STRUCTURE AND CONTENT OF THE EDUCATIONAL AND PROFESSIONAL PROGRAM OF TRAINING SPECIALISTS IN PHYSICAL THERAPY AND OCCUPATIONAL THERAPY (ON THE EXAMPLE OF ZHYTOMYR MEDICAL INSTITUTE)

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The article considers the need to prepare bachelors for the 227 "Physical Therapy, Occupational Therapy" educational and professional program on the basis of the competence approach.

The future specialist in physical therapy, occupational therapy is considered as a person who purposefully acquires qualifications in accordance with the chosen educational degree in the process of specially organized educational activities in higher education, aimed at forming a high quality rehabilitation culture and healthcare culture based on general and special competencies.

The experience of development and implementation of educational and professional program "Physical Therapy, Occupational Therapy" for those seeking a bachelor’s degree by specialists of the Zhytomyr Medical Institute of the Zhytomyr Regional Council is analyzed. The main elements of the educational and professional program are given, the requirements for the quality of content, structure, competencies (general and special) are determined.

Special competencies are practical and can be used in the professional activities of a specialist in physical therapy and occupational therapy. The sequence of study of educational components, plan and schedule of educational process, list and scope of normative and selective educational components correspond to the structural and logical scheme of higher education training for

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“Physical Therapy, Occupational Therapy” educational program and are designed to help ensure compliance of program learning outcomes with the demands of potential employers (stakeholders). The document contains all the necessary structural and semantic components, is based on modern world and domestic educational standards, takes into account the requirements of practical health care, reflects modern requirements for training in physical therapy, occupational therapy and meets the requirements of practical use.

Key words: educational and professional program; educational components; specialist in physical therapy, occupational therapy; competence approach, program learning outcomes.

STРУКТУРА ТА ЗМІСТОВЕ НАПОВНЕННЯ ОСВІТНЬО-ПРОФЕСІЙНОЇ ПРОГРАМИ ПІДГОТОВКИ ФАХІВЦІВ З ФІЗИЧНОЇ ТЕРАПІЇ ТА ЕРГОТЕРАПІЇ (НА ПРИКЛАДІ РОБОТИ ЖИТОМИРСЬКОГО МЕДИЧНОГО ІНСТИТУТУ)

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У статті розглянуто необхідність підготовки бакалаврів за освітньо-професійною програмою 227 “Фізична терапія, ерготерапія” на основі компетентнісного підходу.

Майбутній фахівець з фізичної терапії, ерготерапії розглядається як особистість, що цілеспрямовано здобуває кваліфікацію відповідно до обраного освітнього ступеня в процесі спеціально організованої навчально-виховної діяльності у закладі вищої освіти, спрямовано на формування високої якості реабілітаційної культури та культури здоров’язбереження на основі засвоєння загальних та спеціальних компетентностей.

Проаналізовано досвід розробки та реалізації ОПП “Фізична терапія, ерготерапія” для здобувачів освітнього ступеня бакалавр фахівцями Житомирського медичного інституту Житомирської обласної ради. Наведено основні елементи освітньо-професійної програми, визначено вимоги до якості змісту, структури, компетентностей (загальних та спеціальних). Спеціальні компетентності носять практичний характер і можуть бути використані в професійній діяльності фахівця з фізичної терапії, ерготерапії. Послідовність вивчення освітніх компонент, план та графік освітнього процесу, перелік та обсяг нормативних та вибіркових освітніх компонент відповідають структурно-логічній схемі підготовки здобувачів вищої освіти за ОПП “Фізична терапія, ерготерапія” і покликані сприяти забезпеченню відповідності програмних результатів навчання запитам потенційних роботодавців (стейкхолдерів).

Документ містить усі необхідні структурні та змістові складові, базується на сучасних освітових та вітчизняних освітніх стандартах, враховує вимоги практичної охорони здоров’я держави, відображає сучасні вимоги до підготовки фахівців з фізичної терапії, ерготерапії і відповідає запитам практичного використання.

Ключові слова: освітньо-професійна програма; освітні компоненти; фахівець з фізичної терапії, ерготерапії; компетентнісний підхід, програмні результати навчання.

