Medical education has been stressed by different models, which can motivate essentially biomedical and psychosocial knowledge. This article looks at how this knowledge relates to the teaching of health of the elderly, in the Comprehensive Care for the Health of the Elderly discipline, from the medical course of a public university in the interior of Minas Gerais. For data collection a qualitative approach was utilized, in which observations of theoretical and practical classes as well as interviews and documentary analysis was made. The results indicated that the theoretical classes have no planned relationship to the practice scenarios. The latter, on the other hand, demonstrate the potential to introduce students to the complexity of the health-disease process. In conclusion, the theory-practice, school-service relationships and their care models present challenges in medical training for integral health care of the elderly.

**Keywords:** Medical education. Elderly health. University education. Curriculum.
Introduction

The world is going through a demographic transition: humans live longer and simultaneously they draw a new social and epidemiological scenario. This phenomenon demands that the health system be duly prepared to deal with aging issues, which in turn involves the institutions that train health professionals, their curricula and educational projects. It is against this background that we present the question that guides our work: how teaching elderly care has been delivered in medical courses?

Elderly health is not determined by the absence of diseases, but by the functional capacity, which is directly related to the autonomy that the subject is able to sustain in everyday life. In this sense, the National Policy for the Health of the Elderly (PNSPI), guiding the assistance to the elderly in Brazil, recommends that the care of the elderly to be provided by primary care from the perspective of health promotion, reinforcing the importance of teaching elderly health aspects in undergraduate courses.

According to Pinheiro and Ceccim, scholars of professional education in health are unanimous in their criticism of the biomedical model for prioritizing technical and standardized procedures, which leads to the strengthening of the technological market and the creation of a corporatists profile in students, which undervalues primary care and hinders their insertion in interprofessional teams.

The focus of criticism regarding the biomedical model of health care is centered on the disease and on practices of cure and intervention with drugs and surgery, with a restricted approach to the patient in its entirety and little or no understanding of the dimensions of prevention and health promotion in the care process. Considering that this model has been hegemonic in both teaching and health care, we wonder about the teaching of elderly care in this context, since medical practice necessarily takes place within the order of human action, demanding far more than essentially technical interventions, but also relational and psychosocial knowledge and skills.

According to Ayres, in order to process the transition from the biomedical model to care it is necessary to establish a dialogical relationship between the professional and the patient, which transcends the technical approach to be inscribed in the order of interaction with the objective of the shared construction of health. Care, as a human interaction, requires the assumption of the social determinants in the health-disease process, which in turn does not exclude technology, but makes it available to the human being. To establish a dialogical relationship in the field of care is therefore to humanize health. It is in this sense that the National Curriculum Guidelines for Medical Education (DCNM) in Brazil have proposed the humanization of medical education.

One of the strategies for political, ethical, and pedagogical revision of medical education towards humanization and care is the inclusion of students in services of the Brazilian National Health System (SUS) as a learning setting from the beginning of the course, enabling students to live in the territory and understand concepts such as community, management, and the health system, emphasizing the social responsibility in the education of health professionals.
In order to understand how the teaching of elderly health has been carried out in the context of the search for humanization of medical education, we researched the curricular unit entitled Comprehensive Health Care for the Elderly (Cisi), which is part of the curriculum of the medical course at a Federal University in the countryside of Minas Gerais, such course being implemented already with the guidelines of the current DCNM13.

Methodological pathway

The qualitative approach research questioned how the biomedical and humanistic contents relate to the elderly health teaching scenarios in a medical course. To collect data, we chose to observe theoretical and practical classes of the Cisi subject, recording them in a field journal, interviews with students and teachers, and document analysis. These procedures aimed to bring us closer to representations, meanings, and social interactions, prioritizing language as a symbolic mediator, in a participatory and flexible process, with the goal of understanding17.

The Cisi curricular unit is taught to twenty students in the sixth period of the medical course. It has three teachers with a medical degree and a total class load of 108 hours, of which 36 are theory and 72 practicum hours, which, in turn, take place in Basic Health Units (BHU) and in a Long-Stay Institution for the Elderly (Ilpi). The subject is part of the curricular axis Integration Practices Teaching, Service, Community (Piesc), which runs through the course from the first to the eighth period.

