certification of pharmacists?

1. I agree
2. I partially agree
3. I do not agree

Appendix 3

Questionnaire for employed (pharmacy faculty) students

We appreciate your participation in the study in advance. Respondent's answers altogether without mention of name and with other data of participants of the study will be published in scientific literature. Survey is anonymous.

This study is being conducted with the employed pharmacists students to study professional peculiarities (characteristics). Please circle your acceptable answer(s) or write your version answer(s).

Q-1 Age

1. From 18 to 20 years
2. From 21 to 25 years
3. From 26 to 30 years
4. From 31 to 35 years
5. From 36 to 40 years
6. From 41 to 45 years
7. From 46 to 50 years
8. 51 years and older

Q-2 Course

1. Bachelor I Course
2. Bachelor II Course
3. Bachelor III Course
4. Bachelor IV Course
5. Master student

Q-3 Gender

1. Male
2. Female

Q-4. Are you working currently in correspondence with speciality?

1. Yes
2. No

Q-5. Are you satisfied with your professional (occupational) choice?

1. I am satisfied with my professional (occupational) choice
2. I am partly satisfied with my professional choice
3. I have doubts with my professional choice
4. I am disappointed with my professional choice
5. I am not satisfied with my professional choice

Q-6. Have you changed your attitude to studies?

1. No
2. Study moved to the second place
3. I begin studying with a great interest
4. I have very little time for studying
5. Other

Q-7. What are the reasons for your employment? (Indicate no more than 3 answers)

1. Post graduate recruitment
2. Interest in work
3. Additional income for personal needs
4. Payment for studies
5. Acquisition in the practical skills
6. Lack of financial (material) resources in the family
7. Gain hands-on experience

Q-8. Has work impeded you in your studies?

1. Yes
2. It strongly impedes
3. It Partly impedes
4. It almost not impedes
5. No

Q-9. Have you missed the classes?

1. Most of them
2. Major part
3. Approximately half of them
4. Minority of them
5. Practically no

Q-10. How many days do you work per week?

1. Once
2. Two-three days
3. Three-four days
4. Four or five days
5. Five-six days
6. Every day (daily)
7. Other

Q-11. Which shifts do you work?

1. Daytime
2. Afternoon
3. Evening
4. Night
5. Other

Q-12. What is more important to you?

1. Work
2. Study

Q-13. Has the work had an impact on your academic achievement?

1. No
2. I started learning better
3. I started learning worse

Q-14. Do you think that the Government should make the certification of pharmacists?

1. I agree
2. I partly agree
3. I Do not agree

Q-15. Are you engaged in planning of your professional (employment) career?

1. Yes
2. Partially
3. No

Appendix 4

Questionnaire for the Health-Care Specialists

We appreciate your participation in the study in advance. Respondent's answers altogether without mention of name and with other data of participants of the study will be published in scientific literature. Survey is anonymous.

This study is being conducted within the health-care specialists, to identify pharmacists' professional peculiarities. Please circle your acceptable answer(s) or write your version answer(s).

Q-1. Gender

1. Female
2. Male

Q-2. Age

1. From 18 to 20 years
2. From 21 to 25 years
3. From 26 to 30 years
4. From 31 to 35 years
5. From 36 to 40 years
6. From 41 to 45 years
7. From 46 to 50 years
8. From 51 to 55 years
9. From 55 to 60 years
10. From 61 to 65 years
11. From 66 to 70 years
12. From 71 to 75 years
13. From 76 to 80 years
14. From 81 to 85 years
15. 86 years and older

Q-3. Education

1. Secondary professional
2. Higher
3. (Post Graduate) PhD or Doctoral

Q-4. Length of work

1. From 1 to 2 years
2. From 3 to 5 years
3. From 6 to 10 years
4. From 11 to 15 years
5. From 16 to 20 years
6. From 21 to 25 years
7. From 26 to 30 years
8. From 31 to 35 years
9. From 36 to 40 years
10. From 41 to 45 years
11. From 46 to 50 years
12. 51 years and over

Q-5. Position

1. Director (chief) in public health direction
2. Head (manager) in public health direction
3. Director in health care (clinical) direction
4. Head in health care direction
5. Director in health management direction
6. Head in health management direction
7. Chief of the health care sector unit
8. Head of the department in public health direction

