

MAKING SENSE OF HEALTH NEEDS: FACULTY EXPERIENCE IN UNDERSTANDING AND APPLYING THE CONCEPT IN A MEDICAL SCHOOL

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ABSTRACT

Objective: There is growing recognition of biopsychosocial health in medical training, but it remains inconsistent. Faculty are crucial in this realm, leading to the inquiry: "What are the experiences of medical faculty regarding the concept of health needs?" This study focused on faculty experiences at a higher education institution in the interior of São Paulo, Brazil, from the 1st to 6th grades, in handling health needs within a competency-based curriculum.

Method/Approach: Using grounded theory, the study performed remote semi-structured interviews, analyzing data through microanalysis, open, axial, and selective coding. 17 faculty members participated, with theoretical saturation defining sampling.

Results: Four categories emerged: A) Approaching the concept in phases: contact, construction, and apprehension; B) Recognizing varied approaches in different teaching scenarios based on faculty roles within the curriculum; C) Experiencing doubts about operationalizing the concept due to insufficient teaching training, unclear content, and inadequate support from educational and institutional management; D) Identifying the potential for curriculum restructuring and suggesting improvements while also expressing uncertainties about implementing these changes. In Category A, introducing faculty to the concept is essential, with ongoing construction and comprehension through practice. Categories B and C highlighted variation in students' understanding based on teaching environments and curriculum roles, coupled with a lack of clarity and support causing doubts about implementation. Category D underscored potential curriculum restructuring benefits but emphasized practical strategies.

Conclusions: Achieving clarity in institutional documents and engaging stakeholders in continuous education is crucial for addressing health needs in care. Permanent education should ensure both students and graduates focus on users' health needs.

Keywords: teaching; medical education; curriculum; problem-based learning; collective health.

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INTRODUCTION

Given the paramount importance of addressing the concept of health needs in medical education, the experiences of faculty at institutions such as in a higher education institution in the interior of São Paulo hold tremendous value. However, few studies, both nationally and internationally, exist on this crucial topic. By understanding the experiences of faculty in this institution's Medical Course, from the 1st to the 6th grades, regarding the approach to health needs within an integrated and holistic competency-oriented curriculum, we can contribute to the development of effective teaching practices aligned with the principles of comprehensive care, as well as the integration of teaching, research, and healthcare.

Therefore, the purpose of this study is to provide a comprehensive exploration of the experiences of faculty at this institution, shedding light on their approach to the concept of health needs within the implementation of an integrated and competency-oriented curriculum. By revealing their insights, this study aims to inspire other medical schools to enhance the quality of their teaching and create a more unified, holistic approach to medical education.

LITERATURE REVIEW

With the ever-evolving landscape of global socioeconomic and cultural changes since World War II, profound transformations have occurred, influencing labor markets, production processes, and ethical discussions on human rights (Conti, 2018). Recognizing the significance of these shifts, the World Health Organization, through its Constitution, the Alma-Ata Declaration, and the Ottawa Charter, redefined health as a state of complete well-being encompassing physical, mental, and social dimensions, transcending the mere absence of diseases (Nobile, 2014; Pinto *et al.*, 2020; World Health Organization, 1946, 1986).

In Brazil, the 20th century witnessed a paradigm shift in the healthcare system, culminating in the establishment of the Unified Health System (SUS) in 1988, which recognized health as a fundamental right for all Brazilians. Guided by the principles of



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universality, equity, and integrality, the SUS operates based on decentralization, regionalization, and popular participation. It places a strong emphasis on primary health care (PHC) through family health units, offering comprehensive and continuous care to the community (Castro *et al.*, 2019).

Comprehensive care lies at the heart of the SUS, emphasizing a holistic approach to health needs. Rather than relying on a single profession, collaboration among diverse healthcare professionals within multidisciplinary teams is required (Cunha *et al.*, 2020; Doricci; Guanaes-Lorenzi, 2021; Giovanella; Franco; Almeida, 2020; Tolazzi; Grendene; Vinholes, 2022). However, despite remarkable progress, obstacles to comprehensive care persist, including the persistence of a biomedical model that may overlook the holistic nature of health needs. This highlights the urgent need for reflective practices among healthcare professionals and public policy implementation (Leite *et al.*, 2018; Massuda, 2020).

Within the realm of medical education, there has been a notable shift toward valuing comprehensive care and adopting student-centered teaching methodologies (Daminelli; Wuo; Heinzle, 2018). Historically, scientific knowledge was confined within the walls of universities, detached from societal realities. The advent of the Flexner Report in 1910 introduced a new model of education in the United States, emphasizing hospital-centered health education and specialized knowledge (Koch *et al.*, 2022). Similarly, in Brazil, the democratic education movement led by Anísio Teixeira aimed at universal access to higher education (Almeida Filho, 2014). However, during the President Vargas Era (1930-1945), this model faced significant challenges due to its perceived alignment with "socialist" ideas. Nonetheless, medical education has gradually embraced the integration of teaching and research (Daminelli; Wuo; Heinzle, 2018).

