



CASE REPORT

# The Role of Social Sciences in Dentistry Undergraduate Courses: A Case Report from Brazil

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## ABSTRACT

In this article, we present an analysis of the contribution of social sciences to teaching undergraduate dentistry courses. Based on a literary review of the influence of behavioral and social sciences on oral health research and a case report from a public university in Porto Alegre, Brazil, I propose to consider the interface between health and social sciences, presenting some of our contributions to the training process of undergraduate students at the Federal University of Rio Grande do Sul. Introductory social sciences classes have been incorporated into various healthcare faculties, such as nutrition, dentistry, physiotherapy, medicine, obstetrics, and nursing. The acknowledgment of the importance of social sciences to the formation of health care professionals is reflected in the introduction in the curriculum of topics such as human rights, ethics in the relation of professionals and patients, as well as the challenges presented by social inequalities and the humanistic perspective of integral attention. In this sense, social sciences present undergraduates with a privileged perspective to the understanding of the patient both as a subject of rights, situated in a social, cultural, economic, and political context, and as a critical interpreter and agent of his own body, capable of recognizing and identifying illness processes, choosing, and attending therapy protocols and, therefore, capable of contributing to the continuity as well as transformation of healthcare practices. The inclusion of social sciences classes in undergraduate dentistry courses has given students an invaluable perspective on patients as individuals with rights situated within a social, cultural, economic, and political context. This understanding enables students to identify and tackle social inequalities, maintain ethical standards in their professional practice, and offer holistic care when training in programs integrated into the Brazilian Unified Health System. In addition, social sciences classes equip students with critical thinking skills that enable them to analyze and interpret patient experiences, make informed decisions regarding treatment protocols, and contribute to better treatment adherence, prevention practices, and therapy continuity.

**Keywords:** Social Sciences, undergraduate Dentistry courses, patient-centered care, human rights, social inequalities, ethical standards.

## Introduction

This article analyzes the contributions of the social sciences to dentistry undergraduate courses based on a case report from a public university in Brazil. The first part of the text discusses the influence of the social sciences on the changes in the conception of dentistry as a practice in the Brazilian context. From an introduction to the different paradigms that have evolved since the earlier conceptions of sanitary dentistry to the more recent understandings of collective oral health, we examine the influence of sociology and anthropology of health in the emergence of collective health. Then, we briefly refer to the history of dental care and dentistry training and the relationship with medicine faculties to present an overview of the historical developments that allowed the foundation of the Faculty of Dentistry in the southernmost state of Brazil. The second part of the article connects the changes in paradigm in Health Sciences to the changes in the curriculum of the dentistry undergraduate course at UFRGS. Looking into the structure of the undergraduate course, its disciplines, objectives, and professional models, we discuss the role of the social sciences in the training of undergraduate dentistry students from the practical experience as a sociology professor and researcher at the Faculty of Dentistry from 2011 to 2018. During this period, I was responsible for the Introduction to Social Sciences for first-year undergraduates. This class was mandatory and integrated with other courses by the Department of Social and Preventive Dentistry professors. In the last part of the article, we detail the experience of teaching dentistry undergraduates and the interdisciplinary approach with other important curriculum components, such as bioethics and public health.

The role of social sciences in dentistry undergraduate courses is often overlooked, but it plays a crucial role in providing dental students with a well-rounded education. Many dental students may question the relevance of studying social sciences in a field heavily focused on the technical aspects of dental care.<sup>1-7</sup> However, understanding the social, cultural, and psychological factors that influence oral health and dental treatment can significantly enhance a dentist's ability to provide patient-centered care sensitive to everyone's unique needs and backgrounds. Integrating social sciences into the dentistry curriculum exposes students to a broader understanding of oral health and its impact on individuals and communities. This knowledge allows students to develop practical communication skills, empathy, and cultural competence, essential for building trusting relationships with patients and delivering personalized care.

