

**FORMATION OF RESEARCH COMPETENCY
OF FUTURE FELDSHERS AS A PEDAGOGICAL INNOVATION**

**ФОРМУВАННЯ ДОСЛІДНИЦЬКОЇ КОМПЕТЕНТНОСТІ
МАЙБУТНІХ ФЕЛЬДШЕРІВ ЯК ПЕДАГОГІЧНА ІННОВАЦІЯ**

Moseichuk Anna¹

Postoian Tetiana²

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Abstract. During the period of formation of Ukrainian medicine branch, one of important directions of researches in the theory of professional education is linked with solving the long-existing problem of fast and effective studying to medical professions. Growth of its significance is based on the strategy of development of the medical branch that determined human potential and innovative way of development of Ukrainian medicine branch as central milestones. Compounds of the specified milestones have a common basis – professional education as a source and mean of provision of innovative and highly-technological medical assistance by qualified professional personnel.

Thus, there is a need in innovative changes in existing system of medical specialists of senior level, the most important component of which is the availability of feldshers (feldsher at village feldsher-obstetrical station, emergency conditions medicine feldsher, sanitary education feldsher, laboratory feldsher, etc.) of proper qualification level.

Certain preconditions for solving the matter of the future feldshers research competency formation are provided in sociological, psychological and pedagogical researches, namely: psychological aspects of research activity (O. Leontev, A. V. Mukhina, M. Poddiakov, S. Rubinshtein, etc.); self-sufficiency and personal activity development mechanisms, nature and specific features of research activity (V. Zahviazynskyi, O. Leontovych, O. Obukhov, P. Pidkasystyi, O. Savenkov, V. Slastonin,

¹ Applicant of the Department of Educational Management and Public Management, South Ukrainian National Pedagogical University named after K. D. Ushynsky, Ukraine

² Candidate of Pedagogical Sciences, Associate Professor, Department of Educational Management and Public Management, South Ukrainian National Pedagogical University named after K. D. Ushynsky, Ukraine

H. Shchedrovyskyi, etc.); role of scientific-research activity as a factor of increase of the quality of students professional training (I. Hubenko, M. Potashnyk, O. Shevchenko, etc.); theoretical grounds and practice-focused approaches to organization of scientific research activity of students (I. Zymnia, I. Ziaziun, M. Kniazian, O. Krushelnytska, V. Maiboroda, A. Markova, O. Ovcharuk, O. Piekhota, V. Proshkin, M. Shashkina, etc.) the phenomenon was scientifically grounded for the first time the essences of the phenomenon “future feldshers’ research activity” and “future feldshers’ research competence” were scientifically grounded; the structure of research competence in which motivation, expectative, procedural-communicative and resultative components were determined. Criteria and indexes of future feldshers’ research competence formedness were determined: motivation-values (presence of positive motivation to research activity, presence of need in research activity during the studies, presence of values orientations in research activities); cognitive (familiarization with the sphere of research activity, knowledge of methods of scientific cognition of medical-biological field, familiarization with the sphere of scientific communication), technological (ability to analytical and estimating activity, ability to organize and to conduct a research, ability to make reasonable conclusions), reflexive (understanding own research competence, ability to solve professional tasks creatively, scientific communication ability). The levels of formation of future feldshers’ competence were characterized (adaptive, reproductive, heuristic).

Pedagogical conditions for formation of future feldshers’ research competence during biological disciplines studies (future feldshers’ understanding of interdependence of research competence and successful professional activity on the level of creed; enrichment of the research component of biology disciplines content with profession-aimed research tasks; immersion of future feldshers into active extra-studies project-research activity) were determined and scientifically grounded. Structure-functional model of formation of future feldshers’ research competence during biology disciplines studies was developed that includes purpose block containing, purpose, scientific and pedagogical approaches and principles; content block containing biological disciplines, research, design and research activity, practice; organization and technology block determining pedagogical conditions, methods, means, forms, studies, stages of formation of future feldshers’ research competence (orientation, quasi-pro-

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fessional, evaluation); resultative block determining the components, criteria, research expertise formedness levels. Content of experimental methodology contains developed profession-aimed research tasks, professional situations, textbook for students of medical college “Exercise Book for Laboratory and Practical Works on Discipline “Biology”, diversified extra-studies activity (group, competitions, Olympiad, sanitary-enlightenment), various types of practices.

