

Quality of education and labour integration of master's graduates in public health: an insider's perspective

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ABSTRACT

Aim: To determine the opinions of master's graduates in Public Health regarding the quality of the educational process and its impact on employment and further professional activities.

Materials and Methods: The study utilized bibliosemantic, sociological, medical-statistical methods, and content analysis. The research materials included scientific publications, national-level regulatory legal acts, WHO programme documents, and sociological research questionnaires. The programme involved sociological surveys of graduates of the Master's Programme in Public Health. Statistical processing of sociological survey results was carried out by calculating the standard error and confidence interval.

Results: Anonymous surveys revealed that 94.1% of the 2024 graduates of the Master's Programme in Public Health at Bogomolets National Medical University were employed. Their assessment of the quality of educational services was high (82.4%) and fairly high (17.6%), which was ensured by obtaining in-depth theoretical knowledge (93.8%), acquiring essential practical skills (93.8%), and developing the necessary competencies (100%). High learning outcomes were achieved due to the quality of the educational programme content (98.3%), the possibility of forming an individual learning trajectory, modern teaching methods (88.2%), the high qualification of teaching staff (100%), practical orientation (94.1%), integration of education and research (94.1%), adherence to academic integrity (94.1%), an adequate educational environment (82.4%), and comprehensive student support (94.1%-100%). The feedback from master's graduates serves as an essential foundation for improving the training process for public health professionals.

Conclusions: Master's graduates in Public Health highly evaluate the quality of the educational programme and the overall educational process, emphasizing their positive and decisive impact on employment. The obtained data allow for a comprehensive assessment of learning outcomes, the dissemination of best practices, and the resolution of problematic issues. Additionally, they help determine ways to improve the Master's Programme in Public Health and the educational process in general to ensure the competitiveness of graduates.

KEY WORDS: public health; quality of education; master's programme; graduates; employment opportunities

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INTRODUCTION

It is well known that achieving the goals set for the healthcare system requires a sufficient workforce, high-quality training, and accessibility for the population. These considerations shape the strategies for developing healthcare human resources, which are outlined in various global, regional, and national-level documents.

The WHO Global Strategy on Human Resources for Health: Workforce 2030, adopted by WHO in 2016, aims to accelerate progress towards universal health coverage and the Sustainable Development Goals by ensuring equitable access to healthcare workers within strengthened health systems. This strategy emphasises the development of human resources as a fundamental

component of the healthcare system and highlights key strategies for effective workforce training, education, and employment [1]. WHO documents state that healthcare workers require safe, healthy, supportive, and dignified working conditions. Their education must incorporate innovative learning approaches and systemic transformative solutions that enable interprofessional collaboration [2, 3].

The need to strengthen and reform the education and training system for healthcare personnel is highlighted in the Resolution on Transforming Health Workforce Education in Support of Universal Health Coverage. Key directions for development include expanding interprofessional education at the community and primary healthcare levels, integrating pre-employment

education with continuous professional development, and implementing accreditation systems for this purpose [4]. Recommendations on health workforce policy increasingly focus on prioritising investments to ensure the effective and efficient use of funding for recruitment and retention, training and professional development, skills formation, job creation, and guaranteeing workers' rights and protection [5].

Effective health workforce strategies encompass education and the development of a wide range of sustainable skills and competencies [6]. In this regard, competency-based learning and workforce regulation are of particular importance. To achieve this, a global system for assessing professional qualities and outcomes has been developed to ensure universal health coverage. Workforce regulation in healthcare plays a crucial role in defining educational standards, ensuring quality assurance, developing professional codes of conduct, and establishing systems for continuous professional growth [7].

In the WHO European Region, several documents address the training of healthcare personnel, including public health professionals. These documents emphasize the need to reform the fundamental training system and the further professional development of healthcare workers. The core component of healthcare systems should be professionals equipped with diverse skills and an innovative approach to work, fostering new forms of collaboration among specialists.

The development of the public health system requires a transformation in service delivery, necessitating a rethinking of training principles and professional education. Training mechanisms and workforce development should focus on creating more flexible human resources capable of effectively addressing challenges arising from epidemiological shifts, collaborating with other sectors on social determinants of health, and more. Emphasis is placed on the need for continuous knowledge and skills updates, the ability to respond to new challenges, and lifelong learning. Existing educational structures must implement modern teaching methodologies, including small group interactions, the use of digital technologies and simulation laboratories, and the organization of distance learning [8–11].

The relationship between education quality and employment opportunities in the field of public health is linked to practice-oriented training, the relevance of educational programs, the integration of higher education institutions with the labour market, their reputation, and the internationalization of the educational process. Practice-oriented training enables students to simulate real-world problem-solving scenarios, such as investigating epidemiological situations within dis-

ease control and prevention centres and public health institutions. It also allows them to tackle practical case studies, such as managing public health programs, analysing and evaluating data, communicating with various stakeholders, conducting individual creative and practically oriented tasks, undertaking internships at leading public health institutions, and participating in research projects. These aspects enhance graduates' competitiveness in the labour market [12–17].