In the USA, the research agenda in social sciences and dentistry evolved from the pioneering work of Lois Cohen in the 1960s.<sup>8</sup> Initially, the influence of social sciences on dentistry was mainly observed in the realm of epidemiology, as biomedical influences predominantly guided dental practices for about fifty years. Subsequently, there was a shift towards utilizing social science insights in areas like patient care management, organization, and service delivery within dentistry. In the 1980s, a new phase emerged, characterized by more critical and reflective research at the intersection of dentistry and social sciences, creating a new tradition in

the dental field. (Davis 1981). It was consolidated in the 1970s and 80s through conferences on behavioral and social sciences and their application in dentistry and dentistry curricula.<sup>10</sup>

Since the 1980s, several scholars in different countries have attested to the importance of social and behavioral sciences in dentistry.<sup>9-15</sup> In a historical review of the growth and development of the scientific contributions of social scientists to understanding social factors associated with dental problems, Lois Cohen (1981) pointed out some of the potential research contributions to oral health, such as to comprehend, explain, and predict oral health behavior; application of social survey technology, development of health education research; orientation toward problem analysis and problem-solving in human relations, and other objective oriented, management, and analysis.<sup>16</sup> In the following twenty years, research in health promotion and disease prevention identified social and environmental issues related to oral health behaviors and outcomes, like stress, dental anxiety, health beliefs, and social support, suggesting that "theoretical models grounded in the behavioral sciences provide useful frameworks for understanding the process of health behavior change that can be applied to patient care."<sup>11(p34)</sup> From a broader point of view, how individuals conceive and behave toward disease, illnesses, and health is a relevant part of any social group's culture. As cultural and social constructs, they change over time and are influenced by economic change and social, political, and historical factors. Thus, understanding the cultural aspects of dealing with illness and its cure is central to training healthcare professionals.<sup>17</sup> Therefore, behavioral and social sciences can provide a much more comprehensive understanding of these aspects than the traditional biomedical approach to dentistry.<sup>18,19</sup>

Another significant change was the awareness of social determinants of health, including the social and environmental issues related to oral health behaviors and outcomes. Starting from the 1980s, there has been a growing recognition that these behaviors frequently stem from the exact origins as the causes of other illnesses (shared risk factors). Moreover, since the 1990s, there has been a greater focus on the correlation between individual characteristics and broader environmental influences, underscoring the need for collective efforts to tackle disparities in oral health.<sup>20</sup>

Scholars have attested that oral diseases share the same determinants and risk factors as diseases such as heart conditions, cancer, diabetes, stroke, and other non-communicable diseases.<sup>20-22</sup> The social and economic conditions in which people live profoundly impact their health and well-being. Various theoretical approaches have been developed to explain causal relationships that connect different determinants of health inequalities – from biological to psychological as well as political determinants. These theoretical approaches describe how social structure and social environments influence health behaviors and changes in disease processes over the life course.<sup>23(p3),24</sup>

In exploring the future priorities for behavioral and social research in dentistry, The Behavioral, Epidemiological and Health Services Research group of the International

Association for Dental Research identified four areas of emphasis, including “1. Behavioral and social theories and mechanisms related to oral health; 2. the use of multiple and novel methodologies in social and behavioral research and practice related to oral health; 3. the development and testing of behavioral and social interventions to promote oral health and 4. The dissemination and implementation of research for oral health.”<sup>13(p46)</sup> In 2020, the Behavioral and Social Oral Health Sciences Summit, the first large-scale, comprehensive conference of applied behavioral and social science in research in dentistry and oral health, produced the Consensus Statement on Future Directions for the Behavioral and Social Sciences in Oral Health, published in the Journal of Dental Research in January 2022, which “affirms the significant influence of behavioral and social factors on dental, oral and craniofacial health.”<sup>15(p2)</sup>

The Statement argues that because social sciences focus on individuals and groups, from families to societies, nations, and systems, they are crucial to understanding multilevel, interacting influences on oral health behavior and outcomes.<sup>14(p619)</sup> In this perspective, scholars worldwide have recently published many books, reviews, and papers “on the necessity of applying behavioral and social science to promote oral health.”<sup>10(p3)</sup> These developments aim to advance the implementation of the best health practices.