Introduction

Intensive reformation of the branch of healthcare, its intellectualization, shift to continuous innovative process within the medicine provides for mastering the research competency of future specialists that in its turn requires reviewing and refocusing of content of contemporary medical education with the purpose of increase of its quality.

Professional activity of future feldshers depending on their areas of responsibility (as part of ambulance unit, at village feldsher-obstetrical station, medical station at production facility, etc.) is in one way or another linked with clinical diagnostics that is first of all provided for by research competency of a medical specialist.

Biological component of future feldshers professional training is the most important link and instrument of formation of both professional and research competencies. Research activity as biological disciplines grounding element comprises knowing the scientific research methods and skills to apply them that is comprised with the metadisciplinary and disciplinary requirements to the results of the studies and is a part of general scientific training of a specialist. Formed research knowledge, abilities, skills, learned starting research experience within the field of biology transforms into a research competency, that is a basis for effective professional activity of a contemporary feldsher.

Certain preconditions for solving the matter of the future feldshers research competency formation are provided in sociological, psychological and pedagogical researches, namely: psychological aspects of research activity (O. Leontev, A. Mazaletska, V. Mukhina, M. Poddiakov, S. Rubinshtein, etc.); self-sufficiency and personal activity development mechanisms, nature and specific features of research activity (V. Zahviazynskiy, O. Leontovych, O. Obukhov, P. Pidkasystyi, O. Savenkov, V. Slastonin, H. Shchedrovyytskyi, etc.); role of scientific-research activity as a factor of increase of the quality

of students professional training (T. Babenko, L. Berendiaieva, L. Brazalii, I. Hubenko, I. Konieva, M. Potashnyk, Yu. Solianykov, O. Shevchenko, etc.); theoretical grounds and practice-focused approaches to organization of scientific research activity of students (M. Holovan, I. Zymnia, I. Ziaziun, N. Kichuk, M. Kniazian, O. Krushelnytska, Z. Kurliand, A. Mazaletska, V. Maiboroda, A. Markova, O. Mykytiuk, O. Ovcharuk, O. Piekhota, V. Proshkin, I. Sencha, L. Sultanova, N. Sukhina, V. Tahirov, V. Trush, H. Tsekhmistrova, L. Cherniaieva, M. Shashkina, etc.). Scientific revisions by K. Zadorozhnyi, A. Mukhambetova, O. Pietunin, I. Ponomarov, S. Pokhliebaiev, S. Shamrai, etc. are designated to formation of scientific terms and research skills within the process of studying biology.

Problem Definition

A number of latest researches are designated to the problem of development and modernization of higher medical education that is reflected in the works by O. Volosovets, Yu. Voronenko, O. Humeniuk, L. Lohush, B. Kryshptopi, M. Mruhu, Yu. Poliachenko, I. Radziievaska, T. Temerivska, V. Shatylo, etc.

I. Boryskova, M. Demianchuk, Ye. Kaplii, O. Kryvonos, Ya. Kulbashna, V. Ryzhkovsky and other scientists characterize the research competency of future healthcare specialists in different ways.

The problem of formation of future feldshers research competency (feldsher, emergency feldsher, sanitary education feldsher, laboratory technician feldsher, etc.) was not the subject of the scientists' researches. In addition, there are direct contradictions in the practice of future feldshers training:

– unprejudiced society's demand on provision of qualitative medical services on the grounds of evidence-based medicine, on the one part, and the level of formedness of research competency of feldshers to satisfy this demand on the other part;

– educational potential of biological disciplines within the context of formation of research competency of future feldshers in medical colleges and absence of scientifically grounded pedagogical conditions of organization of this process and methodology of its formation.

Purpose of the research – to theoretically ground and experimentally check the pedagogical conditions of formation of research competitiveness of future feldshers within the process of studying biological disciplines.

