

JUSTIFICATION OF THE GOAL, OBJECTIVES AND METHODOLOGY OF ORGANIZING RESEARCH AND EXPERIMENTAL WORK ON TRAINING FUTURE DENTISTS FOR PROFESSIONAL INTERACTION IN PEDIATRIC DENTISTRY

ОБГРУНТУВАННЯ МЕТИ, ЗАВДАНЬ ТА МЕТОДОЛОГІЇ ОРГАНІЗАЦІЇ ДОСЛІДНО-ЕКСПЕРИМЕНТАЛЬНОЇ РОБОТИ З ПІДГОТОВКИ МАЙБУТНІХ СТОМАТОЛОГІВ ДО ПРОФЕСІЙНОЇ ВЗАЄМОДІЇ В ДИТЯЧІЙ СТОМАТОЛОГІЇ

The relevance of the problem of training future dentists for professional interaction in pediatric dentistry is determined by the social order of society. The article discloses the methodology for organizing an experimental research on the training of future dentists for professional interaction in pediatric dentistry based on situational and communicative modeling. The purpose of the research and experimental work was to study the dynamics of the level of readiness of dentistry students for professional interaction based on the use of the developed pedagogical system for training future dentists for professional interaction in pediatric dentistry on the basis of situational and communicative modeling in the experimental and control groups. The task of the research and experimental work: to identify differences in the level of readiness of dentistry students for professional interaction in pediatric dentistry in the experimental and control groups before and after the implementation of the author's pedagogical system. Research methods: survey, testing, observation, methods of mathematical data processing.

The research and experimental work on the implementation of a pedagogical system for training future dentists for professional interaction in pediatric dentistry based on situational and communicative modeling consisted of three stages – ascertaining, formative and final. At the ascertaining stage, the initial conditions of the experimental work in the control and experimental groups were established, which made it possible to ascertain approximately the same level of readiness for professional interaction. At the formative stage, the implementation of a pedagogical system for training future dentists for professional interaction in pediatric dentistry was organized on the basis of situational and communicative modeling, which contributed to increasing the effectiveness of training dentists of the new formation and is distinguished by its integrativeness, innovation, dynamism and variability. The final stage involved a comparative analysis of the results of ascertaining and formative experiments and determining the dynamics of the level of readiness for professional interaction in pediatric dentistry.

Key words: research and experimental study, future dentists, pedagogical system, stages of pedagogical experiment, readiness for professional interaction in pediatric dentistry.

Актуальність проблеми підготовки майбутніх стоматологів до професійної взаємодії в дитячій стоматології визначається соціальним замовленням суспільства. У статті

розкрито методику організації проведеного експериментального дослідження щодо підготовки майбутніх стоматологів до професійної взаємодії в дитячій стоматології на засадах ситуативно-комунікативного моделювання. Метою дослідно-експериментальної роботи було вивчення динаміки рівня сформованості готовності студентів-стоматологів до професійної взаємодії на основі використання розробленої педагогічної системи підготовки майбутніх стоматологів до професійної взаємодії в дитячій стоматології на засадах ситуативно-комунікативного моделювання в експериментальній і контрольній групах. Завдання дослідно-експериментальної роботи: виявлення відмінностей рівня сформованості готовності студентів-стоматологів до професійної взаємодії в дитячій стоматології в експериментальній і контрольній групах до і після реалізації авторської педагогічної системи. Методи дослідження: опитування, тестування, спостереження, методи математичного опрацювання даних.

Дослідно-експериментальна робота з реалізації педагогічної системи підготовки майбутніх стоматологів до професійної взаємодії в дитячій стоматології на засадах ситуативно-комунікативного моделювання складалася з трьох етапів – констатувального, формувального та підсумкового. На констатувальному етапі встановлено початкові умови дослідно-експериментальної роботи в контрольній та експериментальній групах, що дали змогу констатувати приблизно однаковий рівень сформованості готовності до професійної взаємодії. На формувальному етапі було організовано реалізацію педагогічної системи підготовки майбутніх стоматологів до професійної взаємодії в дитячій стоматології на засадах ситуативно-комунікативного моделювання, що сприяло підвищенню ефективності підготовки стоматологів нової формації та вирізняється інтегративністю, інноваційністю, динамічністю і варіативністю. Підсумковий етап передбачав порівняльний аналіз результатів констатувального та формувального експериментів і визначення динаміки рівня сформованості готовності до професійної взаємодії в дитячій стоматології.

Ключові слова: дослідно-експериментальне дослідження, майбутні стоматологи, педагогічна система, етапи педагогічного експерименту, готовність до професійної взаємодії в дитячій стоматології.