To understand how this process occurred in the Brazilian context, we must examine closely how the paradigm of collective health emerged and its relation to the social sciences. Moreover, it is essential to understand how collective oral health was central to the National Curriculum Guidelines (NCGs) for dentistry.

## 1. Social Sciences and Collective Oral Health

Public dental care in Brazil was gradually institutionalized during the 20<sup>th</sup> century. Initially, the assistance provided was limited to the treatment of people under the custody of the State and students in schools. There was no preoccupation with identifying the population's oral health condition nor any strategic planning to prevent dental health issues. The first oral health public programs were initiated only in 1952. This modality of assistance was known as *sanitary dentistry*, understood as the organized work of the community towards the oral health of the community. According to Narvai (2006), “The main theoretical tool used by public dentistry to diagnose and treat oral health problems in the community was the so-called incremental system,” in which the accumulated needs of a given population would be treated integrally and then, followed up through controlling problems according to needs, age, and general health conditions.<sup>25(p143)</sup>

In time, sanitary dentistry was reduced to preventive actions in schools directed at students, losing its original purpose of overcoming the limitations of private practice in addressing collective health needs. In the 1980s, however, public dental health assistance was profoundly influenced by the collective health movement in Brazil. This was a political movement headed mainly by doctors who advocated for changes in public health assistance as

part of a more significant political movement for social change during the military regime. This movement brought demands such as the right to health, democratizing access to health services, and integrating oral health into public health policies.<sup>26</sup> “These professionals were at the forefront of the sanitary movement that culminated in the creation of the Unified Health System (SUS) and the recognition of health as a universal right enshrined in the 1988 Constitution.”<sup>27(p243)</sup>

Gradually, sanitary dentistry evolved to Social and Preventive Dentistry and, more recently, to collective oral health.<sup>28</sup> Collective health should be understood as a multifaceted academic area combining knowledge and practices based on other scientific fields, such as social sciences. It comprises both an educational area dedicated to research and graduate courses and a political area capable of influencing public policy design in health, mainly through government offices at various levels.<sup>12</sup>

In oral health research and practice, the influence of the collective health movement becomes apparent through the addition of “collective” to the concept of oral health. According to Narvai (2006), collective oral health is a Brazilian variation of public health dentistry and refers to incorporating dentistry into the larger field of collective health. From this perspective, a population's oral health results from a collective commitment to the well-being of every individual as a social right that must be promoted by the state and the public society concerned with the social processes that generate health issues.

Such a rupture requires the development of dental work based on the needs of people (of all people) and, opposing market logic, breaks with the status quo, fundamentally characterized by the commodification of services and the maintenance of the monopoly of access to dental resources (all resources) by the elites.<sup>25(p144)</sup>

From the beginning, collective health was influenced by the social sciences, mainly through the dialog between medical professionals who graduated in preventive or social medicine or public health and sociologists, anthropologists, and political scientists. This interlocution with social scientists included historians, economists, and social psychologists dedicated to social sciences and health studies. In 1982, during the 1st National Meeting on Teaching and Research in Social Sciences in the field of Collective Health, organized by the Brazilian Association of Collective Health (ABRASCO), “the topics selected for teaching social sciences in residency and specialization courses were social determinants of the health/disease process; population health conditions; relationships between health and society; social organization of medical practice.”<sup>29(pp472-473)</sup> This movement will be reflected in the changes incorporated throughout various health graduations, including dentistry.

## 2. The Dentistry undergraduate course at UFRGS

The dentistry undergraduate course at the Federal University of Rio Grande do Sul (UFRGS) was created at the end of the 19<sup>th</sup> century as part of the Faculty of

Medicine. It comprised a two-year specialization in dental practices, including classes in dental pathology, dental therapeutics, prostheses, and clinics. Shortly, the two-year course was extended to three years. However, by the mid-1920s, it was closed due to a lack of students. The course was reestablished only in 1932 after the dentist's union was founded and dental surgeons began a movement to reopen the course at the Faculty of Medicine. Then, in 1952, it became an independent school and, shortly afterward, a faculty on its own, integrated into the University of Rio Grande do Sul and maintained by the Federal government. In 1954, another whole year was added, and now the course took four years to complete.<sup>30</sup>

