

Stricto sensu postgraduate education in the Brazilian Federal District: the experience of the Higher School of Health Sciences (ESCS)

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Abstract *Introduction: Stricto sensu postgraduate courses were regulated to enhance the training of university professors and researchers in order to attend the expansion of higher education and promote scientific research development. Today, Brazilian postgraduate programs transcend the academic limits, especially after the establishment of professional masters and doctorate programs. Methods: This is a documentary study, which included ESCS management reports, as well as bibliographic and technical productions. Results: The ESCS currently provides three postgraduate programs: Professional Masters in Health Sciences, Academic Masters in Health Sciences, and Professional Masters in Family Health (ProfSaúde). Conclusion: The ESCS experience is an effort to integrate teaching, research and health care in which we should highlight the concern with the development of the interface with public health policies. However, the institutional environment is complex because ESCS is a higher education institution linked to a State Health Secretariat, which supports the full development of the critical, creative and humanistic potential of professors and students. However, this challenges the scientific consistency and disruptive nature of their products and processes.*

Key words *Education, Health postgraduate programs, Health sciences*

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Introduction

Training qualified personnel for professional, teaching and research activities which are capable of generating innovations and adapting to the constant advances of technology is fundamental to the progress of a nation. In 1965, through the Newton Sucupira's Opinion (Opinion N° 977/65), *stricto sensu* postgraduate courses were regulated in Brazil in order to foster the training of university professors and competent researchers who could attend to the expansion of higher education and promote the development of national research. In the year of its regulation, Brazil had 27 masters and 11 doctoral programs. Since then, significant growth was observed in Brazilian postgraduate courses, with 3,620 masters' programs (103 in the Federal District) and 1,954 doctoral programs (70 in the Federal District) in 2014, representing a 205% increase in only 19 years¹⁻⁴.

Today, Brazilian postgraduate courses transcend the limits of training aimed exclusively at academia, especially after the establishment of the professional masters in 1999 and the professional doctorate in 2017, whose main characteristic is the training of high-level professionals with a profile for the productive sector and other society-related activities whose main activities do not cover teaching and research^{2,5}.

Although the Federal District is the federative unit with the highest number of masters and doctors per inhabitant (18.0 masters per 1,000 inhabitants and 5.4 doctors per 1,000 inhabitants in 2012), there is still a high demand from professionals for this qualification, especially in the field of health, where the training of professionals with a profile compatible with the needs of a care model and healthcare that meets the principles and guidelines of the Unified Health System (SUS) is paramount for the achievement of a universal and equitable model as per the constitutional precepts^{2,6}.

In this context, this paper aims to reflect on the experience and contributions of the *stricto sensu* postgraduate courses of the Higher School of Health Sciences (ESCS) in the Brazilian Federal District^{4,6,7}.

Methods

This is a documentary study, which included management reports produced by ESCS and its sponsor foundation, the Foundation for Teach-

ing and Research in Health Sciences (FEPECS), political pedagogical projects of the ESCS courses, internal rules of postgraduate programs and postgraduate program reports sent by ESCS to the Coordination for the Improvement of Higher Education Personnel (CAPES), such as applications for new course proposals and data entered in the Sucupira Platform, as well as bibliographic and technical works, such as scientific papers, dissertations and theses until November 2018. This material underpinned the corpus of the work, whose results are shown in two parts. In the first one, the *stricto sensu* postgraduate programs are described with ESCS-certified students. The second one describes the *stricto sensu* postgraduate programs developed in partnerships and with certification from other higher education institutions.

Results

***Stricto sensu* postgraduate programs with ESCS-certified students**

The ESCS currently offers three *stricto sensu* postgraduate courses: Professional Masters in Health Sciences, Academic Masters in Health Sciences and Professional Masters in Family Health (ProfSaúde)⁸:

(1) Professional Masters' Program in Health Sciences in the Nursing Area of the Coordination of Improvement of Higher Education Personnel (CAPES), authorized by Ordinance No. 1324 of 08/11/2012 – MEC. This course is a result of the demand of the State Health Secretariat of the Federal District (SES-DF) for the qualification of professionals working in SUS health services, and aims to provide interdimensional/interdisciplinary academic training to enable professionals to produce and use knowledge in the area of Health Care Quality, and Quality in Women and the Elderly Health Care work lines to improve the quality of life and care to these populations. Its specific objectives are: (a) to train masters in Health Sciences for professional and academic practice with a qualification to develop teaching and research activities that contribute to the production of knowledge within the service; (b) to qualify professionals for the teaching profession in the field of health; (c) to train researchers capable of creating, adapting or dynamically changing the theory and the constant construction of new knowledge in health; (d) to develop scientific research that contributes to the pro-

