

Profile of graduates of a Professional Master's Degree: a contribution to understanding the training-work relationship in the SUS

O perfil dos egressos de um mestrado profissional: uma contribuição para o entendimento da relação formação-trabalho no SUS

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ABSTRACT This article presents the profile of graduates, the effects of training, and the professional trajectory of the Professional Master's Course in Public Health graduates at the Aggeu Magalhães Institute. Of the 99 invited graduates who completed the program between 2013-2020, 54 responded to a questionnaire applied through the Lime Survey software. The descriptive and cross-sectional study used absolute and relative frequency cross-tabulation variables in the analysis, with the instrument covering the following themes: identification of the graduate and program/course; professional activity before and at the end of the program and expectations; current employment status and formation effects; evaluation of the formative trajectory. Among the respondents, most are female, aged between 31-40 years, trained as nurses, self-declared as black or brown-skinned, not having a disability, predominantly residing in Pernambuco, and did not enter through a quota system. As an effect on their professional life, it was found that the program increased prestige/recognition among colleagues, qualified them for activities they were already performing and also different activities, and brought salary increases leading to changes in personal and professional lives. The results are consistent with scientific findings in the same context, and the tool developed by FIOCRUZ made it possible to understand the relationship between education and work.

KEYWORDS Professional qualification. Unified Health System. Evaluation studies. Health education.

RESUMO Este artigo apresenta perfil dos egressos, efeitos da formação e trajetória profissional dos concluintes do Curso de Mestrado Profissional em Saúde Pública, do Instituto Aggeu Magalhães, parte de pesquisa avaliativa em desenvolvimento. Dos 99 egressos convidados que concluíram seus cursos entre 2013-2020, 54 responderam a um questionário aplicado por meio do software Lime Survey. O estudo descritivo e transversal utilizou frequência absoluta e relativa e cruzamento de variáveis na análise, cujo instrumento constou dos temas: identificação do egresso e do programa/course; atividade profissional antes e ao término do curso e expectativas; condição empregatícia atual e efeitos da formação; avaliação da trajetória formativa. Entre os respondentes, a maioria é do sexo feminino, com idade entre 31-40 anos, enfermeiros de formação, autodeclarados pretos ou pardos, não ser pessoa com deficiência, predominantemente residentes em Pernambuco e não ingressaram mediante cota. Como efeito na vida profissional, encontrou-se que o curso aumentou o prestígio/reconhecimento dos colegas, qualificou para atividades que já exerciam e para atividades diferentes, e trouxe ganhos de remuneração, proporcionando mudanças na vida pessoal e profissional. Os resultados estão em conformidade com achados científicos desse mesmo contexto, e a ferramenta desenvolvida pela Fiocruz permitiu conhecer a relação entre formação e trabalho.

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PALAVRAS-CHAVE Formação profissional. Sistema Único de Saúde. Estudos de avaliação. Educação em saúde.



Introduction

To consolidate and qualify the Brazilian Unified Health System (SUS), the formation process for health professionals must align with democratic principles and the value of life¹. Therefore, educational methods decontextualized from the population's social, economic, and cultural reality and disconnected from health practices are no longer acceptable. Likewise, the aim is to transition from the current fragmented and predominantly content-based model to an integrated approach that would provide a more comprehensive formal education and foster individuals with competencies that value the social aspect of reality².

In addition to the formation process, monitoring health graduates/professionals has emerged as an indispensable tool for evaluating the programs offered by learning institutions and evaluation agencies and providing knowledge for society in general. However, even though analyses of education processes have increased in recent decades, there is a consensus among many authors that the knowledge built up in postgraduate education aimed at strengthening SUS still falls short of the idealized purposes³⁻⁵.

The entity responsible for monitoring higher education programs in Brazil (Coordination for the Improvement of Higher Education Personnel – CAPES) highlights the importance of systematically monitoring graduates to gather information that may help in the strategic planning of postgraduate programs and provide insight into their social impact on the region⁶. In CAPES's current postgraduate evaluation instrument, information on graduates appears concerning their intellectual production, valued in previous evaluation processes, and their destination, performance, and evaluation of the training they received^{7,8}.