In analyzing the dentistry undergraduate curriculum until 1962, it is evident that the emphasis was on techniques exclusively oriented to dental care, including knowledge in pharmaceuticals, anatomy, pathology, and specific therapeutics. The purpose was to improve the technical qualities of higher education in dentistry practice based on scientifically developed methods instead of the empirical and craftsmanship-like procedures in which students were formally trained. The only socially oriented discipline was "hygiene and legal dentistry," later renamed "social dentistry." In the 1960s, the disciplines were aggregated into newly formed departments, including the Department of Social and Preventive Dentistry. However, the integration of anthropology and sociology into the curriculum occurred only after the reforms initiated in 1982. This period corresponds with the final years of the military dictatorial regime and the process of democratic opening that Brazil went through. In this period, the Federal University went through a series of major reforms following The National University Reform, which guided a significant curriculum change in 1983, aiming to integrate dentists into the socio-economic reality. The focus shifted towards preventive and social dentistry, seeking alternative solutions to oral health problems in the population.

More recently, following the National Curriculum Guidelines (NCGs) established in the 2000s, the Faculty of Dentistry went through a new and deeper restructuring of the undergraduate curriculum, establishing the basis of the student's formation in three phases: firstly, learning the fundamentals of biological and social sciences, in an integrative manner, through interdisciplinary seminars and activities; secondly, knowing the preparatory abilities for exercising dentistry individually and collectively; thirdly, learning the professional skills to exercise dentistry separately and collectively based on the local reality and aimed at the health system's demands. From the newer version of the curriculum, we will look at the role of the social sciences in the dentistry undergraduate course at UFRGS.

Social Sciences' undergraduate course at the Federal University of Rio Grande do Sul offers a variety of disciplines to undergraduates from other courses, primarily introductory classes on anthropology and sociology. Some classes are specific for veterinary, zootechnics, engineering, design, librarianship, physiotherapy, nutrition, and dentistry. Most of these classes are integrated into other undergraduate courses in the initial semesters and are a general overview of the

social sciences field. As a professor at the Department of Sociology, I had the opportunity to teach first-year dentistry students. Until recently, Introduction to Social Sciences for Dentistry was mandatory. In recent years, this class has been replaced by Health Sociology, and a colleague from the Department of Sociology is currently teaching it.

In their first semester, undergraduates in dentistry must study human anatomy, tissue biology, general biochemistry, and general microbiology, as well as a series of introductory classes on dentistry, ethics and bioethics, and organization of the Unified Health System. Together with the Sociology of Health – which replaced Introduction to Social Sciences for dentistry – these classes are offered as part of the undergraduate training in preventive and social dentistry.

According to the pedagogical project of UFRGS' undergraduate in dentistry, the course curriculum aims to train dental surgeons capable of addressing the Brazilian population's demands on dental health, from prevention to rehabilitation. Graduate professionals are expected to be "capable of carrying out actions related to health prevention, promotion, protection, and rehabilitation, both at an individual and collective level, acting in an integrated and continuous manner with other health system entities. They should be able to critically analyze problems in search of solutions and perform their services within the highest standards of quality and the principles of ethics/bioethics."<sup>iii</sup> The pedagogical project closely follows the NCGs for dentistry courses instituted by the National Education Council in 2002. Since then, the NCGs have proposed that dental surgeons' profile is that of a "generalist, humanized, socially sensitive, ethical dentist, capable of practicing both in private practice and in public services, and committed to improving the oral health conditions of the population." (Fernandes et al., 2016, p. 106) This purpose places value "on studying the health-disease process," and the training aims to develop strategies to improve the population's level of health considering the diversity of lifestyles, in alignment with the paradigm of collective oral health.<sup>28(p133)</sup>

Adding the above characteristics to the dental surgeons' professional profile demanded a multidisciplinary curriculum that included knowledge and training in humanized, preventive care directed to a population that historically has had little or poor access to dental healthcare and primarily depends on the public health system to treat oral afflictions.

