

Children and adolescents with disabilities: challenges in medical training

Crianças e adolescentes com deficiência: desafios na formação médica

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ABSTRACT

Introduction: supporting the constitutional rights of people with disabilities includes meeting new curricular guidelines and requires higher education that considers diversity in different contexts. Thus, the undergraduate curricula of health professionals must meet the multifaceted needs of people with disabilities in a way that transcends the biomedical model and permeates the promotion of an inclusive culture. Attitudes and values about disability often influence people's behavior, making it imperative to introduce this topic.

Aim: the present study aim to describe an approach in the curricula and teachers' conceptions about children and adolescents with disabilities in medical courses.

Method: this exploratory, cross-sectional study with a qualitative approach included the documental analysis of official documents of the courses and official pages of the universities, published until the first semester of 2021 and interviews of teachers participating in the course. The content analysis technique was used for the interview material.

Results: the documental analysis pointed in the general topics a direction towards a humanistic formation, while respecting the differences; however, when the topic is the disability, the focus was centered on biological issues. During the interviews, the following topics were identified: 1) The importance of the Unified Health System as a space for medical training; 2) The contribution of the National Curriculum Guidelines in guiding the activities of teachers and highlighting relevant points; 3) Development of teaching activities aimed at children and adolescents with disabilities, based on the teachers' experiences; 4) Conception about the person with disabilities and teacher training; 5) Teacher training for the development of teaching activities about children and adolescents with disabilities and knowledge about public policies in the area.

Conclusions: a weakness was identified in the approach to the subject, with specific insertions on the subject, usually from the perspective of the disease and from the opportunities that arise. Among the teachers, the predominance of the biomedical perspective was identified, as well as the lack of training on the subject and its fragile insertion in academic practice. However, the importance of the topic was recognized and its potential to integrate the curricular matrix in a cross-sectional way.

Keywords: People with disabilities; Pediatrics; Children; Teenagers; Higher Education.

RESUMO

Introdução: Amparar os direitos constitucionais das pessoas com deficiência inclui atender aos novos direcionamentos curriculares e exige um ensino superior que considere a diversidade em diversos contextos. Assim, os currículos de graduação de profissionais de saúde devem atender às necessidades multifacetadas das pessoas com deficiência de modo que transcendam o modelo biomédico e perpassem pela promoção da cultura inclusiva. As atitudes e os valores sobre a deficiência frequentemente influenciam o comportamento das pessoas, tornando imperativa a introdução desta temática.

Objetivo: Este estudo teve como objetivo descrever a abordagem nos currículos e as concepções de professores sobre crianças e adolescentes com deficiência em cursos de Medicina.

Método: Trata-se de um estudo exploratório, transversal e de abordagem qualitativa que incluiu a análise documental de documentos oficiais dos cursos e páginas oficiais das universidades publicados até o primeiro semestre de 2021, e entrevistas de professores participantes do curso. A análise de conteúdo foi a técnica utilizada para o material das entrevistas.

Resultado: A análise documental apontou nos tópicos gerais um direcionamento para uma formação humanística, com respeito às diferenças. Entretanto, quando a temática é a deficiência, o enfoque foi centrado nas questões biológicas. Nas entrevistas, identificaram-se os seguintes eixos temáticos: 1. a importância do Sistema Único de Saúde como espaço de formação médica; 2. a contribuição das Diretrizes Curriculares Nacionais na orientação das atividades dos docentes e destaque a pontos relevantes; 3. desenvolvimento de atividades de ensino voltadas à criança e ao adolescente com deficiência, com base nas experiências dos docentes; 4. concepção sobre a pessoa com deficiência e formação docente; 5. formação docente para o desenvolvimento de atividades de ensino sobre a criança e o adolescente com deficiência e conhecimento sobre as políticas públicas da área.

Conclusão: Foi identificada uma fragilidade na abordagem da temática, com inserções pontuais sobre o tema, geralmente na perspectiva da doença e a partir de oportunidades surgidas. Entre os docentes, identificaram-se a predominância do olhar biomédico, a ausência de formação para a temática e a frágil inserção desta na prática acadêmica. Entretanto, houve reconhecimento da importância do tema e seu potencial em integrar a matriz curricular de forma transversal.

Palavras-chave: Pessoas com Deficiência; Pediatria; Crianças; Adolescentes; Ensino Superior.

