

RESEARCH OF THE PECULIARITIES OF THE MOTIVATION SPHERE OF FUTURE DOCTORS

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The article presents a theoretical review and the results of an empirical study of the motivational sphere influence on cognitive activity and professional formation of a medical student. It was emphasized that the issue of motivation of medical students to choose the future profession and educational activities at the university is extremely important and relevant. It is noted that the performance of any activity is greatly influenced by the nature of motivation. Internal positive motivation increases the productivity of activity, gives the feeling of satisfaction, while negative and external decreases them, and then activity is perceived as coercion. Moreover the internal positive motivation for learning, self-improvement and professional growth itself can be considered as a professionally significant quality, especially when it comes to creative professions, including the one of a doctor. Personality orientation and the presence of strong positive motivation can be considered as factors of amplifying the significance of professionally ambitions. The influence of various types of motives on the success of professional training of a medical student is substantiated. The importance of taking into account the student's motivational sphere is shown in the application of teaching methods in order to implement a holistic approach to the professional training of future specialists. The level and quality of learning, abilities and practical skills of students depends hence greatly on the extent to which learning, as a process of obtaining a degree and personal self-improvement, is personally significant, backed up by internal positive motives that are formed from the family. The educational process in institutions of higher education should be oriented not

only to the learning, but also to the development of the individual and, above all, to study and accounting its motivational sphere.

Keywords: professional training, professional formation, motive, motivational sphere, future doctor, professionalism, professional identity.

ДОСЛІДЖЕННЯ ОСОБЛИВОСТЕЙ МОТИВАЦІЙНОЇ СФЕРИ МАЙБУТНІХ ЛІКАРІВ

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У статті наведено теоретичний огляд та результати емпіричного дослідження впливу мотиваційної сфери на пізнавальну активність та професійне становлення студента-медика. У дослідженні наголошено на тому, що питання мотивації студентів-медиків до вибору майбутньої професії та навчальної діяльності в університеті є надзвичайно важливим та актуальним. Автором зауважено, що на продуктивність будь-якої діяльності значною мірою впливає характер мотивації. Внутрішня позитивна мотивація підвищує продуктивність діяльності, сприяє отриманню людиною задоволення, а негативна й зовнішня – знижують, і тоді діяльність сприймається як примус. Наголошується на тому, що внутрішню позитивну мотивацію до навчання, самовдосконалення та професійного зростання саму по собі можна розглядати як професійно значущу якість, особливо ж у тих випадках, коли йдеться про творчі професії, до яких належить і професія лікаря. Спрямованість особистості і наявність потужної позитивної мотивації можуть розглядатись як чинники підсилення вагомості та значущості професійних амбіцій. Обґрунтовано вплив різних видів мотивів на успішність професійної підготовки студента-медика.

Показано значимість врахування мотиваційної сфери студента при застосуванні методів навчання з метою реалізації цілісного підходу до професійної підготовки майбутніх фахівців. Рівень та якість засвоєння знань, умінь і практичних навичок студентами залежать значною мірою від того, наскільки навчання, як процес здобуття фаху та особистого самовдосконалення є особистісно значущим, підкріпленим внутрішніми позитивними мотивами, витoki яких йдуть із сім'ї. Навчально-виховний процес у закладах вищої освіти повинен бути зорієнтований не лише на засвоєння знань, а й на розвиток особистості й передовсім на дослідження та врахування її мотиваційної сфери.

Ключові слова: професійна підготовка, професійне становлення, мотив, мотиваційна сфера, майбутній лікар, професіоналізм, професійна ідентичність.

Introduction

While studying at a higher education institution, besides the actual learning, the professional self-determination of the individual continues, the formation of world perception in the framework of future profession is implemented, professional thinking is formed, professional skills are refined, primary professional experience is gained (Furman, 2014: 57).

The problem of motivation is crucial in professional activity. As is known, the efficiency is largely influenced by the nature of motivation. Internal positive motivation increases the efficiency, facilitates the satisfaction of a person, and negative and external – reduce, and then activity is perceived as coercion. Intrinsic positive motivation for learning, self-improvement and professional growth can be seen per se as a means of shaping professional identity (Borysiuk, 2016: 110).

