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TÍTULO: Motivación de estudiantes extranjeros para estudiar en escuelas de medicina superiores en Ucrania.

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RESUMEN: Hoy en día, las escuelas superiores de medicina de Ucrania tienen demanda entre los estudiantes extranjeros, cuya composición nacional está cambiando en un corto período de tiempo. En consecuencia, los motivos para la admisión de los estudiantes cambian. El documento presenta los resultados de la investigación realizada en el año académico 2017-2018 sobre la base de las facultades médicas de la Universidad Médica Nacional Memorial Pirogov, Vinnytsya y la Universidad Médica Nacional Ivano-Frankivsk. Se han identificado los motivos que llevaron a los estudiantes a abandonar sus países de origen y estudiar en el extranjero, en particular en Ucrania, así como los motivos para elegir una profesión médica. Además, se determinaron las preferencias de carrera de los estudiantes de segundo año.

PALABRAS CLAVES: motivación de elección professional, estudiantes de medicina extranjeros, opciones de carrera, motivación para estudiar en el extranjero, razones para elegir el país.

TITLE: Foreign student motivation for studying at High Medical Schools in Ukraine.

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ABSTRACT: Today, Ukrainian high medical schools are in demand among foreing students of very different countries. Consequently, the motives for students' admission change. The paper presents the results of the research conducted in the 2017-2018 academic year on the basis of medical faculties of National Pirogov Memorial Medical University, Vinnytsya, and Ivano-Frankivsk National Medical University. The reasons that made students leave their home countries and study abroad, in particular in Ukraine, as well as the motives for choosing a medical profession, were identified. In addition, the career preferences of the second-year students were determined.

KEY WORDS: motivation of professional choice, foreign medical students, career choice, motivation to study abroad, reasons for country choice.

INTRODUCTION.

The investigation of student motivation for studying in medical educational institutions, and entry motives in particular, is common in many countries throughout the world (Latin America [15], Asian countries [1], [10], [11], [12], [14], European countries [4], [6], [7], etc.).

Scientists study various factors that influence the professional choices by future physicians, in order to analyze the situation that has developed over a period and predict the future student admission. Thus, numerous approaches to the study of motivation for medical education are observed, different groups of motives and factors are distinguished; for example, one can find the division of motivational factors into: 1) Scientific, humanitarian and societal factors [5].

2) Academic performance, economical/prestige, social/altruist [15].

3) Intrinsic, extrinsic and interpersonal factors [2].

It is worth mentioning, that motivation types may be a bit different in papers of some scientists, but in content almost the same or partially similar; for example, "social/altruist" [15] factors may equate to "humanitarian factors" [5], "economical prestige" [15] – to "societal" factors [5], "academic performance" [15] – to "scientific" factors [5].

A certain number of papers study motivation of medical students abroad. Publications in this area deal with the scientific issues related to the students of two different groups: 1) students who have come to study from other countries (S. J. Hawken, M. A. Henning, J. Huber, D. Huhn, I. M. Karpinets, etc.); 2) students who have left or want to go to study in other countries (A. Findlay, A. A. Haghdoost, M. Ghazi, F. Khimani, R. King, B. Sawaf, F. Smith, N. A. Syed, etc.).

Students of the first and second groups are known to be called *international students*. An interesting fact is that this name is widely used all over the world, but in the post-Soviet countries, in Ukraine in particular, for the description of students of the first group the expression *foreign students* is often used in scientific literature ([3], [9], [13], etc.

In general, it is worth paying enough attention to the issue of foreign students entering high medical schools in Ukraine. In case the authors define such reasons, they are related to life experience, reflections and own observations of authors without statistically verifiable information, even with the transfer of the results of the study based on Ukrainian students to foreign students [13]. Some of these motives (high-quality education, low tuition fees compared to Western countries, not so high living expenses) can be considered advertising for foreign students on various educational sites and news sites in the Ukrainian segment of the Internet. Among the known reasons found in articles are the escape from the war in the homeland [13], the requirements of knowledge and skills for foreign

students on admission are comparatively low [13], the chance to move to more developed countries [3], the attitude of the population of the country to foreign citizens [3], and the climate of the country [3].

I. M. Karpinets [9] investigated the selection motives of foreign students for Ukraine as a country to study and the reasons for choosing a particular Ukrainian educational institution (Ivano-Frankivsk National Medical University). Low tuition fees and other graduates' recommendations are among the main reasons. However, the type of questions (open or closed) was not specified in the article. The questionnaire was given to students during the fifth year [9]. It means that not everyone who started doing the first year continued studying until the fifth one. Thus, the assessment of the situation with regard to the reasons for the admission of foreign students is not complete and requires research that is more detailed.