The observations were done regarding the classes of the Cisi curricular unit, accompanied by the field diary record were done in the second semester of 2018, totaling thirty hours of observation among theoretical and practical classes.

Semi-structured interviews were conducted with two teachers and three students. The students interviewed were intentionally chosen from the observations of the classes: students who stood out for their presentations and agreed to participate in the interview(d). These interviews took place three months after the end of the course, in a single meeting with each individual.

The interview script had the following triggering questions: 1) What is your opinion about the content, methodology, workload and practice settings present in Cisi? 2) What are the concepts of elderly, old age and aging adopted in the discipline? 3) Tell us about the relation between Cisi and other contents studied in the medical course. 4) What abilities, competencies and learning objectives are proposed in the Cisi course? 5) Have you changed your view towards the elderly after the course? If so, in what way? 8) Does the Cisi discipline contribute to human formation? How? 9) What is the relationship between theoretical and practical classes in Cisi?

For the document analysis, we used the DCNM13, the Course’s Pedagogical Project18 (PPC), the Lesson Plan19 of the Cisi curricular unit, and the PNSPI8. For the document analysis, we used the DCNM13, the Course’s Pedagogical Project18 (PPC), the Lesson Plan19 of the Cisi curricular unit, and the PNSPI8.

With all the empirical material in hand, we resorted to Bardin’s thematic content analysis procedures20 which, in turn, consists of a cross-section of the data that are projected into categories listed from the exhaustive reading of the material collected throughout the field research.
The analytic process also considered the broader field of analysis, a theoretical review of the topic and the specific context of data production, which are elements that make up the exercise of organizing and discussing the data in a dialog of layers of analysis that were grouped into the following categories: paradigms of medical education present in the health of the elderly; pedagogical proposal of teaching the elderly in the medical curriculum; the daily life of teaching the health of the elderly; the tripod of medical education; theory and practice in teaching the health of the elderly; the humanistic and biomedical model of care in teaching elderly care. It is worth pointing out that not all categories are being addressed in this article.

All participants and institutions involved in the research were informed about it and signed a consent form. The Ethics Committee for Research with Human Beings, approved the research by process CAAE 97006818.7.0000.5151, Opinion number 3.049.012.

**Humanistic education versus biomedical education in elderly care**

The biomedical model, predominant in teaching and care since the beginning of the 20th century, abstracts the subjective character from the objective character of illness, which comes to be conceived as an individual, physiological, apolitical and non-historical phenomenon, divergent from the health needs of the population. The urgent need to improve health care, in turn, culminated in the demand for humanization of teaching, with a review of health conceptions and practices in medical education 10,21.

The humanization of teaching is conditioned to the recognition of social determinants in the health-disease process, and the incorporation of psychosocial content to the curricula. However, the structuring of teaching reflects the tensions engendered by the multiple forces that dispute space and power in society, in such a way that medical education, then, has been organized and tensioned by two different lines: a biomedical/techno-scientific perspective and a biopsychosocial/humanistic perspective 22,23.

The DCNM13 emphasizes that the education should be humanistic and ethical, contemplating the social, community, and subjective determinants of the health-disease process of the population. Aspects of human diversity should be considered, and listening and communication skills are processed throughout the training.

The analyzed PPC meets the general orientation of the guidelines, reaffirming the humanistic character of the education from the axis Psychosocial Bases (BP), which integrates the curriculum from the first to the eighth period of the course.

The teaching plan of the curricular unit Cisi proposes to address both technical issues in relation to pathologies and biology of aging, as well as psychosocial issues, demonstrating that there is dialectics in the relationship between psychosocial and biomedical content.

In this same direction, the PNSPI holds a comprehensive and procedural perspective of health, transcending biomedical and curative aspects by relating the heterogeneity of the aging process with living conditions, besides emphasizing the psychosocial factors and the importance of family and community life.
In the DCNM, the PPC, and the Teaching Plan, we observed the intention of permeability between technical and psychosocial perspectives, so that teaching is based on an expanded concept of health, which considers the multiple conditions in the health-disease process of the elderly.

