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Faculty development for health professions education: mandatory and indispensable

Desenvolvimento docente para a educação das profissões da saúde: obrigatório e imprescindível

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ABSTRACT

Introduction: Faculty development programs (FD) are activities aimed at improving the competencies required of educators. They involve topics related to curriculum design, teaching-learning, student and program evaluation, research, management and leadership of educational processes. In Brazil, after the publication of the curricular guidelines for medical education in 2014, it is mandatory for educational institutions to create and maintain FD programs in undergraduate medical programs.

Development: Brazilian institutions of higher education have begun to structure their FD centers to meet the legislation and, obviously, to support teachers and preceptors responsible for the training of doctors in Brazil. The way in which these initiatives have been evolving is still very diverse, random, and not always with evaluation of the quality and effectiveness of these actions. This essay approaches the FD topic from the global context, and advances with an analysis of how the issue has been developed in Brazil, from the perception and experience of the authors. The scientific production on the subject at the national level is incipient and we believe that the production of knowledge in the area is a priority for the coming years, since Brazil is among the countries with the largest number of medical schools worldwide. Looking at the international experience is fundamental, but insufficient since the Brazilian context of medical schools and the health system itself is unique and needs to be understood and considered regarding FD actions.

Final considerations: The evaluation of the quality and effectiveness of FD programs in health professions education is fundamental for the improvement of teaching and health care, which ultimately must ensure patient safety and sustainability of the health system itself.

Keywords: Teaching; Faculty; Professional training; Medicine; Health Professions.

RESUMO

Introdução: *Programas de desenvolvimento docente (DD) são atividades voltadas ao aprimoramento das competências requeridas de educadores. Envolvem temas ligados ao desenho de currículos, ao ensino-aprendizagem, à avaliação do estudante e de programas, à produção de conhecimento (pesquisa) e à gestão e liderança de processos educacionais. No Brasil, após a regulamentação das diretrizes curriculares para a graduação em Medicina em 2014, existe uma obrigatoriedade para que as instituições de ensino criem e mantenham programas de DD nos cursos de graduação em Medicina.*

Desenvolvimento: *As instituições brasileiras de ensino superior começaram a estruturar seus centros de DD para atender à legislação e, obviamente, para apoiar professores e preceptores responsáveis pela formação de médicos no Brasil e dar suporte a eles. A forma como essas iniciativas vêm evoluindo ainda é muito diversa, aleatória e nem sempre com avaliação da qualidade e efetividade das ações. Este ensaio aborda o tema DD a partir do contexto mundial e avança com uma análise sobre como a questão tem sido trabalhada no Brasil, a partir da percepção e experiência dos autores. A produção científica sobre o tema em nível nacional é incipiente, e acreditamos que a produção de conhecimento na área seja uma prioridade para os próximos anos, visto que o Brasil figura entre os países com maior número de escolas médicas no mundo. O olhar para a experiência internacional é fundamental, mas insuficiente, visto que o contexto brasileiro das escolas médicas e do próprio sistema de saúde é único e precisa ser compreendido e levado em conta nas ações de DD.*

Conclusão: *A avaliação da qualidade e efetividade dos programas de DD em instituições de ensino da saúde é fundamental para a melhoria do ensino e do cuidado em saúde que, em última instância, deve garantir segurança ao paciente e sustentabilidade do próprio sistema de saúde.*

Palavras-chave: *Docência; Corpo Docente; Capacitação Profissional; Medicina; Profissões da Saúde.*

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INTRODUCTION

Faculty development (FD) programs comprise a set of activities promoted by higher education institutions (HEIs) with the objective of improving teachers and preceptors in the fields of curriculum design, teaching and learning (T&L), scientific research in education, team management and leadership, with the aim of achieving academic excellence and, consequently, improving health care in the community[1, 2,3].

FD programs have the purpose of providing support to teachers and other professional educators in the health area, helping them to maintain their vitality to develop skills relevant to the educational institution and appropriate to their position in the present and the future[4].

The concept of FD in structured units of the educational institution is recent and started in the 1950s and has undergone significant advances from its performance and dissemination by teams specialized in medical education from internationally renowned universities, such as McGill University (Canada), University of Maastricht (The Netherlands), University of Illinois (Chicago/USA) and University of Newcastle (England), which developed and implemented programs that became models for other institutions in the world[5,6]. In general, they are programs that have been structured and organized to offer workshops, seminars, in-person or remote education courses through virtual platforms, and also longitudinal training and intervention in health education. Steinert *et al.* (2006) demonstrated, in a review article, that most of the teacher training programs analyzed were based on workshops and short courses, and only 10% of the programs had a more longitudinal characteristic, precisely those that demonstrated more solid and sustainable results[5].

