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Psychological and Pedagogical Conditions of Multicultural Competence of Future Specialists in Medical and Pharmaceutical Industry

In modern conditions of integration into all areas of human activity, employees of medical and pharmaceutical industry must be prepared to communicate with foreigners, to have thorough knowledge of world's most modern scientific achievements, to be able to inform the patient about the traditions of Health preservation in different regions of the world, to make an idea of properties of the foreign pharmaceutical product, to learn and implement international experience in providing medical provision for population. But today we can say that there is a contradiction between deepening and expansion of multicultural environment and unpreparedness of students for these changes which makes the topic of the research actual.

Modern psychological and educational research highlights approaches to determining the content of the concepts of «competence» and «multicultural competence,» examine intercultural subjects of educational process (Ivanyuk [1], Yaks [8] and others), the ways of forming multicultural competence of teachers (Kuzmenko, Goncharenko [2], Lutaieva [3, 4] and others), the method of teaching intercultural communication (Sadohin [6] and others). To investigate the tolerance, the questionnaire «tolerance index» developed by Soldatova [7] can be useful. The method for determining the social distance between ethnic groups was developed by scientists of Kyiv International Institute of Sociology on the basis of Bogardus' scale [5]. Despite the abundance of research on multicultural education, a systematic review of psychological and pedagogical conditions for formation of multicultural competence of future specialists in the medical and pharmaceutical industry is absent in scientific journals.

The purpose of the article is to highlight the psychological and pedagogical conditions for multicultural competence formation of future specialists in medical and pharmaceutical industry by studying the scientific literature and empirical research data analysis.

Modern medical and pharmaceutical education is received in three stages. They include undergraduate medical education, postgraduate medical education, continuing professional development. Unfortunately, multicultural competence is not recorded in the educational qualification characteristics of future employees of medical and pharmaceutical profile, while training at the undergraduate stage should be held with considering the integration of psycho-pedagogical and professional component of continuous professional education.

Ukrainian scientists analyzed international approaches to the definition of «multicultural competence» concept. It is established that Thomas defines multicultural competence as the ability to «help shape the process of intercultural cooperation to avoid or contextualize confusion, and at the same time create opportunities to address common challenges in a way that is acceptable and productive for all participants» [1, p. 142]. Scheglova considers multicultural competence as a complex, personal quality that is formed in the process of training on the base of tolerance [1, p. 144].

According to Kuzmenko and Goncharenko, multicultural competence is the ability of the individual to live and work in a multicultural environment [2, p. 48]. Ivanyuk understands multicultural competence

as an ability to change the knowledge, attitudes and behavior so as to be flexible and open to other cultures. In the structure of multicultural competence the researcher identifies knowledge (of foreign languages and culture of the country, the processes of migration and integration, the concept of cultures), skills (communication, conflict management, ability to solve critical situations, the strategy of working with culture shock) abilities (observation, awareness, adequacy, self-reflection, the capacity for empathy, flexibility, openness, tolerance) [1, p.145].

Most researchers identify three components in the structure of multicultural competence of a future specialist, namely: cognitive; value and motivational; action-behavioral [1]. Scientists connect the concept of «multicultural competence» with the term «tolerance» [8, p. 145]. Tolerance (from Lat. Tolerantia – patience) is recognition of other's right to respect for their personality and identity [8, p. 146]. It is important to identify the psychological and pedagogical conditions for formation of multicultural competence, meaning the features of organizing the educational process that determine the results of training, education and human development and objectively provide the ability to achieve them. To create a diagnostic tool for monitoring the process of formation of multicultural competence of future specialists it is advisable to turn to established by scientists diagnostic methods that have been tested and confirmed their validity and reliability. First of all, we mean rapid questionnaire «Index of Tolerance» by Soldatova and a modified version of the social distance scale by Bogardus.