DEVELOPMENT.

The purpose of our study was to determine the motives of medical international students for studying in Ukraine, the reasons for choosing a medical profession, also the reasons for choosing a country and the university.

Materials and methods.

The research was conducted in two steps in the academic year of 2017-2018. The first stage took place in the beginning of 2017-2018 academic year and aimed at identifying possible reasons for studying of international students at Ukrainian educational institutions.

Questionnaires contained open questions. The sample consisted of 178 second-year students of the medical faculty of the National Pirogov Memorial Medical University, Vinnytsya. The second stage was held in the second semester in the 2017-2018 academic year. It included first-year and second-

year medical students at the National Pirogov Memorial Medical University, Vinnytsya (VNMU) and the Ivano-Frankivsk National Medical University (IFNMU).

The second sample comprised 320 students, 247 second-year students (205 students from VNMU and 42 students from IFNMU) and 73 first-year students (IFNMU). Questionnaires contained closed questions with answer options that took into account the students' answers from the first stage of the study, the results of the literature review and the own pedagogical experience. Some of the questions had the answer "another answer" in case some options have not been taken into account. Each respondent could choose several answers to one question.

The age of students (M \pm SE) from sample I is (20.02 \pm 0.16) years, from sample II – (20.63 \pm 0.18) years. Distribution of students by sex from sample I / sample II is the following: female – 41.6% (74/178) / 42.2% (135/320), male – 58.4% (104/178) / 57.8% (185/320) Distribution of international students by home countries is given in Table 1.

Country	Sample I		Sample II		Country	Sample I		Sample II	
	%	N from	%	N from		%	N from 178	%	N from 320
		178		320					
Africa	47.8	85	39.7	127	Europe	4.5	8	6.9	22
Ghana	7.3	13	7.5	24	Bulgaria	0	0	1.3	4
Kenya	5.6	10	4.4	14	England	1.7	3	0.9	3
Libya	0	0	0.3	1	Foland	0	0	2.8	9
Morocco	0	0	1.9	6	Finland	0	0	0.6	2
Namibia	2.8	5	2.2	7	Sweden	2.8	5	1.3	4
Nigeria	24.7	44	17.2	55	Middle East	18.5	33	10.9	35
Somalia	1.7	3	0.6	2	Egypt	15.6	28	7.5	24
South Africa	0.6	1	0.6	2	Kurdistan	0	0	0.6	2
Swaziland	0.6	1	1.3	4	Kuwait	0.6	1	0	0
Zambia	0	0	0.6	2	Lebanon	0	0	0.3	1
Zimbabwe	4.5	8	3.1	10	Palestine	1.7	3	1.6	5
Asia	25.3	45	37.2	119	Qatar	0	0	0.3	1
India	25.3	45	37.2	119	Turkey	0	0	0.3	1
North America	0	0	0.9	3	Yemen	0.6	1	0.3	1
USA	0	0	0.9	3	No country	3.9	7	4.1	13
South America	0	0	0.3	1	mentioned				
Ecuador	0	0	0.3	1	Total	100	178	100	320

Table 1. Samples distribution across home countries.

Before the start of the survey, all participants were informed about the purpose of this study. All respondents were assured of their data confidentiality; the questionnaires were anonymous. Participation in the survey was voluntary. Descriptive data contains information about the year of study, university, gender and age of the students, their home countries.

Data processing was performed using the Microsoft Excel 2013 table processor.

Methods used were induction, deduction, analysis, synthesis, comparison, generalization, graphical, statistical.

Results and discussion.

In the first survey, medical students of the course II provided detailed answers to questions "Why did you choose to study in Ukraine?", "Why did you choose to study in a medical high school?", "Did you want to become a doctor from the beginning of your study? Why?", "Do you still want to be a doctor after the first course is over?". The variety of responses gave an opportunity to look more broadly at the problem under investigation and group the responses according to reasons that are used in the second survey.

The answers that students have given are as follows:

1) "Because around the world, especially in African countries Ukraine is highly recommended for medical studies"; "I heard back in the days Ukraine used to be the best in medicine"; "Because studying in Ukraine is more useful and effective than in my country"; "Good teaching methods"; "Ukraine has high standard of education"; "I wanted to experience medical practice in Eastern Europe"; "I have seen good doctors being trained here and they are really good so I decided to come to be trained to be good"; "Because of the availability of resources in Ukraine for understanding of medicine"; "It has a more practical approach than my country" etc.

