

The need for changes in medical education and the perception of teachers before the Covid-19 pandemic

Necessidade de mudanças na educação médica e a percepção de professores antes da pandemia da Covid-19 (resumo: p. 16)

Necesidad de cambios en la educación médica y la percepción de profesores antes de la pandemia de Covid-19 (resumen: p. 16)

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This study aims to analyze medical education issues evidenced by the measures of social distancing due to the coronavirus pandemic19, associated with the perceptions of medical professors about these same aspects, in a moment prior to the outbreak of the health crisis. We focused in the results of a qualitative research and conducted a discussion based on the triangulation of data between field observations and interviews with professors. The pandemic has rekindled debates about the relevance of contents, the use of digital technologies for educational purposes and the value of collaborative work. Additionally, it provoked the emergence of issues involving communication skills and the health of students in care practices. We discuss past experiences articulating them with recent experiences and what we can collect to (re)build the direction of medical training.

Keywords: 2019 novel coronavirus pandemic. Medical Education. Qualitative research. Perception. Faculty.



Introduction

The impact of Covid-19 disease on medical education

The need to revisit the academic education of health professionals has never been more pressing and necessary. The health crisis caused by the pandemic of Covid-19 has highlighted the response capacity of health professionals in the face of numerous adversities. As part of overloaded teams, and facing complex clinical and social situations¹ of patients, the professionals and students working in the care actions were challenged to exercise communication, management, and collaborative work skills, in addition to technical competencies. The process of confronting an extremely dynamic reality and new health needs, put in check medical education providing an opportunity to reflect on the formation of competencies for professional work in uncertain contexts.

The emergence of the pandemic, social distancing measures resulted in the suspension of classroom activities in medical schools² and destabilized educational structures, requiring reorganization and new pedagogical strategies to support the continuity of academic training^{3,4}. Academic managers were forced to make decisions regarding different aspects, such as the relevance of content to be taught, the use of digital technologies for pedagogical purposes, teacher education to facilitate adjustments, and review of the evaluation culture of the institution. In addition, it put on the agenda the mental health of the students and the role of the professor in the face of unprecedented teaching processes. Although these issues were already under debate, the sense of urgency brought on by the pandemic demanded immediate solutions.

Since the end of the last century, there has been a consensus in favor of overcoming the traditional teaching model - predominantly biomedical⁵ - towards a more appropriate model to train professionals to provide health care with a comprehensive, interdisciplinary, and multiprofessional approach, considering the particularities of the biopsychosocial context¹. The biomedical model presented itself as limited and scarcely useful to prepare professionals to face “the challenges of the rapid transformations in society, in the labor market, and in the conditions of professional practice”⁶ (p. 17). The limitations arise from the pedagogical characteristics of this model, such as the curricular structure divided into basic and clinical cycles with fragmented subjects and the teaching-learning process centered on the teacher, added to the insufficient, as well as alienated from social reality participation on the part of the students^{1,6-8}

International documents^{1,7} aligned with innovative proposals⁹ advocated that contemporary medical education should focus on student learning and be based on problems, incorporating active teaching-learning methodologies and experiences in diversified practice settings. Several Brazilian movements, articulated with a set of initiatives, in line with innovative proposals resulted in the approval of the National Curricular Guidelines for Undergraduate Medical Education (DCN in the Portuguese acronym)⁸, aiming to better adapt the education to the Brazilian reality and the work in the Brazilian National Health System (SUS). Based on the DCNs, undergraduate medical education should include not only the acquisition of cognitive and technical aspects,



but also the incorporation of competencies that allow future physicians to transform their knowledge into actions that promote integral health, through multidisciplinary cooperation and interdisciplinary practices. Curricular structures integrating the basic and clinical cycles, centrality of teaching in primary care, programmatic adequacy to the health needs of the population, increase of internship hours, student-centered pedagogical project (and teacher as a mediator of the process), emphasis on continuing education and faculty development constitute fundamental guidelines for change in Brazil⁸.

In 2019 we conducted a quanti-qualitative survey with teachers and students of the undergraduate medical course of a public Brazilian university, with the objectives of knowing the perceptions of students and teachers about the educational environment, as well as identifying the impasses and needs for effecting changes. The pandemic and the social isolation measures caught us by surprise in the middle of the data analysis, and we were invited to follow the course reorganization from the vantage point of our role as professionals working in the medical school under study, as well as to participate in discussions in collegiate forums about the impacts and developments verified in our institution and in other medical schools.

