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Teaching Communication Skills and Decision-Making to University Students

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ABSTRACT
The aim of this article is the development and implementation of a model (structure) of effective doctor-patient interaction and its application when teaching future medical workers. The leading method of the given problem under study is the method of psychological-pedagogical experiment, which represents a task-oriented and organized process of communication skills improvement. At the beginning of the educational course and upon its completion, the students of the control and experimental groups were given psycho-diagnostic techniques to fill in, the results of which showed improvement of communication skills in the experimental group. The materials of this article may be helpful to the teachers of psycho-pedagogical disciplines and during the development and implementation of interactive educational modules used during accreditation of health care professionals as well.

Keywords: communication skills, medical education, physician-patient relations, university students, pedagogical experiment, decision-making

INTRODUCTION

At present, modernization of medical professional education against the background of requirements caused by socio-economic conditions of the state reforms goes on in Russia. In Kazan Federal University and Kazan State Medical University, students obtain higher education according to FSES-3 in specialties of "Health Care and Medical Sciences". Such modern technologies in education as simulation training, internship, distance education, simulation methods and others (Pirkova & Ryabova, 2016) are actively applied in the teaching process. At the same time, pedagogical approaches oriented towards modernization of the system of professional education provide practical training of modern specialists not fully (Telegina, Galimova & Masalimova, 2015).

Nowadays, there is no systematic model of teaching communication skills to medical specialists that allows making decisions together with patients, and also meets the requirements of practical activities under conditions of the working specifics of Russian Health Care. We carried out a pilot study, which resulted in development of a model (structure) of effective doctor-patient interaction and methods of teaching with this model.

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State of the literature

- Modernization of medical professional education in accordance with standards of new generation changes its paradigm: teaching a modern "patient-centered approach" to university students includes, apart from medical knowledge, skills for effective interaction with a patient, shared decision-making and prevention of conflict-generating situations as well, which is currently poorly reflected in methodological studies on medical education.
- The vast majority of studies on the problem of teaching effective doctor-patient interaction are focused on the development of skills for establishing quick contact with a patient in a future doctor with the aim of gathering and revising the information required for a disease pattern formation and making a diagnosis.
- The items of systematical teaching of communicative skills, which allow building up trust with a patient, cooperating with him, informing a patient about the peculiarities of treatment in understandable language as well as discussing the probable disease outcomes and making mutual decisions with a patient on the selection of a therapeutic approach and intended diagnostic and treatment activities are poorly studied in literature on the theory and methods of teaching future medical workers.

Contribution of this paper to the literature

- A model (structure) of effective doctor-patient interaction meeting the requirements of practical activities of a modern medical worker is proposed.
- A program for students' training including different methods (training exercises, group discussions, imitation games, study of film clips) contributing to the development of practical skills for effective interaction was developed.
- Systematical approach in teaching including development of not only communication skills, but cognitive, emotional–volitional, motivation, anticipatory/prognostic and creative constituents of future doctors as well through specially selected systems is applied for the first time.

The aim of this article is to develop a model (structure) of effective doctor-patient interaction and methods of teaching this model to the university students.

The main tasks are as follows: study and analysis of literature on the problem of research; development of a model (structure) of effective doctor-patient interaction; carrying out of a psychological–pedagogical experiment based on this model (including training exercises, group discussions, imitation games, study of film clips, etc.); systematization, statistical processing and generalization of experimental data; introduction of the developed model contributing to the acquisition and perfection of practical skills, professional and general cultural competences into the process of the university students' training.

LITERATURE REVIEW

Boluchevskaya et al. (2011); Grinberg et al. (2015); Larencova & Smirnova (2014); Ryabova (2015), write about the problem of patient involvement in the process of rendering medical aid to him. Psychological aspects of rendering psychological support to a patient in difficult situations; providing him with appropriate information (about the health status and proposed medical treatment); alternative variants' choice; patient's independence in decision-making are studied in their works. However, Kremleva (2013) writes in their work that not all Russian physicians agree with the fact that it is necessary to refuse a paternalistic model and recognize the patient's right of shared decision-making.