Studying at a higher educational institution occurs under the influence of incentives, desires and motives that motivate the student to act and form a motivational sphere. It is with their influence that the achieving the goal and success in learning is related. Learning motivation is one of the factors influencing the level of educational and cognitive activity of future professionals. The educational process

as a form of student activity in a medical educational institution is a vocational education, developing the ability to make autonomous decisions, formation and education of a person. In the process of preparing a future professional, should be given special attention to the development of cognitive and professional motives. In accordance with the provisions of the system approach, motivation is viewed as a multidimensional by content system of personality, unity of subordinate components (Dennett, 2013: 200). Cognitive and professional motives are one of the leading in the multicomponent motivational field of the learning subject. Being a neoplasm of learning activities, they represent both a product of mutual transformations and lead to further mutual development. In the process of mastering the features of future professional activity, there may be a problem of transformation of cognitive motives into professional (Borysiuk, 2016: 111).

According to the observation of Japanese scientists, medical students with characteristics such as persistence, ability to independent learning, willingness to cooperate and the desire for self-improvement have a higher motivation.(Tanaka, 2009: 385). Scientists from Pakistan point out that reducing professional motivation in medical students occurs during the transition from general subjects to medical and, in particular, if teachers show the lack of interest in their subject (Farooka, 2018: 629).

According to Rzhavska-Shtefan's research, half of the 3rd year students and more than half of the 4th year students experience a crisis of professional identity that correlates with the crisis of professional motivation(Rzhavska-Shtefan, 2018: 25).

The author's views on the motivational sphere of a personality are generalized (Safdari, Maftoon, 2017: 98).

The aim of this research is to substantiate theoretically and to determine empirically the level of professional motivation formation among medical students.

Research objectives: 1) to study the peculiarities of the professional motivation formation of different courses medical students; 2) to carry out a comparative analysis of the peculiarities of medical students' of different specialties professional motivation.

Methods

The sample was based on students of the specialties „Medical Psychology”, „General Medicine”, „Pediatrics” of Bukovinian State Medical University and on students of the specialty „Practical Psychology” of Yuriy Fedkovych Chernivtsi National University. In total, 87 respondents participated in the research.

There were used such mathematical statistics methods as Student's t-test, Wilcoxon signed-rank test, correlation analysis, factor analysis in the research. The computer program „Statistica 6.0” was used in empirical data processing.

During the analysis and interpretation of data received as a result of statistical processing, statistically valid correlation coefficients were taken into account at the level of $p < 0,001$; $p < 0.01$; $p < 0.5$.

As noted above, the educational process in institutions of higher education should be aimed not only at learning, but also at the development of the individual and, above all, at the research and accounting its motivational sphere. To this end, there was proposed to the subjects of research the methodology for the diagnosis of learning motivation (A. Rean, V. Yakunin, modification by N. Badmaieva), where there are following scales: communication motives, avoidance motives, prestige motives, professional motives, creative self-realization motives, educational and cognitive motives, social motives. Of research interest is dynamics of all the above types' ratio in the process of vocational training.

We also asked respondents to provide written replies to the question: „Do you plan to work in the area of expertise as specified in the (College/Degree) Certificate?”

Results

The analysis of the results of the students' learning motivation diagnosis, obtained by methodology (A. Rean and V. Yakunin, modification by N. Badmaieva), which are presented in Tables 1-5, indicates that during the six courses students have professional, learning and cognitive motives as dominant learning motives. This

represents, on the one hand, sufficiently favorable learning situation, on the other hand, - the truth and adequacy of motivation.

Table 1

**Learning motivation
(1, 2 courses „Medical Psychology”)**

Motives	M		Student's t-test	δ	
	1stcourse	2ndcourse		1stcourse	2ndcourse
Communication	15,407	15,208	0,305	2,6495	2,7441
Avoidance	10,333	12,708	-2,567*	3,4862	4,0316
Prestige	13,667	14,042	-0,351	4,3323	4,5051
Professional	25,556	26,458	-1,151	2,8465	3,4700
Creative self-realization	8,630	7,938	1,583	1,2449	2,0670
Educational and cognitive	24,481	26,333	-1,328	6,3329	5,4746
Social	17,926	18,417	-0,664	3,1247	3,0446