Such conception of dental health professionals resulted from a profound change in the patient's perception, recognized not only as a human being with specific health care demands but encompassing their bio-psycho-socio-cultural dimensions. Moreover, this implied a change in the understanding of the role of the professional, now a person capable of establishing an appropriate relationship with the patient - recognizing and understanding his needs and conflicts - the family, the society, and the professional organizations.

### 3. Teaching practice

As a professor responsible for introducing social sciences to undergraduate dentistry students, I had a difficult task:

to convey the importance of the social sciences to forming a health professional and the connection between sociology and anthropology with dental health and rehabilitation practices. Common sense knowledge sees dentists as highly trained professionals specializing in the various techniques of treating caries and other oral health problems. In this sense, technical training and expertise have been valued over other professional activities, such as planning and implementing public health policies and managing health services. Most students begin the undergraduate course imagining themselves as liberal professionals in their private offices, attending to patients as health service clients. Historically, dentistry has built itself as a profession focusing on only a part of the human body, the mouth and teeth, as if the body itself were disconnected from the person it belongs to.<sup>7</sup> The disconnection and the technical specialization derive from the history of the relation of dentistry with medical practice, which viewed dentistry as a minor practice, a craft usually performed by barbers. It took a long time for dental practice to become a specialized profession, and, depending on the cultural context, an entire graduate course was separated from medicine.<sup>iii</sup> Dentistry isn't even the first option for some students, having enrolled themselves while preparing to compete for a place in medicine as an undergraduate.

In general, students begin dentistry at UFRGS right after finishing high school. Social sciences, except sociology, are not mandatory for secondary or mid-term school. Even so, sociology is reserved for the high school level. It has also been a discipline in dispute regarding its importance during mandatory education for decades.<sup>32,33</sup> Therefore, dentistry students start their studies with little sociological concepts and theory knowledge and no understanding of the social sciences.

As to their expectations regarding the introduction of social sciences, researchers have shown that students in health sciences struggle to see the relevance of social sciences in their education. A survey of undergraduate students in two UK dental schools showed that training in technical aspects of care was considered a priority compared to training in social aspects.<sup>1</sup> Research in other health areas showed that students oppose social science teaching initiatives to different extents due to doubts about their practical application in clinical settings and conflicts with the biomedical approach.<sup>2</sup>

Neville et al. (2019) point out a contradiction with how UK students conceptualize dentistry, with students preferring a biomedical rather than a biopsychosocial approach. In their study, interest in behavioral and social sciences declined from the third year onward due to a strained relationship with these sciences and a strong student culture of criticism towards their contribution to dentistry practice. Preferring technical instruction and hands-on experience over social science content, alongside the dominant biomedical approach to healthcare in dental education, results in a clinical model that views oral health as merely derived from a proper approach to pathological aspects. This perspective reduces dentistry to procedural tasks and treatments (such as 'drill and fill').<sup>34</sup>

In a study with dentistry undergraduates in a public university in the Brazilian Northeast, Vieira (2004) concluded that students regarded social sciences as a complementary discipline, not fundamental to their training. They also believed their content was little related to the specific objectives of the course, although they considered that social sciences should remain in the curriculum.

In 2012, a resolution from the National Council of Education (NCE) established that education in human rights must be integrated into all undergraduate courses in Brazil. To include human rights topics in the dentistry curriculum, the undergraduate coordination consulted the sociology department's representative to include this topic in the introduction to social sciences. This resolution aligns with the changes observed in the undergraduate political and pedagogical project implemented from 2005 onwards. Therefore, one of the first and foremost topics addressed in the introduction to social sciences was human rights. Students would study a general definition of human rights and have an overview of the historical, social, and political process of the emergence and development of human rights in the 20th and 21st centuries. In this perspective, students would have classes on fundamental human rights, emphasizing health as a basic social right, including oral health. The aim was to bring awareness to the conceptual, philosophical, political, and historical basis of the principles that sustain the Brazilian national policies on health and oral health, reflected in the NCGs and their undergraduate course's political and pedagogical project. Most importantly, students should understand how oral health – from prevention to rehabilitation – is integrated into the National Unified Health System.<sup>iv</sup> We would also discuss why oral health services took so long to be incorporated into the public health system.