Chirikova & Shishkin (2014) study the issues of doctor-patient interaction in modern Russia associating shared decision-making with the patients' unwillingness to assume responsibility for their health, undeveloped doctors' skills for building trust with a patient and providing him with appropriate information in understandable language. The authors write that the term of shared decision-making between a professional and a patient is

substituted by the term of "informed consent", which in practice is of formal nature in the form of filling out documents instead of active cooperation.

One must note the research made by Bikkinina & Ishacov (2007), who analyzed 98 visits to a doctor, during which monitoring of "doctor-patient" interaction process was carried out. The assessment of the shared decision-making on subsequent treatment is made in fulfilling such conditions as information sharing on the course of the treatment, developing a strong belief that medications offered for taking are necessary and useful, mutual achievement of consent and agreement about treatment (examination) in the course of the communication. The authors point out that the situation of shared decision-making on subsequent treatments were absent in 20% of cases in the doctor-patient conversation, and a complete shared decision-making on subsequent treatments of somatic diseases were manifested in 9.8% of cases; in the rest of the cases, the process close to this one were observed. The authors make a conclusion of the necessity for doctor training in effective interaction with patients.

Gasparyan (2011) shows that teaching to communicative behavior is required for obtaining a voluntary informed consent or informing about diagnosis, and is meant to be the task of the professionally oriented training in teaching university students.

However, analysis of national scientific works dedicated to the problem of teaching communicative skills to university students showed that they are small in number and are of polemical character.

In their works, the foreign researchers Freed et al. (2012); Schwarts & Bergus (2008); Sofo et al. (2013); Sox et al. (2013) show the importance of students' decision-making training in professional activities. Shwarts (2011) submits that decision-making can be the unifying principle in designing modern curricular programs. This principle integrates other disciplines around the central result of medical education–the process of formation of qualified doctors, who are competent, experienced, attentive, and make effective decisions.

Researcher suggests innovative methods of teaching communication skills and patients-and-doctors making decisions together to university students. They include EQClinic model: a platform for learning verbal and non-verbal communication skills in clinical tele-consultations with simulated patients (SPs), with evaluation exercises promoting reflection (Liuet at al., 2016).

The role of Virtual Patients grows in teaching of the university students as they help to develop communication, teamwork, and decision-making skills (Peddle, Bearman & Nestel, 2016). Interactive methods of teaching are applied as well. These interactive educational interventions are based upon video-recorded patient histories. This training module is designed both for individual and group study (Bishop et al., 2016). Possible ways for standardization of teaching communicative skills, assessment of certain communication factors before and after the courses of study, their integration into educational programs are proposed (Drdla & Loffler-Stastka, 2016; Kölfen, 2016; Modi et al., 2016; McKenzie, 2016; Cämmerer, Martin & Rockenbauch, 2016; Turner et al., 2016; Luttenberger et al., 2014; Mole, 2016; Hess et al., 2016).

It is worth nothing that the degree of scientific development of the problem of shared decision-making between a professional and a patient in foreign studies is high.

RESEARCH DESIGN

Study methods: The following theoretical and empirical methods: analysis of pedagogical, psychological sources, professional periodicals, talks, students' questioning and psychological-pedagogical experiment were applied in the process of study. Informative, reliable, valid psycho-diagnostic methods of study: a technique of "Person's trust/distrust in the world around, other people, in oneself" (Kupreichenco, 2008); a test for determination of a style/behavioral strategy in Thomas Conflict Mode; a technique of "Cascade" assessment of doctor's professional skills (abilities) (Yakovleva, 2004), and a "communicational factor" scale of a diagnostic technique in the form of a questionnaire "Scale for Assessment of Systemic Decision-making Peculiarities" (Pirkova & Ryabova, 2016) were applied.