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INTRODUCTION

The conceptions about persons with disabilities (PwD) change according to the social, moral, philosophical, ethical and religious values adopted by different cultures, in different historical moments¹. The World Health Organization (WHO) estimates that around 15% of the global population and at least 10% of the children worldwide are born or acquire some type of physical, mental or sensory disability, with negative implications on their development^{2,3}.

In Brazil, the 2019 National Health Survey (PNS, *Pesquisa Nacional de Saúde*) estimated the number of persons with disabilities as 17.3 million, representing 8.4% of the population. Of these, 1.5% were children aged 2 to 9 years and 3.3% were adolescents aged 10 to 17 years. Among the major Brazilian regions, the percentage PwD was the highest in the Northeast region, corresponding to 9.9% of the population, with all its federative units showing a percentage above the national average⁴⁻⁶.

Problems in meeting the health needs of this public or population/population segment are observed virtually in the whole world and indicate failures in quality care and attention, in guaranteeing safety, effectiveness, waiting, efficiency and equity⁷.

In this scenario, Europe launched the document European Strategy for Disability 2010-2020 for the 2010-2020 decade, which seeks to promote awareness of persons with disabilities in medical training and health curricula⁸. With this opening in 2021, the European Commission launched the Strategy on the Rights of Persons with Disabilities 2021-2030, a document based on three main pillars: citizenship, the right to a dignified and independent life and the elimination of discrimination⁹.

The Brazilian legal framework recognizes health as the right of all and the responsibility of the government¹⁰, with the Child and Adolescent Statute (ECA, *Estatuto da Criança e do Adolescente*) being emphatic in indicating the need for specialized care for this portion of the population. It is well established that it is the responsibility of the public power to provide, free of charge, all the resources related to the treatment or rehabilitation to all those who need it, without any exclusions¹¹.

The Brazilian Law of Inclusion (2015) reinforced the necessary comprehensive health care for all citizens, in addition to specific assistance with care and services dedicated to children and adolescents with disabilities. This Law, based on the concept of human rights and diversity, aims to develop the potential of persons with disabilities⁷, overcoming the paradigm of charity and welfarism¹².

In 2002, the National Health Policy for Persons with Disabilities already provided as urgent and a priority the training

of human resources in health to care for this public and, thus, signals the development of joint actions with the Ministry of Education (MEC) and with higher education institutions (HEIs)^{13,14}.

Based on the idea of knowledge autonomy, the university has society as its principle and reference of value¹⁵ and must commit to academic-scientific and social relevance, thus seeking solutions to the problems of this society¹⁶. Therefore, higher education must guarantee in its curricula training focused on effective, responsible, and ethical actions directed at the social context^{17,18}. However, despite being one of the largest and fastest growing subgroups, issues related to disability and rehabilitation are not well covered in most medical schools' curricula¹⁹.

In addition to incorporating disciplines and content on rehabilitation and health care for PwD in undergraduate curricula in the health area, it is also important to raise awareness and engage teachers and managers of medical schools, as well as the Ministries of Education and Health, to contribute to the quality of care provided²⁰.

The Brazilian educational scenario experiences significant organizational, curricular and teaching-learning process reforms, seeking a generalist, humanist and critical-reflexive education that includes, in addition to the technical dimensions of work, also the political and ethical dimensions²¹.

In this context, the importance of the International Classification of Functioning, Disability and Health (ICF) is highlighted as a topic to be included in health science curricula, since it brings in its framework the guidelines of the biopsychosocial model, seeking to establish the language, perception and production of comprehensive care, centered on the universality of knowledge and equity of care^{22,23}.

However, few studies have analyzed teaching about persons with disabilities in medical training, either from a quantitative point of view or in relation to the addressed policies and concepts. Given the social dimension of disability, the way it is conceptualized and experienced, as well as its prevalence in the states of the Northeast region, this research is justified, which aims to describe the approach and conceptions about children and adolescents with disabilities in the medical courses at the federal universities in northeastern Brazil.

METHOD

Study type

This was an exploratory, cross-sectional study with a qualitative approach that included documental analysis and interviews.

Research scenario

Northeast Brazil has 86 medical courses, of which 37

are public institutions and, of these, 23 are federal institutions, according to the e-MEC register, the official database of higher education institutions and undergraduate courses of the Federal Education System of Brazil²⁴. The medical schools of the Federal Higher Education Institutions (HEIs) located in the Northeast region were selected, of which courses are recognized by the MEC, instituted before the 2001 curricular guidelines and located in the federal capitals, resulting in nine assessed courses.