In the last two decades, in response to technological advances, changes in evaluation processes, new teaching-learning tools, and government demands for health management and care increased the need for Faculty development and, consequently, pushed the FD initiatives in medical schools around the world[5,6].

One of the longitudinal FD programs that stands out is the Foundation for Advancement of International Medical Education and Research (FAIMER)®, which is a non-governmental and non-profit organization, created in September 2000 by the *Educational Commission for Foreign Medical Graduates* (ECFMG)® in the United States to promote excellence in the education for health professions internationally, through programmatic and research activities in the area[7]. The FAIMER Institute focuses its efforts on developing regions of the world in Asia, Africa and Latin America and uses three specific strategies: faculty development, research aimed at education in the health professions that support policies and practices for the training of human resources in the health area, and the production and analysis of data that assist in decision-making aimed at improving educational quality. Ultimately, the objective of FAIMER Institute actions around the world is to improve population health care by increasing the training of human resources that work in the education of future health professionals. Currently, the FAIMER Institute reaches more than 40 countries and has thousands of participating teachers who completed a 24-month FD program, which until 2019 (before the COVID-19 pandemic) had two in-person sessions (2 to 4 weeks each) and two 11-month periods of remote activities.

In Brazil, the program started its activities in 2007. Several participating teachers had implemented their projects and sensitized a great number of professionals about the importance of updating teaching methods and student assessment to promote improvements in the quality of training in health and, consequently, in the care for the community in general[8].

In 2005, at the governmental level, the Brazilian Ministry of Health created the National Program for the Reorientation of Professional Training in Health – (*PRÓ-SAÚDE*), with the aim of reformulating the training bases of undergraduate courses in the areas of health to adapt to the real needs of the population, based on three axes: , practice scenarios, theoretical and pedagogical orientation[9]. Relevant points were considered: the permanent education of health educators and the changes in educational strategies for effective methodologies for adult learning, such as problem-solving strategies. Also in this sense, in 2008, the Education Program for Work in Health (*PET-Saúde*)[10] was created, aimed at in-service improvement and specialization, as well as work initiation, internships and experiences, aimed at professionals, students in the health area and health service users, according to the needs of the Brazilian Unified Health System (SUS, *Sistema Único de Saúde*). The purpose of the program was to promote integration among Academy, healthcare service and the community, aiming at strengthening education through health work, through the provision of scholarships for tutors, university teachers, preceptors and undergraduate students in the health area. Both were public policies that induced FD, including incentives for research in education in the areas of health promoted in 2010 by the Coordination for the Improvement of Higher Education Personnel (CAPES, *Coordenação de Aperfeiçoamento de Pessoal de Nível Superior*), with the approval of 31 projects related to health professions education, from different medical schools and post-graduate programs around the country[11].

In this context, in 2008, the Brazilian Association of Medical Education (ABEM, *Associação Brasileira de Educação*

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Médica), after a study with 28 Brazilian medical schools participating in the project of the "Commission for the Evaluation of Medical Schools (CAEM, *Comissão de Avaliação das Escolas Médicas*)" showed the fragility of the axis that evaluated faculty development in institutions, both in those with traditional methodologies and in institutions that used innovative teaching and learning methodologies. Most of the participating schools acknowledged that they did not offer or promote systematized pedagogical training and regular technical-scientific updating of the teaching staff[12,13].

To regulate these new needs, in 2014, the Brazilian Ministry of Education approved Resolution number 3, establishing the National Curriculum Guidelines (DCN, *Diretrizes Curriculares Nacionais*) of the Undergraduate Medical Schools, to be observed in the organization, development and evaluation of the medical programs by higher education institutions in the country, establishing the principles, foundations and purposes of medical education. Article 33 of Chapter III (Curricular Contents and the Pedagogical Project of the Undergraduate Course in Medicine) established that medical schools must constitute the Medical Program Coordinating Committee (NDE, *Núcleo Docente Estruturante*), responsible for the process of conception, consolidation, evaluation, improvement and continuous updating of the medical curriculum. Additionally, article 34 of this same chapter establishes that undergraduate medical courses must permanently maintain a Faculty Development program, aimed at valuing the Faculty members´ work, greater involvement of teachers with the curriculum and its improvement. Effectively, this could occur through the conceptual and pedagogical domain, which would encompass active teaching strategies, based on interdisciplinary practices, to undertake a greater commitment towards the transformation of the medical school, to be integrated into the daily lives of teachers, students, workers and users of health services.