Table 1. Factor values according to the technique of "Trust/distrust" before and after psycho-pedagogical experiment

Factor	Low values, %		Average values, %		High values, %	
Before and after of psychological - pedagogical experiment	**Before**	**After**	**Before**	**After**	**Before**	**After**
Trust in oneself as per skills for building relationships with surrounding communities and other people	46,7	6,7	32	29,3	21,3	64,0
Distrusting the world around and other people as irresponsible and unfair ones	32	44,0	33,3	36,0	34,7	20,0
Trust in other people as per skills for collaboration and cooperativeness	58,7	20	28	14,7	13,3	65,3
Trust in oneself as per skills for appraising and making forecasts	42,7	12	46,7	20	10,6	68
Distrusting the world around and other people as dangerous objects	38,7	32	33,3	50,7	28	17,3

Notations: low values (from 3 to 7 scores), average values (from 8 to 10 scores), high values (from 11 to 15 scores).

Experimental facilities for the study: Pilot testing was carried out at the FSBEI of Higher Education Kazan State Medical University (KSMU).

Study stages: *The first stage (preparatory)*: scientific and methodical literature on the investigated problem was studied, current status of the problem was analyzed. *The second stage (main)*: theoretical rationale, development and implementation of the model (structure) of effective doctor-patient interaction, psychological-pedagogical experiment were carried out. *The third stage (final):* systematization, understanding and generalization of experimental data were performed, the study results were registered, their statistical processing was performed, and conclusions were defined more accurately.

125 first-year students of the Faculty of Dentistry of the KSMU aged from 18 to 20 years (28 youths and 97 girls) took part in the study. Their curriculum includes a discipline "Psychology and Pedagogics". In total, 72 hours of classroom studies are envisaged according to the program, two (2) hour practical classes being conducted once a week for the period of 13 weeks and 5 lecture classes. Students are also offered to master the educational material given by the teacher in a distance form. Experimental group (75 persons) took part in formation of effective communication skills and joint decision-making, training exercises, group discussions, imitation games, study of film clips, etc., were carried out on them. The rest group served as the control (50 persons), traditional methods of teaching with application of textbooks and study guides being applied on them.

At the beginning of the educational course "Psychology and Pedagogics" and upon its completion the students of the control and experimental groups were given psychodiagnostic techniques to fill in.

EVALUATED MEASUREMENTS

Diagnostics of students by their answering the questions of "Person's trust/distrust in the world around, other people, oneself" at the beginning of the course showed that the students of both groups had low values for such factors as "trust in oneself as far as skills for building relations tips with surrounding communities and other people" (**Table 1**). Analysis of the statistical data obtained when studying the control and experimental groups showed no significant differences. After completion of psychology and pedagogical experiment-training, the students of the control and experimental groups answered the Scale questions again. No significant differences in test scales were revealed in students of the control group before and after the carried out course. Analysis of the experimental group answers revealed significant differences in all factors under study.

After completion of the training, the values of "trusting oneself" indicator as per skills for building relationships with surrounding communities and other people, and "trusting oneself" as per skills for appraising and making forecasts increased in students of the experimental group (**Table 1**).