Given the importance of the efficiency of public health professionals, researching the impact of the quality of master's training on employment opportunities and successful career advancement within the public health system is highly relevant.

AIM

To identify the opinions of master's graduates in Public Health regarding the quality of the educational process and its influence on employment and further professional activity.

MATERIALS AND METHODS

The study utilized bibliosemantic, sociological, medical-statistical methods, and content analysis. The research materials included scientific publications, national-level regulatory legal acts, WHO program documents, and sociological research questionnaires. The program involves conducting sociological surveys of graduates of the Master's program in Public Health from the Bogomolets National Medical University, 2024 graduates.

For this purpose, a relevant tool in the form of an anonymous survey questionnaire was developed. The questionnaire included questions on the professional field of activity, overall evaluation of the quality of educational services provided, including theoretical knowledge, practical skills, acquisition of necessary competencies, alignment of the content of the Public Health educational program with the professional profile, the presence of useful and unnecessary subjects in the program, the use of various teaching methods, satisfaction with the practical training, the qualification level of the teaching staff, the practical orientation of the program, the integration of learning and research, adherence to academic integrity, access to electronic resources, the quality of the educational environment, and the availability of educational, consultative, informational, and social support, as well as comments and suggestions.

Statistical processing of the of the sociological survey results was carried out by calculating the standard error and confidence interval.

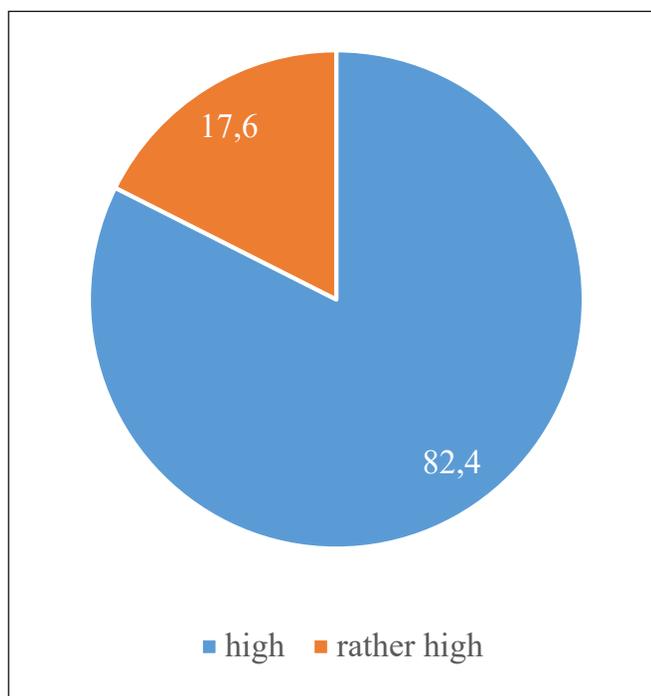


Fig. 1. Evaluation by graduates of the Master's program in Public Health of the quality of educational services (%)

RESULTS

Among the graduates of the Master's program in Public Health who participated in the survey, 31.25% were specialists working in the fields of hygiene and epidemiology, 25.0% were employed in healthcare, 18.75% in education, and 6.25% in each of the following sectors: civil service, laboratory diagnostics, medical tourism, and monitoring and evaluation. At the time of the survey, 35.3% of respondents were working in the field of Public Health, 58.8% in another related specialty, and 5.9% were not employed.

Analysis of the respondents' answers revealed a high evaluation of the quality of the educational process. Specifically, 82.4% [63.9-100.8] of the respondents rated the quality of educational services received during the Master's program in Public Health as high, while 17.6% rated it as rather high. These positive responses indicate the graduates' satisfaction with their education in this program (Fig. 1).

Regarding job search after completing the Master's program in Public Health, only a few respondents actively engaged in this process, as most graduates were already employed and studying part-time. Those who actively searched for a job spent from 7 days to 2 months on the process.

The level of theoretical knowledge gained during the program was considered sufficient for further professional activity by the respondents. 62.5% [38.3-86.7] assessed it as fully sufficient, while 31.3% rated it as rather sufficient. Among the 6.2% of respondents who found it difficult to determine, some expressed a desire for deeper exploration of topics such as working with

personal data, various templates, medical procurement, and practical experience exchange with other countries.

The level of practical skills acquired was similarly rated, with 93.8% [81.6-105.9] of respondents confirming that it was entirely sufficient. An important outcome of the Master's program was the acquisition of necessary competencies for future professional activities, which was confirmed by 100% of respondents.