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Statement of the problem. The study of pedagogical processes and phenomena always requires experimental verification of hypothetical

assumptions. A reliable way to obtain data is a pedagogical experiment as a kind of experience that has a cognitive, purposeful research, and methodical

nature, which is carried out in specially specified conditions [4, p. 67]. In the most general definition, a pedagogical experiment is an empirical research method, the main idea of which is the knowledge of phenomena and processes in controlled and managed conditions, which are reproduced through their controlled changes. The experiment is carried out on the basis of a theory that determines the formulation of tasks and the interpretation of results. In its most general form, a pedagogical experiment involves a sequence of actions for data collection, a research process, analysis, measures and conclusions, as well as verification of research results.

Analysis of recent research and publications.

The issue of reforming and modernizing the system of higher medical education is analyzed in depth by scientists who argue the author's conceptual provisions regarding the improvement of the pedagogical system of medical education (O. Akimova; V. Humeniuk; L. Dudikova; K. Ivashchenko; I. Kankovsky, Yu. Kazakov; Ya. Kulbashna; I. Melnychuk; H. Pustovit, etc.) as the basis for the development of personal maturity of students and those oriented towards becoming healthcare professionals during their studies. However, the problem of professional interaction in medical practice, including dental practice, with child patients remains insufficiently studied.

The purpose of the article is to reflect the main results of the functioning of the pedagogical system for training future dentists for professional interaction in pediatric dentistry based on situational and communicative modeling.

Presentation of the main material. The effectiveness of the pedagogical system for training future dentists for professional interaction in pediatric dentistry based on situational and communicative modeling was tested experimentally during a pedagogical experiment. Pedagogical experiment in modern pedagogy is a research method used to determine the effectiveness of the application of individual methods and means of studying and education [2, p. 22]. The objective of the experiment is to determine the comparative effectiveness of technologies, methods, techniques, new content, etc. used in pedagogical activity [7, p. 14]. According to S. Zolotukhina and V. Lozova, a pedagogical experiment is a set of research methods designed for objective and evidentiary verification of the validity of the proposed hypothesis [3, p. 174]. According to S. Sysoeva and T. Krystopchuk, a pedagogical experiment is an active intervention of the researcher into the pedagogical phenomenon under study with the aim of discovering patterns and changes of existing practice [6]. From the above definitions of pedagogical experiment, it is worth to generalize that pedagogical experiment is a method of active, purposeful study of individual aspects of the educational process.

Experimental work involved the use of a certain set of methods: study and analysis of philosophical, sociological, psychological, pedagogical literature, results of students' and teachers' activity; pedagogical experiment, questionnaires, observations, interviews, conversations, self-analysis, expert assessment, quantitative and qualitative analysis of assessments and self-assessments; methods of mathematical statistics.

During the pedagogical experiment, the following tasks were solved:

1. Determining the initial level of readiness of future dentists for professional interaction in pediatric dentistry based on situational and communicative modeling.

2. Experimental verification of the effectiveness of the developed pedagogical system for training future dentists for professional interaction in pediatric dentistry based on situational and communicative modeling.

3. Research on the level of readiness for professional interaction among students of the control and experimental groups after making an experimental work and analysis of the obtained results.

The experiment was natural, as it was conducted in real conditions of mass training of full-time master's students at Dentistry faculties of medical universities. In general, the research and experimental work was carried out during the 2019-2024 academic years on the basis of the Danylo Halytsky Lviv National Medical University, Bukovyna State Medical University, Ivano-Frankivsk National Medical University, Uzhhorod National University, the private higher educational institution "Lviv Medical University", Kyiv Medical University with students of the "Dentistry" Specialty. At all stages of the study, 997 students took part in the experiment.

The pedagogical experiment was carried out in the following three stages:

1. At the ascertaining stage of the experiment, the initial level of readiness for professional interaction of future pediatric dentists was determined.

2. At the formative stage, direct pedagogical support was provided to prepare future dentists for professional interaction in pediatric dentistry based on situational and communicative modeling.

3. At the final stage, a re-diagnosis of the level of readiness for professional interaction of future pediatric dentists was carried out, as well as an analysis of the results was obtained, which were confirmed using mathematical statistics methods.

Each stage of the research and experimental work provided for the solution of a certain range of tasks. The tasks of the ascertaining stage included:

- selection of the necessary diagnostic methods and techniques that allow to assess objectively the level of readiness of future dentists for professional

interaction in pediatric dentistry based on developed criteria and indicators;

– initial assessment of the level of readiness of future dentists for professional interaction in pediatric dentistry.

Research of the readiness of future dentists for professional interaction in pediatric dentistry in professional training requires the appropriate development of diagnostic tools, the effectiveness of the diagnostic research depends on the appropriateness and competence of its use [5, p. 30]. Scientists consider diagnostic tools as a certain mechanism (tool) or, in a broader interpretation, – the practice of implementing the method of pedagogical diagnostics in order to determine the current state of certain objects of the pedagogical process, the causes of this state and the development of recommendations for the further functioning of the object under study [1; 4; 9]. Within the framework of the article, we consider diagnostic tools as a set of methodological and technical techniques aimed at obtaining comprehensive information about the object under study and the relevant processes, in particular, determining the level of readiness of future dentists for professional interaction in pediatric dentistry.