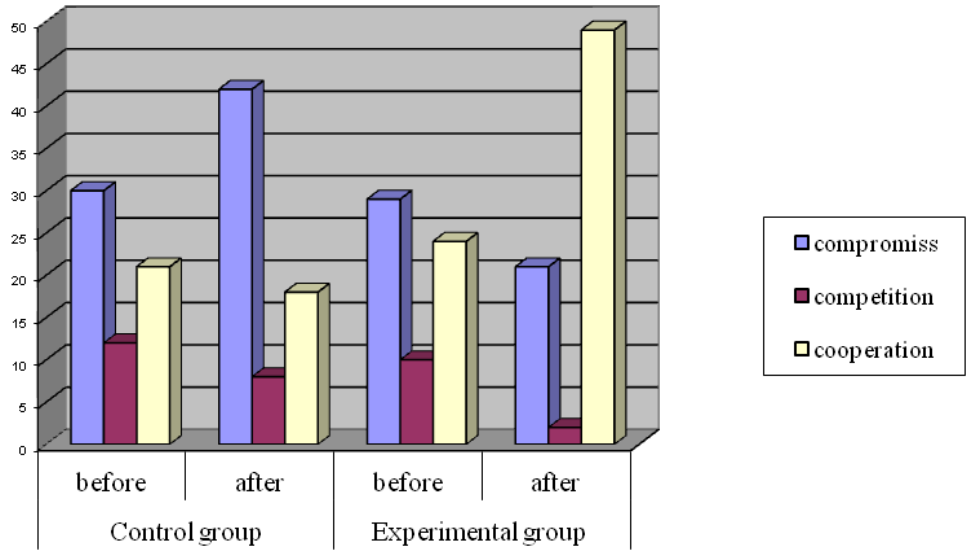

Figure 1. Factor values according to the technique of test for determination of a style strategy in Thomas Conflict Mode before and after psycho-pedagogical experiment

The carried-out analysis performed according to the technique of style/behavioral strategies in conflicts revealed that "compromise", "mutual concession", when a person shows average attention to the interests of another person, or "average attention to one's own interests" was the style, which was most frequently used by the students (as referred to **Figure 1**). Before carrying out the training, such behavioral strategy as "compromise", "adjustment" and "avoiding conflicts" prevailed in both groups. That is, in the case of a conflict, students have the tendency to avoid cooperation and pursue their own goals, or they ignore the problem and make no efforts towards its solution.

As repeated applications of the Thomas test showed, upon completion of the training, the students of the experimental group began to use an effective behavioral strategy in the case of a conflict, in which opinions of both parties are taken into account more often.

It should be noted that the results of our study agrees with the data obtained by Löffler-Stastka et al., who studied the significance of gender in the attitude towards doctor-patient communication in university students and physicians. Female students show high trust in themselves and people. Male students show a person's distrust in the world around and other people as dangerous objects and manifest the style of rivalry/competition feeling "power over a patient" more often (Löffler-Stastka, 2016).

Analysis of the study results according to the test "Cascade" assessment of doctor's professional skills (abilities) showed that the students of both groups appraised the grown abilities as per blocks: perception and storage of information (the arithmetic mean value is 56.2%), information processing (51.5%), emotional-volitional regulation (57.2%) as being rather low. It also affects speech and communication culture/standards (67.9%), dialogue skills (65.3%), and skills for influencing another person (65.3%).

When comparing two groups as per blocks of contact skills (69.2% in students of experimental group, 45.2% in students of control group, $t=2.04$ at $p<0.005$) and skills for influencing another person (72.1% in students of experimental group, 54.2% in students of control group) significant differences were found.

Let us give an example of analysis of skill decision-making with other people (a "communicational factor" scale of a diagnostic technique in the form of a questionnaire "Scale for Assessment of Systemic Decision-making Peculiarities"). After training, the students appraised themselves higher according to such professional decision-

making abilities as to communicate with people who can work hard, to communicate with friendly and helpful people, take into account the point of view of every participant in the discussion group, appreciate the collaboration capabilities, get satisfaction from interaction with others, consider that my success depends on my colleagues to a certain degree, can listen to the explanations of others for a long period of time.

When teaching university students, we suggest a model (structure) of effective doctor-patient interaction:

1st stage. The Contact Phase. Building relationships on the basis of partnership. Creating an atmosphere of security and trust allowing reducing the patient's stress and vulnerability, clear greeting of the patient at the beginning of conversation, addressing a person by his/her name, demonstration of openness and benevolence, and social activity. The doctor's trust in himself and trust in other people, which is manifested in cooperation skills and rendering mutual aid. Essential characteristics of trust/confidence are positive emotional assessments, praise, etc. Showing empathy, respect and support for a patient. The doctor's emotional–volitional control of his own psychic state and behavior. Manifestation of the doctor's skills for encouraging a patient to talk.