Note. * – p <0,05

Table 2

**Learning motivation
(2, 3 courses, „Medical Psychology”)**

Motives	M		Student's t-test	δ	
	2ndcourse	3rdcourse		2ndcourse	3rdcourse
Communication	15,21	15,21	-0,010	2,744	2,664
Avoidance	12,71	13,40	-0,743	4,032	4,864
Prestige	14,04	14,43	-0,409	4,505	4,440
Professional	26,46	25,67	1,056	3,470	3,634
Creative self-realization	7,94	7,52	1,132	2,067	1,234
Educational and cognitive	26,33	24,50	1,651	5,475	4,994
Social	18,42	18,24	0,247	3,045	3,805

Table 3

**Learning motivation
(3, 4 courses, „Medical Psychology”)**

Motives	M	Student's t-test	δ
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	3rdcourse	4thcourse		3rdcourse	4thcourse
Communication	15,21	15,23	-0,021	2,66	3,18
Avoidance	13,40	13,91	-0,537	4,86	4,84
Prestige	14,43	13,92	0,534	4,44	5,20
Professional	25,67	25,73	-0,097	3,63	3,53
Creative self-realization	7,52	7,61	-0,265	1,23	1,99
Educational and cognitive	24,50	25,31	-0,845	4,99	4,93
Social	18,24	18,08	0,203	3,81	4,17

The results presented in tables 1-3 indicate that for students of 1-4 courses professional motives were the most effective, the second largest – educational motives. This situation seems to us very favorable for mastering any practical specialization, as far as the driving force for learning activities is not “studying for studying”, but the desire to master the necessary professional “toolkit”. In other words, such motivation proves the shift in focus from the procedural component of education to its concrete outcome. Attention is drawn to the fact that the second course increases the importance of the „avoidance” motives in comparison with the first course (the difference is statistically significant). In our opinion, this can be explained by the “traumatic” experience of the freshman year, when many students had to get used to different from the school role in the team, and by the completing the process of adaptation. Completing the adaptation is accompanied by a clear understanding of the possible dangers and causes of problem situations, and by the subjective division of academic studies and forms of work into significant and insignificant (in the latter case, the avoidance motivation takes effect).

At the last two courses (fifth and sixth), the situation undergoes changes – educational and cognitive motives become the dominant ones. Moreover, the importance of professional motives decreases at a statistically significant level for students of the sixth course in comparison with the fifth course (Table 4-5).

Table 4

**Learning motivation
(4, 5 courses, „Medical Psychology”)**

Motives	M		Student's t-test	δ	
	4thcourse e	5thcourse e		4thcourse	5thcourse
Communication	15,23	15,83	-1,224	3,18	2,86
Avoidance	13,91	14,50	-0,746	4,84	4,93
Prestige	13,92	13,87	0,063	5,20	4,89
Professional	25,73	25,64	0,147	3,53	3,85
Creative self-realization	7,61	7,82	-0,725	1,99	1,40
Educational and cognitive	25,31	25,83	-0,664	4,93	4,73
Social	18,08	18,34	-0,387	4,17	4,15

Table 5

**Learning motivation
(5, 6courses, „Medical Psychology”)**

Motives	M		Student's t-test	δ	
	5thcourse e	6thcourse e		5thcourse	6thcourse
Communication	15,83	15,57	0,578	2,86	2,65
Avoidance	14,50	14,64	-0,187	4,93	4,06
Prestige	13,87	14,81	-1,226	4,89	4,56
Professional	25,64	23,04	3,204**	3,85	5,97
Creative self-realization	7,82	7,57	0,938	1,40	1,79
Educational and cognitive	25,83	25,81	0,031	4,73	4,68
Social	18,34	17,71	0,969	4,15	3,86

Note: ** – $p < 0,01$

As to the difference between the indicators of professional and educational-cognitive motivation, that are presented in Table 6, for students of the fifth course it is insignificant and is accompanied by a natural for senior students increase in the importance of professional motivation. For the sixth course, it becomes statistically significant in the direction of increasing in comparison with the fifth course.