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Subject of the research – professional training of future feldshers at medical college.

Scope of the research – content and methodology of formation of research competency of future feldshers within the process of studying biological disciplines.

Methodology and Applied Methods of the Research

Under the results of analysis and generalization of theoretical basis of formation of research competency of future feldshers it was established that the basic concept of the research is the research activity that from the philosophical approach is determined as a science development cultural mechanism serving as a mean of active search, knowledge formation, formation of new experience (M. Kahan) [4]. Within the general context of the theory of activity, the research activity is determined as a specific human activity under its scope, means, product, result and requirements to the scope of this activity, regulated by consciousness and activity of the person and directed to satisfy the cognitive needs (O. Leontiev and S. Rubinshtein) [8; 15]. Taking into account the scientific achievements of pedagogues-scientists (M. Aliksieiev, V. Andrieiev, Ye. Berezhnova, V. Zahviazinskyi, A. Karpov, O. Novikov, O. Savenkov, etc.) it was established that scientific activity is linked with solution of research tasks creative under their content by those taught and comprises presence of main stages typical for research in scientific branch [1; 3; 5; 11; 16]. Taking into account the scientific practices of scientists, the research activity of future feldshers is considered as one of the main means of cognition that mostly fully responds to the nature of personality and contemporary tasks of professional training.

The main content of the research in the field of education is that it is educational, the purpose of which is not getting unprejudicely new result but development of personality, getting functional research skills as a universal tool of understanding of reality through increase of motivation to studies and activation of personal position in education process. Its basis is getting unprejudicely new knowledge (gained unassisted, being new and significant for the certain person) (O. Krushelnytska, O. Leontovych, O. Obukhov, V. Omelian, T. Postoian, etc.) [6; 8; 12; 13; 14].

It was established that the sufficient difference between educational-research and scientific-research activities is the level of assistance in completion of a research task and the novelty of the result.

Research activity of future feldshers promotes formation of scientific ground for their medical practice, provides scientific rather than intuitive approach to professional activity on the principles of evidence-based medicine based on collection, analysis, generalization and interpretation of scientific information (L. Brazalii, I. Hubenko, V. Shatylo, etc.) [2; 18]. Research activity of future feldshers is determined as a process aimed at achievement of self-precious new knowledge in the field of medicine, self-education and self-actualization of own research skills.

Research has been completed under the research approach the sense of which lies within the fact that the education process gains the properties to create new knowledge being up to date for nowadays and future of the taught person. Factors providing for use of research approach have been established: assimilation of scientific knowledge in society (introduction of results of scientific activity into daily routine); expansion of science to professions that resulted into special requirements to those qualities of an employee being raised at the very school age; renewal of professions associated with science (A. Karpov) [5]. Functions of the research approach constitute upbringing of cognition process, creative of positive motivation to study and learn, formation of deep, strong and practical knowledge, development of intellectual sphere of property, formation of skills and abilities of self-education, ways of active cognition activity (H. Trosheva) [17].

The competency approach is the basic approach to formation of research competency of future feldshers, it is characterized by scientists as universal in relation to the requirements of modern society and considers content of education as a whole experience of life tasks solving and professional competency of future specialists (I. Bekh, N. Bibik, A. Bogush, N. Boliubash, A. Verbytskyi, E. Zeier, I. Ziazium, V. Luhovyi, A. Markova, O. Pometun, etc.). Competency approach provides for modeling the results of education as the norms of its quality, priority orientation to whole educations (ability to study, self-determination, self-actualization, socialization and development of individuality). Formation of competent specialist of medical area grounds on the concept of modern model of specialist with higher medical education, the main components of which are: motivation to study throughout the whole life, ability to study, skills for unassisted gaining of knowledge and scientific search and also ability to transform gain knowledge into innovative technologies (Ya. Kulbashna) [7].

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Biological disciplines are of fundamental significance in relation to formation of competent future feldshers, taking into account modern trends of innovative development of medicine. Research of the role and place of biological disciplines within the process of professional training of future feldshers showed their general educational and professional load. They appear as theoretical and practical grounds for studying professional and clinical disciplines and upon actualization of their educational potential they provide for formation of research competency of future feldshers.