9. Head of the division in public health direction
10. Head of the program in public health direction
11. Head of healthcare marketing and PR direction
12. Manager of relations with insurance companies issues
13. Health care administrator
14. Expert in health issues
15. Health organizer
16. Head in epidemiology direction
17. Head in Biostatistics direction
18. Head in Hygiene direction
19. Epidemiologist (specialist)
20. Bio-statistician (specialist)
21. Hygienist (specialist)
22. Professor-lecturer in public health direction
23. Professor-lecturer in health management direction
24. Professor-lecturer in health care direction
25. Quality control manager in public health direction
26. Quality control manager in health management direction
27. Senior specialist in public health direction
28. Senior specialist in health management direction
29. Senior specialist in health care direction
30. Specialist in public health direction
31. Specialist in health management direction
32. Specialist in health care direction
33. Manager in insurance company
34. Other please specify

Q-6. Do you think the professional activity of pharmacist is important for the society?

1. Yes
2. No
3. To a small extent

Q-7. What is the sense (meaning) of the work of pharmacist?

1. Timely, proper and qualitative provision of the population and hospitals/clinics with pharmaceutical products
2. Optimization of quality of life for people, related to health by providing of pharmaceutical care (assistance, aid)

Q-8. What functions are performed by pharmacists in the drug store (pharmacy)? (Indicate no more than 5 answers)

1. Realization of drugs and instruments of medical purpose
2. Creation, development, production and sale (realization) of drugs (medications), medical devices, instruments for medical purposes and healthcare products
3. Provide information about drugs to the population
4. Pharmaceutical care
5. They are experts of drugs
6. Ultimately cared about their patients' health and wellness
7. To dosage and dispensing of drugs
8. To inform customers-consumers in pharmacotherapy direction
9. To inform customers-consumers in cost-effectiveness and cost-benefits of drugs
10. Helping customers-consumers in offering or selection of OTC (Over-the-counter) drugs
11. To inform customers-consumers about drug design and drug forms
12. To inform customers-consumers about drugs' generic, chemical and brand names
13. To inform customers-consumers about drugs' effectiveness, safety and toxic effects
14. To inform customers-consumers about ways of drug application
15. To inform customers-consumers about rules of drug application
16. To help in selection of analogue of drugs
17. Other (indicate)

Q-9. What is important to you in your work? (Indicate no more than 2 answers)

1. Receive remuneration and provision of necessities of life
2. Personal realization as a specialist
3. Pain and suffering relief to people
4. Possibility for career development
5. Can not say
6. Other (indicate)

Q-10. Does the level of basic training of pharmacists correspond to the contemporary requirements?

1. Yes
2. No
3. To a small extent
4. Can not say

Q-11. What are the issues to which for pharmacists are in need of additional, further regular study or training? (You can indicate several answers)

1. New medications
2. Psychology of communication with customers-consumers (patient)
3. Issues of pharmacotherapy of certain diseases
4. Safety and effectiveness of drugs
5. Pharmacology and Pharmacotherapy
6. Normative legal regulation of pharmaceutical activity
7. About drugs' toxicity
8. About drugs' dosage
9. About routes of drug administration
10. About drug forms
11. About drug design
12. About the rules of drug administration
13. About drugs' generic, chemical and brand names
14. About selection of OTC (Over-the-counter) drugs
15. About cost-effectiveness and cost-benefits of drugs
16. Other (indicate)

Q-12. Are you familiar with the concept of pharmaceutical care (aid)?

1. Yes
2. No
3. To a small extent
4. Can not say

Q-13. Is it necessary to provide cooperation between pharmacists and physicians on the issues of pharmacotherapy?

1. Yes
2. No
3. To a small extent
4. Can not say

Q-14. Is a pharmacist responsible for treatment along with a physician?

1. Yes
2. No
3. Partially
4. Can not say

Q-15. Should a pharmacist provide assistance in teaching of patients to understand rules of intake of prescribed drugs (medications)?

1. Yes
2. No
3. Partially
4. Can not say

Q-16. Is the pharmacist responsible for registration of side (adverse) effects of drugs (medication)?

1. Yes
2. No
3. Partially
4. Can not say

Q-17 . Do you think that the Government should make the certification of pharmacists?

1. I agree
2. I partially agree
3. I do not agree

Appendix 5

Questionnaire for pharmacist specialists

We appreciate your participation in the study in advance. Respondent's answers altogether without mention of name and with other data of participants of the study will be published in scientific literature. Survey is anonymous.

This study is being conducted within (among) the pharmacist's specialists, in order to study professional peculiarities, professional features and professional career strategy for pharmacists. Please circle your acceptable answer(s) or write your version answer(s).