Throughout the research field we observed, however, that social and family issues seem to be discussed almost exclusively in the practice settings, while theoretical classes emphasize biomedical aspects and pathologies. This perspective appears in the students’ statements:

[...] We had a content, I knew, for example, the person has this condition, this disease, but it remains only in the pathological part, the part of how to understand, how I will approach this elderly person... [...] More than knowing about the disease you have to know how to create this bond with the person [...] And then? this is not approached. So, I think that maybe we need to bring this reality here to the classroom to discuss, for example: Myself as a doctor, I will work at the health center, what will I do with this? It’s not just saying: look, you have a urinary tract infection, you treat it like this. This is important; of course it is, but if the university’s bias is humanization... (Interview student Begônia)

[...] they could have invested more in social issues, even in one of the classes I asked the teacher about the different “I” (insufficiencies) that she was saying that there are several Is in the elderly, but I said that there is also a social insufficiency, right? Where does the social insufficiency go in these “Is”? There were several Is of incontinence, a very biologist thing, but where does the social aspect of this elderly person come in, I think that this community, family aspect, of health determinants could also have been more investigated. (Interview with student Gerânio)

The contents of the interviews evidence that in theoretical classes the social determinants are overlooked in relation to content with a biologicist emphasis, so that a polarization has been created between theoretical classes, which prioritize biomedical content, and practical classes, which bring a more comprehensive and human look at the health-disease process of the elderly.

It can be noticed that, as the students interact with the reality of the services and the health needs of the elderly, essential aspects of care, such as bonding and responsibility, are integrated into the learning process, which, in turn, is actively built throughout the practical classes. In this sense, the interaction of the Higher Education Institution with the network learning settings, as has been done in the Cisi, presents itself as an essential tool for the incorporation of humanization in medical training14,24. However, these practices raise some questions: what ethics and care practices have been taught in medical courses?

The study of ethics is part of the course curriculum in the BP axis, however, it should be understood as a specific axis for the humanistic dimension of medical practice in relation to the other axes, because there is the orientation that each curricular unit should bring together the humanities content with the subjects and practice scenarios. Although
valued in all the analyzed documents, it is noted that it may be pertinent to expand the debate on ethics in the medical course, especially when it comes to practice scenarios, because we observed, from the statements of one of the interviewed students, that there are unpleasant circumstances for patients that deserve to be further explored:

In the fifth period we had ethics, but it was a too short one. [...] I will give you another example that happened in a discipline: it is beautiful when you arrive and say, ah... you have to humanize, ah, the patient’s space, ah... but then, when you arrive at the bedside, I arrived to assist a patient, she was desperate because she had lupus, she did not want to talk to me, it was clear! [...] Then the teacher looked at me and said, you should have insisted, you have to insist. Then I argued: I said no, I have to insist when this will bring some benefit to the patient, now what good will I do her? Nothing... I will only ask her a bunch of meaningless questions, because we are supposed to practice anamnesis, which will benefit me, but not her. So why should I bother? Let’s find someone who is willing. Then he got a little bit mad at me. It has already happened that he told us to talk to someone who is wearing an oxygen mask... So, you know, this lack? Of what is discussed in the classroom with what actually happens in practice [...]. (Interview with student Begônia)

It seems important to reflect if technical learning has not overlapped the ethical approach to care. According to Nogueira, although medicine still tries to deny its interpretative character, scientific rationality cannot deal with human suffering, causing the health professional to have to deal daily with the tensions between technique and practical wisdom in the organization of work. This practical wisdom, in turn, is interpretative, based on ethical and moral knowledge brought by the professional, which further reinforces the importance of the ethical debate throughout medical education in order to prepare the student to deal with the dilemmas of professional life.

In the investigated discipline, the practicum learning settings strengthen the humanistic character in the teaching of integral care to the elderly, however, despite the analyzed documents reaffirming the priority of the humanistic character in training, it seems that the biomedical model prevails implicitly throughout the longitudinal axis of the course, denoting the stress and the dispute between models of care.