The next module of the course studied health inequalities in Brazil, focusing on social markers such as class, gender, and race. Social differences and economic stratification were examined through different studies that showed the interplay between poverty, social vulnerability, gender differences, and racism in establishing inequalities in access to health services, with an emphasis on dental care. The aim was to introduce the perspective of the social sciences on social determinants of health in the Brazilian context. At the end of this module, students would study the prevalence of caries, periodontitis, dental trauma, fluorosis, edentulism, use of oral health services, and self-perception of oral health among the population, comparing age, gender, race, and socio-economic differences.<sup>v</sup>

In the last module, the Anthropology and Sociology of Health subfields were introduced, pointing out some contributions to the approach to health and illness. The purpose was to discuss health and illness from a broader social, cultural, and economic perspective, clearly identifying the limitations of the biomedical and epidemiological perspectives so that students could understand that the health (and oral health) conditions of a given population result not only from their average income but also from their social and cultural ways of life.<sup>35</sup>

Students would be challenged to think about how oral health conditions and diseases are understood through common sense knowledge, away from a biomedical perspective. How do non-professionals understand teeth? How does common sense knowledge explain caries and toothaches? When do patients go to the dentist? Where does the fear of dental practices come from? How do biographical experiences shape adherence to treatments? The central point here was to debate how people, as social agents, build an understanding of their bodies, health, and afflictions from an ordinary, everyday empirical experience, which is different from a biomedical perspective. Langon and Wiik (2010) argue “that medical and health care systems are cultural systems consonant with the groups and social realities that produce them. Such a comprehension is fundamental for the health care professional training.”<sup>17(p173)</sup> Therefore, understanding the role of culture in interpreting body signs and disease symptoms was paramount to drawing the limits of scientific knowledge in building the perception of disease and treatment.

In connection with this awareness, some theoretical developments on the experience of illness are introduced. To understand the interplay of the social and cultural environment in which patients live and their understanding of dental issues, the causes, and consequences of dental afflictions, prevention practices, and treatments, we discussed the concepts of illness behavior and career of illness.<sup>36–39</sup> In this topic, students should understand that patients with common sense or lay knowledge address and interpret their dental health conditions from a socially and culturally embedded point of view. In other words, this is a different kind of knowledge from what students learn in pathology classes—one that is socially built and shared.<sup>40</sup> Together with their own biographical experiences of going to the dentist, patients will develop attitudes and understandings towards what is expected of them that often do not align with what clinical protocols established within a biomedical approach to oral health propose.

The biomedical model of the illness and health process (Conrad, 2007; Foucault, 2011) It is also a topic introduced to students. This approach aims to build and reframe the conception of the body as a “mechanism” that can be “fixed/healed” by applying several techniques and interventions.<sup>43</sup> Students are invited to look at the human body and the extreme specialization in medicine and dentistry over parts and systems from a historical and philosophical perspective so they can understand how dentistry came to specialize in the mouth and teeth in such a way that they became separated from the body and the social, culturally, and historically situated human being. In this topic, the problems and limitations of the biomedical perspective are discussed.

One of this module's main challenges is that anthropology and sociology have a much longer and more influential connection with medicine than dentistry. Therefore, fewer published works and most textbooks are based on research on dental patients.<sup>44,45</sup> Referring to the relationship between doctors and patients, it does not contemplate the specificity and nature of dental practice.

Adaptations and other examples are necessary. In the last part of the Introduction to Social Sciences for Dentistry, we examine qualitative research studies,<sup>46,47</sup> focusing on data collected directly among dental patients regarding their relationship with dental professionals. These studies help students understand the importance of listening to their patients' demands, the importance of considering social and economic barriers that interfere directly or indirectly with the decision to see a professional, and factors that interfere with the decision to continue or interrupt ongoing treatments, from the point of view of the interviewees.

