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**PEDAGOGICAL ASPECTS OF MEDICAL WORKERS’  
ACTIVITIES AT MEDICAL AND PREVENTIVE TREATMENT  
INSTITUTION**

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*Abstract*

The urgency of research in this area is caused by the problem of forming healthy life style skills, change in behavior and attitude to one’s own health and the health of the people around in Russian population. The formation of trust-based partnership relationships between patients and medical workers to prevent diseases requires pedagogical knowledge and skills on the part of the latter. Medical and preventive treatment institution shave to look for optimal forms for their additional professional training, one of which is the corporate training nurses in pedagogical knowledge and skills, which is performed by the teachers of Medical Universities or clinical psychologists of the institution.

The aim of this article is to develop and implement an educational program for medical workers contributing to an increase in the level of their psycho-pedagogical competencies when dealing with patients. The basic method to study this problem is a pedagogical experiment.

The worked out educational program—the patient education algorithm consisting of three stages and containing various methods and education forms, contributes to the increase of the level of psycho-pedagogical competencies of medical workers. The information given in this article may be helpful to the teachers of psycho – pedagogical disciplines of medical higher and secondary educational institutions.

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**Keywords:** Education algorithm, nurses, educational process, patients, questionnaire survey, lifestyles.



## 1. Introduction

Modern socio-economic conditions in Russia are detrimental to the health status of the population, which results in high morbidity in diseases and decrease of the average life expectancy. Deterioration of the environment, life conditions, nutrition quality, high stress loads, decrease of the levels of motion activity and general culture contribute to the spread of an unhealthy lifestyle, alcohol and drug abuse, tobacco smoking, and HIV-infection. One of the important work areas in the health care is forming healthy life style skills in people, change in behavior and attitude to one's own health and the health of the people around.

Preventive activities performed by doctors and nurses imply active efforts to promote public awareness and restoration of the lost health by implementing up-to-date preventive methods, the formation of motivation for health promotion, increase of the quality of life for the patient and his family into medical practice. The implementation educational programs for patients in to the package of curative interventions contribute to more complete realization of the human health potential.

Conscious and responsible attitude to their own physical and mental health, active participation in the preventive process, acquisition of new skills for self-control and self-aid are required from the patients.

The formation of partnership, trust relations between patients and medical workers for prevention of diseases requires psycho-pedagogical knowledge and skills on the part of the latter.

The system of modern continuous medical professional education under goes modernization in keeping with the strategy of the public health development for the period up to the year of 2030. At the same time, psycho-pedagogical training of medical specialists doesn't fully meet the public health requirements, in which timely preventive measures and qualitative medical aid aimed at the health promotion and increase of the quality of life of the population become a priority. Therefore, medical workers have to obtain the required psycho-pedagogical professional knowledge at the workplace.

Consequently, medical and preventive treatment institutions have to look for optimal forms for their additional professional training, one of which is the corporate training nurses in pedagogical knowledge and skills, which is performed by the teachers of Medical Universities or clinical psychologists of the institution.

## 2. Problem Statement

In Russian literature, the problems of teaching the patients by medical workers are presented in works on medical pedagogics. Thus, in Russian research literature on medical pedagogics and psychology a comparative analysis of the nurse and the social teacher activities is carried out, barriers impeding the educational process are revealed, and the growth patterns of the doctors' psycho-pedagogical competencies are developed.

It should be noted that the degree of scientific development of the problem of the patient education performed by medical workers is high in foreign studies. The education process contributes to strengthening relationships between doctors, nurses, and patients. The structured education program for nurses focused on the way, in which to teach patients, contributes to positive transformations of the medical workers' personality, development of new professional competencies, both pedagogical, and educational ones. The age of the patients taught by the nurses can vary from the adolescent age to the elderly one.

### 3. Research Questions

Afanasyev (2015) describes medical pedagogics from a historical perspective emphasizing its interdisciplinary nature. According to the author, medical pedagogics includes population-centered medical education, organization of pedagogical activities at medical institutions, pedagogical support in rehabilitative period.