Analysis of various approaches to the construing the researched phenomenon (research, competency) enabled to consider the research competency as integral, poly-functional personal formation expressing itself in the ability to apply knowledge, skills, abilities, ways of research activity to settle standard and non-standard situations, creative transformation of actuality.

Analysis of the scientific fund showed that research competency of future feldshers under its content and forms is an important component of future competency. The research competency of future feldshers is determined as integral personal new formations constituting basic knowledge of the methods of scientific cognitions, ways of research activity, appreciating relation to it and considered ability to transfer of starting research experience to professional activity with the purpose of provision of qualitative medical assistance to patients.

Structure of the research competency of future feldshers is considered as an aggregate of stable relations, mutual dependency and conditioning between motivating, prognostic, procedural-communicative and resultative components ensuring existence of research competency of future feldshers as a whole formation.

To form the research competency of future feldshers during studying biological disciplines respective pedagogical conditions were found out and scientifically grounded, under the latter we consider an aggregate of non-prejudiced possibilities of content, methods and forms of education and material-space environment actualization of which provides effectiveness of formation of research competency of future feldshers within the process of studying biological disciplines and cognitive project-research activity. Self-reflection of experience and also taking into account the pedagogical nature of the researched phenomenon enabled to give an outline to such an aggregate of pedagogical conditions: future feldshers' understanding of

mutual conditioning of research competency and successful professional activity at the level of beliefs; enrichment of the research component of content of the biological disciplines with profession-oriented research tasks; deepening the future feldshers into active cognitive project-research activity.

Results and Consideration

According to the structural component of the research competence of future feldshers criteria and relevant indicators are defined: motivational-value (presence of positive motivation to research activity; presence of a need in research activity within the process of studies; availability of value orientations in research activities); cognitive (familiarity with the field of research activity; knowing of scientific cognition methods in the medical and biological fields; knowledge of the field of scientific communication); technological (the ability to analytical and forecast activity; the ability to organize and conduct researches; the ability to make reasoned conclusions); reflexive (awareness of own research competence; ability to creative professional tasks solving; ability to scientific communication). On the basis of determined criteria and indicators the levels of formation of the research competence of future feldshers (adaptive, reproductive, heuristic) are described.

To determine the levels of formation of the research competence of future feldshers the following diagnostic tools were developed and used: the test “Scientific Activity Motivation” by Y. Medvedeva, T. Ohorodova; self-assessment map “Need in Research Activity During the Studies”; diagnostics of career value orientations by E. Shane (adaptation by V. Chiker, V. Vinokurova); questionnaire “Research Activity of Medical Worker”; test tasks for future feldshers “Methodology of Medical and Biological Researches”; questionnaire “Scientific Communication of Medical Worker”; tasks for students “Analytical and Forecasting Activity of Medical Worker”; the task “Organization of Biological Observation / Experiment / Measurement”; task for students “Research Conclusions”; self-assessment map “Assessment of Medical Worker's Research Activity; V. Andreev's test “Self-Assessment of the Level of Individual's Creative Potential”; self-assessment card “Intensity of Scientific Communication”; conversations, monitoring activities of future feldshers during educational process.

The results of constituting experiment show the formedness of the research activity of future feldshers is as follows: heuristic level is 1,56%

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of EG students and 0,82% of CG ones, reproductive – 17,19% EG and 16,39% CG, adaptive level was shown by 81,25% of EG and 82,79% CG future fieldshers.

The model of future fieldshers's research competence formation is proposed, it is considered as a general scheme of formation process and reflecting the main components, their sequence and subordination [9]. It is about: a target block containing a goal, scientific and pedagogical approaches and principles; content block formed by biological disciplines, research, design-research activities, methods, means, forms, stages of formation (orientational, quasi-professional, appraisal); result block containing the components and criteria of their measurement, the level of formation of research competence and the result – the positive dynamics of future fieldshers and practice; organization-technology block containing pedagogical conditions of formation of research competence of future fieldshers in the process of studying biological disciplines, namely: awareness of future fieldshers of mutual dependence of research competence and successful professional activity at the level of beliefs; enrichment of the research component of the biological disciplines content with profession-oriented research tasks; immersion of future fieldshers into active extra-curricular project and research activities.

