

Pedagogical Preparation for Physicians and their Performance in the Medical Course

Preparação Pedagógica para Médicos e Sua Atuação no Curso de Medicina

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PALAVRAS-CHAVE

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RESUMO

A formação de um perfil médico resolutivo das principais necessidades de saúde da população é um desafio para as escolas médicas contemporâneas. Nesse processo, o docente médico destaca-se, visto que a prática docente na formação médica se baseia na reprodução de modelos considerados válidos, aprendidos anteriormente, e na experiência prática. Questiona-se, então, a aptidão pedagógica do médico ao exercício docente, uma vez que a relação professor-acadêmico se dá em esferas diferentes da relação médico-paciente, partindo da necessidade de entender quais caminhos os docentes buscam para adquirir habilidades específicas à docência. **Objetivo:** Realizar uma revisão integrativa acerca da formação pedagógica dos médicos no contexto da docência. **Métodos:** Revisão integrativa da literatura, não observacional, descritiva. Inicialmente, buscaram-se estudos nas bases de dados Scientific Electronic Library Online (SciELO), Literatura Latino-Americana e do Caribe em Ciências da Saúde (Lilacs), US National Library of Medicine e National Institutes of Health (PubMed) e na Cochrane Library com auxílio do operador booleano e dos seguintes descritores: Health Human Resource Training; Faculty, Medical e Education, Medical, Continuing. Os critérios de inclusão foram: artigos gratuitos, completos, publicados entre 2012 e 2016, em português, espanhol e inglês. **Resultados:** Nas quatro bases de dados, encontraram-se 24 artigos relacionados ao tema da pesquisa. Após leitura exaustiva dos artigos encontrados, apenas cinco convergiam e respondiam à questão norteadora levantada na reflexão inicial. As estratégias e metodologias de ensino e a avaliação dos processos de supervisão clínica na construção do saber técnico dos estudantes aparecem como tópicos importantes no aprender e exercer a docência. Além disso, emerge, nessas discussões, a necessidade de programas de educação continuada na formação docente, bem como a construção de instrumentos avaliativos dos professores, tutores e preceptores. **Conclusões:** Nesse modo, ressalta-se o aprimoramento contínuo na formação pedagógica dos docentes e no desenvolvimento de programas de educação permanente e o aprimoramento do corpo docente pela escola.

KEY-WORDS

- Health Human Resource Training.
- Education, Medical, Continuing.
- Schools, Medical.

ABSTRACT

*Qualifying the medical profile to meet the population's main health needs is a challenge for contemporary medical schools. In this process, the medical professor has a prominent place, since medical teaching practice is based on the production of models considered valid, previously learned, and the experience of medical practice. One questions, thus, the physician's pedagogical aptitude to teach, since the professor-academic relationship occurs differently from the physician-patient relationship, starting from the need to understand which ways professors seek to acquire the teaching-specific skills. **Objective:** To carry out an integrative review on the pedagogical training of physicians in the teaching context. **Methods:** This is a non-observational, descriptive integrative review of the literature. Initially, we searched the databases at the Scientific Electronic Library Online (SciELO), Latin American and Caribbean Literature in Health Sciences (Lilacs), the US National Library of Medicine and the National Institutes of Health (PubMed) and the Cochrane Library with the help of the Boolean operator and the following descriptors: Health Human Resource Training; Faculty, Medical and Education, Medical, Continuing. The inclusion criteria were free, complete articles, published from 2012 to 2016, in Portuguese, Spanish and English. **Results:** The search resulted in 24 articles those discuss the research theme. After exhaustive reading of the articles found, only five converged and answered the guiding question raised in the initial reflection. Teaching strategies and methodologies, as well as the evaluation of clinical supervision processes to construct the students' technical knowledge appear as important topics on learning and teaching. In addition, these discussions raise professors' need for continuing education programs, as well as the construction of evaluation tools for professors, tutors and preceptors. **Conclusions:** This study highlights the continuous improvement in the professors' pedagogical training and the development of permanent education programs and improvement of the faculty by the school.*

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INTRODUCTION

The medical training schools exert a great influence on the dynamics, organization and performance of the health services, since they are responsible for the training of the subjects who will work at them. Health sector reforms are intrinsically linked to medical education. In this logic, health services are organized to respond to the problems of health and suffering of the population, and schools exist to prepare professionals who, acting in the services, give solutions to the problems and health needs of the community involved^{1,2}.