2nd stage. The Orientation Phase. Collection of information. Information should be collected rapidly and the patient's complaints revealed by means of "active listening" skills, conversation skills and the "body language". It is followed by information processing, physical examination, the disease pattern formation, the problem structuring. Framing a conversation on the basis of cooperation.

3rd stage. The Argumentation Phase. Obtaining of additional information from a patient. Assessment of the intended therapeutic effect and determination of the patient's health subjective model. In such a case, a patient should be informed sufficiently in understandable language, and the doctor's architecture of speech should be correct with manifestation of communicative culture, dialogue and influencing skills. Adoption of the patient examination plans or therapy.

4th stage. Closing phase. Discussion of probable disease outcomes. Use of the patient's anticipatory skills (ability to anticipate future events), his anticipatory competence. Identification of the talk partner's/patient's point of view (with shown empathy), disclosure of the doctor's own point of view. Application of cooperation and/or compromise styles. Search for solutions together with a patient. Mutual decision made with a patient about the follow-up therapy. If required, patient's training, discussion of responsibility for the therapy to be carried out. Doctor's and patient's satisfaction. Getting out of contact.

In doctor's profession, each decision is important for the patient's health and life. In such a case, an effective communication is of crucial importance for creating good interaction between a doctor and a patient and contributes to high quality of rendered medical aid (Singh, 2016). Communication skills remain among the most important professional competences of the patient-oriented dentists, pediatricians, and therapeutics in the epoch of evidence-based and high-tech medicine (Lipp et al., 2016; Shendurnikar & Thakkar, 2013).

For a long time, a paternalistic model of relationship between a doctor and a patient ("subject-object" relationship) prevailed in Russian medicine. Inflexible doctor's role and other cultural peculiarities had such effect that peculiarities of communication were formal and/or insufficient informing of the patient about the disease, insufficient detailing of the patient's state, doctor's failure to tell the patient about the peculiarities of therapy in understandable language, limited patient's participation in choice of a therapeutic approach and intended diagnostic and treatment activities (Grinberg, 2015; Larencova & Smirnova, 2014; Verma, 2016).

CONCLUSION AND RECOMMENDATION

Teaching university students modern "patient-centered approach" (subject-subject interaction), when a doctor must operatively solve the problems of effective interaction with a patient including the problems of respectful and dignified attitude, anticipation, therapeutic alliance, concordance, adherence, cooperation, prevention of conflict-generating situations and informing of the patient is of importance. Future doctors must be ready to build therapeutic relationship, show patient-centered approach, empathy, trust, common ground, and shared decision-making (Frank et al., 2015),

We developed a systematic model (structure) of effective doctor-patient interaction and methods of teaching this model to the university students.

- It is found that the developed model (structure) of effective doctor-patient interaction allows organizing the process of students' training in the system of medical education directed at systematic enhancement of professional and general cultural competences.
- It contributes to psychological and pedagogical tasks of training modern specialists, their practical skills acquisition, which they should keep to during the entire subsequent careers.
- Modern programs for advanced training in continuing medical education comprise an individual five-year cycle of continuing education (minimum 250 hours), which finishes with periodical accreditation of a specialist (a physician, a nurse).

Educational activities of these programs include interactive educational modules, which, in our opinion, should include modules on teaching skills for communication and decision-making together with a patient.

It requires extension and broadening of some statements set out in the article, development of methodological support for these skills teaching with the view of carrying out accreditation both of the graduates of medical higher education institutions and the specialists-health care professionals.

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REFERENCES

Bikkinina, G. M., & Ishacov, E. R. (2007). Relationships of doctor - patient in the development shared decision-making about the treatment of somatic diseases. *The successes of modern natural science*, *1,* 53-59.

Bishop, T. W., Gorniewicz, J. A, Floyd, M. A., Tudiver, F. A., Odom, A. B., & Zoppi, K. C. (2016). 'Innovative patient-centered skills training addressing challenging issues in cancer communications: Using patient's stories that teach. *International Journal of Psychiatry in Medicine, 51*(4), 357-366. doi:10.1177/0091217416659272

Boluchevskaya, V. V., Pavlukova, A. I., & Sergeeva, N. V. (2011). Doctor s communication: features of professional interaction. *Medical Psychology in Russia: Electronic Science Magazin,* 3(20). Retrieved March 30, 2016, from http://medpsy.ru.