In line with this evolutionary process and influenced by political changes, such as redemocratization, in 1985, followed by the creation of the SUS, key institutions in Brazil, including the Associação Brasileira de Educação Médica (ABEM) and the Conselho Federal de Medicina (CFM), established the National Interinstitutional Commission for the Evaluation of Medical Schools in 1991. This commission sought to operationalize the curriculum in a way that genuinely addressed the health needs of the population within the context of medical education (Batista; Vilela; Batista, 2015). Consequently, real and simulated practice gained significance, providing students with diverse learning opportunities.



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The National Guidelines for Medical Education (DCNs) were ratified by the National Council of Education in 2001, further emphasizing the integration of theory and practice and acknowledging the importance of biological, social, psychological, and environmental aspects of the health-disease process. These guidelines underscore the responsibility of students throughout their training, encouraging them to develop the competence to solve practical problems in different contexts (Brasil, 2001).

In 2014, the national medical course guidelines expanded to include three main areas: health care, management, and education (Brasil, 2014). In this model, the student is the central actor in their learning through their questions and their search for answers. The professor is no longer the main element of the hierarchy, moving to the role of facilitator of the process (Cate; Carraccio, 2019; Van Melle *et al.*, 2019).

Despite these progressive developments, a lack of unity still plagues medical education due to institutional diversity and disparate curricula. Outdated models persist in some schools, failing to align with the current emphasis on comprehensive care. Implementing active teaching methodologies presents challenges, including diversity in training and inadequate management. Brazilian medical education predominantly involves internships in university hospitals, fostering early specialization and a limited understanding of the broader health network (Cesario; Cesario; Santos, 2019).

However, a higher education institution in the interior of São Paulo stands out as an example of innovation. Since 1997, it has embarked on a transformative journey, reimagining the curricula of medicine and nursing courses to embrace an integrated and holistic approach through active learning methodologies and community involvement (Brasil, 2002). Its endeavour was further enhanced in 2003 with a "21st century" project, which integrated problem-solving templates with practical scenarios. This institution envisions the curriculum as a social construction, fostering collaboration between students and faculty to foster a new educational model (São Paulo, 2005). With a curriculum organized into three units, it prioritizes Problem-Based Learning (PBL) guided by tutors in the Systematized Educational Unit (UES), engages students in practical activities across various care units in the Professional Practice Unit (UPP), and incorporates mandatory internships chosen by students in the Elective Educational Unit (UEE) (São Paulo, 2014). This curriculum is holistic, competence-based and criterion-referenced, and it encourages reflection and self-assessment while fostering feedback and progression (São Paulo, 2021).

Its curriculum exemplifies the principles of comprehensive care, with an integrated organization, considering the reality of the health workforce, with contents



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and concepts being assessed as interdisciplinary, and with the development of competencies across cognitive, psychomotor, and affective domains. By aligning with health needs, promoting clinical reasoning, and fostering interdisciplinary integration, this institution is at the forefront of modern medical education (São Paulo, 2022; São Paulo, 2022e, b, c, a, d).

Nevertheless, despite advancements, the prevailing model in medical education continues to prioritize specialization, advanced technologies, and hospital settings, promoting a positivist and individualistic approach to care. This paradigm contradicts the principles of the Brazilian Unified Health System (SUS), which falls short of addressing the comprehensive health needs of individuals. The deeply ingrained influence of this model within academic and professional environments necessitates intentional efforts to bring about transformative change.

METHODS

This research employed an exploratory research approach with a qualitative methodology to delve into individual and collective aspects encompassing feelings, behaviors, social organizations, and cultural phenomena. The research design was guided by the grounded theory (GT) method (Corbin; Strauss, 2014), ensuring a robust framework for data analysis. Methodological procedures strictly adhered to the Consolidated Criteria for Reporting Qualitative Research (COREQ) (Tong; Sainsbury; Craig, 2007), ensuring transparency and rigor throughout the study.

The study involved faculty from all grades of the medicine course and was conducted within carefully selected scenarios that represented the various educational units. Data collection was carried out by a proficient master's student who also holds an M.D. degree and volunteered as a professor. Of the 198 faculty, 63 were approached for the research. Ultimately, 21 respondents responded, and after accounting for scheduling conflicts and one refusal, theoretical saturation was reached after 17 interviews. Each interview was conducted only after analyzing the previous one. The initial sampling was randomly defined, seeking to cover all professionals, disciplines, and educational levels. After the 9th interview, through the concomitant analysis of the interviews and the elaboration of memos, the need to intentionally select actors who were part of the academic management was verified. Thus, a total of 17 faculty were included in the final sample after reaching theoretical saturation.