To carry out the interview, one of the medical schools participating in the previous stage was included.

Document analysis

The mapping of the institutions was carried out through the websites of the federal institutions and through the e-MEC Register, as well as the documents used for the syllabi of the medical courses, and information on the universities obtained from the institutions' websites until the first semester of 2021.

The Pedagogical Projects of the Course (PPCs) were analyzed in the light of the current legislation, the National Curricular Guidelines (DCNs, *Diretrizes Curriculares Nacionais*) and the care policies for people with disabilities.

Interview

Teachers of the discipline/curricular unit of Pediatrics working at the selected institution were invited to participate. It was decided to conduct an interview, using guiding questions²⁵.

The pilot test was carried out with three professors of Pediatrics who did not belong to the active staff of the assessed institutions during the months of May and June of 2019. Based on the participants' considerations, the necessary adjustments were made for better understanding of the data collection

instrument. The interviews used in the pilot test were not part of the research.

The interview script consisted of twelve guiding questions, as described in Chart 1.

Study subjects

As research subjects, all teachers of the medical course at the selected institution were defined, with more than one year of teaching at the HEI, linked to the discipline/curricular unit of Pediatrics and who were performing academic activities during the research period.

Of the 19 eligible teachers at the beginning of data collection, one did not identify with the target audience, as he was not performing clinical activities in pediatrics; another did not respond the four contact attempts; two responded to the first contact but did not proceed with the scheduling of the interview; one was on sick leave; one died due to Covid-19 and one was a substitute teacher whose contract ended during the course of the research.

Therefore, 12 teachers effectively participated in the research, 10 of which were women, with a median age of 46.5 years. Of the participants, 8 reported having a person with a disability in their family. The teaching career time ranged between 4 and 32 years. All were pediatricians and had been working in the area for 6 to 41 years, 5 (41.66%) had a Ph.D. degree and 3 (25%) had a Master's degree.

Data collection and analysis procedures

For the documental analysis, a survey of the eligible documents was carried out – PPCs, curricular matrices, syllabi and information from the official websites of the universities –, using the terms: people with disabilities,

Chart 1. Guiding questions for the interview with teachers.

<p>In your opinion, has SUS influenced the training of physicians? How?</p> <p>Do you know the DCNs for medical courses? What points do you find the most relevant?</p> <p>Do you know the PPCs of your course? What do you find the most relevant?</p> <p>What do you understand by children and adolescents with disabilities?</p> <p>How was your training (professional academic) regarding children and adolescents with disabilities?</p> <p>Do you develop any teaching activities related to the issue of children and adolescents with disabilities? What are they?</p> <p>Do you know of any recommendations by the SBP or the DCNs regarding children and adolescents with disabilities? What are they?</p> <p>What do you think of the inclusion of the topic on children and adolescents with disabilities in the curriculum of medical courses?</p> <p>Have you detected any changes in the last five years, regarding medical training related to this topic?</p> <p>In your opinion, what is the best way to work on this topic during medical undergraduate school?</p> <p>What do you understand by accessibility committee? Do you know any?</p> <p>Would you like to say anything else?</p>

Source: prepared by the author (2020).

disability, diversity, respect for differences, child and adolescent with disability and mentions of legislation, public policies and teacher training related directly or indirectly to the pedagogical objectives that would favor the approach of this topic. To guarantee and preserve the anonymity of the HEIs, the documents were coded.

To carry out the interview, contact was made by e-mail with the coordinator of the selected medical course, sending the letter of invitation and clarification of the research, resulting in approval of the proposal. The interviews were scheduled and took place from April to October 2020, remotely, on a day and time that were convenient for the participant.

Information on age, gender, time of training in the specialty, presence of disabilities and presence of a disabled person in the family were collected through a standardized questionnaire sent to the teachers who agreed to participate in the study. The discourses were recorded with the consent of the participants, ensuring privacy, anonymity and confidentiality of their statements.

Data analysis procedures

For the interview, the steps proposed by Bardin²⁵ were followed: floating reading and pre-analysis to get acquainted with the text and record the first impressions; treatment of the material through thematic analysis, defining categories and subcategories according to the benchmarks and the topic of interest established in the study²⁵.

The collected data were tabulated according to sets of descriptive categories²⁵.