This study aimed to recognize the changes that were being required in medical education due to the outbreak of the health crisis and to identify the perception that teachers had about these issues. It is worth noting that many issues emerging in the pandemic period had been on the agendas for change for some years, and were therefore already reflected previously in the discourses of teachers, managers, and students. We observed that the data collected in 2019 allowed us to understand our present environment as well as the impact in the face of necessary changes. In light of past experience, we tried to identify the educational initiatives to be strengthened toward the pressing demands and future transformations.

Methodology

This article is part of a larger study of a qualitative nature about teachers' and students' perceptions of the educational environment. The results of the latter are articulated with the empirical reality at the time of the outbreak of the pandemic, recorded through an ethnographic study. All research took place in a public university, of traditional curricular organization.

The initial stage occurred between 2016 and 2019 and was carried out through focus groups with students from the various grades of the medical course and in-depth interviews with professors. It should be noted that the present article uses data coming solely from interviews with professors, due to the centrality of this category for the processes of changes in educational practices^{8,10}. These followed a semi-structured script addressing issues concerning the educational environment. We interviewed 11 professors, four from the basic cycle and seven from the clinical/internship cycle with outstanding performance in the undergraduate course, six of them female and five male. The sample size was defined according to the saturation criterion and the average duration of the interviews was 1h30m, conducted by the researcher-authors. The collected material was recorded and transcribed in full.



The textual material was analyzed using the WebQda software for qualitative data analysis, following these steps: reading and re-reading to have a notion of the whole and the particularities; data classification according to the emerging meanings; cutting and pasting of the text; interpretative synthesis in articulation with the data from the literature and the ethnographic study^{11,12}.

In the second stage, data were collected through participant observation during the year 2020, already in the midst of the Covid-19 epidemic, and aimed to deepen questions and understand the transformations that were taking shape. Observations and notes from discussions of weekly meetings by the research group supported the task of describing and discussing the elements of the field, without naturalizing them¹³. Contextualized to the new teaching-learning environment by the ethnographic study, we identified the themes in evidence during the pandemic and revisited the data collected in 2019 in the interviews with teachers, from a more detailed plan of categorizations.

For the analysis of this stage, we listed four subcategories derived from general perceptions of the educational environment and that were on the agenda in the discussions in the medical education forums, namely: use of information and communication technology; definition of content relevance for academic education; importance of collaborative work; attention to student mental health.

Finally, we established a dialogue between the teachers' perceptions, the literature and the empirical reality that presented itself, intending to deepen the understanding of the challenges and to glimpse alternatives for the required changes.

This study was ethically cleared by the Pedro Ernesto University Hospital Ethics Research Committee - University of the State of Rio de Janeiro (CAAE) nº 53535915.2.0000.5259, opinion nº 1.542.111.

Results and Discussion

What is relevant to learn? Questions about educational planning

Defining the essential contents for medical education has been an item on the agenda since the last century, due to the realization that it is impossible for the undergraduate course to contemplate the entire volume and detail of medical science. Since the DCNs, the teaching of Primary Health Care has gained centrality as a longitudinal curricular component and the internship time has been extended, demanding curricular reorganizations from the schools.

In compliance with Brazilian national guidelines, the studied institution proceeded with a curricular reform project by holding meetings between the undergraduate coordination, students and teachers, with the main objective of defining programmatic content that would allow greater integration of disciplines and increase the time allotted to the internship. The issue related to the definition of contents had been debated in the institution before the health crisis; however, the pandemic required resuming the discussion



under a new context, giving to it an urgent character. The prospect of teaching in remote modality for an indeterminate period, the uncertainties regarding the maintenance of the school calendar and the need to comply with the deadlines for graduation of interns, forced us to ask: what, in the universe of theoretical and practical content should be prioritized?