Introduction od the issue. In Ukraine, as in most countries of the world, there is a progressive decline in public health of the nation as an integrative indicator of physical and mental health of citizens. Therefore, there is a growing need for specialists who can effectively recover patients/clients to the maximum level of functionality and independence in all aspects of life under the "evidence-based practice" approach. The latter follows from the very interpretation of the concept of "Physical Therapy and Occupational Therapy" as a process of restoring partially or completely lost functions of the human body by non-drug correction, the main of which is the impact on the motor sphere.

According to the experience of developed countries, the profession of a specialist in physical therapy and
occupational therapy should be separated from the profession of a doctor. The professional activity of a specialist in physical therapy and occupational therapy aims to restore and improve the functional state and general health of the human body with the use of physical culture and natural factors. He is able to choose the means and forms of therapeutic physical culture, develop methods of exercise in the early stages of treatment, plan and implement a program of further functional recovery and physical capacity of the patient, identify and expand the body's reserves, train and prepare for exercise at work and everyday life, return to active participation in society [5].

In addition, the significance of proper training of a highly qualified specialist in physical therapy and occupational therapy is justified by the wide range of contingents of the population with whom he will have to work. Zhytomyr region is in need of highly qualified staff for rehabilitation treatment. Personnel potential of the "Nursing" department of Zhytomyr Medical Institute, practical and information support allowed in 2019 to start "Physical Therapy, Occupational Therapy" educational program and to carry out the first set of applicants for this program. The professional activity of graduates will provide an opportunity to improve the quality of treatment of patients in the region and the state as a whole, restore their ability to work, help patients develop self-care skills in cases of disability, help them adapt to active life in new conditions due to illness or injury, as well as to fuller integration into all spheres of human activity [2].

**Aim of research** is to analyze the structure and content of the educational and professional training program for physical therapy and occupational therapy, which is implemented at the Zhytomyr medical institute, as well as requirements for the quality of their training based on the competence approach.

**Current state of the issue.** The analysis of the works of domestic and foreign scientists showed that physical rehabilitation is considered as a medical-pedagogical and educational process with the use of active, passive and psychoregulatory means. The works of leading scientists substantiate the training of physical rehabilitation specialists as a process of forming a level of professional competence of the individual sufficient for physical rehabilitation of various segments and age groups and successful work in health care facilities taking into account modern labor market requirements [6].

Focusing on the process of quality management of educational activities, S. Gordiichuk, I. Snikhovska, L. Kalinina, O. Goray researched the implementation of educational programs for the training of specialists in the field of health care in domestic medical institutions, including those who train specialists in physical therapy, occupational therapy [1].

G. Boyko, L. Suschenko, V. Kuksa and others analyzed the current state of professional training of future specialists in physical rehabilitation in the context of healthcare and development of valeological culture of students. G. Atanova, I. Pustynnikova, M. Romanyshyn and others studied the formation of readiness of specialists in this field to work with athletes and to implement professional functions in rehabilitation institutions [6].

According to O. Karpukhina, the future specialist in physical rehabilitation should be widely oriented in the professional sphere, see prospects for its further development and improvement, and physical rehabilitation is considered as medical and pedagogical, and as an educational process using various tools: active (all forms of therapeutic physical culture), passive (massage, physiotherapy, manual therapy, natural factors) and psychoregulatory (autogenic training, muscle relaxation) [6].
L. Sushchenko defines the professional training of a physical rehabilitation specialist as "a process that reflects scientifically and methodologically defined measures of higher education institutions aimed at forming a level of professional competence of a person sufficient for physical rehabilitation of various segments of the population and successful work in health care facilities, taking into account the modern requirements of the labor market" [5; 6].

According to N. Belikova, the experience of training specialists in physical therapy (physical rehabilitation) in European countries is important for Ukraine from the standpoint of its accession to the World Confederation of Physical Therapy. The scientist stands that it is important to eliminate as many differences between the structure and content of curricula and programs for effective exchange of students and teachers, as well as promoting the mobility of labor resources [6].

Research of scientist A. Gercyk helped to reveal the national interpretation of the terms "physical rehabilitation" and "physical rehabilitation specialist", and also found similarities between the national interpretation of the term "physical rehabilitation" and the international interpretation of the term "physical therapy". It was found that the phrase "physical rehabilitation" is not used in economically developed countries as the name of the industry or specialty. It was not possible to find a definition of physical rehabilitation at all. The terms "physical therapy" and "physiotherapy" in English-language literature are synonymous, and in the domestic scientific and methodological literature, the term "physical therapy" is not common [5; 6].