2) "Because to study medicine in my country is difficult"; "Because of few medical universities in my countries"; "Because my country's medical schools have steep demands"; "I did not meet the

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expected outmark for medicine in my country"; "It's easier than in other countries"; "I want to achieve my goal with minimal stress" etc.

The two groups of answers that have been defined are relatively opposite for reasons, but the frequency of similar responses is quite high. On the one hand, Ukrainian high medical schools are known to provide good medical education. On the other hand, modern admission requirements for foreign entrants are rather low, which affects the quality of their education (without taking into account other contemporary organizational and pedagogical aspects).

Among the students' open responses, the reasons for security seek have been expected. However, the frequency of such responses in the 2017-2018 academic year was extremely low (3/178). In contrast to this, in 2010-2013, in particular at VNMU, the number of students who came to study in Ukraine with the aim to escape from hostilities in their countries was obviously higher. At that time, "escape from the war" was the main reason for some students from the Middle East.

The percentage of students from different countries is constantly changing, which also affects the motives of the entry of foreigners and the choice of the country to study. In the 2017-2018 academic year, the number of students from the countries where military operations are conducted and from post-Soviet countries (Azerbaijan, Uzbekistan, Tajikistan, etc.) is significantly smaller or there are even no such students in the two selected medical educational institutions of Ukraine. On the contrary, there are many students from India. These changes have led to the reduction or absence of Russian-speaking groups and the growth of English-speaking student groups in the first course.

On the background of such changes, many open responses were pleasantly surprising, in which students described their own conscious choice to purposefully study and work in the medical field. We especially want to draw attention to the answers to the question "Do you still want to be a doctor after the first course is over?" which the students understood differently, but answered in the same context:

1) "Yes for sure, it's a long tiring way, and it requires effort and hard work but worth it"; "Yes, I have a higher motivation in learning..."; "Of course, it's my dream and I have to finish what I started"; "Nothing can change my mind about that"; "I want to complete my 6 year course and become a successful doctor", etc.

2) "No, because only first course is not sufficient for a good doctor"; "No, because it's not possible to be a doctor immediately after the beginning of study"; "No, I believe, it is not enough yet it needs a lot of time, it's about human life, and it needs proper, accurate, full preparation and hard-working, no mistakes allowed. You should exactly know what you are doing"; "I think it is a stupid question, how can I treat a patient in one-year experience", etc.

The second closed-question survey gave more information about the motives of students. According to the results, 82.5% (264/320) students plan to work as doctors after graduation, 14.7% (47/320) indicated that their plans might change; 2.8% (9/320) noted that their plans did not include the work of doctors. In addition, medical career choice was made with an emphasis on the profession itself – 82.8% (265/320), university – 13.1% (42/320), and country – 4.1% (13/320). Thus, the vast majority (4/5) of foreign students who has come to study in medical high schools in Ukraine are determined to receive a doctor's diploma and work in the medical sphere. Another part of students who lack a sufficient level of professional motivation may not go to the end of the sixth year. From our own experience, it is known that the greatest part of foreign students is expelled from the university during the first years of study.

Among the reasons for a medical profession choice there is the desire to help others, which is often based on student passion since childhood and his/her dream, fig. 1 and fig. 2. Some reasons mentioned by students and noted in the paragraph "another answer" are as follows: "to achieve my ambition", "medicine amazed me", fig. 1, "way of life", "medicine chose me, I did not choose it", "I

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have a great opportunity to travel", "this opportunity to prove myself for myself", fig. 2. They are also associated with interest and passion for medicine.

Fig. 1. Distribution of students' answers to the question "What is the doctor's profession for you?".



Fig. 2. Distribution of students' answers to the question "Why did you choose to study at a

medical university?".



Reasons for choosing to study at a medical university

It is also worth noting that among students there are those who have already studied several years at another high medical school and then entered a new university again – 2.5% (8/320), as well as those who already have a diploma from medical specialty and arrived to improve his/her professional skills in our country – 2.5% (8/320). Similarly, as some students – 9.7% (31/320) – plan to move to study in another country and complete their studies there after studying in Ukraine and obtaining basic medical knowledge and skills. At the same time, 85% (272/320) of the first and second-year students are going to complete their studies at the medical university they are currently studying.

The decisions of future physicians (or their relatives) regarding the choice of Ukraine as a country for learning were based on the following reasons:

- 1) Good reviews of friend(s), acquaintance(s) -40.6% (130/320).
- 2) Moderate tuition fee -29.1% (93/320).
- 3) Good medical education -28.1% (90/320).
- 4) Low cost of living 27.8% (89/320).
- 5) Diploma with international recognition -13.4% (43/320).
- 6) Safe situation (political, religious, or others) -12.5% (40/320).
- 7) Diploma is certified in the students' home country -11.3% (36/320).
- 8) Friendly people 9.4% (30/320).
- 9) An opportunity to experience medical practice and work with real patients -8.8% (28/320).
- 10) Good climate, nice place 6.9% (22/320) %.
- 11) Insignificant requirements for admission to university -5.9% (19/320).