Article 35 of chapter III strongly recommended that the courses should develop or encourage the participation of professionals from the public health network in these teacher training and development programs, in order to improve the teaching-learning process in SUS and the quality of care for the population[14].

Therefore, with the growing demand for the training of teachers and preceptors to meet the educational needs of medical courses and other health areas and in compliance with the requirements of the new curricular guidelines of the medical course, the creation and structuring of FD programs becomes a teachers' and managers' demand, in addition to being an institutional obligation.

DEVELOPMENT

Historically, the good clinical training of physicians and other health professionals was considered sufficient for these individuals to be able to work as teachers. The prevailing idea was that it was enough to be a prominent person in research or in clinical or surgical practice, and they would naturally also be a good teacher. This belief fails to be supported, since to be an educator, in the deepest sense that the meaning of this word can have, the person who sets out to face this challenge must first recognize that the knowledge, skills and attributes required to perform this function with excellence differ from those required to perform research or to be a clinician[15].

Based on two publications by Professor Harden[16,17], we list 14 roles and functions that can be performed by educators in the health professions education (Table 1).

Thus, it is assumed that preparation for the teaching function in the health area does not mean only technical instrumentation in the area of origin (medicine, nursing,

Table 1. Potential functions and roles of an educator in the health area

1	To be a professional role model for students, residents, and colleagues
2	To design and implement curricula for health courses
3	To facilitate learning for students, residents, and co-workers
4	To be a source of relevant information in their areas of expertise
5	To act in the design, implementation and analysis of student and resident assessment results
6	To recognize the fundamental role of the evaluation of educational programs or their subunits (disciplines, internships, etc.)
7	To act as a mentor whenever you have the opportunity or when provided for in the curriculum
8	To manage educational programs, activities and/or processes (courses, disciplines, internships, assessments, etc.)
9	To lead processes and activities in the educational context
10	To produce knowledge in education based on the study, on one's own practices and through experimentation (innovation)
11	Always uphold good practices in teaching, student assessment and educational programs
12	To advocate for the educational literacy of teachers
13	To adhere to and/or actively participate in teacher development processes at the institution itself or outside it
14	To recognize oneself as an eternal learner and always be ready to help others learn (students, residents, health team, patients, family members and community)

Source: Prepared by the authors

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nutrition, etc.) nor only the techniques to exercise teaching, but fundamentally, a critical reflection on this practice and the reality in which it is processed[18].

Context of FD in Brazil

The quality of medical education has been an important topic for the academic community in the country. From 1991 to 2002, the National Interinstitutional Commission for the Evaluation of Medical Education (CINAEM, *Comissão Interinstitucional Nacional de Avaliação do Ensino Médico)*, a working group involving several entities linked to the field of medicine, whose objective was to evaluate medical schools in the country, stands out. In the first and second phases of the project, it was possible to carry out a diagnosis of the reality experienced and the problems faced by the 76 participating universities at the time, regarding the political-administrative structure, material infrastructure and human resources, the pedagogical model, research production, provision of services to the community and Faculty members profile[19].

In that evaluation, the CINAEM group pointed out that training at the *stricto sensu post*-graduate programs almost always did not address the adequate training of medical educators, leaving teaching as a secondary activity when compared to the role of researcher in the medical area. Additionally, the teachers' remuneration was far below the market values for medical work (clinical or surgical). The teacher training offered by the postgraduate programs was precarious, which contributed to the low commitment to teaching activities, for which many would be hired at the end of the postgraduate program. The third phase of CINAEM consisted of a set of proposals to achieve improvements in educational quality and, consequently, care for the community in general, but which, in addition to the universities' actions, also depended on public policies to promote the transformation of medical education in the country [20].