In the 10-volume edition "Encyclopedia of Physical Rehabilitation" a group of scientists from Kirovograd State Pedagogical University named after Volodymyr Vynnychenko under the leadership of Professor of Rehabilitation A. Grigoriev note that physical rehabilitation specialists can work in specialized preschools: boarding schools, orphanages, training and rehabilitation centers, hospitals, clinics, dispensaries, rest homes, the specifics of which are related to physical rehabilitation [6].

Results and discussion. Due to changes in current legislation, since 2016, the specialty 227 "Physical Therapy, Occupational Therapy" is classified in the field of knowledge 22 "Healthcare", which provided an opportunity to train personnel in physical therapy, occupational therapy in medical institutions of higher education. The profile project team of Zhytomyr Medical Institute of Zhytomyr Regional Council was instructed to develop an educational program in specialty 227 "Physical Therapy, Occupational Therapy" taking into account the requirements of the labor market and the Standard of Higher Education in 227 "Physical Therapy, Occupational Therapy", approved by the Order of the Ministry of Education and Science of Ukraine from December 19, 2018 № 1419 [2; 4].

The development of educational program 227 "Physical Therapy, Occupational Therapy" was preceded by a thorough analysis of the market of educational services and trends in the medical industry. According to the results of the analysis, the growing demand for specialists in 227 "Physical Therapy, Occupational Therapy" was identified, which is associated with the establishment of rehabilitation centers for patients with diseases of the musculoskeletal, nervous, respiratory, cardiovascular systems and others.

The administrative staff of the higher education institution, research and teaching staff, stakeholders and representatives of the Department of Health of the Zhytomyr Region were involved in this work.

The development and implementation of educational program allowed to provide quality professional training of bachelors in specialty 227 "Physical Therapy, Occupational Therapy". The document contains all the necessary
structural and semantic components, reflects the current requirements for the training of specialists in physical therapy, occupational therapy and meets the requirements of practical use.

Educational program (educational-professional, educational-scientific) is a single set of educational components (disciplines, individual tasks, practices, control measures, etc.) aimed at achieving the learning outcomes provided by such a program, which gives the right to receive certain educational or professional qualifications [4]. The educational program regulates the purpose, goals, content, conditions and technologies of the educational process, assessment of the quality of graduate training, based on well-known provisions and results of modern research in physical therapy, occupational therapy [3].

The ideological basis for the preparation of bachelors in physical therapy and occupational therapy are universal and humanistic values, state and national orientation. The system of training such specialists is focused on the close connection with the national traditions of society, its life, interests and moral values, follows from the purpose, main tasks, principles and criteria.

The purpose of training bachelors in the specialty 227 "Physical Therapy, Occupational Therapy" bachelor’s degree is to ensure that students acquire competencies for the development of prevention and rehabilitation strategies, in determining the individual plan of physical therapy to improve health, functionality, adaptation to environmental conditions, increasing the level of physical activity in people of different ages and with different opportunities in the context of personal factors and the environment.

The objectives of the bachelor’s degree training in physical therapy and occupational therapy are:

- demonstration of skills to use biological, medical, pedagogical and psychosocial aspects of physical therapy, identify the relationships of its various elements;
- identification of symptoms and syndromes of common human diseases; adequate selection of assessment and diagnostic methods and tools in accordance with the patient’s/client’s disorders and indicators according to the International Classification of Functioning (IFF);
- demonstration of ability to patient-centered practical activities in coordination with the patient/client, his family/caretakers, members of the multidisciplinary team in accordance with legal requirements and norms of professional ethics;
- choosing appropriate methods that would ensure respect for the patient/client, his safety/protection, comfort and privacy;
- forecasting, planning, setting and correcting goals, implementing an individual physical therapy program in accordance with available resources and environment;
- demonstration of the ability to instruct and train clients, members of their families, colleagues and small groups;
- evaluation of the results of the rehabilitation program with the use of appropriate tools for measuring and modifying current activities;
- demonstration of verbal and non-verbal communication skills with individuals and groups of interlocutors, different in age, level of education, social and professional affiliation, psychological and cognitive qualities, etc., participation in multidisciplinary communication;
- demonstration of the ability to carry out physical therapy measures to correct disorders of the structure/functions of the body, eliminate or compensate for functional and associated restrictions on participation in activities;
- safe and effective use of devices, devices and equipment for rehabilitation activities; devices and equipment for monitoring the main vital signs of the
patient; technical aids for mobility and self-service;

- ensuring the competitiveness of graduates in the specialty 227 "Physical Therapy, Occupational Therapy" in the domestic and international labor markets in accordance with the International Standard Classification (ISCO-08).