Cämmerer, J. A., Martin, O. B., **&** Rockenbauch, K. A. (2016). Learning Doctor-Patient Communication – Evaluating the effectiveness of the communication training course at Leipzig University from the students point of view**.** *GMS Zeitschrift fur MedizinischeAusbildu, 33*(3), 43, 21. doi:10.3205/zma001042

Chirikova, A. E., & Shishkin, S. V. (2014). Interaction between doctors and patients in Russia: vectors of change.*Universe of Russia. Sociology. Ethnolog,* 2(23), 154-181

Drdla, S., & Loffler-Stastka, H. (2016). Influence of conversation technique seminars on the doctoral therapeutic attitude in doctor-patient communication. *WeienerKlinischeWochenschrift, 128*(15-16), 555-559. doi:10.1007/s00508-016-1023-8

Frank, J. R., Snell, L., & Sherbino, J. (2015). Physician Competency Framework. Ottawa: Royal College of Physicians and Surgeons of Canada.

Freed, C. R., Bonnici, D. M., Craddock, L. N. & Franks, R. D. (2012). Necessity of decision-making by the students learning health sciences in view of professional and ethical norms: a call for critical thinking. *Medical education and professional training, 3*(9). Retrieved March 26, 2016, from http://www.medobr.ru.

Kremleva, O. V. (2013). Problems of noncompliance in somatic clinic, a negotiation tactics.*Medical Psychology in Russia: Electronic Science Magazine, 4*(21). Retrieved March 26, 2016, from http://www.medpsy.ru.

Gasparyn, L. A. (2011). The message of diagnosis in the structure of professional communicative competence of doctor. *Psychology and pedagogy: technique and problem of practical applications, 2*(19), 157 -162.

Grinberg, M. P., Archipova A. N., & Kyznecova T. A. (2015). Communication competency physician. Moscow: Litterra.

Hess, R., Hagemeier, N. E., Blackwelder, R., Rose, D., Ansari, N., & Branham, T. (2016). Teaching Communication Skills to Medical and Pharmacy Students through a Blended Learning Course. *American Journal of pharmaceutical education, 80*(4), 64. doi:10.5688/ajpe80464

Huang, C. C., Huang, C. C., Yang, Y. Y., Lin, S. J., & Chen, J. W. (2015). The influence of gender on the communication skills assessment of medical students. *European journal of internal medicine*, *26*(9), 670-674.

Kölfen, W. (2016). Professional physician communication in pediatric and adolescent medicine: Parent consultations are healing arts. *Monatsschrift fur Kinderheilkund*, *164*(7), 574-582.

Kremleva, O. V. (2013). Problems of noncompliance in somatic clinic, a negotiation tactics. *Medical Psychology in Russia: Electronic Science Magazine, 4*(21). Retrieved March 27, 2016, from http://www.medpsy.ru.

Kupreichenco, A.B. (2008). Psychology of trust and distrust. Moscow: Publishing House Institute to psychologies to RAS.

Larencova, L. I., & Smirnova, N. B. (2014). Psychology of the doctor-patient relationships. Moscow: GEOTAR Media.

Lipp, M. J., Riolo, C. B., Riolo, M. C., Farkas, J. A., Liu, T. A., & Cisneros, G. J. (2016). Showing you care: An empathetic approach to doctor-patient communication. *Seminars in Orthodontic*, *22*(2), 88-94.