During the period from May to October 2014 we conducted a survey among full-time and distance learning students of National Pharmaceutical University (Kharkiv), who study at the «Pharmacy» specialty. It should be noted that external students during the survey already had higher medical education. The total number of respondents is 198 people, including 118 women and 80 men. The sample included 60 students aged from 17 to 20 years, 90 students aged from 20 to 30 years and 48 students aged from 30 to 40 years. Students who participated in the survey, are residents of Kharkiv, Lugansk, Donetsk, Dnipropetrovsk, Sumy, Chernihiv, Poltava, Odessa, Kirovograd, Mykolaiv, Zaporizhya, Vinnytsa, Zhitomyr, Kyiv and Crimea regions. The sample is representative for the students of higher educational institutions (HEIs) of pharmaceutical and medical profile.

The level of tolerance of the pharmacy students was examined by the method of G.Soldatova. This questionnaire consists of statements, which reflect the general attitude to the surrounding world and other people

and social attitudes in different areas of interaction where the apparent tolerance and intolerance rights are shown. The questionnaire contains three subscales: 1) «ethnic tolerance» – allows to determine the relation of a person to members of other ethnic groups and units in the field of cross-cultural interaction (the maximum score is 42); 2) «social tolerance» – reveals tolerant and intolerant manifestations in relation to different social groups as well as individual settings for certain social processes (the maximum score is 48); 3) «tolerance as a trait of personality» – diagnoses personality traits, beliefs, attitudes that define man's relationship to the surrounding world (the maximum score is 42). The evaluation of the tolerance level was carried out as follows: low level – 22-60 points; average level – 61-99 points; high level – 100-132 points. We conducted processing, analysis and interpretation of the data at the final stage of the study, which enabled us to make empirically grounded conclusions about the level of tolerance among students of different age groups (see. Table 1).

The indicators of all kinds of tolerance of students are average, but

Table 1.

Indicators of tolerance index of pharmacy students (by Soldatova's questionnaire)

Age group	Tolerance index, in points			
	ethnic	social	as a personality trait	general
Up to 20 years	26,9	27,9	29,7	84,6
20-30 years	25,3	27,8	29,3	82,3
30-40 years	25,8	27,3	26,6	83,4

respondents of 20-30 years have the lowest indicator of ethnic tolerance – 25.3 points, and representatives of the age group of 30-40 years have the worst indicator of tolerance as a personality trait – 26.6 points. The highest index of overall tolerance stands for the students under the age of 20 years, namely 84.6 points. The quantitative distribution of students in low, medium and high levels of tolerance is shown in Table. 2.

Thus, the empirical study of tolerance showed that the vast majority of students (92.9%) have an average level of tolerance; high level of tolerance was obtained by 4.04% of the respondents, and low – by 3.03%. Our data

Table 2.
Distribution of respondents by level of tolerance (by Soldatova's questionnaire)

Tolerance levels	The amount of students, in %		
	Up to 20 years	20-30 years	30-40 years
Low	3,3	4,4	0,0
Middle	90,0	92,2	97,9
High	6,6	3,4	2,1

shows that the acquaintance with the method of determining the social distance between ethnic groups contributes to self-identification of future specialists of medical and pharmaceutical industry. Students received a job where using Bogardus' scale they had to try to test their index of social distancing concerning representatives of certain nationalities. This method allows to determine the integral index of national distancing (IIND) – the average value in respect of all ethnic groups. The social distance between ethnic groups is understood as the degree of preference for a national group of different ethnic groups as partners in interpersonal communication and readiness to contacts with specific ethnic groups. Bogardus' scale is a series of statements of this kind: «I agree to admit a representative of the ethnic group ...», as a family member so that the person him/herself, and his/her children could theoretically get marriage to him/her, see as relative, close friend, neighbor, co-worker, the inhabitant or visitor of Ukraine. It is also possible to say: «I would not like to let ... into Ukraine».