About the relationship between humanistic and biomedical education in the course researched, we can highlight a statement from the interviewed teacher, when she said that it is positive that the subject Cisi is taught in the sixth period, because during education, teaching tends to become more technical and lose its humanistic character. In this sense, as the course progresses, the students end up unlearning to care, through the technical deepening.

This is in line with the scientific literature on medical education, which indicates that, although some courses have incorporated humanistic content to the curricula, such content has remained undervalued in relation to biomedical content, conceived as scientific and charged by a discourse of technological valorization that favors the market.
Learning settings and the theory-practice relationship in the teaching of health care for the elderly

The learning settings provided by undergraduate courses are diverse, including: disciplines, internships, research, extension, events, monitoring, and others. In the training of health professionals, practice settings occupy a prominent place in the curricular organization, especially those that make up the SUS health services.

According to the studied PPC, all disciplines of the Piesc axis (in which the Cisi curricular unit is included) have the health network as a practice setting, configuring it as service learning. The insertion of students in the network has been a strategy to overcome the distance between theory and practical performance, developed from the contextualization of the student in the reality of the SUS throughout the education.

Using this perspective, the entire health network has the potential to act as a learning setting, however, the effectiveness of the teaching plan of this type of discipline (theoretical-practical) in the service requires a continuous transit between pre-established content and content emerging from everyday life; the methodology, pace and organization of the teaching-learning process require flexibility, since part of the content is conducted by the field of practice. To the extent that this does not occur, students are faced with a reality that is not shaped by curriculum control, but by the complexities and difficulties of everyday life (which includes socioeconomic problems, precarious housing, and limitations of the health system itself), leading them to realize the insufficiency of theorization in the face of reality, and resulting in frustration and difficulties in dealing with issues encountered in the practice setting, as observed in the statements of the students interviewed:

[...] I think this was difficult in certain aspects because we didn’t have an explanation in class about how to approach the elderly. We had contents, in general, about the major syndromes of the elderly, but how to approach the elderly, we didn’t see this, this was not discussed in the classroom. [...] So, I think that these are demands that are made on the students, but that are not worked on in the classroom, that are not worked on within the course in general. (Interview student Gerânio)

[...] But this is a complaint that, when talking among us, became very clear: what we got there in the Health Unit or here, we did not see in theory, or we could not deal with the situation. (Interview student Begônia)

It became noticeable that the students in their statements demand to learn about caring for the elderly and not about the diseases that affect this population. The contents of their speeches demonstrate that the students interviewed are already operating within the care model and questioning the organization of teaching through the biomedical model, which pins down the organization of the content of diseases without dialoguing with the reality found in the health service. Even so, it can be seen an attachment to the teaching model that believes that theory is first learned and then applied to reality, in such a way that practice would be a space for proving the theory studied, in a conception that maintains the gap between these dimensions of learning and thinking.
Kind and Coimbra\textsuperscript{27} invite us to think of the theory-practice relationship as a system of alternations. This perspective of the theory-practice axis in university education brings us closer to Freire’s critical reflection\textsuperscript{28} in the sense of overcoming the senseless words of theory versus the activism of practice. Both scientific and professional knowledge are constructed and elaborated through experience. Thus, we would take the professional universe or the world of work not only as a field of intervention, but also as a continuous field of learning and knowledge production.

The theory-practice relay format demands from teachers and students another way of relating to learning, to the class, to knowledge, to studying, to evaluations, but mainly to the deconstruction of the belief in the polarization or opposition between theory and practice. According to Martins\textsuperscript{29}, looking from two poles reduces the totality to simplifying and fixed dualities that deny the complex and dynamic character of the relations, values and concepts circulating in social life.

We observed in the researched curricular unit that the theoretical classes have pre-established contents that are not (re) organized based on the practice setting, in such a way that there is almost no space for the problematization of the issues brought by the students from such scenarios. The problematization of the experiences of the practical learning scenario can help students in the synthesis between theory and reality, by helping them to understand that the experience of health and/or disease is also a subjective process that is closely related to the beliefs, values, culture, socioeconomic and family context of the patient\textsuperscript{25,30,31}.