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To facilitate the interview process, videoconferences were conducted, allowing participants to engage in the interviews within their preferred environment. Each interview commenced with a comprehensive characterization phase, collecting demographic data and exploring the teaching context in which the faculty were involved. Subsequently, a semistructured interview was conducted, involving two pivotal questions: 1) "Tell me how you understand the concept of health needs, considering your academic background, professional practice, and experience as a teacher," and 2) "Tell me about your experience with addressing health needs in the medical course, considering the proposed training performances." (supplementary file). Throughout the interviews, recordings were made, and TranscriPy software was used for transcription. Field notes were taken during and after data collection, ensuring the preservation of vital observations. Notably, no interviews required repetition, and the total durations of the 17 interviews were 14 hours and 34 minutes, with an average duration of 51 minutes per interview. The shortest interview lasted 29 minutes, while the longest extended to 1 hour and 34 minutes.

Ethical considerations were a priority in this study, and the necessary approval was obtained from the institution Research Ethics Committee. Participation in the research was entirely voluntary, and prior to the interviews, participants completed a Free and Informed Consent Term, ensuring their understanding and agreement to participate in the study.

For the data analysis, a meticulous and systematic approach involving microanalysis, open coding, axial coding, and selective coding was employed. Coding was conducted to identify, develop, and correlate concepts, which served as the building blocks of the theory. Categories or subprocesses emerged as the conception of the phenomenon within the data, constituting the primary unit of analysis in GT. By working with categories, the central category, typically a process, emerged, culminating in the development of the theory. GT aimed to comprehend the phenomenon within its environmental context, considering the meanings assigned to it by the actors involved. This approach facilitated the construction of theories and a conceptual model to explain the phenomenon while identifying the potential variables involved in the process (Corbin; Strauss, 2014; Rieger, 2018). A word processor was employed to assist in organizing and analyzing the extensive dataset.



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RESULTS

Characterization of the participants

The study involved 17 participants, consisting of 10 women and 7 men. The average age of the participants was 60 years, with the youngest participant being 44 years old and the oldest being 72 years old. In terms of professional training, the participants included physicians (n=9), nurses (n=4), and professionals in basic disciplines such as biology (n=2) and pharmacy (n=2).

Regarding their educational background, most participants held a PhD (10), while a smaller number possessed a master's degree (5) or had completed residency training (2). With the exception of biology and pharmacy professionals (4 in total), the remaining participants had completed residency in health disciplines, including internal medicine (3), surgery (4), collective health (2), and nursing (4).

The sample included teachers from each of the educational units, as depicted in Figure 1. This ensured representation across the various units of the institution.

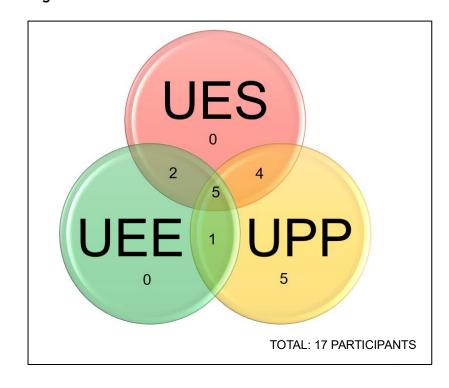


Figure 1 - Inclusions of teachers in educational units.

Label:

UES: Systematized Educational Unit - uses Problem-based Learning

UPP: Professional Practice Unit - real life scenarios, uses Problematization and the

Constructive Spiral

UEE: Elective Educational Unit - mandatory internships chosen by students.



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Regarding the participants' involvement in different grades of the medical course, all teachers taught in at least two grades, with most having prior experience in other grades as well. The detailed distribution of participants across the series of medical courses is illustrated in Table 1, highlighting their current and previous insertions.

Table 1 - Participation of faculty across medical course levels.

	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16	E17
1st grade																	
2nd grade																	
3rd grade																	
4th grade																	
5th grade																	
6th grade																	

Subtitle:	current insertion
	previous insertion
	no insertion

Furthermore, eight participants reported holding or having held management positions within the institution, indicating significant experience and involvement in leadership roles.

These demographic and professional characteristics of the participating teachers provide a diverse and comprehensive perspective on the approach to the concept of health needs within the integrated and competency-oriented curriculum. Their varied backgrounds, expertise, and extensive experience contribute to a rich and multifaceted exploration of the topic.

Categories representing the experience

The analysis conducted, as described in the "Methods" section, yielded a comprehensive list of elements, subcategories, and categories, which are presented



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in the figure below. To provide a vivid representation of the teachers' experience, each category and its components will be discussed in detail.

Figure 2 - Categories representing the experience of medical school faculty with the approach to health needs - 2022

Subprocess A. Approaching the concept in different ways: contact, construction, and apprehension

Subprocess B. Realizing that the approach to health needs is presented and implemented in different ways in different scenarios and according to the inclusion of faculty in the medical curriculum

Subprocess C. Having doubts about the operationalization of the concept: lack of teaching training, lack of content clarity and support from educational and institutional management

Subprocess D. Rescuing the potential of curriculum restructuring and suggesting improvements to the process

Source: Authors

Subprocess A, titled "Approaching the concept in different ways: contact, construction, and apprehension," elucidated the faculty process of engaging with the concept of health needs. The contact phase varied among faculty, with some encountering similar concepts during their academic training, professional practice, or teaching experience. The construction of the concept also varied, with some faculty relying on professional practice alone, while others drawing upon theoretical references related to health needs. The most frequently cited reference for theoretical construction was the taxonomy of health needs proposed by Cecílio and Matsumoto (Nonato *et al.*, 2020).