The principles of training bachelors in physical therapy and occupational therapy are defined as follows:

- unity of theoretical and practical training, educational, scientific and educational work;
- humanization of educational activity, national orientation, its organic combination with the history and culture of Ukraine;
- harmonious combination of integration, variability and individualization of content and forms of learning;
- democratization of educational activities, priority of universal values;
- continuity of education, integrity and continuity in teaching and education;
- compliance with the requirements of the Laws and legislative acts of Ukraine; normative documents of the Ministry of Education and Science and other ministries; state and world standards and experience of educational activities.

The criterion for effective training of such specialists is the level of theoretical and practical readiness for independent responsible professional activity, acquisition of professional competencies; observance of the established generally accepted norms of personal behavior and a healthy way of life; active life position [5].

**The purpose of the educational and professional program 227 "Physical Therapy, Occupational Therapy"** is to train professionals capable of solving complex specialized problems and practical problems associated with dysfunction of organs and systems, including musculoskeletal, nervous, cardiovascular and respiratory systems using the provisions, theories and methods of medical-biological, social, psychological and pedagogical sciences [4].

The volume of educational program in ECTS is 240 credits, of which: 143 credits are required for the formation of competencies defined by the standard of higher education in the relevant specialty and level of higher education, 60 credits are allocated to disciplines chosen by applicants for higher education. Compulsory educational components of the program are structured by semesters / years of study according to the curriculum, divided into two cycles of training: the cycle of humanitarian and socio-economic training, disciplines of mathematical and natural sciences and disciplines of professional and practical training [4].

The next component of the educational program is the formation of competencies, which means a dynamic combination of knowledge, skills and practical skills, ways of thinking, professional, ideological and social qualities, moral and ethical values that determine a person's ability to successfully carry out professional and further activities. a certain level of higher education. In the process of creating the educational program 227 "Physical Therapy, Occupational Therapy" was chosen **integral competence**: the ability to solve complex specialized problems and practical problems related to physical therapy and occupational therapy, characterized by complex and uncertain conditions, using the provisions, theories and methods of medical biological, social, psychological and pedagogical sciences [2; 4].

Also, according to the Standard of Higher Education in Specialty 227 "Physical Therapy, Occupational Therapy" for the first (bachelor's) level of higher education, **15 general and 14 special (professional) competencies** were identified, including: ability to explain the need of physical therapy, occupational therapy, principles of their use and connection with health care to patients, clients, families, interdisciplinary team members, other health professionals;
ability to analyze the structure, normal and individual development of the human body and its motor functions; ability to interpret pathological processes and disorders and use suitable means of physical therapy, occupational therapy for their correction; ability to take into account medical, psychological and pedagogical, social aspects in the practice of physical therapy, occupational therapy; ability to conduct safe practical activities in physical therapy, occupational therapy for the patient/client and practitioner in traumatology and orthopedics, neurology and neurosurgery, cardiology and pulmonology, as well as other fields of medicine, ability to perform basic components of examination in physical therapy and/or occupational therapy, surveys, measurements and testing, record their results; ability to help the patient/client understand their own needs, discuss and explain the content and need for a physical therapy and occupational therapy program; the ability to effectively implement the program of physical therapy and/or occupational therapy, the ability to ensure the compliance of the measures of physical therapy and/or occupational therapy to the functional capabilities and needs of the patient/client; ability to carry out operative, current and stage control of the patient’s/client’s condition by appropriate means and methods and record the obtained results; ability to adapt current practical activities to changing conditions; ability to provide pre-medical care during emergencies; ability to teach the patient/caregivers self-care/care, prevention of diseases, injuries, complications and disabilities, a healthy lifestyle; the ability to find ways to continuously improve the quality of physical therapy and occupational therapy [4].