The students determined their index of social distancing, integral index of national distancing and at the same time trying to make self-esteem, compare reality with their system of norms and values, choose a certain role, position in society, and that are the stages of the process of self-determination.

Using Bogardus' scale revealed the following result. In respect of such ethnic groups as Belarusians, Poles, Russians, French, tolerance is shown (representatives agreed to allow this group to a circle of friends and neighbors). With respect to the Americans, Georgians, Jews, Crimean Tatars, Moldovans, Germans, Romanians, Serbs, Slovaks, Hungarians, Czechs the situation of isolation was found (only agreed to see them among colleagues and residents of Ukraine). Representatives of such

Table 3.**The results of a students survey by the Bogardus' scale**

National distancing of Ukrainians from	The index of national distancing			Total
	Students of age			
	up to 20 years	from 20 to 30 years	from 30 to 40 years	
Azerbaijanis	4,6	5,4	5,4	5,1
Americans	2,9	4,9	4,8	4,2
Arabs	5,3	5,7	5,4	5,5
Afghans	5,4	5,7	5,6	5,6
Belarusians	3,3	3,3	2,8	3,1
Georgians	4,2	4,8	4,6	4,5
Jews	4,1	5,0	4,2	4,4
Chinese	4,6	5,4	5,2	5,1
Crimean Tatars	4,4	4,2	4,3	4,3
Moldovans	4,1	5,3	4,6	4,6
African Americans	4,1	5,5	5,4	5,0
Germans	3,4	4,8	4,4	4,2
Poles	3,2	4,3	4,4	3,9
Russians	2,8	3,2	2,4	2,8
Romanians	4,1	5,0	4,7	4,6
Serbs	4,3	5,3	5,0	4,9
Slovaks	3,8	4,9	4,2	4,3
Turks	4,8	5,4	5,1	5,1
Hungarians	3,6	5,1	4,7	4,5
Ukrainians	1,3	2,0	1,7	1,6
Russian-speaking Ukrainians	1,5	2,1	1,5	1,7
Ukrainian-speaking Ukrainians who live in other countries	2,0	2,5	1,9	2,1
French	3,3	4,4	4,3	3,7
Gypsy	6,2	6,2	6,0	6,1
Czechs	3,4	4,8	4,3	4,2
Chechens	5,5	6,1	5,9	5,8
The integral index	3,8	4,6	4,3	4,2

ethnic groups as Azeris, Arabs, Afghans, Africans, Chinese, Turks, Chechens, are in a situation of isolation; Respondents, as average, did not want to see them as residents of Ukraine. The attitude of students surveyed to Roma representatives can be defined as xenophobia. It should be noted that 50.5% of respondents showed an extreme degree of intolerance (xenophobia), ie, in this case, a total ban on entry to the country in respect of a particular ethnic group was chosen. Analysis of xenophobia in different age groups showed the following results: extreme degree of intolerance was found among 35% of students under the age of 20 years, 57.7% of students aged 20 to 30 years and 56.3% of students aged from 30 years. The overall index of national distancing among students was 4.2, that is an average for all other ethnic groups (except Ukrainians and Russians) to be in a typical attitude of isolation (see. Table. 3).

Analysis of the index of national distancing received by Bogardus' scale shows that students in different age groups have unequal attitude towards people of other nationalities. The greatest tolerance is shown by the students under the age of 20 years, the worst – college students from 20 to 30 years. The findings suggest the need for creating the psychological and pedagogical conditions for multicultural competence formation of students in the educational environment of universities.

Multicultural education of future workers in the health sector, in our opinion, primarily promotes the study of foreign languages, psychological, educational, historical and cultural subjects. We believe that an important pedagogical condition of multicultural competence formation of youth is including courses and topics related to the study and analysis of the nature of multicultural environment, and incorporating the method of forming multicultural competence into the educational process of training the future specialists of medical and pharmaceutical industries.

