

Faculty development in medical school: how can it be improved?

Formação docente no curso de medicina: como podemos melhorar?

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ABSTRACT

Introduction: Faculty development in medical education has shown an increasing focus on universities. Changes in the learning style, the broad access to digital knowledge and new society demands in terms of medical competences have induced the need for updates in teaching practices, especially during the Covid-19 pandemic.

Objective: To evaluate the needs of faculty development, reported educational practices and the view on teaching and learning from medical teachers' perspectives.

Methods: this study has a cross-sectional design with a convenience sample of undergraduate medical teachers from a medical school in São Paulo, who coordinate educational units in the curricula. Data collection took place between August and September 2020, by completing an electronic questionnaire. The data were analyzed using proportions, the chi-square test or Fisher's exact test, with $p < 0.05$ being considered significant.

Results: There were 68 medical teachers coordinating curricula units and 47 (69.1%) accepted to participate. Of the total of 47 participants, 26 (55.3%) are female and 21 (44.7%) are male, 17 (36.2%) teachers taught disciplines from first biennium, 20 (42.6%) from the second biennium and 10 (21.1%) from the third biennium. Most of medical teachers reported being motivated to participate in faculty development courses (93.6%), with focus on the inclusion of innovations in their educational practice (85.1%). They reported the need to update teaching and assessment methods. The women reported more frequently the need for training in assessment methods ($p = 0.04$). In the reported educational practices, women incorporate more attitudes ($p = 0.02$) and skills in educational planning ($p = 0.007$), as well as the use of formative assessment ($p = 0.03$) and more previous training in the use of active methodologies ($p = 0.02$). Although the recognition of the importance of the dialogue with students being reported by most teachers, student-centered practices were described in a lower percentage of responses.

Conclusion: Teachers are motivated to engage in faculty development actions, with several needs regarding educational practices being identified, with differences being observed between genders. Although they reported a dialogic view of the teaching-learning process, this concept is not yet implemented in the reported practice in their disciplines.

Keywords: Teacher training; Medical education; assessment of educational needs; Continuing education; Faculty.

RESUMO

Introdução: As instituições de ensino superior (IES) têm valorizado progressivamente a educação permanente do corpo docente. Mudanças no perfil de aprendizado, o amplo acesso digital ao conhecimento e novas competências exigidas aos médicos pela sociedade induzem necessidades de atualizações nas práticas docentes, especialmente durante a pandemia de Covid-19.

Objetivo: Este estudo teve como objetivo avaliar as necessidades de desenvolvimento, as práticas educacionais utilizadas e a visão sobre o ensino na perspectiva de docentes de graduação em Medicina.

Método: Trata-se de estudo transversal, com amostra de conveniência formada por coordenadores de disciplinas de graduação de uma IES paulistana, com dados coletados entre agosto e setembro de 2020 por meio de questionário eletrônico. Os dados foram analisados por meio de proporções e teste de qui-quadrado e teste exato de Fischer. O nível de significância foi de 5%.

Resultado: Do total de 68 coordenadores de disciplina da IES, participaram 47 (69,1%). Destes, 26 (55,3%) se declararam do gênero feminino e 21 (44,7%) do gênero masculino, 17 (36,2%) eram de disciplinas do primeiro biênio, 20 (42,6%) do segundo biênio e dez (21,1%) do terceiro biênio (internato). A maioria dos coordenadores (93,6%) relatou motivação para participar de ações de formação docente, especialmente para inclusão de inovações em suas disciplinas (85,1%). Relataram maior necessidade para atualização em métodos de ensino e de avaliação. As mulheres citaram, com maior frequência, a necessidade de formação em avaliação ($p = 0,04$). Nas práticas educacionais relatadas, as mulheres incorporaram mais atitudes ($p = 0,02$) e habilidades no planejamento educacional ($p = 0,007$), assim como relataram utilizar mais avaliação formativa ($p = 0,03$) e maior formação prévia para uso de metodologias ativas ($p = 0,02$). Apesar de a valorização do diálogo com os estudantes ser apontada pela maioria dos docentes, práticas centradas no estudante foram descritas em menor percentual das respostas.

Conclusão: Há motivação de os coordenadores de disciplinas se engajarem em ações de formação docente, tendo sido identificadas diversas necessidades quanto às práticas educacionais, contudo observaram-se algumas diferenças entre os gêneros. Embora a maioria apresente uma visão dialógica do processo ensino-aprendizagem, essa concepção ainda não está implementada na prática relatada em suas disciplinas.

Palavras-chave: Educação de Professores; Educação Médica; Determinação de Necessidades de Educação; Educação Permanente; Docentes.