duction of knowledge in the area of Elderly and Women's Health and the improved professional and academic action; (e) to improve professional practice geared to the broad and interdimensional aging process and meet the particular, lifelong needs of women's health care; (f) to produce, use and disseminate knowledge in the area of Elderly and Women's Health; (g) to contribute to the improvement of health planning and management within the Unified Health System (SUS); and (h) to contribute, within the SUS, to the improvement of planning and management of the health care process of professional training and continuing education linked to health work processes at all levels and stages. The program started in 2012. Currently, it is at its seventh class. The Professional Master in Health Sciences totaled 63 graduates by the end of 2017, of which 33 were doctors (52.38%), 12 nurses (19%), 6 nutritionists (9.52%), 4 physiotherapists (6.35%), 4 psychologists (6.35%), 3 dentists (4.76%) and 1 social worker (1.59%), all civil servants working in the SUS⁹. All graduates are health professionals of the SES-DF. Of these, six work as undergraduate professors, 12 as preceptors of the SES-DF and ESCS residency programs, and two as professors of the Technical School of Health of Brasília.

(2) The Academic Masters in Health Sciences in the Medical Area I of CAPES has a multidisciplinary structure, in line with the predominant profile of the Postgraduate Programs and Courses of Medical Area I. The proposed course was submitted for evaluation and approved by CAPES on April 25, 2016, and the course started on April 4, 2017, with the first class of Masters students. It is guided by interdisciplinarity since the generation of knowledge with an important impact on health depends on the interaction and varied knowledge, which requires professionals to work with different experiences and knowledge. The pursuit of academic excellence and commitment to research activity are guiding elements of the course. Its general objective is high-level training of qualified personnel to engage in teaching, research and extension activities in the various fields of knowledge of Health Sciences, providing conditions to improve their research and teaching competencies to contribute to local, regional and national development. Specific objectives are: (a) to train ethical professionals with critical and scientific posture for the exercise of academic and professional practice qualified for developing teaching, research and extension activities; (b) to qualify professionals to practice teaching in the field of knowledge of

Health Sciences; (c) to train researchers capable of dynamically creating, adapting or modifying the theory and constant construction of new knowledge in health; (d) to develop scientific research that contributes to the production of knowledge in the areas of Health Sciences and the improvement of professional and academic activity; (e) to produce, use and disseminate high quality and relevant knowledge in the field of Health Sciences; (f) to contribute to the improvement of policy formulation, management and planning in health; (g) to contribute to the improvement of policies, management and planning of the process of professional training and education in health professions; (h) to gather a group of professors, researchers and students from various fields of knowledge to contribute to the scientific and technological progress of the country, particularly the Federal District and the Midwest; (i) to generate new products, patents and production processes for the country's productive sector; and (j) to foster the production of knowledge for the strengthening of actions committed to technological advances and health policies aiming at the quality of health care in the Federal District and Brazil. The second class started in 2018, and the first graduates are expected to finish their dissertations in 2018⁸.

(3) Professional Masters in Family Health (ProfSaúde) is a national network course proposal led by the Oswaldo Cruz Foundation (Fiocruz) and is backed by the Open University System of the SUS (UNA-SUS), an institution that aims to meet the training and continuing education needs of SUS workers, through the development of the distance learning modality in the health area. The proposal was presented by the Brazilian Association of Collective Health (ABRASCO) and is supported by the Brazilian Society of Family and Community Medicine (SBMFC) and the Brazilian Association of Medical Education (ABEM). Eighteen educational institutions are associated, namely: Oswaldo Cruz Foundation, Rio de Janeiro State University, Fluminense Federal University, São Paulo State University, Federal University of São Paulo, Federal University of Juiz de Fora, Federal University of Uberlândia, Federal University of Paraíba, Federal University of Southern Bahia, Federal University of Pelotas, University of Health Sciences of Porto Alegre, Federal University of Rondônia, Federal University of Maranhão, Federal University of Piauí, Federal University of Paraná, State University of Montes Claros, State University of Amazonas and the Higher School of Health Sciences. The objec-

tives of the program are (1) to train health professionals to engage in teaching, preceptorship and management activities; (2) to train health professionals to carry out research and teaching activities in health facilities; (3) to strengthen knowledge production and teaching activities in Family Health in the various regions of the country; (4) to qualify *Mais Médicos* (More Doctors) Program professionals to work in Family Health/AB; (5) to articulate elements of the education, care, management and investigation in the improvement of the Family Health Strategy (ESF); and (6) to establish an integrative relationship between the health service, workers and users. The program was started in 2017, and the first graduates are expected to finish their dissertations in 2019. The second class selection process (beginning in 2019) is underway, and three other classes are expected (two for doctors through the *Mais Médicos* Program, and one Multidisciplinary) with financing from the Ministry of Health and the Ministry of Education^{8,9}.