On the basis of theoretical research and obtained results the experimental methodology for the staged formation of future fieldshers' research competence within the process of studying biological disciplines has been developed and implemented. The proposed method provides for implementation of all the defined pedagogical conditions at each of the stages as they are interrelated and interdependent and therefore integrated into the formation of the research competence of future fieldshers. "Binding" of the pedagogical condition to a certain stage of the formation of the research competence of future fieldshers was conditional and attention was paid to implementation of one or another pedagogical condition not by the principle of significance, but by the logic of the process of formation the research competence of future fieldshers.

Thus, at the orientational stage the emphasis was placed on the implementation of the pedagogical condition – the enrichment of the research component of the content of biological disciplines with research tasks of professional orientation. The aim was to develop the ability to solve research tasks of professional orientation using research methods; under-

standing of the professional context of biological research. At this stage, experimental material was used that systematized and updated the research component of the discipline “Biology”. Interactive teaching methods were used: search, research, design, game, case method. The forms of studying process organization were lectures, seminars-discussions, research practical and laboratory studies, excursion and competition of sanitary-educational mini-projects that ensured formation of the students’ ability to apply scientific and applied concepts in practice. In the course of research future fieldshers mastered the methods: work with sources of information, observation, research, experiment. Students carried out independent observations and measurements, performed tasks and exercises to form comprehensive vision of the problem. Future fieldshers solved research tasks such as: “Why is the number of gene combinations discrete? Assuming that the set of genes is discrete, how the situation can be forecasted?”, “Forecast the development of human artificial insemination technologies”, etc. Future fieldshers were purposefully studied to characterize the basic methods of plant and animal breeding, solved tasks related with mastering the patterns of heredity and variability of organisms, learned to define concepts, performed tasks for generalization, classification of biological objects and phenomena by features. During the studies crossword puzzles were used as an exercise on definition of concepts. Students mastered organization of the experiment – the most important research method. In the course of studies excursion to the biotechnology laboratory of one of the scientific centers future fieldshers in practice have become familiar with the experimental technology of crop propagation in vitro. Students performed simple mini-projects on various issues with consistent studying of topics within the scope of sections they study composition and structure of the living system of any level, its main properties and their material basis, and also internal and external relations of the system (state of potable water, state of the beaches, influence of park areas on the level of air pollution of the city, problem of sterilization of stray dogs and cats, etc.). Future fieldshers were required to: determine the purpose of the study, its relevance, level the problem was researched, the sequence in the presentation of the results, relevance of the findings to the goals, tasks, study hypothesis, their laconicity. Such creative tasks allowed to form the skills of elementary research work under guidance of a teacher. Upon completion, a competition for mini-projects of first-year students was organized. The “From ancient times...” quest held made relevant the criti-

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cal thinking of future feldshers, the ability to perform comparative analysis, classify information, conduct a dialogue, etc.

At the quasi-professional stage, the emphasis was placed on implementation of the pedagogical condition: the immersion of future feldshers in active non-academic research and development. At this stage developed experimental material was implemented, the one that actualized and systematized research component of the discipline “Medical Biology”, student movement of Olympiad movement, competitions, research and sanitary-education projects, group “Biologist”, scientific seminars, student conferences. The purpose of this phase was to build the ability to use a creative approach to development of new original ideas and methods, to determine the methods of research conducting, results processing using informational technologies and technical means. At this stage, interactive teaching methods were used: dispute, case method, project method and game that contributed to the creative activity of future feldshers. Upon determination of the educational goals of discipline “Medical Biology” is has been considered that it was based on the formed experience of research, its objectives appeared as: to direct research-gained knowledge and skills into the plane of professional use in their own research activities; to master basic biological apparatus necessary for the study of medical and biological objects and phenomena; to form awareness in the latest professional knowledge in the field of medical biology. At the research studies the following tasks were considered: to form the ability to select and use appropriate equipment; to reasonably determine research tools and methods; ability to combine theory and practice to solve medical and biological research tasks; understanding of the possibilities and limitations of research methods and methods. Case studies have been actively used in the educational process, where the study appeared as a kind of instrument for solving medical and biological problem set (Case “Tick-Borne Encephalitis Spread Threat”, etc.). Medical-biological Olympiads of different levels created conditions for demonstration of the results of educational and research activities of future feldshers, promoted scientific communication. Purposeful formation of the ability to scientific communication was solved by the “Public Speech” training, which provided for the formation of public speaking skills.