Ethical procedures

The research was approved by the Research Ethics Committee (CEP) of the Federal University of São Paulo (Unifesp) – N. 2,906,949. The participants signed the Free and Informed Consent Form. All interviews were conducted by the same researcher.

RESULTS

The results are presented according to the two research components: (1) documental analysis and (2) interview.

Documental analysis

The PPCs used for this study were implemented between 2010 and 2021. For this reason, four assessed courses still have pedagogical projects based on the 2001 guidelines as a reference and five have already adapted their projects to the 2014 guidelines.

The workload of Pediatrics in the analyzed courses varied between 640 and 880 hours, with an average of 9.8% of the total. Chart 2 shows the modules or disciplines of each HEI that directly address the issue of persons with disabilities, conditions that course with disabilities or topics that express intentions or contain elements that favor the approach on children with disabilities.

Chart 2. Presence of the disability topic in official documents.

		HEI1	HEI2	HEI3	HEI4	HEI5	HEI6	HEI7	HEI8	HEI9
Optional/elective module/discipline of <i>Libras</i>	PPC	X		X	X	X	X	X	X	X
	Institutional website		X							
Optional/elective module/discipline related to PwD		-	-	-	-	X	-	-	-	-
Optional/elective module/discipline related to human rights									X	
Content on disability in Pediatrics		-	-	-	-	-	-	-	-	-
Curricular contents with a biomedical approach to disability within modules/disciplines			X	X		X				X
Curricular contents with a social approach to disability within modules/disciplines		-	-	-	-	-	-	-	-	-
Content related to genetic syndromes and congenital malformation in pediatrics modules			X							X
Content related to genetic syndromes and congenital malformation in other modules		X	X	X	X	X	X	X	X	X
Teacher training to address disability	PPC			X						
	Institution website			X					X	
Respect for disability		X				x				
Respect for differences and human diversity		X	X	X		X	X	X	X	X

Legend: LIBRAS (*Linguagem Brasileira de Sinais*) – Brazilian Sign Language.
Source: prepared by the author (2021).

All the assessed institutions have in their PPCs a direction towards a humanistic formation focused on the needs of the community and society in accordance with the guidelines of the Brazilian Unified Health System (SUS, *Sistema Único de Saúde*), seeking a generalist, cross-sectional and interdisciplinary approach.

Regarding disability, the contents found are mainly focused on the biological sciences and were identified by the presence of words/terms such as: clinical reasoning, diagnosis, therapeutic conduct and approach to diseases; and little or no aspects related to rights, respect, embracement, which raises some reservations in relation to medical training due to its focus on the disease and not in the broader sense of health. This observation is reinforced by the findings of the syllabi, in which genetic syndromes and congenital malformations are the contents found in disciplines/modules of all assessed courses, even if, for the most part, outside the pediatrics modules.

In the general description of the PPCs, in the fundamentals and justifications section, seven of the nine analyzed documents mention respect for human differences and diversity, and two of them also directly mention respect for persons with disabilities. However, only one of the assessed courses has a module directly related to persons with disabilities in its curriculum, which is optional.

Another finding of the documental analysis was the presence of the Brazilian Sign Language (LIBRAS – *Linguagem Brasileira de Sinais*) component in all analyzed courses, as an optional discipline.

Interview

The teacher's view of the teaching of disability

Based on the interviews, the categories related to the following thematic axes were defined:

The importance of SUS as a space for medical training

Based on the teachers' speeches, it was possible to identify a single category: *Recognition and appreciation of SUS as an important scenario of practices for teaching and professional training*. In this category, speeches about the SUS were considered as an aggregator of conditions to provide a generalist training and to prepare students for future professional work in this system, according to the priority needs and demands of the population. The speeches were complementary and associated working in the SUS with the possibility of teamwork, the training of general practitioners, close to people's reality and with the possibility of exchanging experiences with the services. Some speeches also pointed to difficulties in implementing this teaching, with emphasis on the teacher's role.

[...] that they be more generalist individuals... the training, the person is more... have a greater power of articulation, work as a team and that we can have a broader knowledge of the society that we serve.

[...] medical training, we are already guided to train the professional for the SUS [...] the general practitioner, who is capable of dealing with the problems faced by society [...] and not for specialists, for generalists.

[...] They participate in the service, give back to the population, improve this service; this service, too, is structured to give the best from the point of view of infrastructure aimed at teaching [...].