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INTRODUCTION

What is expected of an educator working in undergraduate medical school? Often, the hiring of teachers is based on the performance in their area of expertise and knowledge of the topic they will teach, based on the concept of “those who know how to do it, know how to teach”. For many, teaching is considered a secondary activity to the medical profession (or other health professions) and the teaching work is not considered a profession but only a complement to its attributions^{1,2}. The reduced appreciation of the pedagogical training of teachers in medical education can be associated with the same depreciation of teaching activities in universities, when compared to scientific research. After all, career progression criteria are guided more by scientific production than teaching practice³. However, in seeking the professionalization of teaching, it is necessary to engage medical professionals in the field of education and encourage the continuous development of teachers, as an instrument for the re-creation and transformation of practice, culminating in a movement that recognizes teaching as a profession^{4,5}.

The professionalization of teaching is the process by which the teacher builds the necessary skills for their performance, acquiring andragogical and disciplinary knowledge for the teaching-learning process⁶. Teacher development should focus on the different competences shown by an educator: lecturer, curriculum and discipline planner, evaluator, educational leader, administrator, role model and researcher⁷. However, the focus should not be exclusively placed on educational strategies, but on values and attitudes about education, aiming at the student-centered teaching^{8,9,10}.

Teachers' adherence to faculty development and their awareness of different competences are central to the evolution of medical training. In Paulo Freire's view, there is no teaching without learning, the two explain each other and their subjects, despite being different, are not reduced to the condition of being each other's object^{11,12}. Author Álvaro Vieira Pinto presented an innovative concept: education is man's formation by society. He introduces two concepts for the understanding of education: the naive concept and the critical one. In the first, the content of education is defined by the totality of knowledge (subject) transmitted from the teacher to the student. The critical concept considers the entire educational process, present in each pedagogical act, its interpersonal relationships, life histories and contexts, individualizing the teaching-learning process¹³.

Educator bell hooks (who asked that her name be written in lowercase) encourages thinkers willing to change the teaching-learning practices to talk to each other¹⁴. Collaboration can be carried out with discussions and space for interventions.

In this sense, she considers dialogue one of the simplest and most effective ways for teachers, scholars, students and thinkers to cross borders. Thus, the author defends her conviction that public dialogues can be useful and powerful interventions^{14,15}. In hooks' view, pedagogical practice and one's identity as a teacher are not something ready-made, but a process in transformation. Hooks believes that the classroom is not an exclusive learning space for students, but also a learning space for the teacher¹⁴.

Paulo Freire emphasizes the importance of critical reflection on practice, a requirement of the theoretical-practice relationship and the importance of permanent teacher education. It is from the critical reflection on practice that the educator understands that teaching is not to transfer knowledge (called the 'banking concept of education' by the author), but to create possibilities for its production or construction based on the dialogue between teacher and student, with the appreciation of the context and life experiences of both. In this sense, we must abandon banking education, which sees the student as a repository of content, in search of the sharing of knowledge and critical reflection on the world (dialogic teaching)^{12,16}. Assuming that teaching is a complex practice that requires continuous reflection, innovation and refinement, that the development of these reflexive practices must be anchored in the teaching routine, knowing the contexts of the institution in which they are inserted and thinking about training as a process is necessary¹⁷.

The professionalization of teaching in medical courses in Brazil has a long way to go to encourage teachers to use competence-based teaching. Some factors contribute to this condition, such as dedication time, motivation, career plans, selection process for faculty and systematic evaluation of courses. To think about how to motivate and engage teachers of the undergraduate medical course towards the professionalization of teaching in medical education, it is essential to listen to these actors. In this sense, the study sought, as a starting point, to understand the perception of course coordinators at a medical school in the state of São Paulo, Brazil, regarding the needs of faculty development, their educational practices and their views of education.

METHODS

This is a cross-sectional study, carried out with a convenience sample consisting of course coordinators from the undergraduate medical course at a medical school in São Paulo. The target audience of the study comprised the teachers who coordinate the undergraduate medical courses. These teachers are chosen by the heads of departments and course managers and are in charge of coordinating activities for the teachers

who teach the discipline, mediating the dialogue with students and their representatives, dialoguing with their peers for the integration between the disciplines, dialoguing with course managers, carrying out the educational planning, educational actions and assessments.

Data collection

Data collection was carried out between August and September 2020. In August, all coordinators were invited to participate through an email, which included the explanation on the research and the link to fill out the Informed Consent Term (ICT). Upon accepting the invitation to participate in the research, the teacher answered a self-administered questionnaire, which was prepared by the authors, based on Freirean pedagogy and the researcher bell hooks, as theoretical frameworks. The assertions used in the evaluation of teachers' values partially correspond to the standardized instrument in the international literature called COLT¹⁸.

The questionnaire included 32 questions on the following domains: teacher development needs, reports on the educational practice used (planning, methods and evaluation) and reflections and views on the teaching-learning process. After the first electronic invitation by e-mail, a new invitation was made within two weeks to teachers who had not yet answered the questionnaire. If there was no response to the second e-mail, the participant was considered as a refusal.