In the research conducted in 2019 in the school under study, we found that the debate is complex and its resolution depends on several factors. There is a lack of consensus about the programmatic objectives and competencies to be achieved by the student, which results in educational planning centralized in the figure of the subject coordinator and in teachers teaching subjects that are poorly integrated. Moreover, even when the degree of importance or detail of the contents are defined by the discipline, they often follow criteria that are disconnected from the general education plan:

In [the discipline] we don't say "Look, these are the articles that you have to read. I don't know if other disciplines have this or not, a more coherent study plan. I think that this is missing [...] I think that maybe in the vast majority of disciplines. (Male teacher, clinical cycle)

And it is very difficult, sometimes, to integrate (content) within the discipline itself. (Female teacher, clinical cycle)

The definitions regarding content relevance, teaching-learning methods, scenarios for practical activities, or forms of student assessment require agreements among professors that contemplate the school's pedagogical project, but they also require an environment within the disciplines and departments themselves that allows for debate and conciliatory movements. However, conservative medical schools are guided by hierarchical relationships^{14,15} which compromise the possibility of collective construction in discipline planning, as the teacher's report indicates:

Let's reduce the content; and by reducing the content we are talking about root, basic content, like what is super, super consecrated... this is impossible, this is a dialog that provoke a heart attack to people, if you talk...[...] until we reach a consensus, it is something that requires a lot of skill... it is very delicate. [...] these teachers were our teachers, and they were mine, because I studied here, you know? (Female teacher, clinical cycle)

Teachers emphasize that there is also resistance from their own peers regarding more innovative proposals for evaluative processes:

I still have resistance to say that I distribute the test and let the students talk among themselves...the teachers think I'm crazy. (Male teacher, clinical cycle)



The impasses seem far from being solved. However, during the pandemic, the need for shared solutions affirmed the importance of expanding discussion spaces for joint educational planning and collective construction of the necessary adaptations.

Use of Information and Communication Technology: teacher-student relationship, motivation, and faculty development

Emergency remote teaching was the solution found by schools to adapt to measures of social isolation by offering synchronous, asynchronous, or other digital media classes³. Information and Communication Technologies (ICT) have represented a trend to renew content and methods in higher education since 1998¹⁶, and have gained greater application in recent years¹⁷. In the studied institution, there was already an institutional platform belonging to the medical school, but underutilized by the undergraduate course, as the professor commented:

It was key to have a distance-learning platform that was an asset for all of us. Somehow, it was that space of common conviviality [...] where (a teacher) from surgery would bring his stuff [...] and I would bring mine, [...] with that, it created a plurality. [...] More and more, it is possible to make these integrations. (Male teacher, clinical cycle)

The establishment of a virtual teaching-learning space with more advanced resources and the offer of training for the teaching staff to use this technology was possible after the health crisis. This was a need that came to meet the desires of teachers who had already observed the importance of greater technological investment in the educational sector:

What we see in all universities around the world is the insertion of state-of-the-art technologies, either in teaching or in medical practice. So, what I see today: digital tools, robotics, and digital teaching practices, invading the academic market. I think that all eyes are turned to this today, to technologies, robotics to operate, distance simulations, also distance learning as a complement. (Female teacher, basic cycle)

The use of ICTs as a pedagogical tool was necessary and can be best experienced under conditions of social isolation. The digital media provided an extensive volume of information about the pandemic, rekindling questions about the role of the teacher in contemporary times that were already on the agenda before:



We have as a challenge how to make the students to appropriate the information, not to be appropriated by the information... How can they dialogue [...] not only about information, but about attitudes, about practices, about all the things that involve medical knowledge and practice. I think that it is a great challenge to be a teacher trained in a pre-informatics era. (Male teacher, clinical cycle)

The emergence of the pandemic found teachers in Brazilian schools faced with little or no infrastructure offered by institutions for online learning¹⁸; moreover, the introduction of remote learning brought challenges to teachers who were uncertain about the task of dealing with digital technologies, leading them to demand help from students who were more familiar with the use of media. Welcoming the unknown as a learning opportunity means that the teacher establishes a horizontal relationship with the student, in which both act in the construction of knowledge “in such a way that both become, simultaneously, educators and learners”¹⁹. Overcoming the teacher-student contradiction is a great challenge in traditional schools^{19,20} as the teacher observed:

We have to reassure ourselves about this, about our limits, about our impossibilities [...] And this is scary, because it is very nice to have this part prepared [...]. So we plan the course, but in the middle of the way there is the unpredictable. (Female teacher, basic cycle)

Teachers were positively surprised by the potential for teaching improvement facilitated by the partnerships established with students for the operationalization of digital media, which corroborate the use of ICTs as an important innovation in adult learning because, in addition to allowing greater autonomy to the student, they facilitate interactions by encouraging collaborative learning²¹.