[...] But in practice, in training this will depend and still depends a lot on the teacher's involvement. The meaning is to train for the SUS, but I cannot specify whether this is actually happening as it should, because it depends a lot on the teacher [...].

The contribution of the National Curriculum Guidelines in guiding the activities of teachers and highlighting relevant points

Regarding this issue, two categories were identified: 1) *Recognition and utilization of relevant points of the DCNs for the guidance and organization of medical courses* and 2) *Recognition and awareness of the DCNs as guiding the organization of the course, but lack of knowledge of its content*. In the first category, the teachers' speeches revealed greater proximity to the topic, highlighting the importance of the DCNs and their relevant points, especially regarding general education at all levels of health care in the SUS and the competencies, abilities and attitudes to be acquired aiming at having future professionals who are better prepared for the demands of society. In the second category, although the teachers demonstrated knowledge of the DCNs as guiding the medical course, there was a distancing from this discussion in their daily lives, difficulties in pointing out their relevant points, indicating that this issue is more present for course managers.

- 1) *Recognition and utilization of the DCNs for guiding and organizing the medical courses and stating of relevant points.*

If it is to highlight one, it would be the one that covers all professions and that... requires that we pay attention to the training at all levels of health care.

[...] I think they are all important, but what I think calls the most attention is the topic that is related to communication. Learning to communicate, relate to people [...].

I remember the ethical issues very well.

- 2) *Recognition and awareness of the DCNs as guiding the organization of the course, but lack of knowledge of their content.*

[...] I followed something from these meetings, but I'm not one of those who are more ahead, no [...] but, well, I have some knowledge, yes.

[...] I know I read it... but... I don't remember, so I can't say exactly.

I don't know them all, no... I can't say now.

[...] For the university, you need to put together an activity plan... then I had access.

[...] No... Not that I remember.

Development of teaching activities aimed at children and adolescents with disabilities, based on the teachers' experiences

A single category was identified: *Recognition of the importance of the topic and its necessary inclusion in the medical curriculum.* This category includes statements by teachers who recognize the current importance of the topic. However, there is a perception that the current training is limited to situations that arise in different services (genetics, neurology, preterm care), focused on biological issues and insufficient in the presence of the demand and the current conception of persons with disabilities, which should include legislation, rights, comprehensive care of the person. Regarding the way it should be included in the course, the teachers' speeches pointed to different possibilities, with a predominance of the cross-sectional approach and, at the same time, given the importance of the issue, its inclusion in the curriculum as a specific topic, emphasizing the role of extension projects aiming at the expansion of the topic.

[...] I think we end up having this more global view of comprehensive care for the child. But the child with a disability requires the most specialized care of all, because this is a concrete reality.

Because, in practice, it is something that we find. So, like, it should have... it doesn't exist in the curriculum.

[...] I don't see it in the curriculum, an... an emphasis, right, on this issue. Then, we don't have, like, a... a... let's say, a... a specific moment to deal with this topic, no.

Regarding children and adolescents with disabilities, I think that we are far from what could be done, unfortunately.

They are treated as they show up with symptoms.

[...] no matter how much you divide Pediatrics into several moments during the course, it still ends up being very focused. Let's say, more biological than... from the point of view of comprehensive care.

[...] this issue of extension courses being mandatory, I think it fits perfectly into university extension.

Conception of persons with disabilities and teacher training

Two categories were identified in this axis: *the comprehensive conception that recognizes the historical-social determination; and a predominantly biological conception.*

Comprehensive conception that recognizes the historical-social determination

The speeches that indicated this conception were directed at the role of society in its approach and the recognition of the person with disability as a subject of rights.

[...] is a very broad term, right!? I think it needs to be seen in its specificities. I think that, depending on the viewpoint, it can be very different, depending on the culture, depending on what is intended, and you always have to have a perspective, that is... in the case of health care, a critical point of view so you can be the facilitator for these children or adolescents to reach adulthood in all their potential.

I think that when people label 'disability', they want to tell me something, as if it were, in the end, a negative thing, which is not always the case. Each one has their strengths and sometimes they may not... they may have special needs in some senses and may have much greater potential in others.

Predominantly biological conception

The speeches focused on diseases and limitations predominated.

[...] that have some limitation from an intellectual, physical point of view.

It is not just the child who has a cognitive disability, in this case. They may have some motor disability, some... any type of disability, right? Sometimes even the behavioral issue is a type of disability, too.