Sadoin A. highlights several proven ways to prepare the individual to cross-cultural interaction. These include didactic teaching methods (education, guidance and modeling) and empirical – training. Education means gaining knowledge about the culture. Orientation – providing recipes behavior in situations that most often occur. Simulation – teaching method that focuses on gaining knowledge through research of artificial models (conventional designs, patterns and processes) that reflect the intercultural communication. Training as a method of training sessions is the program of various exercises systematically carried out in order to develop and improve skills in any area of human activity [6, p. 250-251].

Our experience shows that training develops the ability to listen to the interlocutor, keeps yourself confidently with others, publicly perform, to build an effective model of relations with partners in communication, prevent and eliminate conflicts constructively, to overcome those habits and mannerisms that impede communication. It is useful to engage professionals who have experience with foreigners into the communication training. As part of the extracurricular educational work it is important to hold cultural events such as weeks of culture, festivals and quizzes. The formation of value orientations of future specialists by organizing educational tourism is also effective.

Effective means of forming multicultural competence of specialists is to organize real interaction of students with outstanding domestic and foreign scientists, representatives of world cultures within webinars, educational telecommunication projects.

It is also important for the teacher of higher medical and pharmaceutical school to be multicultural, as the teacher should also take into account the experience of the outstanding teachers of the past for effective intercultural communication. A great example in the process of intercultural communication for modern teachers can be lives and careers of the founders of the national medical and pharmaceutical education of the late nineteenth – early twentieth century (Beketov, Valyashko, Grube, Krasnov, Danilevsky, Hirschman, etc.). The study of historical and pedagogical literature allows to claim that the scientists' articles were published in foreign scientific journals and their long creative journeys abroad provided an opportunity to get acquainted with the system of teaching in European universities, contributed to the formation of pedagogical skills and introduction of advanced foreign teaching experience in higher education [3]. Understanding the value and intercultural adjustment by Kharkiv teachers of higher medical and pharmaceutical schools of imperial period, their interest in the results of the latest research in foreign scientific and educational centers encouraged future medical and pharmaceutical experts to study directing special scientific literature in translation as well as in the original.

In the reviews of medical scientists of Kharkiv University 19th – early 20th century for students' scientific works, the thorough study of literature that was published in French, German and English in relation to a particular issue was evaluated very positively [4].

Nowadays, the teachers' knowledge acquired during international travel can promote the ability to work effectively with other countries

among students. For this purpose training teachers abroad, participation of teaching staff in international educational and research projects, promoting their own education services at the international market is effective. Lectures of teachers from other countries within exchange programs of teachers, students, postgraduates are effective. It is becoming more and more actual to read lectures for Ukrainian undergraduates, graduate students and interns in foreign languages.

An example of setting up cross-cultural communication with foreign colleagues can serve educational and professional activities, which in the years 2011-2014 were attended by scientific and teaching staff of the National Pharmaceutical University. These are international congresses and forums, exhibitions, fairs, trainings, seminars, organized in Austria, Italy, Poland, France, Turkmenistan, Kazakhstan, Tunisia, China and other countries [9].

Analysis of psychological and educational literature suggests that there are different approaches to defining the essence of multicultural competence. We agree with the statement of scientists that multicultural competence should be seen as the ability of the individual to live and work in a multicultural environment.

In our opinion, the unity of external teaching conditions and psychological factors of personality formation provides the formation of multicultural competence of the specialist. The internal factors of development are connected with the process of self-determination of the student.

The study reveals that students of different age showed unequal attitude towards people of other nationalities. The greatest tolerance is shown by students under the age of 20 years, the worst – by college students within the age from 20 to 30 years. This phenomenon can be explained by long orientation of the national system of training future specialists for the so-called educational paradigm of knowledge.

Research shows that the formation of multicultural competence of future employees in medical and pharmaceutical industry should be provided already during training at the university for undergraduate stage of vocational education.