Table 6

Comparison of the degree of manifestation of professional and educational-cognitive motives

(1-6 courses, „Medical Psychology”)

Course	Motives	M	δ	Student's t-test
1	Professional	25,56	2,85	1,324
	Educational and cognitive	24,48	6,33	
2	Professional	26,46	3,47	0,214
	Educational and cognitive	26,33	5,47	
3	Professional	25,67	3,63	1,787
	Educational and cognitive	24,50	4,99	
4	Professional	25,73	3,53	0,932
	Educational and cognitive	25,31	4,93	
5	Professional	25,64	3,85	-0,367
	Educational and cognitive	25,83	4,73	
6	Professional	23,04	5,97	-4,092***
	Educational and cognitive	25,81	4,68	

Note: *** – $p < 0,001$

This phenomenon can be explained by several reasons: first of all, senior students are more clearly aware of their actual social role (the student whose main occupation is learning activity) and the tasks envisaged by it. This contributes to a greater focusing on the learning process, enhancing responsibility, and therefore - the dominance of educational and cognitive motivation. In addition, the predominance of this group of motives can be explained by fear (often unconscious) before starting an independent labour activity. Finally, another reason for such a situation may be a subjective sense of time constraints that is typical for older students (education ends, but not all knowledge, skills and abilities have been learned).

It should be noted that for all courses, without exception, the motives of creative self-realization were the most significant. We assume that this is a consequence of the traditional formalization, standardization and conservatism of the medical community.

Given the age of the respondents and the nature of their chosen profession, it is natural that social motives for respondents of all courses have appeared in the same third most important place.

It was interesting to compare the results of the sixth course students of specialties „Medical Psychology”, „General Medicine” and „Pediatics”, that are presented in Tables 7, 8, 9.

Table 7

Learning motivation
(6 course, „Medical Psychology”, „General Medicine”)

Motives	M		Student's t-test	δ	
	Medical Psychology	General Medicine		Medical Psychology	General Medicine
Communication	15,57	16,25	-1,396	2,65	3,32
Avoidance	14,64	15,31	-0,885	4,06	5,33
Prestige	14,81	15,30	-0,622	4,56	5,26
Professional	23,04	26,36	-4,042***	5,97	4,06
Creative self-realization	7,57	6,79	2,300*	1,79	2,37
Educational and cognitive	25,81	26,99	-1,480	4,68	5,21
Social	17,71	18,23	-0,834	3,86	3,88

Note: * – $p < 0,05$; *** – $p < 0,001$

Table 8

Learning motivation
(6 course, „Medical Psychology”, „Pediatics”)

Motives	M		Student's t-test	δ	
	Medical Psychology	Pediatics		Medical Psychology	Pediatics
Communication	15,57	15,81	-0,40	2,65	3,29
Avoidance	14,64	14,03	0,66	4,06	5,48
Prestige	14,81	15,31	-0,50	4,56	5,80
Professional	23,04	26,11	-2,96**	5,97	2,54
Creative self-realization	7,57	7,03	1,40	1,80	2,16
Educational and cognitive	25,81	25,53	0,25	4,69	6,94
Social	17,71	19,25	-2,19*	3,86	2,47

Note: * – $p < 0,05$; ** – $p < 0,01$

Learning motivation
(6 course, „General Medicine”, „Pediatrics”)

Motives	M		Student's t-test	δ	
	General Medicine	Pediatric s		General Medicine	Pediatrics
Communication	16,25	15,81	0,660	3,32	3,29
Avoidance	15,31	14,03	1,183	5,33	5,47
Prestige	15,30	15,31	-0,006	5,26	5,80
Professional	26,36	26,11	0,343	4,06	2,54
Creative self-realization	6,79	7,03	-0,506	2,37	2,16
Educational and cognitive	26,99	25,53	1,244	5,21	6,94
Social	18,23	19,25	-1,441	3,88	2,47

As can be seen from Tables 7-9, the general picture of the order of learning motives by their importance looks identical (social motives occupy the third position, the last place - creative self-realization motives), except that the professional motives are dominant for students of the specialty „Pediatrics” (difference is statistically significant, in comparison with medical psychologists). In addition, the importance of professional motives is statistically significantly increasing in students of the specialty „General Medicine” in comparison with the students of the specialty „Medical Psychology”. A statistically significant difference is also observed concerning the creative self-realization motive in the direction of increasing in students of the specialty „General Medicine” in comparison with students of the specialty "Medical Psychology". Social motives at a statistically significant level are increasing in future pediatricians, in comparison with future psychologists. Probably this is due to the fact that, unlike medical psychology, the professions of doctor and pediatrician have a long history, and the idea of their essence, professional purpose and objectives, as well as the nature and content of the activities are well-established and well-known. There are no statistically significant differences in the learning motives between students of the specialties „General Medicine” and „Pediatrics” (see Table 9).