As a guideline for program evaluation, the process of monitoring graduates is expected to stand out as a management tool

to help improve postgraduate programs at the master's or doctoral level, regardless of whether they are academic or professional. As a result, improvements are expected in the formation process, providing SUS with increasingly qualified professionals committed to developing societies in social, intellectual, and human terms.

Assessing graduates becomes more relevant regarding professional master's or doctoral programs since the knowledge produced from these formations is intended to meet the demands identified in these professionals' work dynamics when solving practical problems. Monitoring graduates has become one of the most functional alternatives for evaluating this knowledge production's impact⁵.

When considering the importance of the products developed in the formation process, especially those that can potentially transform reality, it is essential to take a broader look at the formation itself. For Santos¹, the need to invest in human formation must consider the new individual and collective care expected for the SUS. Beyond the strategic importance of the products, the formation process must not be reductionist, focused on the instrumental nature of the formation, but instead on the possibility that, through education, individuals allow themselves to produce beyond their predetermined roles, reconstructing themselves and creating ways of existing in the world¹.

In line with these premises, the Oswaldo Cruz Foundation (FIOCRUZ) has systematically monitored graduates in all its teaching units. FIOCRUZ is recognized as Brazil's leading non-university health teaching institution, running from technical courses to master's and doctoral programs. The structural axes of its teaching activities aim to train professionals for the system of Science, Technology, and Innovation (ST&I) in health and for SUS, fulfilling its strategic role in tackling the country's health problems^{3,9}.

Initially, FIOCRUZ undertook efforts to map the professional trajectory of its graduates, albeit in a non-articulated way, between

the various programs offered by the institution^{5,10}. These initiatives were institutionalized according to the VIII FIOCRUZ Internal Congress guidelines 2017, which revealed the need to formulate a policy for assisting graduates. Since then, the teaching management has promoted several events in an integrated approach by all the units/programs aimed at promoting debates and actions to make the process of monitoring graduates a reality and supporting the self-evaluation of the courses/programs.

Some of the guidelines for this activity include the continuous approach and integration with the academic management system, guaranteeing systematic practices; the production of information and indicators to support decision-making for the coordinators and teachers of the program; and providing visibility to society through the Observatory on ST&I in health and by the Campus Virtual FIOCRUZ (CVF)⁹. This produces evaluations, necessary adjustments to the pedagogical structure, strategic planning actions, and conditions for analyzing the social impact of the institution's formation process^{10,11}.

Aligned with the precepts of teaching at FIOCRUZ, the Professional Master's Degree in Public Health, which is the subject of this study, was designed to form professionals ready to understand and make changes to their knowledge and practices, taking into account the incorporation of new concepts, technologies, and innovations into the SUS¹². As such, the program is embedded in the context of Permanent Health Education (Educação Permanente em Saúde – EPS), which is defined as learning at and for the work in dialogue with the players, based on meaningful learning, integrating previous and new knowledge, and giving new meaning to actions to make it possible to transform professional practices in daily work life¹³.

According to Mattos et al.¹⁴, even recognizing the advances in forming health professionals, the authors warn of the need to strengthen this training in the context of (EPS), with more

effective changes in service practices, redefining work processes to enhance the SUS.

Accordingly, Ceccim¹⁵ suggests that the structural milestone of EPS is its porosity and ability to give new meaning to actions and services in the process of daily work permanently under discussion and of living intervention. The author analyzes the conceptual/pedagogical content of EPS, highlighting its flexibility and correspondence with In-Service Education, by which the training is part of a project of institutional changes or political orientation of provided actions in a time and place; Continuing Education, when related to the construction of institutional frameworks or careers path by service in a specific time and place; and Formal Education of professionals, when focused on the development of projects that promote the integration of the service and the academic worlds in the context of the multiple reality of professional experiences.