Liu, C. F., Scott, K. M., Lim, R. L., Taylor, S., & Calvo, R. A. (2016). EQClinic: a platform for learning communication skills in clinical consultations. *Medical Education online, 21*, 31801. doi:10.3402/meo.v21.31801

Luttenberger, K., Graessel, E., Simon, C., & Donath, C. (2014). From board to bedside-training the communication competences of university students with role plays. *BMC Medical Education, 14*, 135-139. doi:10.1186/1472-6920-14-135

Löffler-Stastka, H. A., Seitz, T. B., Billeth, S. C., Pastner, B. A., Preusche, I. D., & Seidman, C. E. (2016). Significance of gender in the attitude towards doctor-patient communication in university students and physicians. *Wiener KlinischeWochenschri, 128*(17-18), 663-668. doi:10.1007/s00508-016-1054-1

McKenzie, C. T. (2016). 'Instructor and dental student perceptions of clinical communication skills via structured assessments. *Journal of Dental Education*, *80*(5), 563-568.

Modi, J. N. A., Anshu A. C., Chhatwal, J. A., Gupta, P. A., & Singh, T. A. (2016). Teaching and assessing communication skills in medical undergraduate training. *Indian Pediatrics, 53*(6), 497-504. doi:10.1007/s13312-016-0879-z

Mole, T. B., Begum, H., Cooper-Moss, N., Wheelhouse, R., MacKeith, P. Sanders, T., & Wass, V. (2016). Limits of patient - centeredness: valuing contextually specific communication patterns. *BMC Medical Education, 50*(3), 359-369. doi:10.1111/medu.12946

Peddle, M. A., Bearman, M. B., & Nestel, D. C. (2016). 'Virtual Patients and Nontechnical Skills in Undergraduate Health Professional Education: An Integrative Review. *Clinical Simulation in Nursing, 12*, 400-410. doi:10.1016/j.ecns.2016.04.004

Pyrkova, K. V., & Ryabova, T. V. (2016).Imitation Methods in Teaching Decision – Making to Students of Medical Faculties. *IEJME- Mathematics education, 11*(4), 539-548.

Ryabova, T. V. (2015). Psychological peculiarities of doctors, which are the important in collaboration with patients. *Practical medicine, 5*(90), 51-55.

Schwarts, A., &Bergus, G. (2008). Medical Decision Making. Cambridge University Press.

Schwarts, A. (2011). Medical decision making and medical education: challenges and opportunities. *Perspectives in Biology and Medicine, 1(*54), 68-72.

Shendurnikar, N. A., & Thakkar, P.A. (2013).Communication skills to ensure patient satisfaction. *Indian Journal of Pediatric*, *80*(11), 938-943. doi:10.1007/s12098-012-0958-7

Singh, M. (2016). Communication as a Bridge to Build a Sound Doctor-Patient/Parent Relationship. *Indian journal of pediatric, 83*(1), 33-37. doi:10.1007/s12098-015-1853-9

Sofo, F., Colapinto, C., Sofo, M., & Ammirato, C. (2013). Adaptive Decision Making and Intellectual Styles. Springer.

Sox, H. C., Blatt, M. A., Higgins, M. C., & Marton, K. T. (2013). Medical Decision Making. - Second Edition, London: by John Wiley & Sons.

Telegina, N. V., Galimova, E. G., & Masalimova, A. R. (2015). The Structure and Content of the Model of Pedagogical Conditions Binary Approach to Optimization of Control and Diagnostic Functions in Teaching "General pedagogy" to Students. *Asian Social Science, 11*(1), 364 -368. doi:10.5539/ass.v11n1p364

Turner, J. S., Pettit, K. E., Buente, B. B., Humbert, A. J., Perkins, A. J., & Kline, J. A. (2016). University student use of communication elements and association with patient satisfaction: a prospective observational pilot study. *BMC Medical Education, 16*, 150. doi:10.1186/s12909-016-0671-8

Verma, A. A., Griffin, A. B., Dacre, J. B., & Elder, A. D. (2016).Exploring cultural and linguistic influences on clinical communication skills: A qualitative study of International Medical Graduates. *BMC Medical Education, 16*(1), 162-166. doi:10.1186/s12909-016-0680-7

Yakovleva, N. V. (2004). Psychological competence and its formation in the learning process at the higher educational institution. Yaroslavl: University of Yaroslavl.