Answers of respondents to the question „Do you plan to work in the area of expertise as specified in the (College/Degree) Certificate?” allow to get an idea of the degree of professional development, the clarity of the professional perspective and the level of motivation for independent labour activity. The results are presented in the Table 10.

Table 10

**Answers of respondents to the questionnaire
„Do you plan to work in the area of expertise as specified in the
(College/Degree) Certificate?”**

Specialty	Yes	No	Undecided	Unanswered
General Medicine	89,6 %	1,6 %	7,2 %	1,6 %
Pediatrics	85 %	3 %	9 %	3 %
MedicalPsychology	49 %	11,3 %	35,9 %	3,8 %
Psychology	64,7 %	17,6 %	5,9 %	11,8 %

We shall note that the number of students of all specialties who plan to work in the area of expertise, as is shown in Table 10, far exceeds the number of those who do not have such plans. In particular, 89.6% of students specializing in „General Medicine” plan to work in the area of expertise, 1.6% - don't; 85% of future pediatricians plan to work, 3% - don't. Less, but still significant difference is observed among psychologists: 49% of future medical psychologists and 64.7% of future psychologists plan in the area of expertise, respectively 11.3% and 17.6% - don't. In our opinion, rather vivid difference between students of the specialties „General Medicine”, „Pediatrics” and future psychologists is partly due to the specifics of the professions themselves. The professions of doctor and pediatrician are more clearly defined, narrowly directed and sufficiently formalized in comparison with the professions of psychologist and medical psychologist due to the strict limits of professional competence, well-formulated professional tasks and the standard list of possible places of work and hypothetical positions, that were made throughout a long time. Accordingly, at the time of admission to a higher education institution, an applicant, who chooses one of the two named specialties, imagines sufficiently clear and realistic the conditions for future labour activity and its content. Quite another

matter is with future psychologists and medical psychologists due to the lack of stable traditions, imperfect regulatory framework etc.

In the same way, in our opinion, can be explained a sharp difference in the number of respondents who did not determine the answer to the question „Do you plan to work in the area of expertise as specified in the (College/Degree) Certificate?” at the time of the survey. If the results on specialties „General Medicine”, „Pediatrics” and „Psychology” are quite proportional and do not reach the high values (7.2%, 9% and 5.9% respectively), then the future medical psychologists at the time of the survey in one third (35.9%) did not determine whether they would work in the area of expertise. We can assume that some of them are really confused and unsure of their own desire and opportunities to find work in the area of expertise, while some intend to work as psychologists, but they consider non-medical spheres of their profession, perceiving it as a formal change of specialty.

Discussion

On the basis of our empirical research, we can generalize that professional and educational-cognitive motives prevail among students of all courses of the specialty „Medical Psychology”. Professional and creative self-realization motives are more significant for students of the specialty „General Medicine”. The students of the specialty „Pediatrics” are dominated by social motives. Students of the specialties „General Medicine”, „Pediatrics”, „Psychology” plan to work in the area of expertise, but among students of the specialty „Psychology” the percentage of negative responses to this question is higher. Students of the specialty „Medical Psychology” demonstrate the tendency for confusion about professional self-determination, since the percentage of „Undecided” answers is significantly higher in comparison with other specialties.

Family support, especially mother support, the positive assessment of friends increases the learning motivation of students. Careless statements of teachers about the inability to become doctors to one or another student, instead, significantly reduce the learning motivation of the students (McHarg, 2007: 818).