Following Ceccim's¹⁵ thinking, this professional program modality is expected to reduce inequalities and improve the population's health and living conditions through the critical thinking incorporated by the graduates. The goal is for these graduates to become capable of changing the reality of work environments in search of quality and effectiveness in health production for society by bridging the two worlds: research and professional practice^{11,16-18}. Lima¹⁹ supports this idea by highlighting the importance of analyzing professional practices based on pre-existing knowledge and values, which will help the necessary dialogues between academia and health services as part of health professional formation.

The Aggeu Magalhães Institute (IAM) offered its first Professional Master's Program (PM) in 2005 as part of its institutional mission. Since then, 13 PM programs have been provided, of which 188 professionals have been awarded degrees (from 2005 to December 2020). For the Master's graduation, the student submits a dissertation or other form of completion work recognized

by CAPES, mainly if applicable. As such, it is essential to understand how much and in what ways the developed products have benefited the population of Pernambuco.

This study aims to analyze the graduates' profile of the PM program offered by IAM using data provided by FIOCRUZ through its Graduate Tracking System of post-graduate programs. This analysis is part of a research project assessing the program's impact on strengthening the SUS in Pernambuco.

Material e methods

This cross-sectional and descriptive study aims to outline the graduates' profiles from the IAM professional master's degree program. This study is part of a work conducted by a specific FIOCRUZ commission appointed for this purpose. To meet its objective, the study considered the total number of graduates from all postgraduate programs offered by the institution in its 15 technical-scientific units engaged in training professionals for the SUS from 2013 to 2020²⁰. The purpose of using the research database is to apply the

existing data and information to encourage the application of findings from previous studies. All information is available on CVF²¹.

The graduates were invited to answer the questionnaire in two stages: initially, for those who graduated between 2013 and 2019, and later, for those who graduated between July 1st, 2019, and July 31st, 2020. Based on a sample of 607 people (graduates of FIOCRUZ's various professional postgraduate degree programs), the graduates of the IAM's Professional Master's Degree in Public Health were selected; 99 graduates were invited to take part in the study, of whom 54 answered the questionnaire. The invitations were sent by e-mail, based on the contact list prepared and made available by the Academic Secretary of the Program, to the committee responsible for the distribution.

The respondents were assessed to determine whether they were well distributed over the study years (2013 to 2020) to prevent distortion in the findings of the study's focus on the Professional Master's Program at the IAM. Moreover, a satisfactory result was found, as shown below in *box 1*.

Box 1. Number of graduates and interviewees per year

| Year of graduation | Number of graduates | Interviewees |
|--------------------|---------------------|--------------|
| 2013 | 21 | 09 |
| 2014 | 20 | 13 |
| 2015 | 01 | 01 |
| 2016 | 08 | 02 |
| 2017 | 05 | 03 |
| 2018 | 14 | 11 |
| 2019 | 21 | 13 |
| 2020 | 09* | 03 |
| Total | 99 | 54 |

Source: Own elaboration.

* In 2020, 19 students graduated, but only those who had graduated by July 2020 were invited to participate in the survey, so only nine graduates were invited.

The questionnaire, consisting of 42 closed-ended questions, was structured into blocks covering the following themes: identification of the graduate and sociodemographic questions; identification of the program/course (the instrument was applied to all FIOCRUZ programs); professional activities and expectations of the professional/student after completing the program; working conditions in which the graduate is involved following the formation process; and a final block regarding the evaluation of the course/program.

To conduct the instrument evaluation (pre-test), the committee applied the questionnaire to 10% of graduates from a specific FIOCRUZ unit, chosen for convenience²⁰. Since the instrument addressed all programs, academic and professional, it was possible to identify some variables that were not considered for this study because they related to academic programs.

The questionnaire was digitally applied through Lime Survey, an open-source software for preparing and applying online questionnaires. The graduates selected for the survey received a link to access the questionnaire and an access key by e-mail. A collective mobilization effort was made, with the participation of program coordinators and advisors, to encourage graduates to take part in this process²⁰.