Three-quarters of the respondents indicated that the content of the educational and professional program "Public Health", based on the list of mandatory and elective courses studied during the program, fully corresponds to the profile of their professional activities (75.0% [53.3-96.7]), while about one-fifth (18.8%) stated that it mostly corresponds.

Regarding the usefulness of studying specific courses for professional training of Master's students in public health, most respondents indicated all of them. The most frequently mentioned courses were "Fundamentals of Public Health", "Biostatistics", "Epidemiology of Infectious Diseases", "Epidemiology of Non-Infectious Diseases", "Law in Public Health", "Prevention", "Informatization in Health Care", and "Quality Management in Health Care".

The ability to form an individual educational trajectory through the free choice of elective components was adequately ensured for 82.4% [63.9-100.8] of respondents, and rather adequately for 17.6%.

Regarding the timeframes for mastering the courses outlined in the educational program "Public Health", 88.2% [72.6-103.9] of respondents considered them sufficient.

The use of modern teaching methods, such as case method, brainstorming, business and role-playing games, etc., was confirmed by 82.4% [63.9-100.8] of respondents.

41.2% [17.3-65.0] of graduates were fully satisfied with the organization of their practical training, while 47.1% [22.8-71.3] were rather satisfied.

All graduates rated the qualifications of the scientific and pedagogical staff who taught the "Public Health" program as fully adequate. The overwhelming majority of respondents highlighted the practical orientation of the training (94.1% [82.4-105.9]) and the combination of education with scientific research (94.1% [82.7-105.5]) (Fig. 2).

Graduates of the Master's program confirmed adherence to academic integrity by participants in the learning process (94.1% [82.7-105.5]) and the provision of opportunities to express their opinions on various aspects of the educational process (100%).

Respondents believe that during their studies, they were generally provided with free access to electronic information resources (94.1% [82.7-105.5]), an adequate educational environment (82.4% [63.9-100.8]), and the highest level of safety (88.2% [72.6-103.9]).

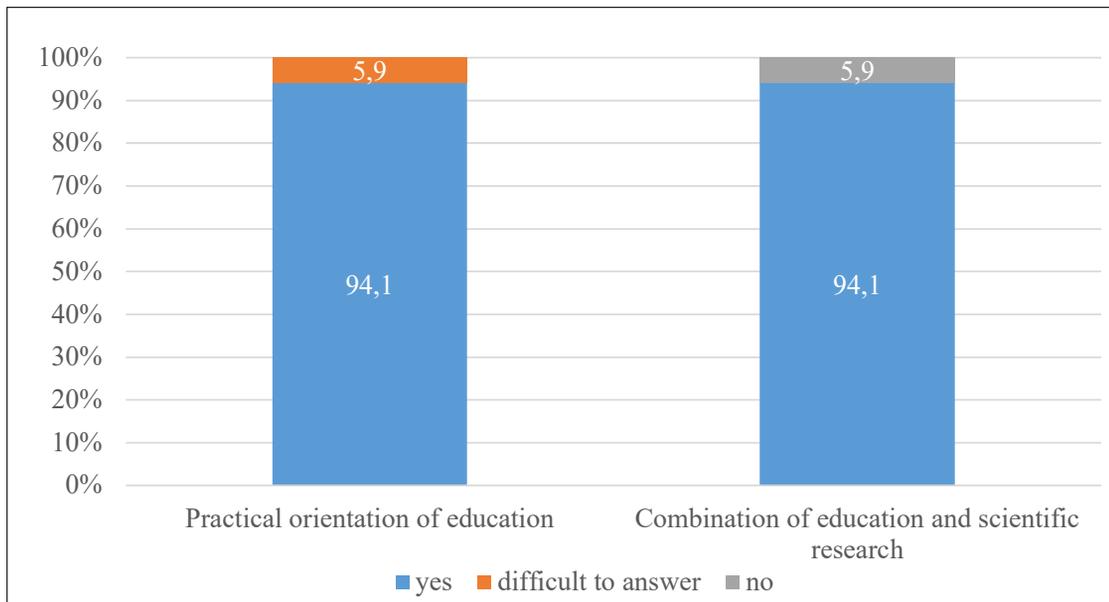


Fig. 2. Evaluation by graduates of the Master's program in "Public Health" of the practical orientation of the training and the combination of education with scientific research (%)

The study results indicate that students received full educational and advisory support from the directorate and academic staff during their studies, as confirmed by 100% of respondents. Sufficient informational support was also provided, as indicated by 94.1% [82.7-105.5] of respondents.

