

## ON THE ISSUE OF METHODOLOGICAL AND PEDAGOGICAL BASIS OF TEACHING PUBLIC HEALTH MASTERS THE SUBJECT “ORGANIZATION AND PRESENTATION OF SCIENTIFIC RESEARCH”

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**Summary.** The aim is to determine the methodological and pedagogical basis for teaching masters of public health the discipline “Organization and presentation of scientific research.”

The materials of the research are the current legislative acts and regulations of Ukraine regarding the functioning of health care system and training of masters of public health, curricula for the training of public health masters. Methods of content analysis, structural-logical analysis and system approach were used in the work.

article presents the structure of educational and scientific program of the discipline “Organization and presentation of scientific research”, methods, forms and results of teaching “Organization and presentation of scientific research”.

**Conclusions.** The methodological and pedagogical basis for teaching masters of public health the subject “Organization and presentation of scientific research” is to use active and interactive forms of classroom teaching using the method of controlled individual learning and research tasks for independent work of students.

**Keywords:** public health, masters, training, the subject “Organization and presentation of scientific research”, methodological and pedagogical basis.

In Ukraine, the implementation and development of the public health system is defined at state level [1, 2]. The Cabinet of Ministers of Ukraine approved the specialty “Public Health” [3], which made it possible to introduce training for the system and approve the State Standard of Higher Education in the specialty “Public Health” for first and second level of higher education [4].

The approved standards are based on the competency approach, which is enshrined in the European Commission’s international project “Harmonization of Educational Structures in Europe” and its methodology lies in formation of competencies at all

stages of learning. At the same time, competencies represent a dynamic and complex combination of knowledge, understanding, skills, abilities and capabilities. Acquisition of competencies by students is the goal of educational programs. Competences are formed during studying different disciplines, and the level of their acquisition is assessed at all stages of training [5].

**The aim** is to determine the methodological and pedagogical basis for teaching masters of public health to the discipline “Organization and presentation of scientific research.”

**Materials and methods.** The materials of the research are the current legislative acts and regulations of Ukraine regarding the functioning of health care system and training of masters of public health, curricula for the training of public health masters. Methods of content analysis, structural-logical analysis and system approach were used in the work.

### Results

The purpose of teaching the subject “Organization and presentation of scientific research” to masters of public health according to educational-scientific program is the formation of theoretical knowledge about the principles and methods of research and practical skills and abilities to use them in organizing and conducting various types of research and scientific-research work in the field of public health, using the principle of academic integrity, practical preparation of future specialists for implementation of research and analytical professional functions.

As a result of studying the discipline “Organization and presentation of scientific research”, a master must be able to use modern methodology for analysing problems and phenomena in the field of public health; to be aware of features in carrying out various types of applied researches; to develop a research concept; to make the program and design of applied scientific research, to choose optimum methods of its performance; to form a sample; to analyse scientific sources, legislative, regulatory and other documents, data of sectoral statistical reporting and monitoring of the situation in the field of public health; to conduct organizational experiment, observation, questionnaire, etc.; statistically, using the methods of biostatistics, process, analyse and design the results of the study, using the methods of clarity and forms of generalization of the research results; independently improve their professional scientific culture.

According to academic program of this discipline, 120 academic hours have been approved for mastering it, including 20 academic hours for full-time lecture material, 28 academic hours for practical classes and 72 academic hours for independent work of students. In the case of distance (extramural) studying, 14 academic hours are approved for teaching students and 106 academic hours for independent work.

The structure of the discipline involves mastering the material in 10 learning topics, which are divided into two content modules.

### Content module 1

#### **Methodology of preparation and carrying out of scientific research by students**

**Topic 1.** Preparatory stage of scientific research. Analytical review of the literature. Transliteration. Choice of topic and objective, formation of research tasks.

**Topic 2.** Program development, selection of object and subject, research base.

**Topic 3.** The choice of the unit, the calculation of the sample size of the study. Research methods. Sources of primary scientific information.

**Topic 4.** The procedure for compiling questionnaires of sociological research.

Questionnaire structure. Types of questions. Organization of sociological research. Collection of information. Verification of the data obtained.

**Topic 5.** The concept of academic integrity and plagiarism. Plagiarism in the scientific work of students and ways to prevent it.

## **Content module 2**

### **Technology of statistical processing of research results and basic requirements for content, design, presentation and protection of students' research works**

**Topic 6.** Methodical approaches to statistical processing of the data obtained. Statistical grouping of the data. Statistical tables and rules for filling them. Statistical processing of the data obtained with the use of modern mathematical and statistical methods and information technologies.

**Topic 7.** Analysis of research results. Literary and graphic design of the results of statistical and sociological research.

**Topic 8.** Implementation of research results in the practice of the public health system and evaluation of their effectiveness.

**Topic 9.** Rules for writing scientific articles, reports, abstracts, messages, annotations and methodology of presentations.

**Topic 10.** Methodology of preparation, design and presentation of the results of scientific master's theses.

Mastering this subject provides students with the acquisition of competencies defined by the State Standard of Higher Education in the specialty "Public Health" of second-level of higher education (Master's degree): the ability to abstract thinking, analysis and synthesis, skills of information and communication technologies, the ability to research at the appropriate level, the ability to learn and master modern knowledge, the ability to search, process and analyse information from various sources, the ability to be critical and self-critical, the ability to make reasonable decisions, the ability to develop and manage projects, the ability to define the priorities of public health, to provide health care needs assessment, propose science-based measures and develop appropriate action plans and strategies, the ability to draw conclusions, develop forecasts and analyse the impact of different determinants on public health, identify the needs of different population groups in relation to health, based on information obtained from epidemiological surveillance systems, the ability to characterize and study the impact of key individual determinants of health on public health in order to maintain and enhance public health, the ability to develop and implement strategies, policies and measures in health promotion, to conduct effective public health communication using a variety of communication channels and techniques, the ability to develop and implement evidence-based public health strategies, policies and interventions based on public health methods and approaches with stakeholder involvement based on a cross-sectoral approach, the ability to apply ethical and legal principles in relation to research design planning, data collection, dissemination and exploitation of research results.