The following variables were studied in this article: gender; self-declared skin color; a person with a disability; undergraduate program; an institution where they did their undergraduate degree; state they lived in before the program; admission through affirmative action (quota); professional activity before joining the program; location of professional activity before the program; employment regime; expectations of mobility upon graduation; professional insertion once the program was complete; paid employment/work; workplace location; employment regime; influence on salary; professional activity related or not to the completed program; the impact of the program if you have changed professional activity; effect of the program on

professional life; scientific production resulting from the program.

The database was created using a simple list of variables extracted from the program using the Lime Survey software. Analyses were conducted using the SPSS24 software package through absolute and relative frequencies and crossing over the variables described above²⁰.

All data used in this study are public. As such, submitting them to the Research Ethics Committee (CEP) was unnecessary. The confidentiality and autonomy of the participants were preserved since no data was used to identify the respondents in compliance with the current resolutions of the CEP/CONEP system.

Results

This research analyzed the profiles of graduates who completed the IAM Professional Master's Degree in Public Health between January 2nd, 2013, and July 31st, 2020. During this period, 99 students completed the program, and 54 (54.5%) participated in the research.

The sociodemographic profile of the graduates reveals a predominance of females (85.2%) and those aged between 31 and 40 (46.3%). Some 64.8% declared themselves black or dark-skinned, 98.1% said they did not have a disability, 88% lived in Pernambuco, and none used the quota system (*table 1*). The predominance of graduates living in Pernambuco suggests a connection with how the programs are offered, i.e., by demand, usually from the Pernambuco State Health Department or the Ministry of Health.

As for the professional category, the highest percentage were nursing professionals (44.4%), followed by dentistry (16.7%) and medicine (9.3%). Other categories were identified: physiotherapy, pharmacy, veterinary medicine, nutrition, biomedicine, accounting sciences, speech therapy, psychology, and social work, but they did not exceed 29.6%.

The leading public higher education institutions in the state of Pernambuco and other federal universities in the Northeast region represent the public institutions that formed

83.3% of the graduates who responded to the questionnaire. Only 16.7% graduated from private higher education institutions located in Pernambuco.

Table 1. Profile of graduates from the IAM Professional Master's Degree (n = 54)

| Variables | N | % |
|--|----|------|
| Sex | | |
| Female | 46 | 85.2 |
| Male | 8 | 14.8 |
| Age at admission | | |
| 20 to 30 years old | 8 | 14.8 |
| 31 to 40 years old | 25 | 46.3 |
| 41 to 50 years old | 14 | 25.9 |
| 51 to 60 years old | 7 | 13.0 |
| Declared skin color | | |
| Black/brown-skinned | 35 | 64.8 |
| White/yellow | 19 | 35.2 |
| Person with disability | | |
| Yes | 1 | 1.9 |
| No | 53 | 98.1 |
| State of residence before the program (n = 50) | | |
| Pernambuco | 44 | 88.0 |
| Others* | 06 | 12.0 |
| Admitted in the program via affirmative action (quota policy) | | |
| No | 54 | 100 |
| Undergraduate Program | | |
| Nursing | 24 | 44.4 |
| Dentistry | 9 | 16.7 |
| Medicine | 5 | 9.3 |
| Others** | 16 | 29.6 |
| Graduating institution | | |
| Federal University of Pernambuco/UFPE | 19 | 35.2 |
| University of Pernambuco/UPE | 18 | 33.3 |
| Rural Federal University of Pernambuco/UFRPE | 2 | 3.7 |
| Other states in the Northeast region | 6 | 11.1 |
| Private Higher Education Institutions/private IES | 9 | 16.7 |

Source: Own elaboration.

* Bahia, Alagoas, Sergipe and Tocantins. ** Physiotherapy, Pharmacy, Veterinary Medicine, Nutrition, Biomedicine, Accounting Science, Speech Therapy, Psychology, and Social Work.