Subprocess B, titled "Realizing that the approach to health needs is presented and implemented in different ways in different scenarios and according to the inclusion of faculty in the medical curriculum", highlighted the perception of faculty regarding the varied approach to the concept of health needs. They acknowledged that the approach to health needs differed across different scenarios and was contingent upon their inclusion in the curriculum. The presentation and implementation of the concept varied in institutional documents, with different interpretations among faculty. Discrepancies were also observed in the approach to health needs between the initial and final grades of the course, as well as variations between the educational units. The emphasis on health needs varied across grades,



Possibilidades da Literatura Infantojuvenil na Educação Ambiental: Fundamentos Pedagógicos na Perspectiva de Paulo Freire

with a greater focus in earlier years. Notably, the approach to addressing health needs in educational units has displayed discrepancies, with more consolidation and focus observed in professional practice units (UPPs) than in systematized educational units (UESs).

Subprocess C, titled "Having doubts about the operationalization of the concept: lack of teaching training, lack of content clarity and support from educational and institutional management", revealed the uncertainties expressed by faculty regarding the operationalization of the concept of health needs within the curriculum. They faced challenges due to the lack of training in this area, as well as a lack of clarity in the curriculum content and insufficient support from educational and institutional management. The diverse backgrounds and limited understanding among teachers resulted in different approaches and interpretations of the concept. The dispersion of content across grades, without clear guidelines on where and how to address health needs, further complicated the teaching process. Moreover, the absence of support from educational management hindered effective mediation and evaluation of the teaching-learning process. Insufficient opportunities for teacher training and a lack of engagement in improvement initiatives were also evident. The lack of support significantly affected the implementation of the concept, leaving teachers to rely on their own understanding and resources.

Subprocess D, titled "Rescuing the potential of curriculum restructuring and suggesting improvements to the process", underscored the recognition among faculty of the potential impact of curriculum restructuring on effective learning and integrated professional performance. The positive aspects highlighted included early immersion in professional practice, an integrated curriculum guided by holistic competence and health needs, and the use of active teaching methods that fostered continuous interest and scientific inquiry. Faculty have suggested that greater support from educational management is needed to improve the approach to meet health needs. This included providing comprehensive presentations and explanations of the curriculum to teachers, offering systematic training opportunities, valuing teachers, alleviating professional workload, and ensuring consistent management of scenarios across all grades. The importance of uniformity and continuity in the approach to health needs, particularly in the UES, was emphasized. By implementing these improvements, teachers believed that the approach to health needs could be



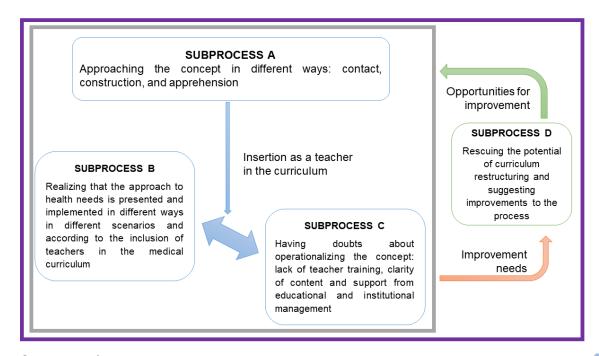
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enhanced, leading to more effective learning and practical application of the concept.

Considering the comprehensive categories, subcategories, and elements described above, it can be concluded that the GT design successfully elucidated the experiences of faculty within the medical course regarding the approach to health needs with their students. The developed subprocesses and their theoretical relationships provided a framework to explore and explain the interactions reported by the faculty in their experience with the approach to health needs.

The representative model of teachers' experience, referred to as "Doing it my way", encapsulates the ongoing process through which teachers engage with the concept of health needs, as shown on figure 3. This process involves initial contact, concept construction, and continual apprehension throughout their professional journeys. The faculty's approach is influenced by their specific insertions within the curriculum and the various ways in which health needs are presented and operationalized. They face uncertainties due to a lack of training, unclear content, and limited support from educational and institutional management. However, faculty recognize the potential of curriculum restructuring and propose improvements to enhance the approach to health needs.

Figure 3 - Representative model of teachers' experience with addressing health needs in the institution's curriculum.