Q-1. Indicate your sex

1. Female
2. Male

Q-2. Age

1. From 18 to 20 years
2. From 21 to 25 years
3. From 26 to 30 years
4. From 31 to 35 years
5. From 36 to 40 years
6. From 41 to 45 years
7. From 46 to 50 years
8. From 51 to 55 years
9. From 56 to 60 years
10. From 61 to 65 years
11. From 66 to 70 years
12. From 71 to 75 years
13. From 76 to 80 years
14. From 81 to 85 years
15. 86 years and older

Q-3. Education

1. Secondary professional
2. College
3. Higher
4. Postgraduate studies: PhD studies or Doctoral studies
5. Other (indicate)

Q-4. Qualification (You can circle 1 or more answers)

1. Pharmacist's assistant
2. Pharmacist with 5 years of higher education
3. Bachelor–Pharmacist (Bachelor's Degree in Pharmacy-B Pharma)
4. Master–Pharmacist (Master's academic degree in Pharmacy)
5. Certified Pharmacist by the Ministry of Health
6. Candidate of Pharmaceutical Sciences
7. Academic Degree PhD in Pharmacy
8. Doctor in Pharmaceutical Sciences
9. Other (indicate)

Q-5. Length of your work experience

1. Up to 1 year
2. From 1 to 2 years
3. From 3 to 4 years
4. From 4 to 5 years
5. From 7 to 8 years
6. From 9 to 10 years
7. From 11 to 15 years
8. From 16 to 20 years
9. From 21 to 25 years
10. From 26 to 30 years
11. From 31 to 35 years

12. From 36 to 40 years
13. From 41 to 45 years
14. From 46 to 50 years
15. From 51 to 55 years
16. From 56 to 60 years
17. 61 years and over

Q-6. Pharmaceutical organization type at your job

1. Drugstore - Pharmacy
2. Wholesale pharmaceutical organization (pharmaceutical warehouse)
3. Pharmacy point-drugstore point
4. Analytical laboratory
5. Hospital - clinic pharmacy (drugstore)
6. Pharmaceutical factory
7. Other (indicate)

Q-7. Network belonging type at your job

1. Drugstore pharmacy
2. Drugstore chain (Pharmaceutical network of drugstores)

Q-8. Your current position (You can circle 1 or more answers)

1. Technical assistant
2. Pharmacist's assistant
3. Consultant of cosmetics and hygiene
4. Intern pharmacist
5. Pharmacist
6. Responsible pharmacist
7. Senior pharmacist
8. Authorized pharmacist
9. Chief pharmacist
10. Manager (chief pharmacist)
11. Director pharmacist (director of pharmacy)
12. Deputy (vice) manager pharmacist
13. Owner of pharmacy
14. Other (indicate)

Q-9. The duration of your employment time on the current position

1. From 1 months to 1 year
2. From 1 to 2 years
3. From 3 to 4 years
4. From 5 to 6 years
5. From 7 to 10 years
6. From 11 to 15 years
7. From 16 to 20 years
8. From 21 to 25 years
9. From 26 to 30 years
10. From 31 to 35 years
11. From 36 to 40 years
12. From 41 to 45 years
13. From 46 to 50 years
14. From 51 to 55 years
15. From 56 to 60 years
16. 61 years and over

Q-10. What most of all have had an influence on your profession (occupational) choice? (Indicate only one answer)

1. Parents' advices or will
2. Teachers' advices
3. Advice of an expert-specialist of professional orientation (career guidance)
4. A desire to obtain a profession in compliance with own trends, aspirations and inclinations
5. There was nowhere to go

6. Dissatisfaction with first education
7. Personal desire
8. Speciality love from childhood

Q-11. What underlying motivations have you had while making your professional (occupational) choice? (Indicate no more than 5 alternatives)

1. Desire to obtain a high-quality professional education (training)
2. Prestige of the profession (specialty)
3. Existence of capabilities to the certain kind of activity
4. Family tradition
5. Desire to develop own capabilities, aspirations and inclinations
6. A desire (ambition) to be included in a student community as a special social environment
7. A desire to expand horizons (desire to widen own range of vision)
8. A desire to extend carefree period of life
9. Opportunity to take a high social position
10. Guarantee to be employed
11. A desire to achieve a certain level of material well-being (security)
12. Possibility of further social advancement (promotion)
13. A desire to achieve self-respect in the point of view of others
14. Striving interests to acquire certain circle of connections, contacts with friends and acquaintances
15. Deferring from military service
16. A desire to have needful social well-being
17. Interest in the profession
18. A desire to be useful to people
19. A desire to care for the health of people
20. A desire to receive (medical) pharmaceutical education
21. Other (indicate)

Q-12. Are you satisfied with your professional (occupational) choice? Are you satisfied with your profession?