Nevertheless, there are some issues to consider in the current context: very long classes - as is common in medical education - have become more exhaustive in the online modality, raising questions about the motivation required for the student to perform tasks individually and isolated from his class. In face-to-face activities before the pandemic, educational planning with varied methodological strategies respecting students' singularities and encouraging meaningful learning was described as a successful model to motivate students:

A short theoretical class, about an hour, is one of the activities of the discipline. There are debates regarding putting the clinical cases for students to discuss and then we are together, articles that will be read with the monitors and they will discuss... practical classes... several methodologies to help, in some of them the student finds it easier...[...] There are students who love theoretical classes [...] there are students who love the debate, there are students who love the practical classes, there are students who love the monitors and their work. So I would say that it is the multiplicity of approaches that generates results, because one approach will not please everyone. You can never please everyone with just one technique. (Female teacher, basic cycle)



Using teacher's creativity to employ multiple resources aligned to the students' interests seems fundamental to make the pedagogical activities more stimulating, whether these activities are face-to-face or remote. However, in the studied institution we observed difficulties in the methodological renovation or in the search for new references, although the teachers perceived the inadequacy of old practices in a changing world. The teacher's speech corroborates the finding that most teachers who work in higher education tend to reproduce the methodologies they have experienced in their educational process¹⁰:

The course that we offer to the students is a very boring course [...] you enter here and leave here and in between you can't do anything different. These students [...] have the same course that I had in 1972. (Male teacher, basic cycle)

The discourse that predominated until the outbreak of the pandemic pointed to a demotivation of teachers and students, at various levels. The lack of meaningful learning for students and a not very motivating institutional environment for teachers, associated with an inflexible curricular structure, seemed to contribute to the situation. The pandemic affirmed the importance of institutional investment in teacher development, an ongoing process that is especially necessary in times of rapid change. Today it is expected that teachers to be updated in the use of computer tools and that, besides the specific knowledge of their areas, they know how their subjects interact with other subjects. In the field of values, they must transmit to the students a humanistic knowledge, encompassing an ethical and emotional awareness, and a cultural competence, which allow for a collaborative practice based on critical thinking and with abilities to solve problems in creative and innovative ways^{16,22}. Faculty development programs in medical education have increased significantly in the last two decades²³. In the studied institution, the participation of teachers in the collective construction of the Objective Clinical Structured Examination (Osce), promoted dialogue between disciplines and enabled the updating of knowledge, allowing the teacher to move out of his disciplinary territory.

[...] you are not by yourself in your little island of subject x, y, z, there are other subjects... and you see things that you didn't study 20, 30 years ago, this gives you a greater humility [...] you are at a station being the evaluator and when you see that case, you would not answer the same way as the person who made the checklist; [...] and sometimes you evaluate in another way or you didn't even know that, or you would take it in another way... (Female teacher, basic cycle)

The collective construction of the Osce assessment by the faculty members put collaborative work into action, promoting dialogue across disciplines and showing to be a promising avenue for future teacher development programs.



Collaborative work and the importance of communication skills

In health education processes, the emphasis on educating professionals for work collaboratively is a strategic recommendation for professionals and health systems to achieve greater resolutivity. A large percentage of medical errors and iatrogenesis occur mainly due to failures in the organization of care flows, when the patient is treated by several specialties that communicate little with each other²⁴.

During the pandemic, the participation of student volunteer and intern student groups in health care units highlighted the importance of academic education emphasizing the teaching of communication, management, and collaborative work skills, in order to value students' leading role and develop competencies for interdisciplinary and collaborative work. In the studied institution some of these competencies were already being worked on within the scope of some disciplines in collegiate meetings, or through practical activities in simulated situations,

[...] in a scenario of a cardiac arrest, in the hospital environment, the street environment... so, who is going to command? "You do this, you do that... So, we do dramatization, we... show the wrong parts. Show a video on the internet of some wrong procedure. And then we ask them to criticize. (Female teacher, basic cycle)

I am the coordinator (of the discipline) but I have other preceptors that participate, and I have students participating in the formulation. We sit down and decide how we want to conduct the course. And this is being very, very well received by the students. (Male teacher, clinical cycle)