I think they are children with special needs. [...] this word is not something that makes me... that word does not make me feel comfortable.

Teacher training aimed at the development of teaching activities about children and adolescents with disabilities and knowledge about public policies in the area

Regarding this topic, a single category was identified: *Recognition of the lack of teacher training for the care of children and adolescents with disabilities.* The speeches highlight that attention to this public, when it happens, is imbued with life experience and acquired through professional practice. The participants state that the HEI needs to provide opportunities for teacher development on the subject, going beyond clinical issues and including public policies, approach and communication.

Nothing specific, no. I don't remember having it. What we have, is like... in practice and we have contact with these children and adolescents, during practice, but not specific training aimed at it.

We treat them, but we do not have the specific training to treat this type of child and adolescent.

[...] the institution needs training for these teachers, because as we were not instructed during training, so for us to be able to work that with our students, we need to possibly undergo training.

DISCUSSION

The DCNs bring a positive impact on health courses, contributing to transform the teaching process and the general training of physicians, strengthening the relationship between training, the SUS and the health needs of the population, including the approach to persons with disabilities.

The development of integrated actions between the education and the health systems should be the basis of the health training, seeking to train skilled professionals able to provide comprehensive and humanized care, with competencies that include teamwork; decision-making power; and able to consider both individual needs and the context and available resources^{26,27}.

In this context, the HEIs must adapt their political-pedagogical projects to society's needs, aiming to strengthen educational processes, seeking a redefinition of the medical course format in accordance with the DCNs.

The documental analysis, in this study, showed that, in most of the analyzed documents, the topic of the disabled person is discussed and valued in the general description; however, it does not appear in the intentionality of the disciplines, or in the syllabi. Considering the epidemiological reality of the northeast region, the question arises about the reasons why this topic does not have a significant scope among the assessed courses.

It is also noteworthy highlighting the heterogeneity of the participants regarding the utilization of the DCN and PPC contents, which can be an obstacle to their operationalization. However, the recognition of the importance of the SUS and the DCNs in the teaching-learning process is remarkable, which points to a generalist training that meets the most frequent health situations.

As with official documents, the teachers' speeches emphasize the importance of the topic. However, very often, the approach related to disability is offered to the undergraduate student at specific times and only if something arises that raises the discussion, not being part of the curricular components of most courses.

The teachers participating in this research pointed to the need for training and awareness as challenges to be overcome,

so that the inclusion of the topic on persons with disabilities can be fully established in medical courses. This need is reinforced in the many speeches of teachers pointing out the lack of contact with the topic during their training.

The inconsistency of the discussion on disability during teacher training may explain, at least in part, the statements that correlate the topic approach to experience, interest and personal conceptions, rather than a consistent discussion throughout the course. Allowing the teachers to reflect on how they understand disability is a significant step for greater inclusion of the topic in the curricula²⁸. For this purpose, institutional support is crucial, as the undergraduate course is the most democratic opportunity to promote this discussion.

The WHO states that HEIs are privileged places, being in a unique position to influence changes²⁹. The National Health Policy for Persons with Disabilities¹³ also reinforces the availability of qualified human resources for its development and implementation as a priority and necessary.

The focus on the disease and not on the expanded concept of health, observed in the documental analysis and reinforced in the interview with the teachers, points to a curriculum centered on the clinical aspect, with emphasis on diagnosis and therapeutic conduct. Some authors point out that the large amount of contents to be included in the curriculum can lead to a disease-centered approach³⁰. The interdisciplinary and transdisciplinary focus, as well as the adoption of comprehensive curricula and the encouragement of an inclusive institutional culture constitute the path to effective integration.

Teaching strategies based on the individualization and medicalization of disability, excessively focused on the disability, are very limiting³¹. It is worth emphasizing the importance of accurate diagnosis and treatment, which are part of the specific skills to be developed by medical students. However, technical knowledge alone is not enough and, therefore, general skills, such as comprehensiveness, accessibility, responsibility, commitment and considering the needs of the population, are crucial for the training with a broader view of health.

Here, salutogenesis stands out as a way to understand health, seen in its broader context from the perspective of health promotion, care and well-being, directed towards the perception of the health-disease process linked to the historical-cultural and individual context, pointing out strategies to stay healthy^{32,33}.