1. Yes, I am satisfied with my professional choice. (Yes, I am satisfied with my profession)
2. Partially
3. I have doubts with my professional choice. (I have doubts of my profession)
4. I am disappointed with my professional choice. (I am disappointed with my profession)
5. No

Q-13. Are you satisfied with your professional career?

1. Yes
2. Partially
3. No

Q-14. Are you satisfied with your work (job) ?

1. Yes
2. Partially
3. No
4. Can not say

Q-15. Estimate the impacting factors, influencing on your work satisfaction (estimate each factor with 5-point scale system)

№	Factors	Points				
1	The content of work (labor)	1	2	3	4	5
2	Position held	1	2	3	4	5
3	Correspondence of qualification to work	1	2	3	4	5
4	Correspondence of nature of work to my capabilities, aspirations, and inclinations	1	2	3	4	5
5	Existence of perspective for professional promotion (enhancement)	1	2	3	4	5
6	Existence of perspective for career promotion	1	2	3	4	5
7	The possibility to enhance (improve) qualifications	1	2	3	4	5
8	Existence of a high degree of responsibility for the result of work	1	2	3	4	5

9	Regimen (schedule) of work	1	2	3	4	5
10	Labor salary (compensation)	1	2	3	4	5
11	Existence of the system of benefits (incentives) scheme for employees	1	2	3	4	5
12	Support and assistance of a manager (chief)	1	2	3	4	5
13	Direct relations with manager	1	2	3	4	5
14	Relations with colleagues	1	2	3	4	5

Q-16. To what extent have you realized your professional capabilities, skills and habits?

1. To the full extent
2. Partially, more than 50% of own potential
3. Partially, less than 50% of own potential
4. Can not say

Q-17. Evaluate factors influencing on your professional development (evaluate each factor with 5-point scale system)

№	Factors	Point				
1.	Interesting and valuable (informative) work	1	2	3	4	5
2.	A favorable psychological climate within the colleagues' team	1	2	3	4	5
3.	The possibility of career growth (development)	1	2	3	4	5
4.	The possibility of professional education or training	1	2	3	4	5
5.	The social importance of the profession	1	2	3	4	5
6.	Independence in work	1	2	3	4	5

Q-18. In your opinion, at what level it is possible to cease education?

1. After getting specialist diploma (degree)
2. After getting the specialist certificate
3. Education should not be ceased

Q-19. Have you used knowledge in the practice, obtained from professional publications?

1. Yes
2. Partially
3. No

Q-20. What issues (questions) of pharmaceutical activity are the most essential (relevant) for you? (You can specify several answers)

1. New drugs (medications), drugs' generic, chemical and brand names
2. Psychology of communication (relations) with customers
3. Issues of pharmacotherapy of certain diseases
4. The safety, effectiveness and quality of the drugs
5. Pharmacology, Pharmacodynamics' and Pharmacokinetics' issues
6. The normative legal regulation of pharmaceutical activity
7. Drug Technology issues
8. Pharmacognosy
9. Pharmaceutical Organization and Economics and Pharmaceutical Business
10. Pharmacy Management and Pharmaceutical Marketing
11. Pharmaceutical Chemistry
12. Toxicology
13. Clinical Pharmacy
14. Pharmaceutical Care
15. Pharmaceutical Analysis
16. Toxicological Chemistry
17. Pharmaceutical Technologies
18. Nutrition
19. Pharmaceutical cosmetics and perfume
20. Social Pharmacy and Public Health
21. Computer Technology and Pharmaceutical Information
22. Phytotherapy