Research context

The undergraduate medical course at the Higher Education Institution (HEI) has 94 disciplines, of which 74 are mandatory and 20 are optional disciplines, coordinated by 68 teachers from the institution. All 68 coordinating teachers were invited to participate in the study. Of these, 56 coordinated mandatory disciplines (82.4% of the total number of teachers) and 16 coordinated the optional disciplines (23.5%), with 12 teachers coordinating only optional ones (17.6%). Of the total, 19 teachers coordinated of two or more disciplines (27.9%).

The present study constitutes a diagnosis carried out at the implementation of the Teaching Development Center of the HEI in 2019, aiming to plan faculty development actions at the institution.

Variable construction

The dependent variable of the study was the self-reported gender. The independent variables were related to the three modules of the questionnaire: faculty development needs, reports on educational practice and reflections on the views related to the teaching-learning process.

The five-point Likert response scale was used for categorical variables, according to the level of agreement

with the statement. Among the response options, it was classified as 1 = totally agree, 2 = partially agree, 3 = neither agree nor disagree, 4 = partially disagree and 5 = totally disagree. For the final analysis of the answers, the data were grouped as a dichotomous variable: 1 and 2 as 'I agree' and 3, 4 and 5 as 'I disagree'.

The education perspective variable was constructed from eight variables from the first module and the last module of the questionnaire, already dichotomously grouped (agree = 1/Freirean perspective on education, disagree = 0/banking perspective on education). The following questions were considered for the construction of the variable:

- a) There is nothing better than a good lecture with an expert to promote learning.
- b) Students need to receive information from the teacher because they do not have the skills to adequately search for it.
- c) Students should be encouraged to ask questions and seek answers autonomously
- d) Students' life experiences are irrelevant in the teaching-learning process in the health area
- e) In the interaction between teachers and students, we should invite students to describe examples and previous experiences
- f) The dialogue with teachers, both in the classroom and in practical internships, influences learning
- g) I think it is more important for students to know how to critically analyze a situation than to memorize information
- h) Students learn a lot by explaining the subject to their peers or younger students.

Statements A, B, and D have inverted scores in relation to the other questions. The sum of the eight responses to the statements described above was performed. Freire's dialogic perspective of education was considered for those teachers who scored 5 to 8 points in the sum of the 8 categories. The banking education perspective was considered for those teachers who scored 0-4 points in the sum of the categories. The cutoffs were defined by the authors of this study and require further validation.

Statistical analysis

The categorical variables were described as proportions. The chi-square test was used for comparisons between categorical variables and Fisher's exact test was used in cases of comparisons in which the expected number of observations

in the cells was less than five. The result with a p value <0.05 was considered significant. The STATA 13.1 program was used for data analysis.

Ethical aspects

The study was authorized by the Institution's board and submitted to the Ethics Committee for Research on Human Beings (CEP). The study was approved by the CEP on August 17, 2020 (CAAE 35167120.7.0000.5479, Opinion number 4,217,084). All participants agreed to participate and signed the ICF, in electronic form using a Google form.

RESULTS

Of the total of 68 course coordinator teachers, 47 answered the questionnaire (69.1%), with a refusal rate of 30.9%. Of the total of 47 participants, 26 (55.3%) declared they were female and 21 (44.7%) male. None of the teachers declared themselves to be of another gender. The completion of a previous training course for teaching was reported by 34 (72.3%) coordinators, and 13 (27.7%) reported not having any formal training for teaching, with no difference between genders ($p=0.15$). The perception of the importance of specific training for teaching was reported by 44 (93.6%) participants (Table 1).

Table 1. Perception of continuing education needs of teachers coordinating undergraduate medical courses, according to gender in August and September 2020, São Paulo - SP

	Female sex N= 26	Male sex N= 21	Total N= 47	P
<i>Having had a previous course in the area of training for teaching (%)</i>				
Yes	21 (80.8)	13 (61.9)	34 (72.3)	0.15
No	05 (19.2)	08 (38.1)	13 (27.7)	
<i>Perception of the need for specific training for teaching (%)</i>				
Yes	24 (92.3)	20 (95.2)	44 (93.6)	1.0
No	02 (7.7)	01 (4.8)	03 (6.4)	
<i>Spontaneous needs for topics for faculty development (%)</i>				
Planning	07 (26.9)	02 (10.0)	09 (19.6)	0.15
Methods	18 (69.2)	08 (40.0)	26 (56.5)	0.04
Assessment	09 (34.6)	02 (10.0)	11 (23.9)	0.08
Others				0.004
Distance learning	02 (7.7)	07 (35.0)	09 (19.6)	
Tutoring/mentorship	01 (3.9)	0 (0)	01 (2.2)	
Didactics/ learning theory	01 (3.9)	05 (25.0)	06 (13.0)	
<i>Perception of strengths in training as a teacher (%)</i>				
Planning	08 (30.8)	06 (28.6)	14 (29.8)	0.87
Methods	10 (38.5)	07 (33.3)	17 (36.2)	0.72
Assessment	04 (15.4)	03 (14.3)	07 (14.9)	1.0
Content	21 (84.0)	18 (85.7)	39 (84.8)	1.0
<i>Perception of needs for improvement in teacher training (%)</i>				
Planning	20 (76.9)	11 (52.4)	31 (66.0)	0.08
Methods	20 (76.9)	14 (66.7)	34 (72.3)	0.44
Assessment	19 (73.1)	09 (42.9)	28 (59.6)	0.04
Content	10 (38.5)	02 (9.5)	12 (25.5)	0.02