Source: authors



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Validating the theoretical model of experience means considering the representation of reality based on the interpretation of raw data; thus, it is important to determine how the abstraction fits these data and if there are others that were not incorporated into the theoretical scheme (Corbin; Strauss, 2014). This process can be carried out in several ways. In the case of this research, first, the possibility was considered of showing the experience to the informants or asking them to comment on which approximations and departures of the theory in relation to their reality; however, considering the difficulty of accessing the participants, the social isolation advocated by the COVID-19 pandemic, with a recent face-to-face return, and the small number of faculty, preference was given to validation through comparison of the scheme with the raw data, in which the theoretical model is extensively compared with the participants' data and it is verified if there is congruence and adjustment between them (Corbin; Strauss, 2014). A comparison of the interviews alongside the categories, subcategories, and research elements confirmed that the theoretical model effectively represented the teachers' experiences and validated the representative scheme.

CONCLUSION

The approach to health needs and its operationalization within the curriculum are complex and multifaceted issues, as highlighted in this study. Professionals recognize that health needs encompass a wide range of factors, including social, political, economic, and cultural aspects, extending beyond mere biological demands (Nobile, 2014; Pinto et al., 2020; World Health Organization, 1946, 1986). However, there is a challenge in bridging the gap between theoretical knowledge and the rebuilding of health practices, with healthcare often relying on a simplified understanding of health and illness (Cecilio; Reis, 2018). This disparity between social knowledge and the technologically driven medical approach (Borkan et al., 2021; Freitas; Flores; Camargo JR., 2022) creates difficulties for teachers in effectively articulating these concepts in their professional practice and with their students.

The concept of health needs is inherently polysemic, presenting various interpretations and meanings, which further complicates its design and operationalization within the curriculum. It is intricately linked to an expanded



Possibilidades da Literatura Infantojuvenil na Educação Ambiental: Fundamentos Pedagógicos na Perspectiva de Paulo Freire

understanding of health that surpasses the traditional notion of the absence of disease and incorporates broader contextual considerations. This polysemic nature is evident not only within the field of collective health but also in the understanding and operationalization of integrity-based healthcare. The integration of theory and practice has become crucial in overcoming the fragmented and biomedical model of health education prevalent in Brazil, which poses challenges to the establishment of comprehensive care (de Camargo, 2018; Freitas; Flores; Camargo JR., 2022).

Within its medical curriculum, the approach to health needs is manifested and operationalized in diverse ways, resulting in discrepancies across institutional documents, different grades, and various learning groups (Lima; Padilha, 2018; Nonato *et al.*, 2020). The curriculum itself is organized into three core areas of competence: health care, health management, and health education (Brasil, 2014; Ferreira *et al.*, 2019; São Paulo, 2014; Veras; Feitosa, 2019). However, operationalizing these areas and transcending the biomedical model of care present significant challenges. While the National Guidelines for Medical Education (DCNs) serve as a guiding framework, each institution must navigate its own path toward student-centered learning and the delivery of comprehensive care (Freire Filho *et al.*, 2017; Machado; Oliveira; Malvezzi, 2021).

The clear presentation of the curriculum to teachers plays a pivotal role in their understanding and confidence when working with health determinants and vulnerable populations. However, reported misunderstandings and discrepancies regarding the institution's curriculum impede its effective implementation (Denizard-Thompson *et al.*, 2021; Rezende *et al.*, 2020).

The integration of education and the world of work, with early exposure to professional practice, is highly valued because it fosters meaningful learning and provides students with an integrated perspective on primary healthcare. However, the lack of adequate structure and fair remuneration within practice scenarios, including teaching hospitals (Swanwick, 2018), hinder the genuine integration of students into the healthcare system (Girotto *et al.*, 2019).

In conclusion, transformative changes within medical education are essential for addressing the complexities surrounding health needs and promoting comprehensive care. Overcoming the dichotomy between theory and practice requires ongoing discussion and re-evaluation. The successful consolidation of



Possibilidades da Literatura Infantojuvenil na Educação Ambiental: Fundamentos Pedagógicos na Perspectiva de Paulo Freire

processes such as patient-centered care, attentive listening, and the humanization of healthcare depends on embracing holistic views, fostering strong social networks, and facilitating the integration of theory and practice. These shifts in medical education will contribute to better preparing future healthcare professionals to effectively address the diverse and multifaceted health needs of individuals and communities.

Prior to the study described here, another study was carried out with students from the same institution on addressing health needs, considering their apprehension and understanding (Nonato *et al.*, 2020). The results demonstrate that students reported a diversity of approaches across different groups, educational units, and grades. They specifically mentioned that the Professional Practice Units (UPPs) and the Longitudinal Primary Care Practice (LPP) scenarios are most conducive to the theoretical-practical approach to the concept (Nonato *et al.*, 2020), which aligns with the findings presented in Subprocess B.

Interestingly, an inverse movement in the approach to the concept was observed, as reported by both students and teachers. Students expressed greater difficulty in apprehending the concept during the first two grades of their academic trajectory, while faculty reported greater ease of approach at this stage. This disparity can be attributed to various factors. On the one hand, students may lack experience and encounter challenges due to the lack of clear intentionality within each educational cycle. Additionally, the prevailing biomedical model in health services requires a deconstruction of previous knowledge and a shift toward a comprehensive approach to health needs. On the other hand, teachers benefit from longer contact time with users in primary healthcare (PHC) settings during the first two grades, which facilitates their approach to the concept.