The scientist Vasilieva (2016) underlines the importance of prophylactic function in the medical worker activities, which is aimed to provide the prevention of chronic diseases and motivate the patients for a healthy lifestyle. The author proposes the growth pattern of the doctor's psycho-pedagogical competencies.

The work of the scientists Laptieva, & Rublevskay (2014) deals with pedagogical aspects of professional activities of medical professionals. It states that during a preventive medical examination or daily reception of patients a doctor can carry out a brief or in-depth preventive counseling. The authors give recommendations how to more effectively in form the patients of the healthy life style fundamentals and consult on the risk factors depending on the type of disease.

Glukhikh (2016) carries out a comparative analysis of activities performed by nurses and social are teachers. Similar indices of professional activities: aim, functions, objects, types, results and professional skills are singled out for comparison. The author emphasizes that both nurses and social are teachers have a common goal to help the population. But the result of the nurses' activities is creating conditions for human prevention, treatment and awareness.

The opinions of medical workers on educational schools for patients are presented in the works of such scientists as Savinykh, & Snkhchyan (2017). For example, such barriers as uninformedness about schools and disinterest crop up along the patients' way to participation in educational schools. Such barriers as emotional burnout, lack of pedagogical abilities, time shortage, in sufficient financial support and others hinder medical workers from carrying out the patient education activities.

The work of Ryabova (2017) presents a proprietary model of forming psychological readiness of future medical workers to perform a prophylactic function in their activities.

Dahmardeh, Barati, Shahdadi, Balouchi, & Ahmadidaehsima (2017) study the problem of barriers when teaching patients. According to the results of their study, the major barriers when teaching patients are the lack of motivation for patient education, lack of control and supervision on the patient education process, lack of evaluation of patient education process and lack of declaration of patient education as one of the nurses' duties.

The scientist Devido et al. (2017) studied the nurses' problems that arose when teaching patients. The authors applied various methods: face-to-face, teleconference, and videoconferencing formats. A secondary method used a quantitative descriptive design with three self-report measures (demographic, preconception counseling self-efficacy, and preconception counseling knowledge). Nurses were unaware of preconception counseling and lacked knowledge and teaching self-efficacy as it related to preconception counseling and diabetes education. The nurses were given recommendations for education and resources to advance their knowledge and skills.

The scientists Eloranta, Katajisto, & Leino-Kilpi (2016) studied the nurse's educational skills, content, structure and educational approaches to patient teaching and their changes for several years at the

University Hospital. The authors failed to reveal positive changes in the educational skills of a nurse for patient teaching. They concluded that the results of the study indicated clear development needs in patient education practice.

Lee, & Wang (2016) wrote about an education program for enhancing pediatric nurses' competencies. The results of the test carried out before and after the three week individual and group education program for nurses were given in the study. On completion of the structured education programs they demonstrated significant improvement of the incompetence in teaching the adolescent-patients, in health maintenance in primary health care practice.

The scientist Levey (2016) studied the problem to examine the characteristics and relationships of nurse educators' teaching practices, knowledge, support, and willingness to adopt inclusive teaching strategies. The author came to the conclusion that awareness of the factors influencing the adoption of inclusive teaching strategies could inform schools of nursing of areas needing further development in the preparation of novice to experienced educators to teach diverse learners.

The scientists Pétré, Gagnayre, De Andrade, Ziegler, & Guillaume, (2017) showed that during the therapeutic patient education medical workers have an educative influence on the patients. The authors analyzed the opinion of novice medical workers after carrying out study courses for patients. Seven categories of statements, such as the professional nature of education (educational competencies required), the holistic, interdisciplinary approach (complexity of the person and value of teamwork), and the educational nature of the care relationship (education as an integral part of care) were identified. The scientists concluded about positive transformations experienced by medical workers themselves during therapeutic education of patients. Best therapeutic patient education practices should encourage personal work on this, opening professionals to the social, experiential and emotional aspects of managing chronic illness.

The scientists Strupeit, Buss, & Dassen (2016) in their systematic review assessed the effectiveness of nurse-delivered patient education interventions on quality of life in elders in the hospital. The authors made conclusion that the nurse-delivered education might be more effective as a part of multifactorial interventions.