23. About routes of drug administration
 24. Drug forms and drug design
 25. About drugs' toxic effects
 26. About the rules of drug administration
 27. About cost-effectiveness and cost-benefits of drugs
 28. About the terms and conditions of storage of drug (conditions and shelf-life)
 29. Other (indicate)
- Q-21. What is your attitude to the qualification upgrading (improvement) study courses?**
1. I learn with great pleasure
 2. Learning process rise interest to me
 3. I have indifferent attitude toward learning
- Q-22. Do you think that the Government should make the certification of pharmacists?**
1. I agree
 2. I partly agree
 3. I do not agree
- Q-23. Are you engaged in planning of professional career?**
1. Yes
 2. Partially
 3. No
- Q-24. What goals do you want to achieve as a result through professional career? (Please evaluate each of the chosen option by 5-point scale system)**
- | | | | | | |
|------------------------------------|---|---|---|---|---|
| 1. Obtain more power and authority | 1 | 2 | 3 | 4 | 5 |
| 2. Much higher status | 1 | 2 | 3 | 4 | 5 |
| 3. Independence | 1 | 2 | 3 | 4 | 5 |
| 4. Self-realization | 1 | 2 | 3 | 4 | 5 |
| 5. Power | 1 | 2 | 3 | 4 | 5 |
| 6. Economic (material) welfare | 1 | 2 | 3 | 4 | 5 |
| 7. Professional growth | 1 | 2 | 3 | 4 | 5 |
| 8. Career advancement | 1 | 2 | 3 | 4 | 5 |
| 9. Other (indicate) | 1 | 2 | 3 | 4 | 5 |
- Q-25. Are you satisfied with the balance between the workload and your personal life ?**
1. Yes
 2. Partially
 3. No
- Q-26. Are you satisfied with the time duration of your job?**
1. Yes
 2. Partially
 3. No
- Q-27. Are you satisfied with your income?**
1. Yes
 2. Partially
 3. No

Appendix 6

Questionnaire for (pharmacy faculty) students

We appreciate your participation in the study in advance. Respondent's answers altogether without mention of name and with other data of participants of the study will be published in scientific literature. Survey is anonymous.

This present study is conducted within (among) pharmacy faculty students' to study peculiarities (features) of professional choice. Please circle your acceptable answer(s) or write your version answer(s).

Q-1. Indicate your age

1. From 17 to 20 years
2. From 21 to 25 years
3. From 26 to 30 years
4. From 31 to 35 years
5. From 36 to 40 years
6. From 41 to 45 years
7. From 46 to 50 years
8. 51 years and older

Q-2 Course

1. Bachelor I Course
2. Bachelor II Course
3. Bachelor III Course
4. Bachelor IV Course
5. Master student

Q-3. Gender

1. Female
2. Male

Q-4. Indicate your permanent place of residence

1. Tbilisi
2. Other city
3. District-region
4. Village

Q-5. When did you make your professional (occupational) choice?

1. Before I was 11
2. At the age of 11-12
3. At the age of 13-14
4. At the age of 15-16
5. At the age of 16-18
6. At the age of 19-20
7. At the age of 21-22
8. At the age of 23-25
9. At the age of 26-28
10. At the age of 29-30
11. At the age of 31-35
12. At the age of 36-40
13. At the age of 41-45
14. At the age of 46-50
15. Exactly before enrollment to the university

Q-6. What most of all influenced on your professional (occupational) choice? (Indicate only one answer)

1. Parents' advice (or will)
2. Teachers' advices
3. Worker-specialist's advice
4. Friends' advice
5. Relatives' or acquaintances' advice
6. This profession corresponds to my aspiration and inclination
7. Interest in profession

Q-7. How did you prepare for enrollment exams? (You can indicate several answers)

1. In the high school
2. Independently
3. I have passed pre-study training courses
4. I studied with tutor

Q-8. What underlying motivations did you have while selecting the given direction of education? (indicate no more than 5 answers)

1. A desire to obtain high-quality professional training
2. Prestige of specialty
3. The existence of abilities to this (the given) type of activity
4. Family tradition
5. A desire to develop own capabilities, aspirations, and inclinations
6. A desire to be included in a student community as a special social environment
7. A desire to expand horizons (desire to widen sense of vision)
8. A desire to extend carefree period of life
9. Opportunity to take high social position
10. Guarantee to be employed
11. A desire to get high level to material well-being (security)
12. The possibility to develop further social promotion
13. A desire to obtain self-respect in the eyes of others
14. A desire and interests to obtain certain circle of contacts with friends and acquaintances
15. Deferring from military service
16. A desire to have needful social well-being
17. Interest in a profession
18. A desire to be useful to people
19. Other (write namely which one)

Q-9. Are you satisfied with your professional (occupational) choice?