The practice scenarios of the discipline have provided the students with the opportunity to live both with frail and dependent elderly people, as well as with those who maintain greater functional capacity and autonomy. This aspect is in line with the literature on the subject, because, according to Xavier and Koifman\textsuperscript{32}, the academia has the social function of showing the student the heterogeneity and complexity of the aging process, as well as the different places where the elderly are assisted.

In this sense, it is worth pointing out that the elderly, as a social category, carries symbolic traits inherent to aging and old age, which, in turn, influence health decisions in the policies, technicians, and the subjects themselves\textsuperscript{33} and, therefore, the students and professors throughout medical education.

In the interviews, the students emphasized that being in different settings of the network offers learning for a comprehensive care by experiencing the expanded health in its economic, social, subjective and institutional dimensions. One of the students reported that

Being in the UBS or being in the Ilpi, those are two very different worlds, because you get an elderly person who is locked up, and I put several quote-quote in that locked up, right? And you get an elderly person that is technically, that is well, inside the house. So you see two scenarios. For example, I found a very bad situation, an elderly woman whose family had abandoned her, and an elderly woman whose daughter had stopped working to take care of this elderly woman. I think this is very important. So I think the setting, being in practice is very good. (Interview student Begônia)
For the interviewed teachers, primary care is the most appropriate practice setting for clinical learning, as it allows for a broader follow-up of the elderly due to their autonomous condition in relation to the elderly in the Ilpi, who tend to present greater frailty and dependence. One of the professors even showed a certain ambiguity in relation to the Ilpi:

[...] so we prioritized the family health strategy, I think that this scenario is the best scenario indeed, because the physician has to learn in primary care how to evaluate the elderly [...]. The other practice setting we chose was the Ilpi, for me it was always a questioning, [...] and for the student it is a great challenge because it is a confrontation of the elderly, exactly what we don’t want, without independence and without autonomy, in a closed environment, a very collective environment, without much individuality [...]. Is this the time? For the sixth period? [...] I think the practice scenario is good. [...] Because they at the end, will evaluate it positively. “No, no, it was good. But then you see students suffering, right? It’s the first disappointment, right? (Interview with Professor Jacarandá)

Finally, disciplines with a heavy workload of practical classes in the service require a step-by-step organization of content with the events in the scenario outside the university, and sometimes get confused with professional internship subjects that have other competencies and skills to be developed. In the case of the researched course, it is noted that the issue of dealing with frailty, associated with the follow-up of the elderly patient, has been a source of anguish for the students.

Education of health professionals: anguishes in practice settings

The Cisi discipline counts with a reflexive portfolio, to be done in a virtual environment that would act as a tool for the students to deal with the expectations and feelings generated along the practices, as such discussion is not done in the theoretical classes. However, the students’ speeches revealed their complaint about the absence of face-to-face spaces for the problematization of the experiences of the practice scenario of the curricular unit:

[...] It is about how to see the elderly, how they were treated, if this did not cause a sickness in the student. And this was little worked on by the teachers of the unit, sometimes the teacher would say something, but he didn’t see the student integrally, he didn’t see the anguish, what was happening. I think this should be looked at more carefully as well, so that the student’s mental health is preserved. [...] I think it was painful for almost everyone [...] there were many comments about how sad it was to see inside the Ilpi, or when we went to the homes and saw the contact of these elderly people with their families, or with the caregivers... I think this could have been worked on at some point: the anguish that the unit brought to the student. (Interview with Student Gerânio)
I realized that the elderly can be as vulnerable as I saw in the institution shocked me. I left very bad, very bad indeed. Some days in the Ilpi were very bad, so bad that I had to write the portfolio of the woman there, and I left it, and left it to write at the last minute, and when I sat down to write, it hurt me a lot and made me anguished / [...] and then you stop to think... [...] you don’t change that [...] and it was very distressing/ we have our portfolio, which is to put some anguishes, but then it becomes very vague, because that anguish is not discussed, you know? (Interview with student Begônia)