The association between technique and knowledge that guide medical practice should lead professionals to consider themselves as social subjects in search of care focused on quality of life, where diagnosis and treatment take on a

different meaning³⁴. It is crucial to develop competences that include knowledge, skills and attitudes that allow detecting the health problems of the population, in addition to considering their rights and the socioeconomic context³⁵.

Overcoming the unicausal, biologicist model is a permanent challenge. Replacing cure by care from a holistic perspective, in which becoming ill and dying are closely linked to quality of life, is a challenge³⁶ that demands a balanced approach, considering different perspectives for different needs and aspects of disability³⁷.

Since disability is a multidimensional concept, its approach is broad and can be included in all curricular components and in any course offered by the HEI³⁸. It is important to highlight that, in line with the DCNs, HEIs, in addition to guaranteeing access for students and professionals with disabilities, need to build knowledge on the subject in all academic spheres and, thus, train professionals with the competence to understand and deal with disability issues in their professional life³⁰.

The extension subject is mentioned by two teachers as the moment of contact with the issue of children with disabilities. These reports show the importance of optional/elective moments in the curriculum, particularly in relation to the strengthening of the issue. However, the results presented herein suggest that the topic, due to the experienced reality, also needs to be part of the mandatory curricular matrix, aiming to provide the opportunity of contact to all students.

An important initiative related to this perspective was the inclusion of the Brazilian Sign Language (LIBRAS, *Linguagem Brasileira de Sinais*) curricular component in health courses, established by Decree number 5.626, of 2005³⁹. Perhaps its offer in the optional/elective modality is a reflection of the flexibility offered in the decree regarding medical courses and reflects on the findings of the interviews, showing the fragile recognition of the existence of the teaching of LIBRAS in the course by the participating teachers.

From this perspective, the need to include in training courses for the health area the discussion on disability encompassing the perspective of structuring legislation, embracement, citizenship and inclusion is reinforced. Therefore, in addition to meeting health needs, professionals will be able to develop approaches aimed at human rights and social justice and break up with excluding and stigmatizing attitudes towards this public⁴⁰.

The treatment, stimuli, attitudes and rights must permeate the entire curriculum and not be discussed only at specific times⁴¹; therefore, the student can learn to understand, respect, live with and deal with persons with disabilities and their particularities⁴².

And thus, it is opportune to face the challenge of motivating and providing opportunities for teacher training, involving students and managers in the construction of an educational project that prepares subjects to exercise their citizenship, with the capacity to meet the current demands⁴³.

The absence of the student viewpoint is pointed out as a limitation of this study, which would allow expanding the triangulation of findings from the perspective of those who benefit from the offered curriculum. Another possibility of expanding the study would be to include teachers from other curricular components, as well as other public and private institutions from other regions of the country.

Nonetheless, one of the strengths of this study is the fact that it is multidimensional, starting from a relevant and urgent topic, with previously defined and consolidated public policies, which interconnects the areas of health and education and suggests ways and actions to improve the teaching of health, with reflections and dialogue for planning, aiming at comprehensive care for children and adolescents with disabilities.

FINAL CONSIDERATIONS

The results pointed to a weakness in the inclusion of the topic of disability in the PPCs, particularly when one seeks compatibility among their importance at the institution's official documents as beacons of training. It is suggested that an effort by the management can be opportune to promote its utilization among teachers, as well as to involve them in the construction and implementation process.

There was a relative lack of discussion about disability from the perspective of expanded health. Thus, it is considered necessary for educational institutions to make an effort to include the topic in a cross-sectional way, to provide opportunities for their students to reach the expected competences, overcoming the biomedical and disease-centered paradigm.

This convergence of views towards the curriculum and the teacher provides the necessary basis to support a technical training, in line with the social perspective of disability, anchored in the principles of human dignity and social equity.

AUTHORS' CONTRIBUTION

Rafaela Brandão Almeida Ambrosio: study conception and design; collection, analysis and interpretation of data; writing, review and final approval of the manuscript. Glaura César Pedroso: study conception and design; analysis and interpretation of data; technical and intellectual supervision; writing, review and final approval of the manuscript. Rosana Fiorini Puccini: study conception and design; analysis and interpretation of data; technical and intellectual supervision; leadership of the research group; writing, review and final

approval of the manuscript. Fabiola Isabel Suano: study conception and design; analysis and interpretation of data; technical and intellectual supervision; writing, review and final approval of the manuscript.

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

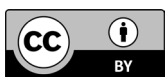
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