According to the survey conducted by the Federal Council of Medicine (CFM), in the period from 2013 to 2015, the number of private medical courses in Brazil increased significantly, growing from 64 to 154 institutions. Of the 257 courses in activity in the country, 69% are in the Southeast and Northeast Regions and account for the preparation of 23 thousand new doctors every year. Today, in Paraíba, ten medical schools count more than 900 places each year for the entry of future professionals³.

Despite the great availability of courses and vacancies, most of these new projects do not meet current pedagogical

needs, curricular guidelines and minimum provisions for training physicians³. In this sense, in recent years, medical education in Brazil and worldwide has undergone transformations. Innovative educational models have replaced the traditional teaching model, leading to positive changes in the professor's role. The teaching previously based on the transmission of knowledge, in which the professor is the specialist in the subject and the student only observes, no longer adapts to the training needs of health professionals nowadays⁴.

Considering that these educational transformations are essential to the medical courses, the faculty is the structural base on which the changes necessary to the formation of professionals of the area within the process of modification of the medical school must be instituted. Most of the times, the medical professor was formed by the hospital-centered model, which shows that medical professors have often not been prepared for teaching and, as a result, their experience derives mainly from their knowledge on their professional field. Therefore, the professionalization of the professor becomes an essential strategy to rethink the medical education in its institutional and social dimensions^{5,2}.

Given this, there are proofs that, when teaching occurs in a teacher-centered manner and focused on the knowledge transmission, the student becomes more favorable only to reproducing the knowledge obtained through a superficial learning than using the clinical reasoning that can be obtained from teaching. When teaching is student-centered, the depth of learning and understanding of the studied phenomena are greater⁴.

Obviously, the complexity that involves teaching in Health cannot be given little value, since the knowledge and practices of the educational sphere demand different knowledge when compared to those of the clinical sphere, and, therefore, the teaching career should not be understood in the same way as the medical career, although the medical practice involves concepts and educational actions, as in the interactions of the doctors with their patients⁶.

Thus, the professor's role acquires new contours, since, in addition to the training of human resources in quality health, he/she also acts efficiently to improve the already-existing health services. This further expands the need to invest in the training and development of the medical professor⁵. Based on these considerations, this work aims to carry out an integrative review on the pedagogical training of physicians in the teaching context, starting from the following guiding question: how has been the pedagogical preparation of physicians to act as professors in the medical course?

METHOD

This is a non-observational, descriptive study, of the integrative review of the literature type⁷, as an important method in the analysis of researches that support decision-making and improvement of clinical practice. The integrative review was chosen as a research method because it is a method that favors the incorporation of updated scientific evidence in the practice, since the compilation of information in electronic means is a great advance for the researchers, democratizing the access and providing constant updating.

Moreover, the integrative review allows analyzing the most relevant researches, selected from previously established criteria. The analysis highlights the synthesis of the state of knowledge of certain subject, possible gaps in knowledge, which must be met through further studies. This new synthesis allows reducing uncertainties, generalizing safely and disseminating information based on scientific evidence⁷.

According to the methodological procedures, we initially searched for studies in the databases Scientific Electronic Library Online (SciELO), Latin American and Caribbean Literature in Health Sciences (Lilacs), US National Library of

Medicine and National Institutes of Health (PubMed) and the Cochrane Library with the help of the Boolean operator and the following descriptors: Health Human Resource Training; Faculty, Medical and Education, Medical, Continuing.

The filters used to meet the inclusion criteria were free, complete articles, published from 2012 to 2016, in Portuguese, Spanish and English. Thus, articles published before 2012, paid, incomplete, without summary in the databases and duplications of articles were excluded. The search for the productions was conducted in December 2016.

RESULTS AND DISCUSSION

Table 1 shows the number of articles found after the systematized search in the databases from the chosen descriptors and criteria. In the four databases, 24 articles discussed the research theme. At the end of the exhaustive reading of the articles found, only five converged and answered the guiding question raised in the initial reflection.