Thus, the problem of patient education is associated with overcoming of barriers impeding the education process, which are observed both in nurses, and patients.

#### **4. Purpose of the Study**

The aim of this article is to develop and implement an educational program for medical workers contributing to an increase in the level of their psycho-pedagogical competencies when dealing with patients. The basic objectives set out were the following: study of the problem status; development of the research techniques program and creation of the patient education algorithm; carrying out of the summative, formative and control stages of the pedagogical experiment; analysis of the obtained data.

#### **5. Research Methods**

Various methods complementing each other were used to solve the objectives set. Theoretical: analysis of the social teachers' and psychologists' works on the problem under study; analysis of the

educational learning materials; analysis of the normative documents; Empirical: overt observation, formative pedagogical experiment, questionnaire survey, analysis of the experimental work results.

The study was carried out on the basis of a multi-field polyclinic of the State Autonomous Healthcare Institution “Municipal polyclinic No.7” in the city of Kazan. The study was carried out at the Internal Medicine Department of the polyclinic, Day-Patient Department (it is a form of rendering medical aid to population, a structural unit of outpatient primary care designed for carrying out curative, rehabilitation, diagnostic and preventive activities with patients not requiring day and night medical surveillance with application of up-to-date medical technologies up to standards and case management protocols). 20 nurses and 60 patients of these departments took part in the experiment.

### **5.1. A summative stage of the experiment**

To reveal the urgency of improving pedagogical knowledge and skills in the nurses’ professional activities before carrying out the experiment, we conducted the survey of 20 nurses from a medical and preventive treatment institution.

Analysis of the results showed that the major part of nurses were not sure, if pedagogical knowledge was the basis for their successful activities. Only 20 - 30% of the research subjects have the required pedagogical knowledge. However, 20-25% of them use it in their professional activities, and 70% are not sure. 50-60% of the surveyed don’t consider themselves to be prepared for pedagogical activities. At the same time 40% of nurses accept the need for training of medical workers in pedagogics.

### **5.2. A formative stage of experiment**

The aim of the formative stage of experiment is to carry out the education process and develop nurses’ psycho-pedagogical knowledge and skills in the patient education process. At the formative stage of (September – November 2016) classes in forming psycho-pedagogical competencies in nurses were conducted with 20 nurses of the experimental group.

We understand the process of patient education as a package of measures, which help them during therapy to anticipate the possibility of developing various complications. It is a patient-oriented education system, in which several factors are taken in to account: how a patient copes with disease; if he can control the situation; what he knows about his health.

At the formative stage of the experiment we conducted practical classes with nurses in mastering the patient education algorithm. In the education program, which we worked out, they mastered the algorithm consisting of the following stages:

Stage 1. Planning comprises making up of a plan, defining of training objectives, selection of methods, provision of methodological support, selection of place and time for the group patient education at the Day Patient Department. In the course of the conversation with a patient a nurse reveals the patient’s problems and risk factors, assesses the patient’s attitude to risk factors.

Stage 2. Implementation of education process is performed in various forms of group conversations. A nurse demonstrates various manipulations, which patients can perform in self-control, self-care and the fundamentals of the behavioral habits improvement. Viewing of videos; role playing of situations in the group (case – study) are also possible. To increase the efficiency of the education process and retention of

the learning material, patients are offered various methodical products, such as brochures, books, booklets, sanitary bulletins, information posters, patient alert cards and thematic leaflets.

Stage3. Control of the patient education process includes several levels: questionnaire survey, testing or questioning and discussion on revealing the level of knowledge in the issue or problem under study. Carrying out and following of the obtained recommendations, change of behavioral habits, attitude to one's heal there controlled during the follow-up visits.

## 6. Findings

A control stage of experiment was carried out in February – March of 2017. The aim of this stage was to run diagnostics of formedness of the nurses' pedagogical competencies.

Analysis of the results showed that on completion of the formative experiment the nurses considered that they needed pedagogical knowledge, which was the basis for their successful activities. However, 70% of the surveyed considered themselves to be prepared for the pedagogical activities and applied it in their professional activities.