1. Yes, I am satisfied with my professional choice
2. In general, I am satisfied, but I have some doubts about the preciseness of my professional (occupational) choice
3. I am partly satisfied with my professional choice
4. I am mostly disappointed with my professional choice
5. I am not satisfied with my professional choice

Q-10. Please specify, to what degree are you familiar to separate areas of your professional activities

1. I am familiar very well
2. I am familiar in general terms
3. I am not familiar

Q-11. What is your interest in regard to your future work (workplace)? (You can indicate several answers)

1. Content (essence) of the work
2. Labor conditions, necessary equipment
3. The system of labor and rate of wage (salary of labor)
4. Peculiarities of team of collective, where I have to work
5. Employment opportunities
6. Demand for such specialist at the labor market

Q-12. How is your attitude towards learning?

1. I learn with great pleasure
2. I have indifferent attitude to learning
3. Learning is a burden to me

Q-13. Would you like to change your chosen specialty?

1. In case of Yes – move to question Q-14
2. In case of No - move to question Q-15

Q-14. What is the main reason for changing your direction of learning?

1. I understand that the given work is not interesting to me
2. Future work will not correspond to my aspiration and inclinations
3. I am not satisfied with the quality of education

4. I do not like the quality of teaching
 5. Other reason (indicate)
- Q-15. Do you know where to work after graduating?**
1. Yes
 2. No
 3. I know roughly, but it may be changed
- Q-16. Are you engaged in the search of your future work in specialty (training)?**
1. Yes
 2. No
- Q-17. Are you working currently?**
1. Yes, I am working in the peciality
 2. Yes, I am working, but not in the speciality
 3. No, I am not working
- Q-18. What kind of work would you like to have? (Indicate no more than 2 answers)**
1. Highly-paid work
 2. Work with possibility of self-improvement, self- development
 3. Work, which is needful for the society, other people
 4. The work, which allows to realize fully the received knowledge at the full extent
 5. Other (indicate)
- Q-19. How do you plan to find a job (to be employed) after graduation? (You may indicate several answers)**
1. Recommendations of friends, acquaintances, someone I know
 2. Offer from an employer
 3. Advertisements in mass media
 4. Recruitment agencies
 5. Private pharmaceutical activity
 6. Using the internet
 7. Other (indicate)
- Q-20. What is your intention after graduating university (indicate no more than 2 answers)?**
1. Working in the got specialty
 2. Continue postgraduate studies to getting PhD (doctoral) degree
 3. Working not in the got speciality
 4. Getting second higher education
 5. There are no definite plans yet
 6. Other (indicate namely which one)
- Q-21. What areas (spheres) of activities are the most attractive to you?**
1. Scientific-teaching
 2. Pharmacy- drugstore
 3. Wholesale pharmaceutical organization
 4. Administration bodies
 5. Pharmaceutical factory
 6. Analytical laboratory
 7. Work of medical representative
 8. Other (indicate)
- Q-22. In your opinion, at what level it is possible to cease education?**
1. After getting higher education
 2. Education should not be ceased
- Q-23. Evaluate factors, influencing on your professional development (evaluate each factor under 5-point scale system)**
1. Interesting and valuable work

1	2	3	4	5
---	---	---	---	---
 2. The favorable (prosperous) psychological climate within the colleagues' team

1	2	3	4	5
---	---	---	---	---
 3. Possibility of career development (growth)

1	2	3	4	5
---	---	---	---	---
 4. Professional training

- | | | | | | |
|------------------------------------|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| 5. Social importance of profession | | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| 6. Independence in the work | | | | | |
| | 1 | 2 | 3 | 4 | 5 |

Q-24. Select your supposed prospective monthly salary after graduation

1. Less than 100 \$
2. From 100 \$ to 200 \$
3. From 200 \$ to 300 \$
4. From 300 \$ to 400 \$
5. From 400 \$ to 500 \$
6. From 500 \$ to 600 \$
7. From 600 \$ to 700 \$
8. From 700 \$ to 800 \$
9. From 800 \$ to 1000 \$
10. From 1000 \$ to 1200 \$
11. From 1200 \$ to 1500 \$
12. From 1500 \$ to 1700 \$
13. From 1700 \$ to 2000 \$
14. Over 2000 \$
15. I do not know

Q-25-26. Please indicate occupation of your parents (indicate in each column)

Parents' occupation	
Q-25. Mother	Q-26. Father
1. Workers and employees (clerks) without higher education	1. Workers and employees (clerks) without higher education
2. Directors, managers, administrative employees	2. Directors, managers, administrative employees
3. Intellectuals and employees with higher education	3. Intellectuals and employees with higher education
4. Entrepreneurs, businesswomen	4. Entrepreneurs, businessmen
5. Military servant/police	5. Military servant/police
6. Pensioner	6. Pensioner
7. Unemployed, housewife	7. Unemployed

Q-27. Do you have secondary special education?