The characteristics of the professional insertion of the graduates before starting the program and their mobility expectations at the end of it can be observed in *table 2*. It is noted that all had some professional connection before starting the course, distributed as follows: 55.6% had connections with Municipal Health Departments, 22.2% with State Health Departments, 11.1% at the federal level, and other connections with public and private companies and educational institutions. The unified legal regime (50%) prevailed in the employment regime. Following this were temporary contracts as individuals (16.6%), the Consolidation of Labor Laws (CLT) (9.3%), commissioned positions (3.7%), and scholarships (1.8%).

As for the graduates' expectations regarding mobility, 61.1% expressed their desire to remain in the municipality where they

completed the program, while 33.3% wished to return to their municipality of residence before starting the program.

On completion of the program, the majority of respondents (79.6%) were working in activities and institutions similar to those in which they worked before joining the program, reinforcing the strategic role of the professional master's program in solving problems within the field of the professional graduate. On the other hand, 9.2% of graduates went on to work in another activity and another institution after completing their formation. The remaining, 5.5%, worked in another professional activity different from the one they 'worked in before attending the masters, but continued working in the same institution', and 5.5% 'worked in the same professional activity as before attending the program but moved to another institution'.

Table 2. Professional insertion of graduates before the program (n = 54)

| Variables | N | % |
|---|----|------|
| Had a professional activity before joining the program | | |
| Yes | 54 | 100 |
| Place of work before the program | | |
| Municipal government | 30 | 55.6 |
| State government | 12 | 22.2 |
| Federal government | 6 | 11.1 |
| Public University | 2 | 3.7 |
| Public/private company | 2 | 3.7 |
| Other | 2 | 3.7 |
| Municipal government | 30 | 55.6 |
| Employment status | | |
| Unified legal system | 27 | 50.0 |
| Temporary contract as an individual | 9 | 16.7 |
| CLT | 5 | 9.3 |
| Commissioned position | 2 | 3.7 |
| Scholarship holder | 1 | 1.8 |
| Others | 10 | 18.5 |
| Unified legal system | 27 | 50.0 |

Table 2. Professional insertion of graduates before the program (n = 54)

| Variables | N | % |
|--|----|------|
| Upon completing the degree program, expectations regarding their mobility | | |
| Remain in the municipality where the program was done | 33 | 61.1 |
| Return to the municipality of origin before enrolling in the program | 18 | 33.3 |
| Move to another municipality in the same state where the program was completed | 2 | 3.7 |
| Move to another state | 1 | 1.9 |
| Professional insertion upon completion of the program | | |
| Worked in the same professional activity and at the same institution as before starting the program | 43 | 79.6 |
| Worked in a different professional activity before starting the program and started working at another institution | 5 | 9.2 |
| Worked in a different professional activity before completing the program but remained at the same institution | 3 | 5.5 |
| Worked in the same professional activity as before completing the program but moved to another institution | 3 | 5.5 |

Source: Own elaboration.

Table 3 represents variables more related to the impact of the program on the graduate's professional career, which is why the 2019 and 2020 graduates were not invited to answer this thematic block because, at the time of the survey, time was still short to demonstrate the influence of the degree on their professional life. Among the respondents, 97.6% remain in employment/paid work, with 56.1% having two to three contracts, followed by 34.2% with only one contract, and 7.3% with more than three contracts. In general, these activities are in the municipal government (40%), followed by the state government (22.5%) and the federal government (20%), totaling approximately 80% in these three spheres. The remaining jobs are with public and private universities and private companies.

The primary type of employment is the unified legal regime (42.5%), confirming the insertion of graduates in the municipal sector. A cross-analysis of the program's starting time

suggests no significant changes in employment contracts, indicating a stable employment relationship between the program's beginning and completion. The impact is essential when analyzing the salary increase of graduates, as 45% of respondents reported some salary increase. Of those who had a salary increase, 30% reported that it was up to 25%.