In the process of carrying out sanitary-educational projects, the future feldshers were supposed to: identify the problem, the task of research, put

forward the hypothesis of their solution, select appropriate research methods, formalize the results, carry out their analysis and correction. Students worked on projects: “Everyone must know it!”, “Tuberculosis among us!”, “Genetics and us”, etc. According to the results of the study, future feldshers developed sanitary and educational reminder cards, issued newspaper, leaflets, booklets for population of different categories (schoolchildren, students, HIV-infected, pregnant women).

Quasi-professional stage was focused on elementary research activity under lecturer’s guidance within the scope of the group “Biologist”. The tasks solved were: development of the worldview and scientific erudition of future feldshers; acquaintance of students with the state of consideration of scientific problems in the field of medicine; development of the ability to transfer the gained knowledge into practical activity, etc. Students of the groups performed cross-researches (comprehensive, cross, express) and express-researches (“Impact of Educational Buildings Factors on the Students’ Health. Analysis of measures complex concerning creation of optimal living environment”, “Reasons Students do not Attend Classes”, “Industry of Health in Israel and Odesa Region: Comparative Analysis”, “Allergic reactions among Odessa students”, etc.). Within the framework of cooperation with Odessa National Medical University and clinical practice facilities, training senior students, being the authors of the research “Reasons of Tuberculosis Rapid Spread in Odessa Region”, was organized, that created conditions for individualization of future feldshers’ scientific activity. Within the framework of the scientific topic, the members of the group carried out the research “Research of Various Factors Impact on School-Aged Children Morbidity Rate”. On the quasi-professional stage, the professional competition “Feldsher – Sanitary-Educational Work Organizer” was organized, the final phase of which was conducted in the form of roundtable presentation and discussion of sanitary and educational projects, thus promoting formation of ability to conduct scientific communication, participate in substantive discussions on current medical and biological problems. All this enabled to realize the professional and social contexts of the future profession, to develop the skills of creative individual and collective work, scientific communication more effectively. Quasi-professional stage allows for realizing by future feldshers of significance and acceptance of research competence as one of conditions of competitiveness of a modern specialist through conduction

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of professional research activities within the process of not only studying medical biology, but also in active extra-curricular project and research activities.

At the estimation stage, a pedagogical condition was implemented – realizing by future feldshers of the interdependence of research competence and successful professional activity at the level of beliefs. Achieving the goal of this phase was to help future feldshers understand the interdependence of research competence and successful professional activity, in providing the students with the opportunity to independently carry out a research search into professional activity, to initiate self-reflection of the future feldshers. Knowledge and practical skills gained during the conduction of research and medical-biological tasks at this stage allowed to solve clinical research tasks during on-the-work and pre-diploma practices of the future feldshers. Upon preparation for the clinical research the students were required to: conduct a deep analysis of information on the state of the problem, comparative characteristics of the research methods, analysis of their advantages, disadvantages and selection of the research method. During pre-diploma practice, future feldshers conducted examination of patients at the therapeutic department to study their comorbidity, nutritional benefits, diagnosis of magnesium deficiency, assessment of nutrition status, anxiety and depression. Patient research has promoted students to acknowledge the interdependence of research competencies and successful professional activity of future feldshers. The estimated stage envisaged the accumulation and reflection of experience in the professional field related with the understanding of the research activities carried out in the previous stages, to identify errors and to identify the causes preventing achievement of the goal. The leading methods of teaching at this stage were: search, research and conversation, and the forms – practice, independent work of students, individual consultation.