The government programs *Pró-Saúde*, *PET-saúde* and the DCN regulated in 2014 were important to stimulate improvements in the training of professionals involved with education in medicine and other areas of health training. Until now, few national higher education institutions had a trajectory in this area. In Rio de Janeiro, the pioneering spirit of NUTES Institute (Instituto de Educação em Ciências e Saúde), of Universidade Federal do Rio de Janeiro, founded in 1972 by Professor Luiz Carlos Lobo[21], stands out. In 2015, the Medical School at Universidade de São Paulo proposed a Health Professions Program, as na integral part of Centro de Desenvolvimento de Educação Médica Professor Eduardo Marcondes (CEDEM)[22]. This program was created in 1987 from the Pedagogical Advisory Group (GRAPED, *Grupo de Assessoria Pedagógica*), which was reformulated in 2010. Universidade Federal de São Paulo (UNIFESP) also restructured the discipline of didactic pedagogical training in health in 2003, which was part of the Center for the Development of Higher Education in Health (CEDESS, *Centro de Desenvolvimento do Ensino Superior em Saúde*)[23], which was created in 1996.

The Faculty of Medical Sciences of Universidade Estadual de Campinas (UNICAMP) and the Faculty of Medicine of Universidade Estadual Paulista (UNESP in Botucatu) have maintained, respectively, the Center for Research Support in Medical Education, (NAPEM, *Núcleo de Apoio a Pesquisa em Educação Médica*) since 2006[24] and the Health, Education, and Technology (SETe, *Saúde, Educação e Tecnologia*), since 2018[25].

At Ribeirão Preto School of Medicine (FMRP), University of São Paulo, the concern and actions for the training of its faculty have been present since its foundation, but in a decentralized and non-institutional way[26]. In 2016, the first educational unit for health professions was created, the Center for Faculty Development for Education (CDDE, *Centro de Desenvolvimento Docente para o Ensino*), which was only possible because it had broad and unrestricted institutional support[27]. In 2017, the CDDE/FMRP implemented a structured teacher training program called "Essential Skills in Health Professions Education" (Módulo Básico de habilidades do educador da Saúde), with the purpose of assisting teachers and preceptors in their daily practices, encouraging them to actively participate in new teaching-learning projects in their departments, for the overall improvement of training in the university health areas. After completing the activities of this module, teachers were invited to participate in a community of practices, for permanent discussion of issues pertinent to education in the health areas at the university. The construction of this activity was guided by internationally available scientific evidence and was the subject of a description and analysis of a doctoral thesis in 2022. The impact of three editions of a teacher training course in basic skills for education in the health professions on the teaching activity of the participating teachers after two years was evaluated. The study used a mixed-method approach with a description of the participants' demographic data and professional profile. Immediate and post-course perceptions were assessed through structured instruments. Two years later, semi-structured interviews were conducted, recorded and stored in the *NVIVO® software* used to systematize the thematic analysis of the participants' discourse with interpretation based on the socioconstructivist theoretical framework. A mixed methodology was used for data analysis, after open interviews with the participants [28].

After the publication of the DCN (2014), many institutions created, expanded or revitalized programs focused

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on FD in the health area. The current trend of FD programs and their evaluations seek to remove the focus from the teacher of medicine and create programs capable of involving and expanding actions for professionals from different professions and who are directly involved with the teaching-learning process in the different contexts and scenarios of teaching practice: classrooms, small group tutorials, mentoring programs, virtual environment, laboratory practices, simple and realistic simulations, professional practice scenarios (patient's home, social equipment, clinics and outpatient care, pre-hospital services, emergency care, emergency hospitals that offer elective care) [29].

Many FD programs that were structured from 2007 onwards had the direct or indirect participation or support of teachers trained by FAIMER-USA or FAIMER-Brazil FD program for the health professions[7,8]. One of the largest initiatives for the faculty development of preceptors of medical residency programs in Brazil, which was created in 2012, has a FAIMER-Brasil participant among its creators and executors of this program, which is linked to the Brazilian Association of Medical Education (ABEM, *Associação Brasileira de Educação Médica*). Among the objectives of the project, we highlight the expansion of medical residency and undergraduate programs and its central goal is to support preceptors and teachers for the full exercise of their duties as educators. The emphasis of the courses that are organized, validated and regularly offered by Abem is on the development of pedagogical skills. The Pedagogical Skills Development Course for Preceptorship and Teaching Practice, in the hybrid modality, offered since 2012, has already certified 1,202 professionals in its 47 editions, reaching the five macro-regions and with the participation of professionals from all Brazilian states[30].