When asked if their current professional activity is related to their master's degree, 80% of the graduates reported that the two are very related, 17.5% consider them reasonably related, and 2.5% are not significantly associated with the degree they have completed. In addition, 45% of those who changed their occupation after joining the program related this change to completing their master's degree.

Table 3. Professional insertion of graduates after program completion

| Variables | N | % |
|---|----|------|
| Number of employments/paid jobs (n = 41) | | |
| 2 to 3 | 23 | 56.1 |
| 1 | 14 | 34.2 |
| More than 3 | 3 | 7.3 |
| None | 1 | 2.4 |
| Place of work (n = 40) | | |
| Municipal government | 16 | 40.0 |
| State government | 9 | 22.5 |
| Federal government | 8 | 20.0 |
| Public university | 3 | 7.5 |
| Private corporation | 2 | 5.0 |
| Private university | 2 | 5.0 |
| Employment status (n = 40) | | |
| Unified legal system | 17 | 42.5 |
| CLT | 7 | 17.5 |
| Commissioned position | 4 | 10.0 |
| Temporary contract as an individual | 4 | 10.0 |
| Scholarship holder | 1 | 2.5 |
| Others | 7 | 17.5 |
| Salary increase (n = 40) | | |
| No | 22 | 55.0 |
| Yes, up to 25% | 12 | 30.0 |
| Yes, from 26 to 50% | 3 | 7.5 |
| Yes, above 75% | 2 | 5.0 |
| Yes, from 51 to 75% | 1 | 2.5 |
| Relation of professional activity to the course (n = 40) | | |
| Highly related | 32 | 80.0 |
| Fairly related | 7 | 17.5 |
| Slightly related | 1 | 2.5 |
| Change in professional activity as a result of the course (n = 40) | | |
| I haven't changed my professional activity | 21 | 52.5 |
| Yes | 18 | 45.0 |
| No | 1 | 2.5 |
| Effect of program completion on professional life (multiple answers) | | |
| It has affected my professional life | 50 | - |
| I'm not sure yet | 2 | - |
| It has increased the prestige/recognition of colleagues | 22 | - |
| It has qualified me for the activities I already do | 40 | - |
| It has qualified me for different activities | 21 | - |
| I have improved my remuneration | 16 | - |

Table 3. Professional insertion of graduates after program completion

| Variables | N | % |
|--|----|---|
| Type of scientific production achieved by the Program (multiple answer) | | |
| Presentation of the study to managers | 17 | - |
| Presentation of the study at a scientific event | 11 | - |
| Article | 9 | - |
| Book chapter | 7 | - |
| Technical material | 6 | - |
| Consultancy | 4 | - |
| Educational or cultural material | 1 | - |
| Book/patent/ bill of law | 0 | - |
| No developments yet | 11 | - |

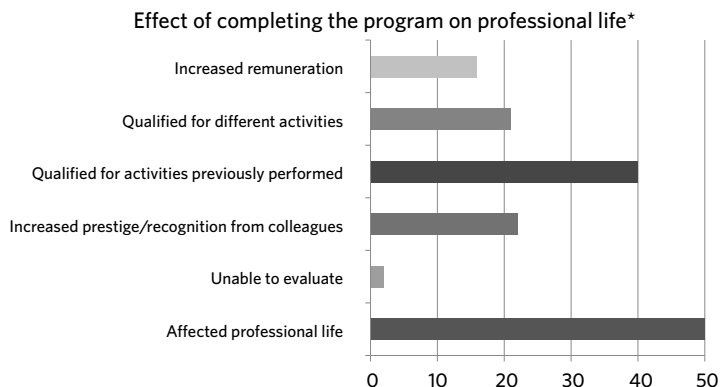
Source: Own elaboration.