According to Grosseman and Karnopp, dealing with terminal patients, or those with no chance of cure, prepares the students for situations of loss and make them aware of their own finitude, which would be positive in establishing better relationships with the patients. What seems to fit, also, in the case of teaching health care to the elderly, since, according to the report of the teacher interviewed, “the practice scenario brings approximation and even identification with aging, to the extent that the elderly is personified and seen as someone’s grandfather or grandmother” (Interview with professor Ipê). However, it is essential, according to the authors cited, the availability of appropriate spaces to discuss the anguishes experienced throughout the course, in order to help students develop reflections and tools to deal with their feelings and frustrations.

During the research, the teachers of the Cisi curricular unit demonstrated an effort to establish a dialogical and democratic relationship with the students. There was a consensus among the interviewed students about the importance of the course in learning about the health of the elderly, especially regarding the sensitization to the frailty of the elderly and the understanding of integral care. The students unanimously highlighted the human attitude of the teachers in the practice scenarios during the course.

We also observed that the spaces where the Cisi course includes its practical workload allow students to circulate through the territory and interact with the elderly and their families. In this sense, teaching is no longer an exclusive assignment of the University, but is also performed by the network services, which in turn present themselves as privileged learning settings. However, by not effectively questioning the students’ experiences in the practice sites, the discipline ends up somehow maintaining the gap between theory and practice, amplifying the difficulties and anguish experienced by students in the network.

The curriculum shapes identities and, in the case of undergraduate courses, professional identities. To the extent that medical training is permeated by different discourses and educational practices, the student experiences antagonisms and contradictions between the formal curriculum and what is taught. Even the teacher-student relationship, which should be an example of dialogicity and learning to care, is experienced in an incoherent manner, generating ambiguities and suffering in the students.
Final remarks

In general, this study has shown that the learning settings in the network, which are configured as practice sites, demonstrated to have great potential in the sense of presenting to medical students the richness and complexity of the territories, which are the social spaces in which health and disease are experienced by the elderly.

The intersection between the world of work and the world of training, which is presented in practical learning settings, is full of different experiences, conceptions and conflicts about one’s own practice and the reflection on this practice. The dichotomy between theory and practice, hierarchizing knowledge of science and knowledge of work, detaching science from social reality, or reinforcing any subordination of one by the other, feeds a one-sided reading of the world, impoverishing teaching.

The experiences of the learning scenario, duly linked to theoretical knowledge, can reduce the distance between theory and practice to the extent that care becomes the horizon of training. Along these lines, teaching should transcend the application of technical knowledge, in order to also focus on the relationships established among teachers, students, network professionals and users, considering the multiple possibilities that these relationships can engender.

The present study is limited to the peculiarities of the institution researched and, being a singular experience, it does not propose to generalize, instead trying to understand a given reality. We believe that our contribution can generate reflections on other contexts in which medical education is inserted. In any case, we advocate that those involved in medical education and, especially in the training of professionals focused on health care for the elderly, should problematize the teaching models and be open to listening to the students, because they will be in the practice settings acting as physicians in the future.
Authors’ contributions

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Conflict of interest

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A educação médica tem sido tensionada por diferentes modelos, que podem mobilizar conhecimentos essencialmente biomédicos ou também de ordem psicossocial. O presente artigo busca abordar como tais conhecimentos se relacionam com o ensino da saúde do idoso na disciplina Cuidado Integral à Saúde do Idoso, do curso médico de uma universidade pública do interior de Minas Gerais. Trata-se de uma pesquisa de campo, de abordagem qualitativa, na qual foram feitas observações de aulas teóricas e práticas, entrevistas e análise documental. Os resultados indicaram que as aulas teóricas não se orientam por meio dos cenários de práticas, e esses, por sua vez, demonstram potencial em apresentar aos estudantes a complexidade do processo saúde-doença. Por fim, as relações teoria-prática, escola-serviço e seus modelos de atenção são desafios na formação médica para o cuidado integral com o idoso.