Both studies highlighted divergences in the institutional documents that guide educational activities. These documents exhibited inconsistencies regarding the concept of health needs and its operationalization at different stages of the academic trajectory. Didactic materials were also found to primarily focus on individual care within the traditional clinical setting, making it challenging to develop practices based on comprehensiveness. This limitation hampers the effective approach to health needs, as there is a lack of continuous and integrated materials that address the concept across all grades.



Possibilidades da Literatura Infantojuvenil na Educação Ambiental: Fundamentos Pedagógicos na Perspectiva de Paulo Freire

Therefore, there is a clear need to review and align the approach to the concept of health needs, considering the perspectives and demands of all stakeholders involved. It is essential to consider the opportunities for learning within each group, educational unit, and grade of the educational cycle, following the recommendations outlined in the National Guidelines for Medical Education (DCNs) and the institution's Pedagogical Project of the Course (PPC). By addressing these discrepancies and promoting a cohesive approach to health needs, medical education programs can enhance the learning experience and ensure that students are adequately prepared to provide comprehensive care to patients.

The objectives outlined in this study were successfully achieved through the utilization of grounded theory methodology, allowing for the inclusion of a diverse range of participants and actions within the medical course. The experiences of faculty from various grades, educational units, and managerial and construction groups were represented and given a voice.

The faculty' experiences with addressing health needs in the medical course were portrayed through the identified subprocesses: the varied apprehension and approach to the concept by faculty, the resulting doubts regarding its effective operationalization in the curriculum, and the additional challenges brought about by the educational changes prompted by the COVID-19 pandemic. Nevertheless, faculty remain optimistic about the potential of curricular restructuring and suggest improvements to the process. The development of a theoretical model that symbolizes the actors' experiences was a significant step, further supported by the presence of similar studies conducted within the same institution, which yielded comparable results. While these findings validate and reinforce the outcomes of this research, they also raise a compelling question: why do similar issues persist across studies conducted at different times and with varying objectives? The dynamic and fluid nature of the educational experience permeates all investigations, even if they are not specifically focused on the same topic. What remains to be explored, subject to future studies, is the reason behind the ongoing lack of resolution to the problems identified by the actors.

The importance of continuous and ongoing professional development in teaching is emphasized, considering the ever-evolving landscape of health and society. This development should be rooted in the principles and guidelines of the



Possibilidades da Literatura Infantojuvenil na Educação Ambiental: Fundamentos Pedagógicos na Perspectiva de Paulo Freire

Unified Health System, empowering critical reflection, and the transformation of educational and medical practices. Thus, educational management is crucial in aligning processes with the desired professional profile and the National Guidelines for Medical Education.

The findings of this study, combined with other literature and previous research involving students, hold substantial potential to contribute to actions related to teacher training and the management of educational processes.

For limitations, the remote nature of the interviews resulted in some refusals and potential difficulties in contacting certain participating teachers. Additionally, due to social isolation, it was not possible to validate the data with the participants or engage in other forms of triangulation, such as participant observation.

As a future expansion of the research process, it is recommended to conduct a third study aimed at understanding the experiences of users who receive care from the health services where students of this institution are involved.

The presentation of the research findings to the participants and other stakeholders involved in this process is essential, stimulating critical reflections and fostering changes in the approach and operationalization of health needs, which serve as the theoretical foundation of the institution's curriculum. Without the active participation of key stakeholders, including students, faculty, academics and health management personnel, and users, the transformations sought will not be truly effective or enduring.

REFERENCES

ALMEIDA FILHO, Naomar. We have never been Flexnerians: Anísio Teixeira and higher education in health in Brazil. *Cadernos de Saúde Pública*, v. 30, n. 12, p. 2531-2543, dez. 2014.

BATISTA, Nildo Alves; VILELA, Rosana Quintella Brandão; BATISTA, Sylvia Helena Souza Silva. *Medical Education in Brazil*. 1. ed. São Paulo: Cortez Editora, 2015.

BORKAN, Jeffrey M. *et al.* Health systems science education: The new post-Flexner professionalism for the 21st century. *Medical Teacher*, v. 43, n. sup2, p. S25-S31, 8 abr. 2021.

BRASIL. A new medical school for a new health system. Brasília, DF: [s.n.], 2002.



Possibilidades da Literatura Infantojuvenil na Educação Ambiental: Fundamentos Pedagógicos na Perspectiva de Paulo Freire

BRASIL. CNE/CES Resolution No. 4, of November 7, 2001. Establishes National Curriculum Guidelines for the Undergraduate Course in Medicine. Brasília, DF: [s.n.], 2001.