Teaching of this subject is carried out in the form of lectures, practical classes and independent supervised work of master students. Only active and interactive teaching methods are used.

The practice of lecturing includes such forms of teaching as binary lecture, lecture-conversation and lecture-discussion, which require appropriate preparation of students during self-study on predetermined topics.

The methods of conducting practical classes are mainly business games, brainstorming, educational discussion and case method. These methods develop students' ability to analyse and synthesize, to communicate, to act and evaluate their actions, to apply the acquired practical skills.

The method of individual educational and research tasks is used for independent work of students. Performance of the tasks provides not only active mastering by students of the course program, but also preparation for carrying out research for master's thesis.

During the classes, students actively exploit the knowledge gained in studying of the following disciplines: "Biostatistics", "Fundamentals of Epidemiology", "Scientific Communications in Public Health", "Informatization and Communication in Health Care", "Monitoring and Evaluation in the Public Health System". This comprehensive approach to the application of knowledge acquired by students during the study of various disciplines, allows to stimulate students' learning and cognitive activity, to carry out current comprehensive control of student achievements for the entire period of study at the department, to develop students' ability to apply knowledge, skills and abilities in total and develop such important qualities as the ability to analyse and synthesize and systemic actions through the application of structural-logical thinking.

Upon completion of training in this subject, masters must be fully prepared to perform a scientific master's thesis. Thus, during the study of the subject masters directly determine the direction and topic of scientific master's work and its purpose and objectives of the study, object, subject, base of research and sample size, as well as define research methods, determine the structure of analytical review of scientific literature on the topic of master's thesis.

Masters of Public Health of Uzhhorod National University (11 full-time and 9 part-time students) in addition to the above during studying of this subject prepared 11 review articles and 4 analytical articles on master's theses, which were discussed in practical classes, reviewed and sent for publishing in professional journals of Ukraine. It is important that out of the total number of articles, 12 (80.0%) are independent. Masters, during practical classes and independent work, conducted statistical processing of data from sectoral statistical reporting and prepared 24 abstracts of reports. The reports were presented at the conference of masters of the university and published in the conference materials, 4 abstracts were presented at the II International Student Scientific Conference in Michalovce (Slovakia), 5 abstracts at the 74th International Scientific-Practical Conference of medical students and young scientists "Actual Problems of Modern Medicine" of Samarkand State Medical Institute (Uzbekistan) and 2 abstracts at the International Scientific and Practical Conference of Young Scientists to the 100th anniversary of the Tashkent Medical Academy "Medical Science of the XXI century. A look into the future".

**Conclusions.** The use of active and interactive forms of classroom training and controlled forms of self-preparation of master students majoring in "Public Health" in studying the subject "Organization and presentation of scientific research" allows them to master basic competencies and develop students' ability to analyse and synthesize, communicate, employ systemic actions and to evaluate them, apply the acquired practical skills, as well as prepare for a scientific master's study. Thus, the methodological and pedagogical basis for teaching masters of public health the subject "Organization and

presentation of scientific research” is to use active and interactive forms of classroom teaching using the method of controlled individual learning and research tasks for independent work of students.

**References:**

1. Pro skhvalennia Kontseptsii rozvytku systemy hromadskoho zdorovia. Rozporiadzhennia Kabinetu Ministriv Ukrainy vid 30 lystopada 2016 r. № 1002-r. [online]. Available at: <https://zakon.rada.gov.ua/laws/show/1002-2016-%D1%80>
2. Pro zatverdzhennia planu zakhodiv shchodo realizatsii Kontseptsii rozvytku systemy hromadskoho zdorovia. Rozporiadzhennia Kabinetu Ministriv Ukrainy vid 18 serpnia 2017 r. № 560-r. [online]. Available at: <https://zakon.rada.gov.ua/laws/show/560-2017-%D1%80>
3. Pytannia Ministerstva okhorony zdorovia. Rozporiadzhennia Kabinetu Ministriv Ukrainy vid 2 veresnia 2015 r. № 909-r. [online]. Available at: <https://zakon.rada.gov.ua/laws/show/909-2015-%D1%80>
4. Nakaz MON Ukrainy vid 12.12. 2018 № 13 83 « Pro zatverdzhennia standartu vyshchoi osvity za spetsialnistiu 229 «Hromadske zdorovia» dlia drugoho (mahisterskoho) rivnia vyshchoi osvity» . [online]. Available at: <https://mon.gov.ua/storage/app/media/vishcha-osvita/zatverdzeni%20standarty/12/21/229-gromadske-zdorovya-magistr.pdf>.
5. Rozroblennia osvitnikh prohram. Metodychni rekomendatsii / Avt.: V.M. Zakharchenko, V.I. Luhovyi, Yu.M. Rashkevych, Zh.V. Talanova / Za red. V.H. Kremenia. – K. : DP «NVTs «Priorytety», 2014. – 120 s. ISBN 978-966-2432-08-4