Stricto sensu postgraduate programs developed in partnership and with certification from other higher education institutions

(1) The Interagency Masters (MINTER) was developed in partnership with the Postgraduate Program in Gynecology, Obstetrics and Mastology of the Medical School of the University of the State of São Paulo (UNESP - Botucatu), as a Sponsor institution, and ESCS, as Receiving Institution, in a period of 2 years (2009 to 2011). Priority was given to the qualification of professors and preceptors in the area of women's health, which allowed the qualification of 21 professors among ESCS professors and preceptors^{9,10}.

(2) The Master of Health Professions Education (MHPE) with the School of Health Professions Education of the University of Maastricht (Netherlands) was developed from 2011 to 2013 and enabled the qualification of 9 professors and preceptors as masters in Health Professional Education⁹.

(3) The Masters in Health Administration focusing Health Education by the Collective Health Postgraduate Program of the Institute of Social Medicine of the State University of Rio de Janeiro (UERJ), developed under the Health Professions Education Training Program (ProFEPS), which also had a partnership with the Health Work and Education Management Secretariat of the Ministry of Health (SGTES/MS) and funding

from the Pan-American Health Organization. It was developed in the 2014-2018 period⁹.

(4) The Interagency Doctorate (DINTER), developed in partnership with the Postgraduate Program in Health Sciences of the University of Brasília (UnB), as a Sponsor Institution, and ESCS as Receiving Institution, which was submitted and approved by CAPES in 2014, and started in March 2016 with the entry of 25 doctoral students⁹.

Discussion

In 2001, the ESCS was created under the initiative of the SES-DF following public consultations and public health sector demand, and is the only higher education institution in the country within the organizational structure of a State Health Secretariat. It aims to reorient health education, and was structured based on the principles of the SUS and the National Curricular Guidelines established by the National Education Council (CNE), and is supported by a methodological tripod: (1) teaching-learning problem-solving methodologies (problem-based and questioning-based learning), (2) teaching-service-community integration, based on a new paradigm of medical practice, which introduces the change from clinical education of the university hospital to a network of SUS services, namely, the SES-DF, and community service, and (3) teaching and research developed exclusively by SES-DF servants, who work as health care professionals and also as professors, which enhances the link between ESCS and the world of work and social practice^{8,11-13}.

Teaching-service-community integration is the primary guide of the process of learning and production of knowledge, which articulates the cognitive, psychomotor and attitudinal realms in a curriculum organized by competences. Thus, pedagogical praxis occurs in the SES-DF health network, which is a privileged scenario for teaching, research and extension activities in a collective, shared, agreed and integrated action among students, professors, public network teams and SUS users. At the undergraduate level, it regularly provides medical and nursing courses, contributing to the construction of a new teaching-care paradigm through the training of differentiated health professionals for the reality of the Brazilian health system, with robust overall education as recommended by the National Curricular Guidelines of Undergraduate Medical

(MEC/2014) and Nursing (MEC/2001) courses^{8,11-15}. As per document prepared by the Lancet Commission for Health Professions Education, the curricula of the ESCS courses are incorporated into the third generation of educational health reforms, health system-based education, whose main characteristics are transformative learning, interdependence in educational processes, and equity in access to health¹⁶.

With the consolidation of undergraduate courses, the implementation of *stricto sensu* postgraduate courses became a fundamental objective of the ESCS. Thus, actions were implemented to promote the research groups' nucleation and improved institutional research, technological innovation and postgraduate studies were implemented. These actions include the strengthening of the institutional scientific initiation program and the establishment of partnerships with other national and international education, research and technology dissemination. The first partnership implemented in *stricto sensu* postgraduate courses was the Interagency Masters (MINTER) in partnership with the Faculty of Medicine of the University of the State of São Paulo (UNESP - Botucatu), which was fundamental for the establishment of the first *stricto sensu* postgraduate course certified by the ESCS, the Professional Masters' Program of the Postgraduate Program in Health Sciences, accredited in the Nursing Evaluation Area of CAPES.

During this period, the ESCS held initiatives to foster the nucleation of institutional research groups and partnership with other institutions to develop research projects in the area of health professions education in order to exercise its mission to contribute to its innovative nature, with the improvement of this area in our country. It is essential to highlight that, for the development of the internal competences of the ESCS as a higher education institution, it was relevant to partner with the University of Maastricht, which is a Dutch public institution with significant innovation in the education track record. Its graduate programs are internationally recognized for the quality of research in health professional education and are among the best in the world. In this context, the Master of Health Professions Education (MHPE) was provided with the School of Health Professions Education of the University of Maastricht (Netherlands)⁹.