Continues...

Table 1. Continuation

	Female sex N= 26	Male sex N= 21	Total N= 47	P
<i>Motivation to participate in faculty development courses at the present time (%)</i>				1.0
Yes	24 (92.3)	20 (95.2)	44 (93.6)	
No	02 (7.7)	01 (4.8)	03 (6.4)	
<i>Perception of sufficient mastery of methods for teaching practice (%)</i>				0.3
Yes	10 (38.5)	11 (52.4)	21 (44.7)	
No	16 (61.5)	10 (47.6)	26 (55.3)	
<i>Desire to undertake training in the next three months (%)</i>	20 (76.9)	12 (57.1)	32 (68.1)	0.15
<i>Motivation to include innovations in educational planning and practice (%)</i>	22 (84.6)	18 (85.7)	40 (85.1)	1.0

Source: primary research data.

In order to assess the faculty development needs spontaneously pointed out by the coordinators, an open question was asked: "Which topics of training for teachers would you like to study further?". Teaching methods were the often most cited need for teacher development by teachers (56.5%), with women indicating this need more often than men ($p=0.04$). Educational planning was cited as a necessity by 26.9% of women and 10.0% of men ($p=0.15$) and assessment by 34.6% of women and 10.0% of men ($p=0.08$). Other spontaneously raised topics were distance learning (19.6%) and didactics and teaching-learning theories (13.0%) (Table 1).

The second module of the questionnaire was related to educational practices, allowing a diagnosis of the educational strategies reported by the course coordinators. When asked about the first stage of educational planning for the discipline, the most frequently mentioned topic was the selection of contents or subjects (38.3%), followed by educational objectives (36.2%) and competence planning (17.0%). As for the educational objectives more often present in the daily routine of the discipline, 83.0% reported those related to the cognitive domain, followed by competences (63.8%), skills (59.6%), attitudes (57.5%) and professionalism (25.5%). Skills were more often cited by women (76.9% versus 38.1% men, $p=0.007$), as well as attitudes (73.1% versus 38.1%, $p=0.02$) (Table 2).

A single assessment moment during the course was mentioned by 19.2% of the coordinators, with no difference between genders ($p=0.49$). Only eight coordinators (17.0%) use a practical test such as the Organized and Structured Clinical Examination (OSCE) as an assessment tool (30.8% of women and no men, $p=0.006$). When asked about their knowledge of the term "formative assessment", 25.5% of the coordinators

did not know the terminology and only 24 (51.1%) teachers reported using formative assessment in their discipline. Women reported using formative assessment more often (65.4%) than men (33.3%, $p=0.03$). Regarding the use of active teaching-learning methodologies, 89.4% used them before the Covid-19 pandemic, and 83.0% after the start of the pandemic. A total of 11.6% of teachers mentioned the exclusive use of lectures as an educational method in the discipline, after the start of the pandemic. Women reported more specific training to use active teaching-learning methodologies (57.7%) when compared to men (23.8%, $p=0.02$) (Table 2).

The third module of the questionnaire encompasses the teachers' values about the teaching-learning process and their role as teachers, which influences their educational practices and course planning. A total of 23.4% of the teachers say that lectures with specialists are the best way to promote learning and 14.9% of coordinators believe that students do not have the ability to seek information adequately and independently. However, 78.7% believe that students should be encouraged to ask questions and seek answers autonomously. Although 93.6% believe that dialogue is an important tool and influences learning, 10.6% believe that the students' life experiences are irrelevant in the educational process, whereas 21.3% disagree that students should be invited to present examples and talk their experiences during the conversation. The value of memorization still happens among the coordinators (17%); however, the importance of critical reflection of situations was pointed out by 83% of the coordinators. Most teachers agree that small group discussions motivate students to learn more efficiently (85.1%) and that peer education is important, that is, students learn in a relevant way when they are teaching others (87.2%) (Table 3).