In the health actions during the pandemic, adaptations in terms of so-called 'light' or 'soft' technologies²⁵ were implemented, such as communication between staff and families via telephone or online calls. Health teams had to reinvent themselves, and it is undeniable that the ability to communicate and the flexibility to create new ways of dialoguing, were central axes of these changes. Addressing bioethical issues that emerged in this context, such as patient eligibility for hospital admission and elective use of patient support equipment, challenged teams in shared ethical decisions. In addition to the adversities of care, the intense exposure to others' suffering and the witnessing of farewells and anticipatory grief (previously restricted to palliative care spaces, and now becoming frequent in the ward settings) undoubtedly led health care teams and students to experiment severe physical and emotional wear and tear.



The Mental Health of the Medical Student

The stress and exhaustion of health professionals and students during the pandemic have shown that attention to the integral health of these subjects is essential. The context of uncertainty reached medical students, considered a vulnerable population to mental health problems. The emotional overload expressed in reports of increased symptoms of anxiety, depression, loss of sleep quality, increased drug use, and psychosomatic symptoms, was verified both in our experience of clinical care to students and in studies conducted in the period²⁶.

The high prevalence of depression and suicide among medical students²⁷ is scarcely discussed in medical schools, even though professors at the studied institution recognize the influence of the educational environment on students' mental health:

I don't know if the medical environment is very welcoming. I think it's inhospitable. [...]. You have to grow a shell for yourself, because in medicine one never supports the other, you know? [...] There is the difficulty of knowledge - it's a lot of knowledge, a lot to learn, but there are also the human dramas, which are there, in our faces, every day. (Female teacher, clinical cycle)

Some teachers at the institution under study attribute greater importance to the influence of contemporary social factors than to the pressures experienced in the educational environment in the causality of the students' psychic symptoms

I think it's a worldwide suffering; it's something that we are going through in the whole world, and that is reflected here. There are some things, yes, that worsen their suffering here, these issues related to homosexuality, to race, to the vulnerability of the student. (Female teacher, clinical cycle)

Nevertheless, studies have observed that there is a culture in medical schools that considers psychological suffering as an inherent part of the educational process and even necessary for the formation of a good professional²⁸.

The approximation of teachers and students and the importance of a careful look at the unique ways of facing academic or personal adversities seem to be a good step to overcome difficulties, as observed by the teacher in her contact with students prior to the pandemic:

Some are more susceptible to pressures from the school, others are more susceptible to pressures from outside the school, you know? I've seen students reaching their limits with personal situations: "I'm going to drop out, I can't do it. I've seen students reaching the limit with academic situations, pure and simple... I've seen students with family and academic problems. (Female teacher, basic cycle)



The context of uncertainties about the social, political, and economic directions in Brazil were constant concerns of students in this period¹⁸, but the study showed aggravating factors directly related to the educational environment, such as the lack of digital accessibility, difficulties for online education and the acquisition of content in this format, as well as insecurities about the acquired learning and future insertion in the professional market. The pandemic has highlighted the importance of mental health care for students; therefore it can urge medical schools to denaturalize the causes of mental suffering and invest in protection strategies and social support on an ongoing basis.

What can we strengthen toward change?

Brazilian medical schools had the opportunity, in the midst of the health crisis, to revisit the guidelines previously recommended⁸ and verify their legitimacy to effect changes in academic training.

In the analysis of the interviews with professors, we verified that in the institution under study, before the outbreak of the pandemic, traditional teaching practices had been renewed by innovative initiatives, but only occasionally.

In the curriculum reform undertaken at the institution in 2018, the debate conducted on the relevance of content did not show advances within the disciplines after the new curriculum was established. There were issues of academic hierarchy and institutional importance that seemed to get in the way of the evolution of this debate. The destabilizations of curriculum planning caused by the social distancing affirmed the importance of the revision of the fundamental contents to be practiced systematically and frequently in the institution. Even before the pandemic, the professors identified the need for institutional incentive for faculty development programs, so that they could update themselves methodologically and talk about more subjective aspects of the educational practice, such as the role of the teacher in contemporary times and the relationship with the students. Educational planning activities carried out before the pandemic that required a joint planning of teachers (such as the Osce, for example), were perceived as facilitating the integration of disciplines and provided opportunities for updates, functioning as a useful strategy for teacher development.