We believe that the new generation of educational standards within the branch of knowledge “Medicine” and “Pharmacy” has to orient teachers and students to focus on understanding the nature of multicultural competence, put forward a number of requirements to professional knowledge and skills of the specialist who will be able to work in a

multicultural environment. Preparing to work in multicultural conditions should be formed upon the content of education of future specialists and find reflection in some special courses, in diverse systemic relationship among courses, research work of students and graduate students.

We consider it necessary to organize systematic work focused on upbringing intercultural tolerance as a professionally meaningful personality trait of a future specialist, providing for strengthening the role of the teacher as a key figure of modern education system and the complexity of his/her professional functions as a mediator in intercultural communication.

The training of future specialists for intercultural interaction is possible, subject to communication trainings. Extracurricular educational work with students (weeks of culture, festivals, quizzes, educational tourism, introduction of appropriate pedagogical traditions of higher medical and pharmaceutical schools) will also help prepare future workers of medical and pharmaceutical industry for life and professional work in conditions of pluralism of cultures.

Thus, external pedagogical conditions for multicultural competence formation are appropriate direction of educational content, the willingness of teachers of higher medical and pharmaceutical schools to operate in a multicultural education and introduce appropriate teaching methods and traditions of training to the educational process of universities. Internal psychological conditions are the adoption of tolerance as a value by students, formation of standards of tolerant behavior and awareness of its benefits in the multicultural environment.

For the research perspective, we see further wide comprehensive study of different ways to prepare future workers of medical and pharmaceutical industry for cross-cultural interaction.

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Abstracts

НАТАЛІЯ АЛЬОХІНА, ТЕТЯНА ЛУТАЄВА. Психолого-педагогічні умови формування полікультурної компетентності майбутніх фахівців медико-фармацевтичної галузі. У статті на основі вивчення наукової літератури та аналізу даних емпіричних досліджень висвітлено різні підходи щодо визначення поняття «полікультурна компетентність», охарактеризовано психолого-педагогічні умови формування полікультурної компетентності майбутніх фахівців медико-фармацевтичної галузі.

Ключові слова: полікультурна компетентність, толерантність, студент, фахівець, медико-фармацевтична галузь, освітній стандарт.

NATALIA ALOCHINA, TETIANA ŁUTAJEWA. Psychologiczno-pedagogiczne warunki kształtowania kompetencji wielokulturowej przyszłych specjalistów w dziedzinie medycyny i farmacji. W artykule na podstawie analizy literatury teoretycznej przedstawiono różne podejścia do definicji pojęcia «kompetencje wielokulturowe», opisano psycho-pedagogiczne warunki kształtowania wielokulturowych kompetencji przyszłych specjalistów z branży medyczno-farmaceutycznej.

Słowa kluczowe: kompetencje wielokulturowe, tolerancja, student, branża medyczno-farmaceutyczna, standard kształcenia.

НАТАЛІЯ АЛЬОХІНА, ТАТЬЯНА ЛУТАЄВА. Психолого-педагогические условия формирования поликультурной компетентности будущих специалистов медико-фармацевтической отрасли. В статье на основе изучения научной литературы и анализа данных эмпирических исследований освещены разные подходы к определению понятия «поликультурная компетентность», охарактеризованы психолого-педагогические условия формирования поликультурной компетентности будущих специалистов медико-фармацевтической отрасли.

Ключевые слова: поликультурная компетентность, толерантность, студент, специалист, медико-фармацевтическая отрасль, образовательный стандарт.

NATALIA ALJOCHINA, TATIANA LUTAIEVA. Psychological and pedagogical conditions of multicultural competence of future specialists in medical and pharmaceutical industry. The article highlights the different approaches to the definition «multicultural competence». On the base of nonfiction and empirical research it was allocated the main psychological and pedagogical conditions of multicultural competence of future specialists in medical and pharmaceutical industry.

Key words: multicultural competence, tolerance, student, professional, medical and pharmaceutical industry, educational standard.