The next step in the development of the educational program was to determine the program learning outcomes. For the first (bachelor’s) level of "Physical Therapy, Occupational Therapy" educational program were identified 18 program learning outcomes: to demonstrate readiness to strengthen and maintain personal and public health through the use of human physical activity and outreach among patients/clients, their family members, health professionals, and improving the community environment; communicate orally and in written form in Ukrainian and foreign languages in a professional environment, be fluent in professional terminology and professional discourse, adhere to the ethics of business communication; compile documents, in mother tongue and in a foreign language (languages); use modern computer technology; find information from various sources; analyze domestic and foreign sources of information needed to perform professional tasks and make professional decisions; apply in professional activities knowledge of biological, medical, pedagogical and psychosocial aspects of physical therapy and occupational therapy; provide pre-medical care for emergencies and pathological processes in the body; choose the best methods and means of saving lives; apply methods and tools to identify and measure structural changes and impaired body functions, activity and participation to interpret the information obtained; interpret information on the patient’s/client’s violations according to the International Classification of Functioning, Restriction of Life and Health (ICF) and the International Classification of Functioning, Restriction of Life and Health of Children and Adolescents (ICF CA); act in accordance with legal requirements and norms of professional ethics; to implement individual programs of physical therapy, occupational therapy; carry out physical therapy measures to eliminate or compensate for motor disorders and activity; carry out occupational therapy measures to eliminate or compensate for functional and associated limitations of activity and participation in activities; apply modern scientific evidence in professional
activities; choose the best forms, methods and techniques that would ensure respect for the patient/client, his safety/protection, comfort and privacy; use equipment safely and effectively for rehabilitation activities, control of the patient’s main vital signs, rehabilitation aids for mobility and self-care; communicate verbally and non-verbally with individuals and groups of interlocutors, different in age, level of education, social and professional affiliation, psychological and cognitive qualities, etc., in a multidisciplinary team; to instruct and train clients, members of their families, colleagues and small groups; evaluate the results of the implementation of physical therapy and occupational therapy programs, using appropriate tools, and, if necessary, modify current activities; to evaluate oneself critically, to assimilate new professional information, to deepen knowledge through self-education, to evaluate and present one’s own experience, to analyze and apply the experience of colleagues [4].

Certification of graduates studying the "Physical Therapy, Occupational Therapy" educational program is carried out in two stages:

- Certification exam, which is conducted in the form of a standardized test (license, integrated) exam "Krok".
- Practical-oriented exam.

Certification ends with the issuance of a standard document on the award of a bachelor's degree with the qualification of bachelor of physical therapy, occupational therapy [4].

Conclusions and research perspectives. The basis for the development and implementation of the educational program 227 "Physical Therapy, Occupational Therapy" at the Zhytomyr Medical Institute was many years of scientific, innovative activities of higher education institution. While formulating the goals, objectives and program results of the educational program, the sectoral and regional context was taken into account, which determined the current areas of health care: restoring human health, improving quality of life using rehabilitation tools and methods based on the International Classification of Functioning (IFF).

Future specialists of specialty 227 "Physical Therapy, Occupational Therapy" at the first (bachelor's) level are able to study the full range of medical disciplines, master modern methods of treatment in physical therapy and occupational therapy, be experienced psychologists, treat functional disorders, especially motor and primarily use non-drug treatment, for example, exercise, chiropractic, massage and the influence of various natural factors (heat, light, high frequencies and ultrasound, water).

According to the authors, the strengths of the educational program are:

- academic autonomy of the Zhytomyr Medical Institute of ZRC, within the framework of which graduates have the opportunity to obtain the full range of necessary knowledge and skills;
- relevance, which is determined by current trends in the labor market;
- reasonable selection of educational components, which provides applicants with the fullest possible set of necessary general and professional competencies;
- cooperation with employers, stakeholders, which provides opportunities for practical training of higher education seekers, as close as possible to the real conditions of their future professional activity;
- combination of traditional and innovative educational technologies, teaching and research work;
- educational process is filled with constant step-by-step practice of skills in the training center with the use of modern models, simulators, devices, equipment according to current domestic and European protocols.

At the same time, it is advisable to provide guidelines for modernization and improvement of the program:
– increase the library fund of professional literature on physical therapy, occupational therapy;
– to start training applicants for higher education in a dual form of education, which would provide the opportunity for working students to study at a convenient time without leaving work, on an individual schedule, as enrolment is based on complete general secondary education;
– intensify the process of further involvement of teachers in foreign internships in leading educational and research institutions; writing professional publications on topical issues of physical therapy, occupational therapy.

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Received: January 31, 2022
Accepted: March 25, 2022