1. Yes (indicate)
2. No

Appendix 7

Questionnaire for young pharmacist specialists (up to 35 years)

We appreciate your participation in the study in advance. Respondent's answers altogether without mention of name and with other data of participants of the study will be published in scientific literature. Survey is anonymous.

This study is conducted within (among) young pharmacist specialists. The purpose of the study is to examine the adaptation process of a young pharmacist specialist in a drugstore (pharmacy) organization. Please circle your acceptable answer(s) or write your version answer(s).

Q-1. Education

1. Secondary professional
2. College
3. Higher
4. Postgraduate studies -PhD

Q-2. Information about the organization: type of organization

1. Pharmacy- drugstore
2. Pharmacy point- drugstore point
3. Hospital/clinic's pharmacy

Q-3. Period of work experience (total)

1. Up to 1 year
2. From 1 to 2 years
3. From 3 to 4 years
4. From 5 to 6 years
5. From 7 to 8 years
6. From 9 to 10 years
7. From 11 to 12 years
8. From 13 to 15 years
9. From 16 to 18 years

Q-4. When did you make your professional (occupational) choice?

1. Before I was 11
2. At the age of 11-12
3. At the age of 13-14
4. At the age of 15-16
5. At the age of 17-18
6. At the age of 19-20
7. At the age of 21-23
8. At the age of 24-25
9. At the age of 26-27
10. At the age of 28-30
11. At the age of 31-35
12. Exactly before enrollment to higher education institution
13. Other

Q-5. What most of all had influence on your profession (occupational) choice? (Indicate only one answer)

1. Parents' advices (or will)
2. Teachers' advices
3. Advice of a specialist (expert) of career guidance
4. The ability to obtain a profession in compliance with own aspirations and inclinations
5. There was nowhere to go
6. Dissatisfaction with the first education
7. Personal desire
8. Interest in profession
9. Other (indicate)

Q-6. What underlying motivations did you have while making your professional (occupational) choice (indicate no more than 5 alternatives)?

1. A desire to obtain high-quality professional training
2. Prestige of profession (specialty)

3. Existence of capabilities to the given type of activity
4. Family tradition
5. A desire to develop own capabilities, aspirations, and inclinations
6. A desire to be included in the student community as a special social environment
7. A desire to expand the horizons (acquisition in knowledge)
8. A desire to extend carefree period of life
9. Opportunity to take high social position
10. A desire to get a certain level of economic (material) well-being (security)
11. A possibility to further social advancement (promotion)
12. A desire to obtain self-respect among the surrounding people
13. A desire or interest to obtain certain circle of contacts (connections) with friends, acquaintances
14. Deferring from military service
15. A desire to have the necessary social well-being (benefits)
16. A desire to be useful in service of people
17. Guarantee to be busy
18. Interest in a profession
19. Other (write namely which one)

Q-7. Are you satisfied with your professional (occupational) choice?

1. Yes I am satisfied with my professional choice
2. I am partly satisfied with my professional choice
3. I have doubts with my professional choice
4. I am disappointed with my professional choice
5. I am not satisfied with my professional choice

Q-8. Are you satisfied with your job (work)?

1. Yes
2. Partially
3. No
4. Can not say

Q-9. Estimate the impacting factors, which influence on your work satisfaction (estimate each factor with 5-point scale system)

1. Correspondence of your qualification to work
1 2 3 4 5
2. Correspondence of nature of work to capabilities of personality
1 2 3 4 5
3. Existence of perspective for professional promotion
1 2 3 4 5
4. Possibility of the qualifications enhancement
1 2 3 4 5
5. Existence of high degree of responsibility for the result of work
1 2 3 4 5
6. Awareness about affairs of the company and affairs of the staff activity (colleagues' team)
1 2 3 4 5
7. Working conditions
1 2 3 4 5
8. The existence of a labor contract
1 2 3 4 5
9. Working regimen (schedule)
1 2 3 4 5
10. Salary
1 2 3 4 5
11. Existence of benefits (incentives) scheme for employees
1 2 3 4 5
12. Support and assistance of a chief (manager)
1 2 3 4 5
13. Direct relations with chief (s)
1 2 3 4 5

- | | | | | | |
|---------------------------------------|---|---|---|---|---|
| 14. Relations with colleagues | 1 | 2 | 3 | 4 | 5 |
| 15. Possibility to career enhancement | 1 | 2 | 3 | 4 | 5 |

Q-10. What methods have you applied in the search for job? (You can indicate several answers)

1. Recommendations of friends, acquaintances and someone I know
2. Offer from an employer
3. Advertisements in mass media
4. Recruitment agencies
5. Private pharmaceutical activity
6. Using the internet
7. Other (indicate)

Q-11. How much time did you need to find a job?