Table 2. Educational practices reported by teachers coordinating disciplines in undergraduate medical courses according to gender. August and September 2020

	Female sex N= 26	Male sex N= 21	Total N= 47	P
<i>First stage of educational planning (%)</i>				0.98
Content/topics	09 (34.6)	09 (42.9)	18 (38.3)	
Educational objectives	10 (38.5)	07 (33.3)	17 (36.2)	
Methods	01 (3.9)	0 (0)	01 (2.1)	
Assessment	0 (0)	0 (0)	0 (0)	
Competences	04 (15.4)	04 (19.0)	08 (17.0)	
Fields of practice	02 (7.7)	01 (4.8)	03 (6.4)	
<i>Educational objectives more present in the daily routine of the discipline (%)</i>				
Knowledge	23 (88.5)	16 (76.2)	39 (83.0)	0.44
Skills	20 (76.9)	08 (38.1)	28 (59.6)	0.007
Attitudes	19 (73.1)	08 (38.1)	27 (57.5)	0.02
Competences	17 (65.4)	13 (61.9)	30 (63.8)	0.81
Professionalism	09 (34.6)	03 (14.3)	12 (25.5)	0.11
<i>Use of an assessment only in the discipline (%)</i>				0.49
Yes	04 (15.4)	05 (23.8)	09 (19.2)	
No	22 (84.6)	16 (76.2)	38 (80.9)	
<i>Use of practical test like OSCE* (%)</i>				0.006
Yes	08 (30.8)	0 (0)	08 (17.0)	
No	18 (69.2)	21 (100.0)	39 (83.0)	
<i>Use of a practical test like OSCE*, seminars, projects, among other assessment techniques (%)</i>				0.73
Yes	21 (80.8)	16 (76.2)	37 (78.7)	
No	05 (19.2)	05 (23.8)	10 (21.3)	
<i>Uses formative assessment (%)</i>				0.03
Yes	17 (65.4)	07 (33.3)	24 (51.1)	
No	06 (23.1)	05 (23.8)	11 (23.4)	
I don't know the term	03 (11.5)	09 (42.9)	12 (25.5)	
<i>Active methods used before the start of the pandemic (%)</i>				1.0
Yes	23 (88.5)	19 (90.5)	42 (89.4)	
No	03 (11.5)	02 (9.5)	05 (10.6)	
<i>Active methods used after the start of the pandemic (%)</i>				0.72
Yes	21 (80.8)	18 (85.7)	39 (83.0)	
No	05 (19.2)	03 (14.3)	08 (17.0)	
<i>Exclusive use of lectures as methods (after the start of the pandemic) (%)</i>				0.35
Yes	04 (17.4)	01 (5.0)	05 (11.6)	
No	19 (82.6)	19 (95.0)	38 (88.4)	
<i>Specific training for the use of active teaching-learning methodologies (%)</i>				0.02
Yes	15 (57.7)	05 (23.8)	20 (42.6)	
No	11 (42.3)	16 (76.2)	27 (57.4)	

* OSCE = Organized and Structured Clinical Examination
Source: primary research data.

Table 3. Reflections on the teaching-learning process of teachers coordinating undergraduate medical courses according to gender. August and September 2020

	Female sex N= 26	Male sex N= 21	Total N= 47	P
<i>There is nothing better than a good lecture with an expert to promote learning. (%)</i>				0.51
I agree	05 (19.2)	06 (28.6)	11 (23.4)	
I disagree	21 (80.8)	15 (71.4)	36 (76.6)	
<i>Students need to receive information from the teacher because they do not have the skills to adequately search for it. (%)</i>				0.68
I agree	03 (11.5)	04 (19.1)	07 (14.9)	
I disagree	23 (88.5)	17 (80.9)	40 (85.1)	
<i>Students should be encouraged to ask questions and seek answers autonomously (%)</i>				0.48
I agree	19 (73.1)	18 (85.7)	37 (78.7)	
I disagree	07 (26.9)	03 (14.3)	10 (21.3)	
<i>Students' life experiences are irrelevant in the teaching-learning process in the health area (%)</i>				0.16
I agree	01 (3.9)	04 (19.1)	05 (10.6)	
I disagree	25 (96.1)	17 (80.9)	42 (89.4)	
<i>In the interaction between teachers and students, we should invite students to describe examples and previous experiences (%)</i>				0.08
I agree	23 (88.5)	14 (66.7)	37 (78.7)	
I disagree	03 (11.5)	07 (33.3)	10 (21.3)	
<i>The dialogue with teachers, both in the classroom and in practical internships, influences learning (%)</i>				0.08
I agree	26 (100.0)	18 (85.7)	44 (93.6)	
I disagree	0 (0)	03 (14.3)	03 (6.4)	
<i>As a teacher I have to clearly indicate the most important points (%)</i>				1.0
I agree	21 (80.8)	17 (80.9)	38 (80.9)	
I disagree	05 (19.2)	04 (19.1)	09 (19.1)	
<i>I think it is more important for students to know how to critically analyze a situation than to memorize information (%)</i>				1.0
I agree	22 (84.6)	17 (80.9)	39 (83.0)	
I disagree	04 (15.4)	04 (19.1)	08 (17.0)	
<i>Presenting the daily practice of the profession motivates students to learn (%)</i>				0.08
I agree	26 (100.0)	18 (85.7)	44 (93.6)	
I disagree	0 (0)	03 (14.3)	03 (6.4)	
<i>Small group discussions motivate the student to learn more efficiently (%)</i>				0.22
I agree	24 (92.3)	16 (76.2)	40 (85.1)	
I disagree	02 (7.7)	05 (23.8)	07 (14.9)	
<i>Students learn a lot by explaining the subject to their peers or younger students. (%)</i>				1.0
I agree	23 (88.5)	18 (85.7)	41 (87.2)	
I disagree	03 (11.5)	03 (14.3)	06 (12.8)	