TABLE 1				
Result of the data collection				
	SciELO	PubMed	Lilacs	Cochrane
<i>Health Human Resource Training</i>	1,327	10	17	–
	144	32.497	17	782
AND				
<i>Faculty, Medical</i>	09	0	0	–
	02	1.554	0	18
AND				
<i>Education, Medical, Continuing</i>	01	0	0	–
	01	150	0	06
Filters:				
<i>Complete files; in Portuguese, English and Spanish; last five years.</i>	0	0	0	–
	01	21	0	02
Total	01	21	0	02

Source: research data, 2016.

The analysis shows that most of the selected studies were published in 2015, evidencing the growing interest by scholars to improve the professors' training for the medical teaching. Especially in Brazil, publications occurred in the same period when medical schools and medical courses increased³, making the search for reflections and strategies that transcend pedagogical training even more important.

Frame 1 briefly presents the main characteristics of the studies selected for analysis.

FRAME 1
Summary-frame of the selected articles

Authors	Year	Title	Objective	Main Results and Conclusion
Roland D, Matheson, Taub, Coats, Lakhanpaul	2015	Is it a perception of quality most important than technical quality in patient video cases (PVC)?	The aims of this study were to evaluate whether the technical quality or judgement of quality of a video clip influences a pediatrician's judgment about acuity of the case and assess the relationship between perception of quality and the technical quality of a selection of video clips.	The evaluation of the participants about the quality and the real standard of PVC was independent. The agreement between the real and the acuity trial participants was generally good at higher working group 39, but moderate in average acuity. The perception of the quality of the clip was related to the correct assignment of accuracy, regardless of the technical quality of the clips. The PVCs are beneficial in a pedagogical context, as the perception of the quality of the clip by the specialist.
Subramaniam, Uli, Ismail	2015	Effects of coaching supervision, mentoring and abusive supervision on talent development among trainee doctors in public hospitals: moderating role of clinical learning environment.	To identify the extent to which supervisory styles (coaching, mentoring and abusive supervision) can facilitate talent development among trainee doctors in public hospital.	The supervision of coaching and mentoring are positively associated with the development of academic skills. Already abusive supervision does not guarantee the development of them. The moderator role in the learning environment in relations between the supervision of training and talent development; supervision of tutoring and talent development indicates a 26% variation when compared to abusive supervision.
Rathore, Mansoor	2015	How to conduct a workshop on medical writing: Tips, advice and experience sharing.	To conduct a series of workshops on medical writing. Eight workshops were conducted in three months, benefitting more than 200 students and faculty staff.	Medical writing workshops are effective in teaching of medical writing for students and faculty members. There is a huge demand for these workshops around the world. Generally, there is no written curriculum for medical students or structured training sessions for faculty members. Experienced medical writers need to transfer their skills to form best medical writers.
Norman RI, Dogra N.	2014	A survey of the practice and experience of clinical educators in UK secondary care.	To explore the commitment, experience and attitudes of clinical teachers and trainers of undergraduate medical students and postgraduate trainees.	Most educators considered that they were well prepared and fulfilled their responsibilities of clinical education. Many reported restricted time for preparation and delivery of activities. Despite the support and incentives low, many respondents felt valued on of your role within the clinical education in medical schools.
Arce Antezana, Osmar; Larrazábal Córdova, Ciro; Antezana Soria Galvarro, Marlene	2015	Application of the survey instrument PHEEM Roff <i>et al.</i> in medical specialty residents in the College of Medicine of the Universidad Mayor de San Simón.	To apply the Postgraduate Hospital Educational Environment Measure (PHEEM) with residents of specialties and subspecialties of the College of Medicine of the Universidad Mayor de San Simón.	Academic improvement must be generated from continuous assessment carried out by the application of evaluation instruments like the PHEEM. Must also be objective and priority of educational institutions continuing education through training programs for teachers in planning, educational environment, educational innovation; In addition to developing instruments for ongoing evaluation of the teachers.

Source: research data, 2016.

The articles found discuss teaching strategies and methodologies, as well as the evaluation of clinical supervision processes in the construction of students' technical knowledge. The need for continuing education programs for professors, as well as the construction of evaluation tools for professors, tutors and preceptors, arises from a background of these discussions.

Some authors offer an approach on the use of alternative methodologies to contemplate a broader medical education. They suggest a beneficial effect in the pedagogical context on the use of videos of patients' cases⁸. They also mention reporting experiences from medical writing workshops through the experience of medical writers while conducting workshops to

transfer their skills and to facilitate for their colleagues and students to become better medical writers⁹.