A valuable outcome of the study was the analysis of graduates' suggestions for improving the "Public Health" educational and professional program and the learning process. These included expanding the curriculum to cover pandemics, the impact of climate change and conflicts on public health, and the digitalization of healthcare; enhancing internationalization, increasing student mobility, and expanding international exchange opportunities.

DISCUSSION

The study of graduates' opinions on various aspects of the educational process and its outcomes is crucial for understanding both achievements and challenges, addressing which will enhance education quality and meet the needs of educational service consumers. The importance of such an approach in ensuring the effectiveness of educational activities has been highlighted by several domestic and international researchers. In particular, monitoring and evaluating the quality of the educational process, including the assessment of educational components and graduate satisfaction, are significant mechanisms for improving university education quality [12-14].

Our findings indicate that graduates of the Master's program in Public Health at Bogomolets National Medical University highly evaluated the educational process. The demand for such professionals proved to be high, as almost

all graduates were employed (94.1%). The quality of educational services was rated as high (82.4%) and fairly high (17.6%) by all survey participants. This was ensured by both the acquisition of in-depth theoretical knowledge and the development of necessary practical skills. These factors contributed to the formation of the professional competencies required for employment and further professional activity among Public Health master's program graduates.

The assessment of the quality of the Master's program in Public Health by graduates showed that its content fully aligns with the professional activity profile. Only one respondent identified two subjects they considered less important, while 93.8% confirmed the relevance and necessity of all educational components.

Among the key advantages of this program, graduates highlighted the opportunity to shape an individual educational trajectory through the free selection of elective components, the sufficient time allocated for mastering academic disciplines, the use of modern teaching methods, the practical orientation of training, an adequate level of industrial practice organization, and the integration of education with scientific research.

According to graduates, the quality of the educational process was enhanced by adherence to academic integrity, the opportunity to express personal opinions on various aspects of the learning process, free access to electronic information resources, a supportive educational environment, and comprehensive student support from the administration and faculty. At the same time, studying the opinions of graduates of the Master's program in Public Health has helped identify suggestions for improving the educational and professional program and the learning process, which will form the basis for its optimization.

Our findings are consistent with those of other researchers studying the opinions of Public Health master's program graduates. For instance, graduates of the Master's program in Public Health at the Medical University of Warsaw predominantly (80%) did not intend to pursue third-cycle studies, while a significant proportion engaged in public health practice (37.43%), working in roles aligned with their degree (60.70%), including in the public sector (33.38%) and in managerial positions (23.27%) [15].

A study conducted among graduates of the Master's in Public Health program at the Hanoi School of Public Health revealed that the majority (91%) considered the curriculum to be aligned with the professional requirements of public health specialists. Most respondents (96%) were satisfied with the learning process, 90% were satisfied with the curriculum, and 95% reported acquiring relevant professional skills. Additionally, 73% of respondents believed that the program's structure was balanced and well-designed, while 64.3% were satisfied with full-time faculty and over 83% with guest lecturers. Among public health competencies, graduates emphasized computer skills (66.4%), planning and managing health programs (47.9%), and engaging with communities to mobilize them for health initiatives (43.2%). However, respondents identified deficiencies in data analysis skills, decision-making, intersectoral collaboration, and English proficiency [16].

A survey and in-depth interviews with graduates of the Haifa School of Public Health indicated that 35% of respondents received a promotion in their current positions due to their degree, while 63.8% believed it helped improve their work performance. Most graduates (80.3%) did not change jobs after completing their studies. The Master's program contributed to their personal and professional development by providing a comprehensive understanding of public health and healthcare systems, as well as enhancing their research

skills. Barriers to professional growth included a lack of core competencies, low salaries, and insufficient information on suitable job opportunities. Graduates noted that the degree supported their career advancement, job satisfaction, and leadership development [17].

Our study findings align with existing scientific literature, enabling a critical assessment of the obtained results, addressing challenges, and identifying pathways for improving the Master's in Public Health program and the educational process as a whole.

CONCLUSIONS

The assessment of graduates of the Master's in Public Health program regarding the quality of the educational process and its impact on employment and professional activities demonstrates a positive evaluation of the program and the quality of educational services. Graduates highlight the adequacy of their theoretical knowledge, practical skills, and acquired competencies, ensuring their professional employability and alignment with industry requirements.

The high learning outcomes were achieved through the quality and comprehensiveness of the educational program, the possibility of creating an individual learning trajectory, modern teaching methods, the high qualifications of academic staff, the program's practical orientation, student-centered learning, a well-developed educational environment, and comprehensive support for students.

Graduates' suggestions for expanding the study of pandemic-related issues, the impact of climate change and conflicts on public health, and the digitalisation of healthcare, as well as enhancing internationalisation, student mobility, and international exchange programs, provide a valuable foundation for improving the training process for public health professionals.

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CONFLICT OF INTEREST

The Authors declare no conflict of interest

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