The health crisis has accentuated the need for educational planning that is adequate to the general plan of formation. The readjustment of assessment processes implies the recognition of the teaching/learning process established and demands the inclusion of the participating subjects (students and teachers), constituting an “essential basis for the construction and consolidation of new work practices”²⁹ (p. 49). In this sense, the perspective of a permanent dialogic exercise between the student body and the faculty may favor the changes, being necessary that they are negotiated and agreed upon between academic managers, discipline coordinators, departments and students. It was verified that the professors wish to establish more horizontal relations with the students, occupying a position more consistent with what is required in contemporary times about the teacher’s role, in agreement with Freire’s conceptions¹⁹. The use of active teaching-learning methodologies has the potential to redefine roles and catalyze new changes²⁰ and, in virtual environments it could lead to an increase in motivation for both students and



teachers, strengthening the bonds of partnership and work. The need to diversify the methodological strategies that place the student at the center of the teaching-learning process was emphasized by teachers. We found that some courses seem more aligned with Fair³⁰ principles^(f) (acronym for Feedback, Activity, Individualization, Relevance), developing feedback practices, actively engaging students in course planning, and emphasizing meaningful learning with respect for the singularities and learning needs of each student. However, despite the efforts made, there is still resistance to its widespread implementation within the disciplines themselves.

The collaborative and interdisciplinary work to face complex issues in assistance was scarcely promoted in educational practices before the pandemic. The predominance of a competitive culture among students and among teachers seems to be an obstacle to the advancement of partnerships and agreement upon outcomes, but collaborative practices introduced gradually can solve the difficulties of this training.

The incidence of psychological distress among medical students during their academic training is a phenomenon recognized³¹ and perceived by the professors in the studied institution. Even though there is no consensus among the teachers about the causality of its symptoms, it has revealed the need to better understand the diversity of the students and its idiosyncrasies, through a teacher-student approach that allows moments of reflection, dialog and sharing.

Final considerations

The present study, even limited to the universe of a public medical school with a still traditional teaching model, allowed us to get an overview of the issues in the educational environment that gained relevance due to the emergence of the pandemic. The teachers' perceptions already made clear the need for changes in the traditional medical education model, which the social isolation caused by Covid-19 showed to be unavoidable. The analysis of the teachers' perceptions enabled us to identify initiatives to be strengthened in order to make changes. We verified that pedagogical practices more in line with the current imperatives have been gradually implemented in the daily routine of the disciplines of the institution studied, and, although isolated in their disciplinary territories, they produce effects of questioning an outdated model of teaching. Innovative discourses and practices need to be valued and shared in the academic community, and this work encourages research to uncover and promote the legitimacy of these practices.

Medical schools are now challenged to convene the largest possible number of teachers and students to build together an agenda for discussion about the impacts and changes that have occurred, evaluating the possible incorporation of innovations. It is necessary, however, that schools link to medical associations, establishing a network of cooperation and collaboration to discuss and strengthen initiatives.

Investing in empirical research and critical reflection of the practices in progress, opening the field to new subjects, creating spaces for dialoguing, can trigger changes and catalyze transformations in the discourses and educational practices for the education of physicians.

^(f) Applying the Fair principles - providing feedback to the student, engaging the student in active learning, individualizing learning to the student's personal needs, and making learning relevant - can lead to more effective learning.



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Authors' contributions

All authors actively participated in all stages of preparing the manuscript.

Conflict of interest

The authors have no conflict of interest to declare.

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References

1. Frenk J, Chen L, Bhutta ZA, Cohen J, Crisp N, Evans T, et al. Health professionals for a new century: transforming education to strengthen health systems in an interdependent world. *Lancet*. 2010; 376(9756):1923-58.
2. Brasil. Ministério da Educação. Portaria nº 343, de 17 de Março de 2020. Dispõe sobre a substituição das aulas presenciais por aulas em meios digitais enquanto durar a situação de pandemia do Novo Coronavírus - COVID-19. *Diário Oficial da União*. 18 Mar 2020; sec. 1, p 39.
3. Gordon M, Patricio M, Horne L, Muston A, Alston SR, Pammi M, et al. Developments in medical education in response to the COVID-19 pandemic: A rapid BEME systematic review: BEME Guide No. 63. *Med Teach*. 2020; 42(11):1-14.
4. Santos BM, Cordeiro MEC, Schneider IJC, Cecconi RF. Educação Médica durante a Pandemia da Covid-19: uma Revisão de Escopo. *Rev Bras Educ Med*. 2020; 44 Suppl 1:e139. Doi: <https://doi.org/10.1590/1981-5271v44.supl.1-20200383>.