BRASIL. Resolution No. 3, of June 20, 2014. Establishes National Curriculum Guidelines for the Undergraduate Course in Medicine and other measures. Brasília, DF: [s.n.], 2014.

CASTRO, Marcia C *et al.* Brazil's unified health system: the first 30 years and prospects for the future. *The Lancet*, v. 394, n. 10195, p. 345-356, jul. 2019.

CATE, Olle T; CARRACCIO, Carol. Envisioning a True Continuum of Competency-Based Medical Education, Training, and Practice. *Academic medicine*, v. 94, n. 9, p. 1283-1288, 2019.

CECILIO, Luiz Carlos Oliveira; REIS, Ademar Arthur Chioro. Notes on persistent challenges for basic health care in Brazil. *Cadernos de Saude Publica*, v. 34, n. 8, p. 1-14, 2018.

CESARIO, Raquel Rangel; CESARIO, Manuel; SANTOS, Cibele Gomes. Dawn of the Systemic Paradigm in Medical Education. *Revista Brasileira de Educação Médica*, v. 43, n. Suppl 1, p. 305-313, 2019.

CONTI, Andrea Alberto. Historical evolution of the concept of health in Western medicine. *Acta Biomedica*, v. 89, n. 3, p. 352-254, 2018.

CORBIN, Juliet; STRAUSS, Anselm. *Basics of Qualitative Research*: Techniques and Procedures for Developing Grounded Theory. 4. ed. [S.l.]: Sage Publications, 2014.

CUNHA, Carlo Roberto Hackmann Da *et al*. Primary Health Care Portfolio: Assuring of integrality in the Family Health and Oral Health Teams in Brazil. *Ciência & Saúde Coletiva*, v. 25, n. 4, p. 1313-1326, abr. 2020.

DAMINELLI, Clarisse Machado Borges; WUO, Andrea; HEINZLE, Marcia. Brazilian Medical Education: a Historical Analysis of Academic and Pedagogical Education. Revista Brasileira de Educação médica, v. 42, n. 4, p. 66-73, 2018.

DE CAMARGO, Kenneth Rochel. On health needs: The concept labyrinth. *Cadernos de Saude Publica*, v. 34, n. 6, p. 1-10, 2018.

DENIZARD-THOMPSON, Nancy *et al.* Association of a Health Equity Curriculum With Medical Students' Knowledge of Social Determinants of Health and Confidence in Working With Underserved Populations. *JAMA Network Open*, v. 4, n. 3, p. e210297, 1 mar. 2021.

DORICCI, Giovanna Cabral; GUANAES-LORENZI, Carla. Co-management in the context of Brazil's National Humanization Policy: an integrative review. *Ciência & Saúde Coletiva*, v. 26, n. 8, p. 2949-2959, ago. 2021.

SÃO PAULO; MARÍLIA MEDICAL SCHOOL. *Integrated Internship*: Adult Health I, Mother and Child Health I. Marília: [s.n.], 2022



Possibilidades da Literatura Infantojuvenil na Educação Ambiental: Fundamentos Pedagógicos na Perspectiva de Paulo Freire

FERREIRA, Marcelo José Monteiro *et al.* New National Curricular Guidelines of medical courses: opportunities to resignify education. *Interface - Comunicação*, *Saúde*, *Educação*, v. 23, n. suppl 1, 2019.

FREIRE FILHO, José Rodrigues *et al*. New national curricula guidelines that support the use of interprofessional education in the Brazilian context: An analysis of key documents. *Journal of Interprofessional Care*, 2017.

FREITAS, Gabriele Carvalho; FLORES, Joyce Andrade; CAMARGO JR., Kenneth Rochel. "Health needs:" reflections on the (in)definition of a concept. *Saúde e Sociedade*, v. 31, n. 1, 2022.

GIOVANELLA, Ligia; FRANCO, Cassiano Mendes; ALMEIDA, Patty Fidelis De. National Primary Health Care Policy: where are we headed to? *Ciência & Saúde Coletiva*, v. 25, n. 4, p. 1475-1482, abr. 2020.

GIROTTO, Letícia Cabrini *et al*. Preceptors' perception of their role as educators and professionals in a health system. *BMC Medical Education*, v. 19, n. 1, p. 203, 13 dez. 2019.

KOCH, Roland *et al.* A post-Flexner comparative case study of medical training responses to health system needs in Brazil and Germany. *BMJ Global Health*, v. 7, n. 3, p. e008369, 28 mar. 2022.

LEITE, Jéssyca Andrade *et al.* Effectiveness of the principles of the unified health system in primary health Care: systematic review of the literature. *Revista de APS*, v. 21, n. 2, p. 278-290, 20 dez. 2018.

LIMA, Valéria Vernaschi; PADILHA, Roberto Queiroz. *Reflections and innovations in the education of health professionals*. Rio de Janeiro: Atheneu, 2018.

MACHADO, Carolina; OLIVEIRA, José Maurício; MALVEZZI, Edson. Repercussions of the 2014 national curricular guidelines on the pedagogical projects of new medical schools. *Interface - Comunicação*, *Saúde*, *Educação*, v. 25, 2021.