As for the program's effect on the graduates' professional life at the time of the training, the graduates were asked to choose one or more alternatives in the form that reflected their perception, which explains why the number of responses was higher than the number of participants. Thus, the respondents affirmed the positive effects on their professional life after completing the degree, reflected in the increased prestige/recognition from colleagues, better performance in the activities

they already had, qualification for new activities, and improved remuneration (*graph 1*).

In terms of technical-scientific production resulting from their studies, the following stand out: presentation of their studies to managers and workers and at scientific events, publication of articles, among others. However, 11 graduates pointed out that, at the time of the survey, they had not yet generated any scientific output.

Graph 1. Impact of completing the master's degree program on the graduate's life



Source: Own elaboration.

* Multiple responses, hence different sample sizes.

Discussion

In evaluating professional programs in the public health field, graduates are expected to have qualified work processes, engage in critical and reflective thinking, disseminate new knowledge, and contribute to the development of public policies. Thus, knowing the impact of the degree program on the graduates' professional lives through evaluation processes is an essential tool for program management, enabling them to re-evaluate their strategies to achieve their educational mission^{8,22}.

In the context of the self-evaluation of three professional programs offered by FIOCRUZ, Hortale et al.¹⁰ highlight the importance of using graduates' evaluations to improve the teaching-learning process of the programs and their impact on society.

The used indicators suggest the effect of training on the professional life of the graduate/manager in multiple aspects as a result of the skills and abilities acquired in the knowledge development process. Therefore, to meet the needs of SUS, it is necessary to qualify individuals capable of delivering quality services and committed to Health Reform toward developing a democratic society¹.

Given the complexity of SUS, the professional formation process previously provided specialization courses that did not meet the broader needs of the health system for the Brazilian population¹⁶ while academic programs primarily focused on training teachers and researchers, regardless of whether they were within or outside the health service environment. In response to the lack of training, the Professional Masters (PM) programs emerged to train professionals connected to health services to address the problems identified in their practice and evaluate the impact of the applied interventions^{17,23-25}.

It is understood that the healthcare system requires innovations in processes and products to improve its management, attention, and the population's health²⁶⁻²⁸. To meet this need to create innovations in processes and products,

the formation of health managers/professionals has emerged as a driving force behind the consolidation of SUS. Studying the trajectory of graduates to monitor their professional lives and the impacts of their training and having an open and available channel with the training institution enables an exchange of information capable of understanding and reframing the learning process to optimize the training-work relationship.

The predominance of females confirms trends already observed in other health studies^{3-6,8}. Historically, actions related to care and education have been part of the female universe in an analogy to domestic activities, placing such actions in a position of discredit. In this context, the feminization of health professionals may be closely related to the patriarchal model of society that is still very prevalent in Brazil^{6,29}.

Regarding self-declared skin color, 64.8% of graduates said they were black or dark-skinned. This predominance is striking and differs from other studies. When looking at admission to the program through affirmative action, all participants entered without using the quota for self-declared students (racial quota and quota for people with disabilities). In a comparative analysis with other programs/courses offered by FIOCRUZ, according to the data available in the CVF²¹, there is a predominance of graduates who declare themselves to be white, confirming other findings^{3,30}; however, the rate of graduates who used the affirmative action policy is less than 1% of students, which may suggest that affirmative action needs to be increasingly strengthened at the institutional level as recommended by the FIOCRUZ Presidency's Ordinance No. 491, of September 20, 202131, which addresses this subject.

When looking at the data, which indicates that 88% of the graduates live in the state of Pernambuco, it is possible to consider that this reflects the process of interiorization of the professional formation. This perception can be strengthened by observing the graduates'

expectations about mobility since 61.1% expressed their desire to remain in the municipality where they attended the program, while 33.3% expressed their desire to return to the city where they lived before joining the program. Perhaps these municipalities are more distant from the capital of Pernambuco, where the programs were held.