1. Up to 1 week
2. Up to 1 month
3. Up to 3 months
4. Up to 6 months
5. Up to 9 months
6. Up to 1 year
7. Up to 2 years

Q-12. How long do you need for adaptation under the conditions of a new job position?

1. Up to 1 month
2. Up to 3 months
3. Up to 6 months
4. Up to 9 months
5. Up to 1 year
6. More than 1 year

Q-13. Choose major important difficulties which you met during your professional adaptation (Indicate several alternatives)

1. The lack (shortage) of the professional knowledge
2. The lack (shortage) of special skills (basis of marketing, computer knowledge, etc.)
3. Difficulties in acclimatization within the collective (colleagues team)
4. Difficulties in relationship with a chief management (leadership)
5. Non-compliance (non-conformity) of a job with own ideas (views)
6. Or other (indicate)

Q-14. In your opinion, which forms of professional assistance are the most effective while adaptation of a young specialist? (You can indicate several alternatives)

1. Work with a mentor (instructor)
2. Discussion of work of young employees within the colleagues' team
3. Individual (personal) conversation
4. Existence of special programmes, trainings on professional orienteering
5. Other (indicate)

Q-15. What time did you need to master (acquire) professional skills?

1. During 1 month
2. During 2 months
3. During 3 months
4. During 6 months
5. During 9 months
6. During a year
7. I have not acquired yet

Q-16. How long did you need assistance of colleagues in your work?

1. Up to 1 month
2. Up to 2 months
3. Up to 3 months
4. Up to 6 months
5. Up to 9 months

6. Up to 1 year
7. It will be needed after adaptation

Q-17. To what extent have you realized your professional capabilities, skills and habits?

1. To the full extent
2. Partly, more than 50% of own potential
3. Partly, less than 50% of own potential
4. Can not answer

Q-18. Evaluate factors influencing in your professional development (evaluate each factor under 5-point system)

- | | | | | | |
|---|---|---|---|---|---|
| 1. Interesting and valuable work | 1 | 2 | 3 | 4 | 5 |
| 2. The favorable (prosperous) psychological climate within the colleagues' team | 1 | 2 | 3 | 4 | 5 |
| 3. The possibility of career (growth) development | 1 | 2 | 3 | 4 | 5 |
| 4. Professional education (training) | 1 | 2 | 3 | 4 | 5 |
| 5. The social importance of profession | 1 | 2 | 3 | 4 | 5 |
| 6. Independence in work | 1 | 2 | 3 | 4 | 5 |

Q-19. How often have you changed workplace ?

1. Never
2. 1 -2 times
3. 3-4 times
4. 5-6 times
5. More than 6 times

Q-20. Would you like to leave your profession?

1. Yes
2. No
3. I have thoughts

Q-21. What do you think about the knowledge you lack or not enough for successful work? (You can indicate several answers)

1. Pharmacognosy
2. Pharmaceutical organization and Economics and Pharmaceutical business
3. Pharmacy Management and Pharmaceutical Marketing
4. Pharmacology
5. Pharmachemistry
6. Pharmacotherapy
7. Drug technology (Technology of medicines)
8. Toxicology
9. Clinical Pharmacy
10. Pharmaceutical care
11. Pharmaceutical Analysis
12. Toxicological Chemistry
13. Pharmacokinetics
14. Pharmaceutical Technologies
15. Nutrition
16. Pharmaceutical cosmetics and perfume
17. Social Pharmacy and Public Health
18. Computer Technology
19. Pharmaceutical Information

Appendix 8

Informed consent form of respondents

Informed consent form to participate in an anonymous survey.

I agree to participate at anonymous survey. I agree that my answers without mention of my name together with other data of participants of the study will be published in scientific literature. Survey is anonymous.

Respondent's Signature/_____

Date_____