Continues...

Table 3. Continuation

	Female sex N= 26	Male sex N= 21	Total N= 47	P
<i>Conception about education (%)</i>				0.31
Banking education perspective	01 (3.9)	03 (14.3)	04 (8.5)	
Dialogic Freirean perspective	25 (96.1)	18 (85.7)	43 (91.5)	
<i>Score ranges on the Education Conception Scale (%)</i>				0.17
0 to 2	0 (0)	03 (14.3)	03 (6.4)	
3 to 4	01 (3.9)	0 (0)	01 (2.1)	
5 to 6	06 (23.1)	03 (14.3)	09 (19.2)	
7 to 8	19 (73.1)	15 (71.4)	34 (72.3)	

Source: primary research data.

The set of values on education was analyzed according to educator Paulo Freire's perspective and classified into two categories: banking education perspective and a dialogic Freirean perspective. It was observed that 91.5% of professors have a dialogic Freirean perspective, while 8.5% have a banking education perspective, with no difference between genders (Table 3).

DISCUSSION

This research considers the importance of the view of the teachers who coordinate the disciplines in undergraduate medical school, their needs for faculty development, their views on educational practice and on the teaching-learning process. Although most of the teachers reported having taken a previous teaching training course (72.3%), we observed that the teachers still lack training in the area. In medical education, given the acknowledgement of the importance of teaching professionalization, faculty development is a fundamental part.

One must consider that this higher education institution originated from a hospital. In the initial construction, the hospital became a large classroom, whose physicians provide not only patient care, but also become renowned professionals with competence for medical education, based on the concept of "those who know how to do it, know how to teach". The majority was comprised by good physicians; however, without training for teaching. The follow-up of the patient at the bedside was considered a crucial part for the training of the medical professional. The concern with the professionalization of teaching, teaching in different settings in hospitals and away from hospitals and centered on the student, came later.

Most medical school teachers have experience in the content to be taught (what they teach), but not in the methods and strategies (how they teach, plan and evaluate) as they demonstrate practices with several opportunities for

improvement. The goal should be that all teachers have training for teaching activities, with progressive professionalization of teaching^{8,19,20}.

The research participants showed great awareness regarding faculty development, since almost all of them believe that specific training for teaching is necessary (93.6%) and only three teachers reported that they did not perceive the need for this type of training. The percentages of teachers who are motivated to take the course at the present time (93.6%) and in the next three months (68.1%) were also high, with 85.1% reported being motivated to include innovations in their educational practice. Motivation combined with engagement and a positive perception of the professional environment can contribute to the development of the teaching staff and, when added to institutional initiatives, promotes the improvement of teaching skills^{20,21}.

There is still uncertainty regarding the mastery of teaching methodologies, with 55.3% of the teachers reporting not having mastered sufficient techniques. It should be noted that the study was carried out during the Coronavirus (Covid-19) pandemic, a fact that profoundly transformed educational practices and required great adaptation by the faculty and the students, which may explain part of the perceived insecurity²². The generational differences between students and teachers were demonstrated, showing the greater adaptability of students (considered digital natives), and followed by the teachers' difficulties (considered digital immigrants) in the context of emergency remote teaching²³, in addition to emotional adaptations of all involved in times of mourning and intense suffering²⁴.

Regarding the perception of faculty development needs, the most spontaneously requested topics were methods and evaluation. However, in the questions with pre-established answers, a significant percentage of the need for educational

planning also emerged, in addition to reiterating the needs regarding methods and evaluation. In a study on teacher education, carried out with teachers from six universities, 13 competences in teacher education were listed according to their order of value: presenting studies at conferences, providing effective feedback, teaching communication skills, applying problem-based learning, creating assessments such as OSCE, teaching evidence-based medicine, use effective strategies for student-centered teaching, teaching in small groups, building teamwork skills, accessing medical information online, teaching students and resident physicians considered difficult, evaluating a discipline or a course and developing materials and remote courses²⁵. As with the present study, there is great emphasis on innovative teaching methods and assessment techniques (such as practical tests, feedback and even discipline assessment).