International context of FD

The literature indicates that the effectiveness of teacher development has been associated with its longitudinal and continuous format, encompassing training in innovative teaching and assessment methodologies and reflection on daily practices in the different scenarios involved, including the professionals' practical work environments [6,29].

Among the central pillars to ensure the effectiveness of teacher training programs is their pedagogical structure, which must have the following characteristics: 1) organization based on available scientific evidence complemented by the facilitators' experience; 2) presence of relevant content for teaching practice in different teaching contexts; 3) creating a safe and welcoming learning environment that offers opportunities for sharing experiences among the participants; 4) regular and abundant offer of feedback as the tasks are being carried out, seeking to stimulate personal and peer reflection, a thematic that includes different scenarios of the teacher's performance; 5) possibility of reviewing, improving, building and making viable educational projects based on what is learned in FD activities, and above all, 6) support and appreciation of the educational institution to the participants in FD activities[5,6].

Leadership and management development have been recognized as critical components of FD in health professions education and should be part of the list of topics to be addressed and developed by the participants. This is certainly one of the differentials of the FAIMER Institute in Brazil and around the world[1,31,32].

O'Sullivan et al, in 2011, highlighted that FD programs address a variety of institutional needs for four different types of audiences: 1. students, residents, and trainees, who have little experience and are starting their careers in medical education; 2. health professionals who participate in care services at the institution or at community bases, but do not have teaching as their main responsibility – which we call preceptors in Brazil; 3. teachers who have teaching as their main activity; and 4. members of the educational institution who are interested in research on medical education and education in the health professions[29]. Thus, these training programs need to adapt and offer a proposal that meets and adapts to the group to be reached as a priority. In view of this complexity, Sklar DP, in 2016, suggested that a different framework be considered for structuring teacher development programs, considering the identity, growth, and empowerment of the professionals involved in the education process in the areas of health[33]. "Identity" should be placed at the center of actions for teacher development, recognizing the diversity of professionals linked to the institutions who contribute to specialized education and making it possible building a trajectory of professional identity development for each person involved. This would allow the differentiation of teaching activities in the fields of research, education, management and clinical care or the combination of them in different phases of time and priorities of the professionals involved. "Growth" over time recognizes the intrinsic need of teachers to continue learning and improve their competence for the exercise of their educational activities. The work environment should stimulate and favor this demand and expand the activities of reflection on practices, always respecting individual differences. It is also important to recognize the hierarchical structures of the institutions, in which junior teachers, assistant physicians, and multiprofessional residents usually do not actively participate in the design of these programs, being, for the most part, designed by and for senior teachers and subject specialists.

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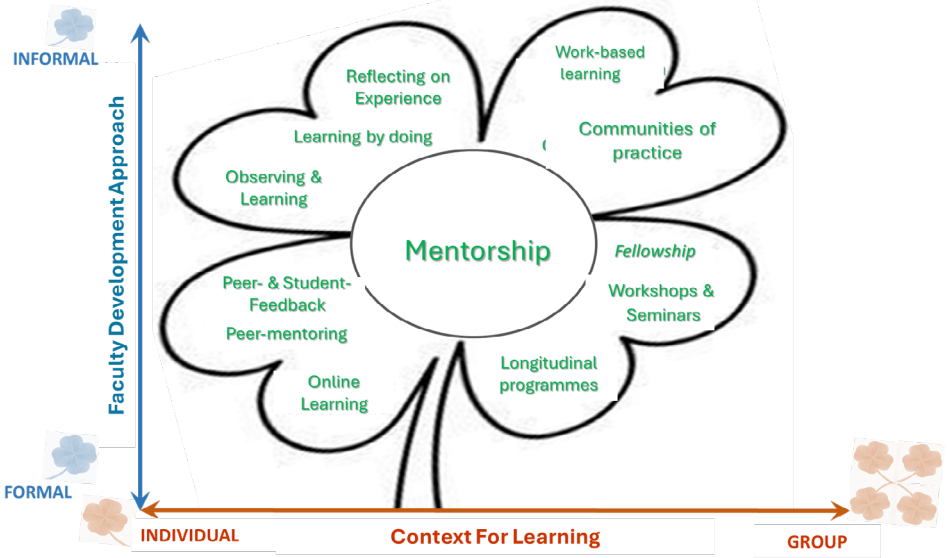
The lack of opportunities in this sense can discourage professionals with high potential and enthusiasm in academic activities and further stifle most programs. Moreover, it is worth mentioning the fact that the programs are poorly articulated and focused almost exclusively on activities such as lectures and occasional workshops (non-longitudinal). The FD of professionals who help students and residents in health areas learn should be thought of comprehensively by institutional collegiate bodies and go beyond isolated and non-regular initiatives. This vision could lead to a workforce that is more engaged and able to make educators, researchers, clinicians, scholars, and administrators able to anticipate and meet their students' educational needs and the population health needs, and in doing so, also meet their potential as individuals and teachers[34].