The questionnaire survey of patients was carried out at the control stage of the experiment. 30 persons composed an experimental group; they were in contact with doctors and nurses, who underwent psycho-pedagogical training. 30 patients from the control group were treated by the medical workers, who didn't undergo training. The results of questionnaire survey are given in Table 1. Analysis of the results showed that the patients of the experimental group had better skills for self-control of their state, as well skills for self-aid and self-care as compared with the control group. Their behavioral habits (in nutrition, leisure-time activities, stress relievers, and etc.) changed for the last six months, and they considered themselves to be responsible for their own health.

**Table 01.** Results of questionnaire survey of the control and experimental groups of patients at the control stage of the experiment.

No.	Question	Experimental group			Control group		
		Answer variants			Answer variants		
		Yes, %	No, %	Don't know, %	Yes, %	No, %	Don't know, %
1	Have you got the skills for self-control of your own state (Can you measure arterial pressure, glucose level, fluid balance, daily urine or whatever)?	66,7	16,7	16,7	3,3	86,7	10
2	Have you got the skills for self-aid or self-care (Can you choose a drug for rendering emergency aid and treatment, prepare diet meals, and etc.)?	90	0	10	60	33,3	6,7
3	Have the members of your family got the skills for self-care, self-control, self-aid?	63,3	16,7	20,0	83,3	6,7	10
4	Did your behavioral habits (innutrition, leisure-time activities, stress relievers, and etc.) change for the last six months?	93,3	3,3	3,3	30,0	56,7	13,3
5	Do you consider yourself to be responsible for your own health?	90	3,3	6,7	60	23,3	16,7

In the course of questionnaire survey, the patients of experimental and control groups were also asked such question as “What methods of the patient education do you know personally?” It is worth noting that patients of the control group know such “teaching method” as viewing of television programs, as well as individual conversation with a doctor or a nurse; viewing of brochures, booklets and posters best of all. Such methods as lecture classes and practical classes, work in small groups of 5-7 persons, viewing of videos, obtaining information in the Internet, acting out a situation and participation in role play games, holding of competitions with educational elements prevail in patients of the experimental group.

It was revealed in the course of experiment that directive techniques of a medical worker and a patient interaction (ready-made advice, recommendations) were less effective than non-directive techniques. When advice and recommendations are given in an active form of mutual discussion, without excessive information over learning, a patient begins to take interest, and afterwards, slowly, but consciously, motivation for health promotion arises, behavioral habits change, and then a lifestyle as well.

The study revealed that more than half of the medical workers surveyed considered themselves to be unprepared for pedagogic activities on teaching patients. After the experiment the nurses submitted that they obtained the required pedagogical knowledge and made active use of it in their professional activities. We came to the conclusion that the education program on additional training for pedagogical skills at the medical and preventive treatment institutions contributed to transformation of a medical worker’s personality, confidence in one’s knowledge and skills, attitudes and convictions. Similar data are given in works of the scientists Pétré et al. (2017) who conclude about positive transformations of medical workers during therapeutic teaching of patients.

An algorithm of patient education comprising various forms of work was used in our study. We disagree with the opinion of such scientists as Eloranta, Katajisto, & Leino-Kilpi (2016), who failed to reveal positive changes in the nurses’ educational skills during the last few years. We came to the conclusion that application of such patient teaching modes as acting out the situations and participation in role games at the educational schools for patients promoted changes in the nurses’ pedagogical skills. Viewing of videos, obtaining information in the Internet, dealing with patients and medical workers in online forums change the forms of patient teaching as well. However, the advent of patients born in the “computer age” or “digital generation” brings forth a problem of the search for new teaching methods. These methods must combine the advantages of traditional teaching and the benefits of using information technologies.

The study confirmed the viewpoint of Jakovenko (2016), who underlined that such therapeutic teaching of patients contributed to strengthening relations between doctors, nurses and patients. The study revealed that transfer of attention to human physical health was to the detriment of human moral and spiritual principles, which are the basis for a healthy lifestyle and prevention of diseases. We agree with the opinion of Strand, Carlsen, & Tveit (2016), who include conversations about the spiritual principles of health into clinical work of nurses. In the process of teaching, medical workers should focus on the patients’ mental health, change of their attitudes and convictions on implementation of the teaching algorithm.