Upon completion of the formation stage of the experiment, a comparative final examination was conducted in relation to the levels of formation of research competency of future feldshers during studying biological disciplines in the experimental (EG) and control (CG) groups.

At the final stage of the experimental research, the heuristic level of formedness of the research competency was reached by 21,87% of EG students (1,56% previously) and 9,87% of CG ones (0,82% previously); 55,47% of EG future feldshers (17,19% previously) and 36,06 of CG ones

(16,39% previously) were at the reproductive level and 22,66% of EG respondents (81,25% previously) and 54,10% of CG ones (82,79% previously) left at the adaptive level.

Changes that occurred in the dynamics of the formation levels of research competence of future fieldshers in the process of studying biological disciplines of EG were statistically significant that is confirmed by the value of the median criterion in contrast to the results of the CG. The median criterion is more critical ($21.64447 > 3.84146$) that proves the effectiveness of the pedagogical conditions involved in formation of the research competence of future fieldshers in the process of studying biological disciplines and, taking into account these conditions, the model and experimental methods of their implementation.

Conclusions

The problem of forming the research competence of future fieldshers in the process of studying biological disciplines reflected in the development, scientific grounding and approbation of the model and experimental methodology providing for implementation of certain pedagogical conditions for formation of the phenomenon, has been researched.

The research competence of future fieldshers is considered as an integrative personalized neoplasm consisting of basic knowledge of scientific cognition methods, research activities methods, appreciating attitude it and conscious ability to transfer initial research experience into professional activity to provide qualitative medical care to patients. Its structure forms interconnected, interdependent and inter-conditioning components (motivational, predictive, procedural-communicative, productive).

The criteria and indicators of formedness of research competency of future fieldshers are determined: motivational-value (presence of positive motivation to research activity; presence of need in research activity during studies, availability of value systems in research activities); cognitive (awareness of the field of research activity, knowledge of the methods of scientific cognition of medical and biological industries, knowledge of the field of scientific communication); technological (ability to analytical and forecasting activity, ability to organize and conduct researches, ability to make reasoned conclusions); self-reflexive (understanding of own research competence, ability to creative problem solving, ability to scientific communication). According to the determined criteria and their indicators, the

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levels of formation of the investigated phenomenon are characterized: heuristic, reproductive, adaptive.

Pedagogical conditions for formation of research competence of future fieldshers in the process of studying biological disciplines have been detected, theoretically grounded and introduced, namely: understanding of interdependence of research competence and successful professional activity by future fieldshers at the level of beliefs; enrichment of the research component of the content of biological disciplines with research tasks of professional direction; immersion of future fieldshers into active extra-curricular project and research activities.

Experimental methodology and blocks-containing model of formation of research competence of future fieldshers in the process of studying biological disciplines has been developed and approbated: goal, content, organizational-technological, productive with the stages of formation of the investigated phenomenon (orientational, quasi-professional, evaluating). Each stage of the organizational-technological block has education goals, content, methods (search, research, project, game, case-method, conversation, individual consultation) and the forms of their implementation (research studies, round table, Olympiad, competition, scientific-practical seminar, conference, sanitary-educational project, etc.) defined, that provides a comprehensive introduction of the proposed pedagogical conditions.

The final stage of the experiment showed that the number of EG students with a heuristic level of the development of research competence increased by 20.31% (by 9.02% at CG); by 38.28% – with reproductive level (in CG – by 19.67%); the index of adaptive level in EG was reduced by 58,59% (in CG – by 28,69%). The statistical processing of the quantitative results obtained from the diagnosis of the levels of formation of the research competence of future fieldshers with the use of the median criterion proved the statistical significance of positive changes through the introduction of the proposed pedagogical conditions, the model and the experimental methodology for their implementation.

The research held does not exhaust all aspects of the problem of formation of the research competence of future fieldshers. **The prospect of further research** is seen in the comprehensive study of individual psychological factors, regularities and peculiarities of formation of research competence of future medical assistants within the process of professional training, as well as in the system of continuous education.

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