The study indicated a diversity of undergraduate backgrounds, with the highest percentage being nursing professionals (44.4%). Barata²⁵ considers this diversity of professional backgrounds and various work experiences a critical bottleneck for the development of the program. This diversity demands skill and competence from teachers in conducting the formation process and formulating everyday academic activities. On the other hand, the author also identifies this universe of individuals with different expertise and worldviews as a fertile environment suitable for exchanging knowledge²⁵. Therefore, using active methodologies is considered a teaching-learning strategy that promotes the necessary student motivation since it is based on problematization using real situations, stimulating critical thinking and the debate of ideas. In this type of methodology, teachers assume the role of facilitator in the learning process, and students assume the role of protagonists in constructing their knowledge^{32,33}.

Relevant facts were observed regarding the institution of origin of the graduates: 83% come from public institutions, and when analyzing the fields of professional activity, approximately 80% are linked to the public sector (municipal, state, federal). As professional courses are conducted on demand, the postgraduate program is financed by public institutions, therefore with contracts from public institutions recognized by CAPES (in this case, FIOCRUZ), closing a cycle of using public policies to strengthen the SUS.

Regarding the professional insertion of graduates, 79.6% reported that after the program, they remained in the same work activities and institutions as before. This

indicator was assessed as a positive impact of the program on the graduates' professional lives, which is related to the wish of health professionals to improve their knowledge and look for tools to solve problems in their areas.

The type of employment bond the graduates have in their institutions is to be highlighted. The unified legal system prevailed, which is considered a very positive point since the qualification of civil servants increases the chance of knowledge being systematically shared within work teams. Once employment stability is considered, these professionals have more significant potential to become knowledge multipliers.

When asked about any changes related to the formation process, most graduates indicated that there had been an effect on their professional lives, emphasizing increased prestige/recognition from colleagues, qualification for the activities they already performed, and qualification for different activities. This finding was considered positive, supporting the need for permanent learning for health professionals since processes in this area are dynamic, practices change, and paradigms are either abandoned or reframed, requiring skills and competencies to reorient the work processes⁵.

Further indicators that point out the graduates' activity beyond their work duties and that impact for the program are related to the type of scientific production carried out during or after their studies, among which the following stand out: presenting studies at scientific events, publishing scientific articles and book chapters; and presenting studies to managers, with the latter being the most predominant. This may represent an essential standpoint in health services with the possibility of managers interfering in decision-making, which is a significant outcome of the formation. Although these products are relevant to fostering dialog between academia and health services, it is essential to emphasize the need to develop technical/technological products, especially those that can improve health services³⁴.

Conclusions

This study has revealed the results of an integrated survey carried out at FIOCRUZ, in which data on a Professional Master's Degree program in Public Health was extracted, analyzed, and discussed. This study will support a broader research project in which the characterization of the graduate profile constitutes an essential basis.

The program was favorably evaluated by the graduates, most of whom remain within the SUS, ensuring that its pedagogical proposal is being fulfilled in forming individuals capable of promoting improvements in their work environments and undertaking new practices that encourage the development and strengthening of SUS.

In the education-work relationship, the formation process brought about recognition and improved working relationships between teams, improved performance in the activities the graduates were already working on, and their qualification for new assignments. This is understood as a virtuous triad: improvements in working relationships, in carrying out activities, and the ability to absorb new assignments with quality.

One limitation is the short time to complete the degree program for those graduating in

2019 and 2020. For the survey, this group did not have the minimum time required for an adequate assessment of the impact of graduation on their professional lives.

The results reaffirm the importance of monitoring graduates as a management tool for teachers and program coordinators in the search for a political-pedagogical process articulated with the needs and strengthening of SUS.

The formation process goes beyond providing professionals/students with tools, concepts, techniques, and products applicable to the work environment. Moreover, human capital must be considered in its entirety as political individuals with ethical values who can contribute to public health that meets society's aspirations²².

Collaborators

Nascimento AP (0000-0001-7823-1982)* contributed to the conception, preparation, and critical review of the manuscript. Cesse EAP (0000-0001-5745-3981)* and Figueiró AC (0000-0003-0718-5426)* contributed to the conception and critical review of the manuscript. ■

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