A number of researchers point out that external motivation is associated with the choice of a medical profession at will and a high average score of a school certificate. In addition, external motivation is more common for women. The internal motivation correlates with the support of the family, the determination to obtain the profession of a doctor, and, in particular, the personal choice of the profession. The complete lack of professional motivation is more common for men and is associated with depression (Kunanithaworn, 2018, p. 7). Internal motivation is also lower for those students whose close relatives do not work as doctors. The external motivation is, on the contrary, higher if one of the relatives works in the medical field (Ramezani, 2018: 87).

Scientists from Saudi Arabia indicate that the system of continuous evaluation serves as a motivation tool for medical students. A constant testing of knowledge in the form of tests leads to positive competition for the best score (Tariq, 2018: 78). Social learning is also a source of good motivation for medical students (Keren, 2017: 315).

According to research of foreign scholars, students of medical specialties express more autonomous professional motivation than controlled. Correlation analysis showed a significant link between autonomous motivation and a higher development of consciousness, reflection in learning, learning achievements, learning experience in a team, and the intention to continue education (Sobral, 2004: 954).

A group of Dutch researchers conducted a study on the identification of age and gender specifics of medical students' motivation field. They got the following results: women have more professional motivation than men; the older the student, the higher professional motivation (Kusurkar, 2010: 310).

Researchers from South Korea have found an interesting relationship between stress and professional motivation - the lower the level of stress, the higher the motivation. Additionally, stress management measures for students increase students' motivation, so teachers should pay attention to it (Park, 2012: 148).

The results of Kozova's research among dentistry students indicate that the motivation slightly increases with the introduction of the Bologna credit-module

training system, but does not come automatically, requiring stimulation in the learning process (Kozova, 2015: 300).

Also, research of medical students' professional motivation was carried out by a group of Russian scholars. As a result of research, it was found that students of the 1st-2nd courses are more motivated by the profession of a doctor because of their desire to assert themselves or to gain the respect of their loved ones, colleagues, parents etc. In the first place in the number of choices is the orientation of young people to obtain an education document rather than an increasing professional competence (Stepanenko, 2017: 74).

Conclusions

Therefore, as a result of our empirical research, the differences in the motivation field of future doctors and future doctors-psychologists may be explained by the specifics of the sample, namely at least two reasons. The first is that, due to the lack of traditions, the imperfection of the regulatory framework and the various legal and organizational difficulties, as of today, the content of the professional activities of a medical psychologist (and partly a psychologist) is not definitively defined, clearly regulated and, moreover, well-known to the masses of the population. It can scare away from these professions at the stage of their choice, as well as give rise to anxiety and insecurity among those already undergoing vocational training in these specialties. Mix in the difficulties with our employment, that we have mentioned, the false stereotypes that exist in the mass consciousness, and so on. The second reason, as it seems to us, should not be unequivocally evaluated as negative. It consists of the fact that the field of demand for psychological knowledge is constantly expanding, psychologists and medical psychologists are more and more able to carry out their professional activities. Today, medical psychologists and psychologists are in demand not only in medical, preventive and educational institutions, but also in manufacturing, in business, in management structures, in so-called uniformed services, and so on. Moreover, even medical psychologists, whose limits of professional competence are narrower than those of "classical" psychologists, are

found to be in demand not only in the health care system. For example, the content of their vocational training makes them indispensable specialists for sports schools, educational institutions for children with special needs, geriatric homes, social and rescue services, etc. The realities are such that, for example, a medical psychologist will have more options to apply his profession if he considers the possibility of work not only in health care institutions.

The level and quality of learning, abilities and practical skills of students depends hence greatly on the extent to which learning, as a process of obtaining a degree and personal self-improvement, is personally significant, backed up by internal positive motives that are formed from the family. The educational process in institutions of higher education should be oriented not only to the learning, but also to the development of the individual and, above all, to study and accounting its motivational sphere. Personality orientation and the presence of strong positive motivation can be considered as factors of amplifying the significance of professionally significant qualities. After all, the very fact of their possession does not provide the personality full realization. Only if the activity is consistent with the motives and needs of the individual, its professionally important qualities are “disclosed” in this activity, increasing its efficiency, success and provide self-revelation and self-realization.

The prospect of further research is to write and approve a training program, that is aimed at actualizing and enhancing the motivation to the chosen specialty.

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