Again, in the area of education of the health professions, ESCS participated in the Professional Master's Degree in Health Administration focusing Health Education through the Collective

Health Postgraduate Program of the Institute of Social Medicine of the State University of Rio de Janeiro (UERJ), within the scope of the Health Professions Education Training Program (ProFEPS). This program was an initiative that aimed to train and qualify professors and preceptors linked to undergraduate courses in the health professions of public and private non-profit Brazilian HEIs, to contribute to the reorientation of undergraduate health courses that respond to the needs and the development of the SUS in the context of consolidating teaching-service integration, promoting interdisciplinary training, comprehensive health care and work in health care networks. The ProFEPS consisted of activities that included a Health Education Specialization Course, Workshops and the Professional Masters Course^{8,9}.

A partnership with the Postgraduate Health Sciences Program of the Faculty of Health Sciences of the University of Brasília (PPGCS/FS/UnB) was established through an Interagency Doctoral Program (DINTER) to consolidate the institutional post-graduation, create conditions for the future provision of a PhD course, and train new doctors in its faculty in order to ensure the sustainability of the Political Pedagogical Project of the ESCS. The DINTER UnB/ESCS Project will allow the qualification of a significant level of professors without them leaving their functions, within a maximum period of 48 months, providing them with the necessary skills and competencies to strengthen research, technological innovation and postgraduate course in the ESCS^{8,9}.

In 2017, expanding the range of ESCS postgraduate courses, two new Masters courses were started, namely, the Academic Masters in Health Sciences in the Medical Evaluation Area of CAPES and the Professional Masters in Family Health (ProfSaúde) in the Collective Health Evaluation Area of CAPES.

Since its inception, the Masters in Health Sciences' main concern was the excellence of health professionals who will be trained and faculty's and students' scientific production. One of the valued points in the training of students is the Teaching Orientation Practice activity, which meets one of the objectives of teaching. It is also worth noting that this is the only academic masters course provided by a district public institution⁸. Another important initiative is the participation in the Professional Masters in Family Health (ProfSaúde), which is a proposal of a national network course covering 18 institutions

and building on previous experiences, such as the Family Health Professional Masters (RENASF), ENSP/Fiocruz and Fiocruz Mato Grosso do Sul/UFMS, and UNASUS Network specialization courses, in particular those of the Federal University of Pelotas (UFPEL) and the Federal University of Health Sciences of Porto Alegre (UFCSPA)^{8,15}.

Thus, the development of the ESCS *stricto sensu* postgraduate course is an unfolding of organizational learning acquired during the 17 years of developing undergraduate courses and consolidation of its research groups. In its definitions, organizational learning underscores the relevance of acquiring, improving and transferring knowledge to improve existing performance and prepare for new circumstances¹⁷. Thus, organizations learn as they produce, which is why production systems must be seen as learning systems¹⁸. Three factors are critical in organizational learning success, namely, (1) well-developed core competencies that serve as a starting point for new services and products; (2) an attitude that supports continuous improvement in the aggregate business value chain; and (3) the ability to renew and revitalize. Thus, one can affirm that the establishment of the professional and academic masters' courses was resulted from the development of the ESCS learning in the training of health professionals, closely related to the real context of the Federal District SUS (SUS-DF). It represents, therefore, an evolution in the stages of learning, of using the accumulated knowledge and its availability through the generation of new situations or new processes¹⁸.

It is also important to develop an interface with the country's public health policies based on a work geared to developing skills and competencies of students and health professionals working at the SUS-DF. At the same time, the ESCS keeps the process of developing internal competencies, as it continues to implement initiatives aimed at fostering the nucleation of institutional research groups and partnerships with other institutions for the development of research projects, in order to improve its mission and innovative nature in the formation and production of health knowledge in the country^{8,9}.

Thus, the experience accumulated in the initiatives of *stricto sensu* postgraduate courses is a concrete manifestation of the development of competencies of the organization, insofar as the products (courses) are the manifestation of the competencies (to provide courses). However, the institutional environment is complicated due to political, administrative and legal issues, mainly because the ESCS is a higher education institution linked to a State Health Secretariat.

This favors, on the one hand, the development of the critical, creative and humanistic potential of professors and students. However, on the other hand, it challenges the scientific consistency and disruptive nature of the products and processes generated in this unique academic environment. While recent, the contributions of ESCS *stricto sensu* postgraduate courses to the SUS and scientific knowledge can already be perceived, although the programs still evidence significant challenges to their academic, pedagogical and financial sustainability resulting from

the characteristics described above, which is why they require significant efforts and dedication from coordinators and professors.

Collaborations

Study design and planning: FF Amorim, LA Santana. Data collection, analysis, and interpretation: FF Amorim, LA Santana, LBD Göttems. Elaboration and review of the manuscript: FF Amorim, LA Santana, LBD Göttems. Approval of the final version: FF Amorim, LA Santana, LBD Göttems.

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