At the same time, scientists interpret the concept of “pedagogical diagnostics” as a complex of interrelated elements of pedagogical diagnostics, which includes kinds, requirements, types and stages of diagnostics, a set of certain procedures, methods and diagnostic operations. [8, p. 33]. Determining a pedagogical diagnosis and developing and implementing a number of corrective measures is the goal of pedagogical diagnostics, the effectiveness of which depends on the appropriateness of using diagnostic tools, the correctness of the analysis of the

results, and the effectiveness of designing the further educational process based on them [9, p. 6–7].

In order to determine the level of readiness of future pediatric dentists for professional interaction, a set of methods was used, presented in Table 1.

Using the selected tools, the results of the ascertaining stage of the study were determined, which made it possible to draw the following conclusions based on the generalization of information obtained through the analysis of testing, questionnaires and polystructural interviews:

1) for students, there is a significant gap between the meanings embedded in the educational process and the meanings realized in the process of dental practice (separation of educational material from real professional practice);

2) students perceive the need to communicate with patients and colleagues as a certain complexity of the profession, which sometimes becomes a cause of stress;

3) by identifying the most critical aspects of communication, students identify difficulties associated with the inability to manage their own emotions in stressful situations, the inability to manage conflicts, the inability to explain the “correctness” of a clinical decision, and communication with colleagues and the management of the dental clinic;

4) the lack of a communication skills program in higher education institutions is perceived by students as a significant disadvantage, but paradoxically it correlates with their perception of learning as a process “abstract” from professional reality. Moreover, not taking into account individual positive examples received from teachers, students note a fundamental lack of “quality” communication from the teaching staff.

Therefore, the results obtained at the ascertaining stage of the study necessitated the conduct of the

Table 1

**Diagnostic tools for assesement the level of readiness of future dentists
for professional interaction in pediatric dentistry**

Readiness components	Assessment methods and techniques
Axiological-motivational	Conversation, questionnaire. Diagnostics of motivational orientations in interpersonal communications (test “Motivation of professional activity” according to the method of K. Zamfir, approved by K. Lyniov, O. Merzliakova, D. Sabol), Methodology for personality diagnostics for motivation to success (T. Ehlers), questionnaire “Goals and values of professional activity of a master of medicine” (adapted and approved by V. Humeniuk)
Interdisciplinary-cognitive	Test “Fundamentals of Intellectual and Communicative Interaction” (author’s development), questionnaire “Emotional Intellect” to determine the level of awareness of one’s own emotions and management of emotions of child patients in the process of professional interaction (modification of N. Hall’s methodology).
Communicative and organizational	Interview, observation, questionnaire, testing. Situational exercises of professional interaction in dental practice (selected by the author), semi-structured interview.
Personally developmental	Conversation, interview, observation, testing. Test to determine the level of realization of needs in self-development (adapted and tested by A. Ostapenko), self-examination of educational and professional activities (author’s project), Questionnaire to identify personal traits for self-improvement in future dental practice (modification of the semantic differentiation method of F. Fiedler, R. Dobrovolska).

formative stage of the study, which provided for the following logic of its implementation:

- grouping of control and experimental groups;
- determination, based on the identified criteria and indicators, of the initial level of readiness of future dentists for professional interaction of the control and experimental groups (by conducting diagnostic measures in the control and experimental groups using the same diagnostic tools as at the ascertaining stage of the study);
- implementation of a pedagogical system for training future dentists for professional interaction in pediatric dentistry based on situational and communicative modeling;
- monitoring the dynamics of the formation of future dentists' readiness for professional interaction according to specific components.

To achieve the objectives of the formative stage of the study, a methodology was developed for training future dentists using situational-communicative models of professional interaction, which included discussion and analysis of real clinical cases; the use of interactive forms of classes, role-playing games, simulations, etc. for the practice of interaction with patients and their relatives in conditions as close to real ones as possible; the use of a number of reflective methods that include written and oral self-analysis, group discussions and analysis of consultations; comprehensive study of three main types of communication skills (content, procedural and perceptual).

At the *final stage*, the results of the formative and ascertaining stages of the pedagogical experiment were analyzed, compared and summarized, and the main conclusions and recommendations were formulated regarding the implementation of the results of the pedagogical experiment in the process of training future dentists for professional interaction. At this stage, the effectiveness of the developed educational and methodological tools for forming the readiness of dentists for professional interaction in pediatric dentistry was tested.

Conclusions. Thus, within the framework of the experimental study, a statically significant difference in the levels of readiness of future dentists for

professional interaction in pediatric dentistry was established, which indicates a positive dynamic of the formation of the studied phenomenon during the experimental work in the context of the implementation of the research tasks. The theoretical significance of the study lies in determining the method of training future dentists for professional interaction in pediatric dentistry based on situational-communicative modeling. The practical significance lies in the possibility of applying the results of the study to train future doctors of various specializations for professional interaction, including with children.

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