From the students' viewpoint, the expectations related to the teacher's pedagogical competences are based on competences related to communication, attitudes and interpersonal relationships. In a study carried out at Universidade Paulista in 2018, with 418 participants (74 teachers and 344 medical students), the characteristics most valued by students in relation to their teachers were attitudes in the teaching environment and interaction with students and with the colleagues. The interaction with the students and colleagues included stimulating clinical reasoning, making oneself available to help, presenting oneself with empathy, good communication and good relationship with the students, in addition to having a good ability to interact²⁶.

Regarding the educational practices reported by the course coordinators, we observed that planning is still predominantly based on the choice of contents and topics. However, planning must begin with the construction of competences and educational goals. The cognitive domain (83%) was the most often reported educational goal, with a lower value being attributed to skills, attitudes and professionalism. When reflecting on education as a practice of freedom, we must warn that the acquisition of information is quite different from the construction of critical thinking. Therefore, when valuing the cognitive domain, we have a fragmented view, which does not value training directed at the construction of competences, which incorporates a much greater participation of skills, attitudes and professionalism. The teacher must be much more than someone who transfers knowledge or who knows how to teach good classes. The true teacher is the one who mediates between the search for knowledge and the process of transformation on the way to autonomy, through educational experiences, dialogue and critical reflection (action - reflection - action) about the world and its practices¹².

Regarding the assessment practices, there is still a reasonable percentage of coordinators who use only one test at the end of the course (19.2%), with a lower value being attributed to the evaluation in process and the formative evaluation (55.1% of the coordinators carried out a formative evaluation). It is noteworthy that a significant number of coordinators does not know the term 'formative assessment' (25.5%), reiterating the urgent need for faculty training. A study carried out in 2017 observed that students point to the need for teaching updating in: didactics, teaching methods to organize and lead the teaching-learning process, empathy, communication skills and flexibility to consider the students' needs and expectations. The same questions were less valued by teachers ($p < 0.01$), with the exception of professionalism, which was more valued by the faculty ($p < 0.01$)²⁷.

The present study showed that there are differences in educational planning according to the teacher's gender. Female discipline coordinators more frequently reported the need to develop methods, evaluation and updating of contents, demonstrating a greater demand related to their teaching training. Women included more skills and attitudes in educational planning, being more prone to have a comprehensive view of teaching, aimed at acquiring skills. They use more assessment tools, such as formative assessment and have more training in the use of active methodologies. No gender-related differences were observed regarding the conception of education. We use the term gender inequality to talk about cultural differences between men and women, related to power and the political-economic inclusion in society. Although there has been a progressive feminization of the medical profession in recent decades (from the 2000s onwards), the same does not happen regarding leadership positions, as well as in academic life^{28,29}. Especially in teaching: the more initial the level of education, the lower the salary and the greater the number of women, and the higher the level of education, the higher the salary and the greater the number of men. It is a clear division of power, women continue working in teaching jobs that are culturally devalued and more associated with care; and men are assigned teaching positions with greater social prestige³⁰. This inequality between women and men has several explanations and cultural and social determinants; although there is evidence of the overload between domestic work and professional life, many women still face the need to show greater qualifications to occupy spaces in academic life and break access barriers based on structural sexism^{31,32}.

Regarding the values reported by the teachers in relation to the teaching-learning process, we perceive a dialogic perspective¹² in most teachers. However, the dialogic

perspective still does not translate into educational practice, as planning starts with the contents, with little formative assessment and little diversification of assessments. It should be noted that formative assessment is fundamentally based on observation and dialogue about the teaching-learning process, supported by feedback based on trust, respect and focused on transformation. A balance between summative and formative assessments is increasingly advocated to provide students with feedback on their training development process.

There is still a reasonably expressive percentage (23.4%) of discipline coordinators who believe that there is nothing better than a good lecture with a specialist to promote learning. This fact constitutes a matter of concern because, as discipline coordinators, this belief will influence the way they plan the curriculum and prioritize this passive method. Classes with the specialist draws apart from learning, especially when they are long, promoting passivity and discouraging the participation of learners. The lecture can still take place when working with large groups, to carry out a synthesis of an educational process; however, it is essential to include interactivity techniques during the class and include spaces for reflection, to strengthen learning^{33,34}.

Although 93.6% believe that dialogue is an important tool and influences learning, 10.6% believe that the students' life experiences are irrelevant in the educational process and 21.3% disagree that students should be invited to present examples and their experiences for the dialogue. To know the origins, desires and dreams makes the environment more favorable to learning, and the dialogue is the exchange of understandings and meanings in an effort to develop training^{34,35}.