## 7. Conclusion

We worked out an educational program—the patient education algorithm comprising various forms of education and contributing to the increase of psycho-pedagogical competencies of medical workers. While improving the nurses' pedagogical competencies, emphasis was laid on skills for teaching a patient and the members of his family to specific techniques of self-control, self-care and, self-aid.

The study proved the efficiency of the proposed algorithm of the patient education performed by nurses, after implementation of which the level of formedness of the patient skills for self-control of their own state and self-aid increased. The patients changed their behavioral habits, their motivation for health promotion increased, and they became responsible for their own health.

The questionnaires developed for medical workers and patients, allowed identifying the changes that have taken place after the education process. The information given in this article maybe helpful to the teachers of psycho – pedagogical disciplines of medical higher and secondary educational institutions. It can be also used by the clinical psychologists carrying out their activities at the medical and preventive treatment institutions.

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## References

- Afanasyev, M. V. (2015). Ideas of medical pedagogy at the stage of its formation in the history of education. *The World of Science, Culture, Education*, 2 (51), 38-40.
- Dahmardeh, H., Barati, F., Shahdadi, H., Balouchi, A., & Ahmadidaehsima, S. (2017). Barriers to patient education from the viewpoint of nurses in emergency department in the hospitals affiliated with university of medical sciences in 2015. *Indian Journal of Public Health Research and Development*, 8(1), 312-316.
- Devido, J. A., Doswell, W. M., Braxter, B. J., Spatz, D. L., Dorman, J. S., Terry, M. A., & Charron-Prochownik, D. (2017). Experiences of Parish Nurses in Providing Diabetes Education and Preconception Counseling to Women With Diabetes. *Journal of Obstetric, Gynecologic, and Neonatal Nursing*, 46(2), 248-257.
- Eloranta, S., Katajisto, J., & Leino-Kilpi, H. (2016). Orthopaedic patient education practice. *International Journal of Orthopaedic and Trauma Nursing*, 21, 38-48.
- Gluhih, S. I. (2016). Peculiarities of training nurses in modern vocational education. *Siberical pedagogical journal*, 1, 73-77.
- Jakovenko, D. (2016). Doctor-nurse cooperation in a therapeutic education pathway at home. *Soins; la revue de reference infirmiere*, 61(809), 23-26.
- Laptieva, L. N., & Rublevskay, E. I. (2014). Pedagogical aspects of professional activity of medical professionals. *Messenger UO MGPU*, 1(42), 82-90.
- Lee, R. L. T. & Wang, J. J. (2016). Effectiveness of an adolescent healthcare training programme for enhancing paediatric nurses' competencies. *Journal of Clinical Nursing*, 25(21-22), 3300-3310.
- Levey, J. A. (2016). Measuring Nurse Educators' Willingness to Adopt Inclusive Teaching Strategies. *Nursing Education Perspectives*, 37(4), 215-220.
- Pétri, B., Gagnayre, R., De Andrade, V., Ziegler, O., & Guillaume, M. (2017). From therapeutic patient education principles to educative attitude: The perceptions of health care professionals - A pragmatic approach for defining competencies and resources. *Patient Preference and Adherence*, 11, 603-617.



- Ryabova, T. V. (2017). Formation of readiness to make decision and act in abnormal situation in future healthcare professional. *Society of Russia: education space, psychological structures and social values*, 8(6), 329-337.
- Savinykh, E. A., & Snkhchyan, A. S. (2017). Educational schools for patient: viewpoint of medical community. *International research journal*, 1(55), 157-160.
- Strand, K., Carlsen, L. B., & Tveit, B. (2016). Nursing students' spiritual talks with patients - evaluation of a partnership learning programme in clinical practice. *Journal of Clinical Nursing*, 26, 1878-1886.
- Strupeit, S., Buss, A., & Dassen, T. (2016). Effectiveness of nurse-delivered patient education interventions on quality of life in elders in the hospital: A systematic review. *Applied Nursing Research*, 32, 217-221.
- Vasilieva, E. U. (2016). Model of psycho – pedagogical competence of the doctor. *Medical education and professional development*, 3, 134-136.