12) Other answers – 0.9% (3/320) ("Ukraine is a democratic country"; "I need a new learning environment"; "It just came up").

In addition, only 46.25% (148/320) of future students (or their relatives) are comparing the requirements and/or conditions of studying in different countries and medical high schools before admission to university. 18.75% (60/320) of the respondents reported that the choice was directed to the country, the university was chosen by chance. 10.9% (35/320) students knew in advance that they would study in Ukraine, so they made choices among medical educational institutions. 24.1% (77/320) of respondents did not make any comparison between countries and medical schools because they were quite sure about the university in which they would study.

Among the reasons why foreign students do not study in their countries, respondents chose the following:

1) Very high requirements for admission to university in my country -36.3% (116/320).

2) Education is quite expensive in my country -34.4% (110/320).

3) The desire to study other cultures, languages, etc. -22.8% (73/320).

4) The situation in my country is not stable (political, religious, or others) -18.1% (58/320).

5) Studying is very difficult in my country -14.4% (46/320).

6) The desire to be away from home -13.8% (44/320).

7) There are no good medical schools in my country -4.1% (13/320).

8) The opportunity to work with patients is absent or limited for medical students -2.8% (9/320).

9) Other answers ("difficulty getting specialty of your choice", "new life"; "I want to be independent and hopefully not in Africa"; "very hard to enter medical schools because of student numbers"; "intakes for that year were over"; "I want to study in my country"; "Ukraine is easier to get medical degree"; "I'll continue studying in my country"; "quick here").

Among the "other answers", there is one "I want to study in my country", which indicates a reluctance and the need (for some reasons) to study abroad. It should be added that 20.9% (67/320) of respondents would prefer to study in their own country if they had such an opportunity. Of the total sample, 30.9% (99/320) of students unambiguously indicated only Ukraine or the Ukrainian university as the preferable place to get medical education.

Other students would like to study in North America – 35% (112/320), in particular in the USA – 25.3% (81/320) and in Canada – 9.7% (31/320); in European countries – 20.3% (65/320), namely the UK – 11.3% (36/320), Germany 4.4% (14/320); and Australia – 3.4% (11/320). Johns Hopkins University, the USA; Manchester University, UK; University of Western Australia, Australia; Standford University, the USA; Yale School of Medicine, the USA were mentioned among the universities in which future physicians would like to study.

After receiving the doctor's diploma, foreign students of the 1st and 2nd year would like to work in:

1) Their country -50% (160/320).

2) The USA or Canada – 38.1% (122/320).

3) A European country – 24.7% (79/320).

4) Anywhere, but not in their country -3.8% (12/320).

5) Another answer – 7.2% (23/320).

Students of the first course have not yet decided on the future specialization that they would like to work in. Instead, most students of the second year (80.6% (199/247)) have already certain preferences and plans. In particular, the following specialties were given as options: Surgery (different fields: pediatric surgery, heart surgery, orthopedic surgery, neurosurgery, cardiothoracic surgery, general surgery, internal surgery) – 24.3% (60/247); Cardiology – 10.9% (27/247); Pediatrics – 10.5% (26/247); Gynecology, Obstetrics – 9.7% (24/247); Internal medicine, General medicine (physicians, physiotherapists, psychologists) – 6.5% (16/247); Neurology – 5.3% (13/247); Dermatology – 2.8% (7/247); Orthopedics – 2.4% (6/247); Nuclear medicine – 1.2% (3/247); Urology – 1.2% (3/247).

Students also mentioned Forensic medicine, Sports medicine, Cosmetic medicine, and Reproductive medicine, Anesthesiology, Geriatrics, Pulmonology, Traumatology, Emergency Medicine and Hepatology.

Summing up the results of our study, some facts should be highlighted:

1) 82.5% of students plan to work as doctors.

2) 82.8% – when choosing an educational institution were guided by "future profession option".

3) 94.7% (85% + 9.7%) – plan to complete their studies at a medical institution in Ukraine or in another country.

For comparison, in Finland, approximately 95% of students admitted to a medical school finish their studies [7]. The first stage of training is considered in our research, but it is obvious that we have quite motivated international medical students now, at least in the first year of study. In addition, most of 2nd year students have already a certain professional preference for the future specialization. Surgery as 'number one option' may be explained by the fact that men prevail in their number (2/3 of the total).