5. Lampert JB. Na transição paradigmática da educação médica: o que o paradigma da integralidade atende que o paradigma flexneriano deixou de lado. *Cad ABEM*. 2004; 1(1):23-5.
6. Brasil. Ministério da Educação. Conselho Nacional de Educação. Parecer CNE/CES nº 116, de 3 de Abril 2014. Diretrizes curriculares nacionais do curso de graduação em medicina. *Diário Oficial da União*. 6 Jun 2014; sec. 1, p. 17.
7. World Health Organization. Department of Human Resources for Health. Framework for action on interprofessional education and collaborative practice [Internet]. Genebra: WHO; 2010 [citado 12 Maio 2019]. Disponível em: http://www.who.int/hrh/nursing_midwifery/en/
8. Brasil. Ministério da Educação. Resolução nº 3, de 20 de Junho de 2014. Diretrizes curriculares nacionais do curso de graduação em medicina [Internet]. Brasília, DF: Ministério da Educação; 2014.
9. Venturelli J. Educación médica: nuevos enfoques, metas y métodos [Internet]. Washington: OPAS; 1997 [citado 1 Ago 2019]. Disponível em: <https://www.imperial.ac.uk/media/imperial-college/administration-and-support-services/library/public/vancouver.pdf>
10. Behrens MA. A prática pedagógica e o desafio do paradigma emergente. *Rev Bras Estud Pedagog*. 1999; 80(196):383-403.
11. Taquette SR, Borges L. Pesquisa qualitativa para todos. Petrópolis: Vozes; 2020.
12. Minayo MCS. O desafio do conhecimento. 13a ed. São Paulo: Hucitec; 2013.
13. Damatta R. O ofício de etnólogo ou como ter Anthropological Blues. In: Nunes E, organizador. *Aventura sociológica*. Rio de Janeiro: Zahar; 1978. p. 23-35.
14. Rego S. A formação ética dos médicos – saindo da adolescência com a vida (dos outros) nas mãos. Rio de Janeiro: Fiocruz; 2003.
15. Feuerwerker L. Mudanças na educação médica e residência médica no Brasil. São Paulo: Hucitec, Rede Unida; 1998.
16. UNESCO. Organização das Nações Unidas para Educação, Ciência e Cultura. Declaração Mundial sobre Educação Superior no Século XXI: visão e ação. Comunicado. Paris: UNESCO; 1998.
17. Goudouris E, Struchiner M. Aprendizagem híbrida na educação médica: uma revisão sistemática. *Rev Bras Educ Med*. 2015; 39(4):620-9. Doi: <http://dx.doi.org/10.1590/1981-52712015v39n4e01642014>.
18. Rodrigues BB, Cardoso RRJ, Peres CHR, Marques FF. Aprendendo com o imprevisível: saúde mental dos universitários e educação médica na pandemia de covid-19. *Rev Bras Educ Med*. 2020; 44(1):1-5.
19. Freire P. *Pedagogia do oprimido*. Rio de Janeiro: Paz e Terra; 2005.
20. Feuerwerker L. Gestão dos processos de mudança na graduação em medicina”. In: Marins JN, Rego S, Lampert JB, Araújo JGC, organizadores. *Educação Médica em transformação – instrumentos para a construção de novas realidades*. São Paulo: Hucitec; 2004: p.17-39.
21. Ruiz JG, Mintzer MJ, Leipzig RM. The impact of e-learning in medical education. *Acad Med*. 2006; 81(3):207-12. Doi: <https://doi.org/10.1097/00001888-200603000-00002>.
22. Kereluik K, Mishra P, Fahnoe C, Terry L. What knowledge is of most worth: teacher knowledge for 21 st century learning. *J Digital Learn Teach Educ*. 2013; 29(4):127-40.