In the same line of reasoning, *Burguess et al.* (2019), addressed the importance of trying to create a culture for teaching-learning among health professionals in higher education institutions, including through informal training opportunities in their fields of activity[35].

Steinert (2010)[36], proposes a review and expansion of the ways in which FD opportunities are organized in institutions. The author articulates the different forms of approach: informal (which take place in the work environment and are not planned) or formal (face-to-face or online courses, fellowship in health education, etc.), with activities that are carried out individually or in groups. All the possibilities generated from the intersection between these different aspects are equally valuable, but they can reach different audiences and offer significant learning experiences. When we create opportunities for them to coexist, we open spaces for the formation of communities of practice among health educators, who can support each other. In this format. The most experienced educators can help the beginners. In this model, we do not reduce FD actions only to isolated workshops or lectures, but we create a wide range of possibilities in which interested people engage and support each other in the process of qualifying teaching practice. FIGURE 1 depicts this model using an image that represents the four-leaf clover, and which was created from the proposal made by Steinert (2010)[36].

There is increasing scientific evidence on the relevance of FD programs as a structuring factor for significant changes in teaching practice, in the training of health professionals, improvement in academic learning and in the impact of care in the community[5,6]. However, the measurement of these outcomes is still a challenge for research on the subject, since the contexts of FD evaluation programs are complex and involve assistance in patient care[31]. Newman *et al.* (2016) highlights that in the last 50 years there has been a significant expansion of research on the topic of education in the areas of health, not only in quantitative terms (number of publications), but also in the international presence at conferences and the growing diversity of professions, perspectives, disciplines and theoretical approaches, recognizing advances in new knowledge in the area[37]. However, the disparity in scientific production between developed and developing countries is still very large. The difficulties related to funding, work overload and institutional support for professionals involved in research related to faculty development and education programs in the health professions are recognized obstacles

Figue 1. Image presenting the different possibilities for Teacher Development in two dimensions that are articulated in practice: individual learning experiences (independent) or in groups (collective); and more formal approaches in contrast to other more informal ones that usually occur in teaching practice.



Source: Prepared by the authors based on the model proposed by Steinert (2010)[36]

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to the creation of better evidence in these countries, and which are certainly related to the low scientific production on the subject in South America and Brazil, which can be easily verified in indexed publication databases such as Pubmed, Medline and Scielo. In these, a notable gap can be observed in publications by Brazilian authors, especially regarding the description, evaluation and outcomes of national faculty development programs[38].

Last but not least, educational institutions must value teachers who are dedicated to innovative practices in education and student assessment, who generate new knowledge and solutions for in-person or remote learning. Whether they are focused on the cognitive, psychomotor or attitudinal domain, all necessary to define professional competence in health professions education. This stimulus and recognition of academic and scientific merit (scholarship) will be the driving force that will increase the number and quality of FD programs and centers in medical and health professions´ schools in Brazil. The prestigious journal Lancet recently published an article that states that:

> *"Science is important. But education is the vector that transmits to each new generation the curiosity, passion and commitment to reimagine the future, expand the limits of human possibilities and achieve a fairer social world."*

And it adds:

> *"However, the teacher is always in the shadow of the scientists. Teaching is often judged as an activity inferior to research by leaders in Academia and teachers tend to run away from teaching responsibilities to dedicate themselves to research"*[39].

This reality needs to change.

FINAL CONSIDERATIONS

The strengthening and valorization of the FD axis in health training institutions in the country is fundamental for the advancement and improvement of training in undergraduate health courses. The implementation of FD programs and centers, their evaluation, and the publication of studies on Brazilian experiences are fundamental for FD to advance in the national scenario.

AUTHORS' CONTRIBUTIONS

Karine Angélica Cintra was responsible for the original idea, literature review, data collection, analysis, writing and editing of the final manuscript. Valdes Roberto Bollela was responsible for the original idea, review and approval of the final manuscript.

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

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