Teachers do not have a consensus on the greater relevance of critical analysis on memorization, as 17.0% disagree with this assertion. It is noteworthy that clinical reasoning is more similar to analysis and critical thinking than memorization. Awareness and critical engagement in the classroom transforms teachers and students into active participants, not passive consumers. These data also highlight a portion of teachers with a banking view, according to Paulo Freire¹², the approach based on the notion that all the student has to do is consume the information given by a teacher and to be able to memorize and store it and the naive concept of learning according to Pinto¹³, who value the content more than the cognitive processes of reflection, contextualization and articulation of knowledge.

The present study reflects the faculty development needs of an HEI in the city of São Paulo. The study results have limitations because, although they show agreement with findings in the literature, they do not represent part of higher education institutions. These results are also based on the teachers' perception and report, and do not include

the students' or managers' views, and did not include the documental analysis of the course plans. Therefore, they show a memory bias of the respondents and their subjectivities in the self-assessment of their work as teachers. The study also refers to the group of discipline coordinators of the institution, which does not always reflect the group of teachers of each discipline, which may be a limitation in the interpretation of results. The context of the Covid-19 pandemic greatly affected the results and should be considered, due to the historical moment of data collection.

The study has some strengths. The research question had been rarely addressed in the literature, valuing the centrality of the faculty needs. It included an analysis of the teachers' values in the teaching process, which is essential in the academic culture, for awareness and the desired organizational change. The analysis of values was based on Freirean pedagogy and the researcher bell hooks, as theoretical frameworks for the analysis. The assertions used in the evaluation of the faculty values correspond largely to the standardized instrument in the international literature (COLT)¹⁹.

Although it was carried out in an institution, there is a clear perception by the authors that the faculty development, in a systematic way and supported by the course, is a necessity in most medical courses. More than that, it is up to a specific core of faculty development, with reserved hours for such activity, the commitment and attention to the identification of customized demands for that group of teachers. In this sense, the diagnostic phase, like the one carried out in this study, is aligned with the pedagogical project of the course, being a necessary pathway towards building an effective and communicative plan that generates meaningful and lasting learning for teachers. The continuous motivation of the participants can allow the natural professionalization of the faculty's activity, with a clear insertion of the latter in their daily life, without the destructive perception of "additional", peripheral and undervalued work.

The study plays an important role in the construction of an institutional faculty development program, seeking to incorporate the view of the course coordinators. The study was carried out at the implementation of a Teaching Development Center at the HEI as part of an initial diagnosis for planning actions, such as courses, workshops, journal club, seminars, among others. More research is needed on the continuing education needs of teachers, both from the perspective of the teachers and from the students' perspective, as well as of the academic management. It is also necessary to broaden the analysis of the teachers' values in the teaching-learning process, aiming to promote improvements in the educational environment.

CONCLUSIONS

Faculty development is crucial in the professionalization of teaching, generating a positive impact on student formation. An important step in the construction of a faculty development program is the initial diagnosis, considering the expectations and needs of the teachers involved, which is crucial for the dialogic perspective of faculty training.

The educational practices reported herein disclose the insufficient incorporation of competence-based teaching, valuing the cognitive domain and a lower value of attitudes and skills. Planning often begins with the choice of topics and content, to the detriment of building competences or even educational goals. The reported assessment shows a lack of formative assessment and few practices that assess student performance more comprehensively. The values reported by the teachers reflect a dialogic perspective of teaching; however, the reported practices are contradictory in relation to the reported teaching concept. This contradiction suggests the need to incorporate a greater diversity of educational tools (related to planning, evaluation and methods) to implement this view in educational practice.

In the analysis related to gender, women more often reported having undergone teacher training (for the use of active methodologies, specifically), greater incorporation of attitudinal and psychomotor objectives in the planning of disciplines, with greater diversification of assessment tools, in addition to greater appreciation of formative assessment. The observed results may indicate a greater professionalization of teaching in the female gender, as they seem to aim at a Freirean dialogic perspective of education, based on the reported practices.

An important motivation of teachers for permanent education was observed, who were open to innovations. The first step towards teacher professionalization is based on expectation and the perception of need. Valuing a wide range of topics is fertile ground for a faculty development program and a prerequisite for the professionalization and transformation of educational practices.

AUTHORS' CONTRIBUTION

Danielle Bivanco-Lima participated in the study design and conception, data collection and analysis, writing and final review of the manuscript. Giselle Burlamaqui Klautau participated in the study design and conception, data analysis, writing and final review of the manuscript. José Knopfholz participated in the study design and conception, data analysis and final review of the manuscript.

CONFLICTS OF INTEREST

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