MARÍLIA MEDICAL SCHOOL. Attention to the Health Needs of the Individual, Family and Community, in the Health Surveillance Model and Professional Practice Unit. Marília: [s.n.], 2022a.

SÃO PAULO; MARÍLIA MEDICAL SCHOOL. Evaluation guide for medicine and nursing courses. Marília: SÃO PAULO; MARÍLIA MEDICAL SCHOOL, 2021.

SÃO PAULO; MARÍLIA MEDICAL SCHOOL. Famema and new perspectives: medical course. Marília: [s.n.], 2005

SÃO PAULO; MARÍLIA MEDICAL SCHOOL. Health Needs 2 and Professional Practice. Marília: [s.n.], 2022b.

SÃO PAULO; MARÍLIA MEDICAL SCHOOL. Health Needs 3 and Professional Practice 3. Marília: [s.n.], 2022c.



Possibilidades da Literatura Infantojuvenil na Educação Ambiental: Fundamentos Pedagógicos na Perspectiva de Paulo Freire

SÃO PAULO; MARÍLIA MEDICAL SCHOOL. *Integrated Internship*: Adult Health II, Mother and Child Health II. Marília: [s.n.], 2022d.

SÃO PAULO; MARÍLIA MEDICAL SCHOOL. *Pedagogical Project of the Medicine Course*. Marília: [s.n.], 2014.

SÃO PAULO; MARÍLIA MEDICAL SCHOOL. *Professional Practice Unit and Systematized Educational Unit 1*. Marília: [s.n.], 2022e.

MASSUDA, Adriano. Primary health care financing changes in the Brazilian Health System: advance ou setback? *Ciência & Saúde Coletiva*, v. 25, n. 4, p. 1181-1188, abr. 2020.

NOBILE, Marianna. The WHO definition of health: a critical reading. *Medicine and law*, v. 33, n. 2, p. 33-40, jul. 2014.

NONATO, Ana Carolina *et al*. Apprehension and Understanding of the Health Needs Concept for Students of an Active Curriculum. *Revista Brasileira de Educação Médica*, v. 44, n. 2, 2020.

PINTO, Luiz Felipe *et al.* 40 years of Alma-Ata: Challenges of Primary Health Care in Brazil and in the World. *Ciência & Saúde Coletiva*, v. 25, n. 4, p. 1178-1178, 1 abr. 2020.

REZENDE, Kátia Terezinha Alves *et al.* Problem-Based Learning in a Medical School: Implementations Challenges. *Revista Brasileira de Educação Médica*, v. 44, n. 4, 2020.

RIEGER, Kendra L. Discriminating among grounded theory approaches. *Nursing Inquiry*, v. 26, n. 1, p. 1-12, 2018.

SWANWICK, Tim. Understanding Medical Education. *Understanding Medical Education*. Chichester, UK: John Wiley & Sons, Ltd, 2018. p. 1-6.

TOLAZZI, Julia da Rosa; GRENDENE, Gabriela Monteiro; VINHOLES, Daniele Botelho. Measuring comprehensiveness of care using the Primary Care Assessment Tool: systematic review. *Revista Panamericana de Salud Pública*, v. 46, p. 1, 21 fev. 2022.

TONG, Allison; SAINSBURY, Peter; CRAIG, Jonathan. Consolidated criteria for reporting qualitative research (COREQ): A 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*, v. 19, n. 6, p. 349-357, 2007.

VAN MELLE, Elaine *et al.* A Core Components Framework for Evaluating Implementation of Competency-Based Medical Education Programs. *Academic Medicine*, v. 94, n. 7, p. 1002-1009, 1 jul. 2019.

VERAS, Renata Meira; FEITOSA, Caio Cezar Moura. Reflections on the National Curricular Guidelines of undergraduate medical courses based on the National Health Promotion Policy. *Interface - Comunicação*, *Saúde*, *Educação*, v. 23, n. suppl 1, 2019.



Possibilidades da Literatura Infantojuvenil na Educação Ambiental: Fundamentos Pedagógicos na Perspectiva de Paulo Freire

WORLD HEALTH ORGANIZATION. Constitution of World Health Organization. [S.l: s.n.], 1946.

WORLD HEALTH ORGANIZATION. Ottawa charter for health promotion. Ottawa: WHO, 1986.

DECLARATIONS

Ethics approval and consent to participate

Research Ethics Committee approved this qualitative research on December 16, 2020, with approval number 4.468.452 and Brazil Plataform (Plataforma Brazil) registration number CAAE: 40684720.0.0000.5413.

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Authors' contributions

ACN contributed to the data curation, formal analysis, investigation, methodology, resources, supervision, validation, visualization, writing - original draft, writing - review and editing.

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MQC contributed to the formal analysis, investigation, methodology, supervision, validation, visualization, writing, review and editing.

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