23. Steinert Y, Mann K, Anderson B, Barnett BM, Centeno A, Naismith L, et al. A systematic review of faculty development initiatives designed to enhance teaching effectiveness: a 10-year update. *Med Teach*. 2016; 38(8):769-86.
24. Kohn LT, Corrigan JM, Donaldson MS. *To err is human: building a safer health system* [Internet]. Washington, DC: National Academies Press (US); 2000 [citado 20 Out 2020]. Disponível em: <http://www.nap.edu/catalog/9728.html>
25. Merhy E, Feuerwerker L. Novo olhar sobre as tecnologias de saúde: uma necessidade contemporânea. In: Merhy EE, Baduy RS, Seixas CT, Almeida DES, Slomp, H, organizadores. *Avaliação compartilhada do cuidado em saúde: surpreendendo o instituído nas redes*. Rio de Janeiro: Hexis; 2017. v. 1, p. 59-72.
26. Santos WA, Beretta LL, Leite BS, Silva MAP, Cordeiro GP, França EM. The impact of the COVID-19 pandemic on the mental health of healthcare workers: integrative review. *RSD Res Soc Dev*. 2020; 9(8):1-29. Doi: <http://dx.doi.org/10.33448/rsd-v9i8.5470>.
27. Rotenstein LS, Ramos MA, Torre M, Segal JB, Peluso MJ, Guille C, et al. Prevalence of depression, depressive symptoms and suicidal ideation among medical students: a systematic review and meta analysis. *JAMA*. 2016; 316(21):2214-36.
28. Slavin SJ. Medical student mental health: culture, environment, and the need for change. *JAMA*. 2016; 316(21):2195-6.
29. Ribeiro ECO. Ensino/aprendizagem na escola médica. In: Marcondes E, Gonçalves E, organizadores. *Educação médica*. São Paulo: Sarvier; 1998. p. 40-9.
30. Harden RM, Laidlaw JM. Be FAIR to students: four principles that lead to more effective learning. *Med Teach*. 2013; 35(1):27-31. Doi: <https://doi.org/10.3109/0142159X.2012.732717>.
31. Jamal F, Fletcher A, Harden A, Wells H, Thomas J, Bonell C. The school environment and student health: a systematic review and meta-ethnography of qualitative research. *BMC Public Health*. 2013; 13(1):798. Doi: <https://doi.org/10.1186/1471-2458-13-798>.



Este estudo objetiva analisar questões da educação médica evidenciadas pelas medidas de distanciamento social provocadas pela pandemia do coronavírus19 associadas às percepções de professores de medicina sobre esses mesmos aspectos, em um momento prévio à eclosão da crise sanitária. Realizamos um recorte de resultados de uma pesquisa de natureza qualitativa e conduzimos a discussão com base na triangulação de dados entre observações de campo e entrevistas com professores. A pandemia reacendeu debates sobre a relevância de conteúdos, a utilização de tecnologias digitais para fins pedagógicos e o valor do trabalho colaborativo. Além disso, resgatou questões que envolvem habilidades de comunicação e a saúde de estudantes nas práticas do cuidado. Discutiremos a experiência passada articulando-a às experiências recentes e o que poderemos recolher para (re)construirmos os rumos da formação dos médicos.

Palavras-chave: Epidemia pelo novo coronavírus. Educação médica. Pesquisa qualitativa. Percepção. Docentes.

El objetivo de este estudio es analizar cuestiones de la educación médica puestas en evidencia por las medidas de distancia social adoptadas por la pandemia del coronavirus 19, asociadas a las percepciones de profesores de medicina sobre esos mismos aspectos, en un momento previo a la eclosión de la crisis sanitaria. Realizamos un recorte de resultados de una investigación de naturaleza cualitativa y dirigimos la discusión a partir de la triangulación de datos entre observaciones de campo y entrevistas con profesores. La pandemia reencendió debates sobre la relevancia de contenidos, la utilización de tecnologías digitales para fines pedagógicos y el valor del trabajo colaborativo. Además, rescató cuestiones que envuelven habilidades de comunicación y la salud de estudiantes en las prácticas del cuidado. Discutiremos la experiencia pasada articulándola con las experiencias recientes y lo que podremos recoger para (re)construir los rumbos de formación de los médicos.

Palabras clave: Epidemia por el nuevo coronavirus. Educación médica. Investigación cualitativa. Percepción. Docentes.