The attempts to insert significant changes in the process of medical education have been carried out in Brazil and in the world. Over the years, the need for a reflection on the strategies of educational development of the medical schools that opted to work with active methodology in their curriculum emerged, as well as the increasing use of technological resources in the pedagogical practice¹⁰. Recently, in 2014, 13 years after the publication of the first National Guidelines for the Medical Graduation Course (DCNs), new DCNs were instituted, which are currently responsible for the regulation of medical courses within the higher education system of the country¹¹. They are still in the implementation phase and their impacts have not yet been documented in the scientific literature.

Another important point in the training of a physician is the clinical supervision of the patient's care within the health services. In the health setting, supervisors are portrayed as role models for young doctors. Thus, health supervisors should portray qualities that include the ability to communicate, inspire, and demonstrate integrity, honesty, and consistency. Previous studies state that supervision styles have significant implications for the development of in-training doctors' talents¹².

Coaching and guidance supervision are positively associated with talent development, and there is no significant relationship between abusive supervision and talent development^{12,13}. The findings also support the moderating role of the clinical learning environment in the relationships between coaching supervision – talent development, mentoring supervision – talent development and abusive supervision – talent development among public hospital interns. That is, in coaching, through supervision coaching, supervisors who pass on their accumulated wisdom to their pupils led to the development of young talents. On the other hand, abusive supervision leads to exhausted and incompetent individuals^{13,14}.

Still regarding clinical teaching and training, professors often provide it in the context of busy clinical service demands. Given that educational responsibilities typically represent only a fraction of their tasks, clinical educators are under considerable pressure to balance contracted teaching time with the demands of their clinical service and other responsibilities¹⁵. Important issues also raised include workload pressures that resulted in lack of time for preparation, lack of availability of adequate space, and financial resources for teaching materials. There is also a lack of communication, resulting in feelings of isolation from the staff, poor preparation of students for clinical practice and lack of institutional recognition and potential reward^{16,17}.

Faced with this obstacle, currently, large hospitals have inserted teaching and research centers, since they understood that medical research and teaching are an important contribution to the institutions and the health service itself. These hospitals have dedicated to scheduling larger spaces for physicians to perform the teaching task with quality, in addition to offering refresh courses, which have as their important bias the prestige and recognition of the teaching activity¹⁸.

Imbricated in this medical teaching-learning process, a study at the Medical School of the Universidad Mayor de San Simón, Bolivia, states that the continuous academic improvement must be generated from the continuous evaluation carried out by the application of instruments that evaluate the training process¹⁹. Teaching institutions are responsible for developing continuing education programs for professors' training on planning, educational environment, educational innovation, methodologies and evaluation processes, as well as developing tools for continuous evaluation of professors and preceptors.

The study also ratifies this continuous need for improvement, evidencing that most professors find the creation of a program for permanent improvement of professors relevant and that they would participate in it if there was one²⁰. In this area, the literature have described several initiatives of medical schools to create spaces for the improvement of their teaching staff^{18,19,20}.

In this context, 53 studies were analyzed in the period from 1980 to 2002. According to the authors²¹, the participants in teaching promotion programs indicated general satisfaction with the initiatives, considered the actions useful and relevant. The participants described the increased knowledge on the concepts and educational principles, specific strategies of teaching and acquisition of didactic abilities. Both the participants as the students of these courses reported attitudinal changes in teaching practices and the implementation of new educational activities.

FINAL THOUGHTS

Given the growing number of medical schools and the need to promote actions aimed at the qualification of professors and teaching, medical schools are responsible for creating spaces for professor's training and improvement, capable of bringing teaching to the political pedagogical project of teaching institution, ensuring the performance of these professors as part of a team aimed at training the doctor defined by the DCNs, and enabling professors to become aware of the need for specific knowledge of the educational sphere for a good performance of their teaching.

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CONTRIBUTIONS

TO conducted this research as part of his Medical Course completion work at the Santa Maria Faculty with orientation of RLSFMM. All authors were involved in the collected the data, transcribed all data and were involved in the data analysis. All contributed to the writing of the paper and approved the final version.

CONFLICT OF INTERESTS

The authors declare that they have no competing interests.

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