According to the study by S. M. M. Ahmed et al. [1], male students in Bangladesh also choose surgical specialties while female students prefer medical specialties (e.g. pediatrics). At the same time, a new trend has been noted – the increased choice of surgical specialties among female graduates. In general, similar to our study, the largest selection of medical students came from medical specialties and surgical specialties, with third-place obstetrics & gynecology like career choices [1]. The same clinical specialties were selected but in a different order by medical students in India. Clinical subjects such as General Medicine and Obstetrics & Gynecology topped the list, followed by surgery and pediatrics. In the total career choices of the first year students "were biased among the clinical subjects" [14].

Back to the motivation for choosing medicine, humanitarian factors rank first in the professional choice of future doctors who have come to study in Ukraine. The confirmation of this is the option "helping others, saving a human life", "I want to bring a benefit to my country", "I want to bring a benefit to society", "an opportunity to change the world for the better". The answers "medicine is my passion from childhood" and "medicine is my dream" can be related to both humanitarian factors and scientific factors. However, the percentage of choosing the answer "I like to study disciplines connected with medicine" is significantly less than societal factors, therefore we consider our study results similar to the results of the study by S. Goel et al. [5].

The conclusion is made based on the fact that most foreign students who participated in our study have come from lower-middle income countries, and humanitarian and societal factors are major influences to join medicine. In addition, in our questionnaire, the responses of students related to societal factors are: "money (good profit, high salary)"; "the way to a better life"; "respect of people"; "my parent's choice"; "I want to be like a person who is an example for me"; "An opportunity to prove to others that I can achieve something in this life"; "Dream of a close person"; "It is the basis of my future prosperity"; "power"; "I will have an elite position with title "Dr."; "Family tradition". In general, the results of many studies in different countries show that altruism is one of the most influential motives for choosing a doctor's profession [6,7,12,15, et al.].

"The social/altruistic motivation appears early in young people with the purpose of helping others, save lives, and contributing to the society" [15], which is related to the content of the work and the profession itself [7]. On the contrary, the lack of altruism is a major risk factor, apart from others, for cynicism and academic efficacy lowering [6]; for example, a twenty-year study in Finland from 1988 to 2008 showed a decrease in the relative importance of "good salary" and "achievements at school" and an increase in the importance of "vocation" as motives for entering medicine [7]. In contrast, studies conducted in Turkey in the academic year of 2012-2013 showed that first-year students "adopt

a very money-minded and career-wise approach towards their profession, which may bring about problems in their future doctor-patient relationship and the practice of the medical profession" [10, p265].

In conducting the research analysis, R. A. Kusurkar [12] concludes that helping people and interest in science or biology are the top reasons for choosing medicine for males and females, but "males are more inclined toward extrinsic motives like money and fame and females are more inclined towards intrinsic motives like fulfilment and sense of achievement" [12, p321].

Despite the difference in home countries among international medical students in different countries where they study, the main motivations for studying medicine abroad are roughly the same. For example, students who have come to study in Germany mentioned the quality of the study program, prior reference to the country chosen, the study conditions, experience adventure, autonomy and personal development [8], which is similar to our results. However, in the study by D. Huhn et al. [8]. There is one of the motives that none of the students indicated in our study, namely, "achievement principle vs. corruption".

Special attention should be paid to the motives of students from the UK for studying abroad. Unlike students from Asia and Africa (most in our study and study by D. Huhn et al.), the main determinants/motivations for UK-students are determination to attend a world class university (55% as very important), an opportunity for a unique adventure (50.4% as very important), the first step towards an international career (33.8% as very important) [4, p27]. Among the perceived benefits of studying outside the UK (undergraduates only), enhanced academic and professional knowledge, personal development, new ways of thinking about the UK, general career prospects, potential for international career, and understanding of another country have been mentioned [4, p37].

CONCLUSIONS.

During the 2017-2018 academic year, we have motivated international medical first year students to study at healthcare institutions in Ukraine. The predominant motive for choosing the professional path is helping others and saving a human life.

The main reasons for choosing Ukraine as a country for studying were good reviews of friend(s) and/or acquaintance(s), quality of medical education, affordable living costs and fees. At the same time, only a third of international medical students knew before admission that they wanted to study only in Ukraine. In addition to the high requirements of entry and study in the home country, every fifth student noted the desire to study other cultures and an unstable situation in his/her country (political, religious or others) as a reason for inducing them to study abroad.

The research has not covered fully all the aspects of the problem. There remains a part of issues to be investigated in future, namely the dependence of the motivation for studying of international medical students on various factors.

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