## Conclusions

Social sciences are fundamental in forming dental professionals, especially in contexts where health inequalities impact oral health. Topics such as social determinants of health and the patient's relationship with the professional can bring awareness of the social, cultural, and economic factors that explain the prevalence of caries, periodontitis, and edentulism in each population. Moreover, a broader understanding of the limitations of technical training, focused mainly on procedures, materials, and tools, without considering how subjects understand, adhere to, or reject treatments, demand oral health services, and participate actively in prevention helps prepare a generalist professional, focused on collective needs. However, social sciences are still perceived as complementary or a minor contribution to the undergraduate curriculum. At UFRGS, Introduction to Social Sciences and, afterward, Health Sociology are taken in the first-year curriculum before undergraduates begin training with patients within the public health system. This not only limits the interdisciplinarity with other fields, such as pathology and orthodontics, but also perpetuates the notion that social sciences are secondary to technical training in dentistry. This is in line with the findings of Neville *et al.* (2019), who, in a more recent qualitative study with dental students in the UK, showed a negative perception of social and behavioral sciences in the curriculum, especially after their contact with clinical staff and patients increased in frequency during their undergraduate course. Their findings pointed out that as students move into the clinical phase of their studies, clinical interactions become more valued and take priority when developing their professional identity so that “when faced with the prospect of ‘doing’ dentistry, the values, attitudes, practice, and knowledge of clinicians took precedence over those of non-clinical staff members,” undervaluing their knowledge and contexts offered in class.<sup>34(p467)</sup>

By the time students are in contact with actual patients, they have already formed their understanding of dentistry as a technical and procedural field, with minimal emphasis on oral health's social and cultural aspects. The lack of integration of social sciences in dental education perpetuates the notion that they are secondary to technical training, resulting in dental professionals who view oral health solely through a biomedical lens and prioritize procedural tasks over understanding the broader social, cultural, and economic factors that impact oral health.

## References

- Kent GG, Croucher R. Priorities of undergraduate dental education: what do students think? *Med Educ.* 1992;26(5):372-377. doi:10.1111/j.1365-2923.1992.tb00189.x
- Benbassat J. Teaching the social sciences to undergraduate medical students. *Isr J Med Sci.* 1996;32(3-4):217-221.
- Mowforth G, Harrison J, Morris M. An investigation into adult nursing students' experience of the relevance and application of behavioural sciences (biology, psychology and sociology) across two different curricula. *Nurse Educ Today.* 2005;25(1):41-48. doi:10.1016/j.nedt.2004.09.009
- Litva A, Peters S. Exploring barriers to teaching behavioral and social sciences in medical education. *Med Educ.* 2008;42(3):309-314. doi:10.1111/j.1365-2923.2007.02951.x
- Edgley A, Timmons S, Crosbie B. Desperately seeking sociology: nursing student perceptions of sociology on nursing courses. *Nurse Educ Today.* 2009;29(1):16-23. doi:10.1016/j.nedt.2008.06.001
- Carnut L, Costa SG de A, Moura Neto JG de. A percepção discente sobre os conteúdos essenciais de Ciências Sociais em Saúde Bucal em uma graduação em odontologia. *JMPHC | Journal of Management & Primary Health Care | ISSN 2179-6750.* 2017;7(1):39-39. doi:10.14295/jmphc.v7i1.365
- Vieira MMachado. *A Representação Social Da Disciplina de Ciências Sociais Para Estudantes de Odontologia.* Dissertação de mestrado. Universidade Estadual de Campinas; 2004.
- Dworkin SF. The Emergence of the Social and Behavioral Sciences in Dentistry: Lois Cohen as Principal Architect. *J Dent Res.* 1999;78(6):1192-1196. doi:10.1177/00220345990780060101
- Davis P. The social sciences and dentistry: current influence and future opportunity. *Soc Sci Med.* 1981;15(a):387-395. doi:10.1111/j.1752-7325.1967.tb03916.x
- McNeil DW, Randall CL. Introduction to the special issue: Advancing the behavioural and social sciences to promote oral health. *Community Dental Oral Epidemiol.* 2024;51(1):1-5. doi:10.1111/cdoe.12833.Introduction
- Stetson BA. Influence of behavioral science research on oral health promotion. *Compend Contin Educ Dent Suppl.* 2000;(30):24-30; quiz 66.
- Canesqui AM. About the Presence of Social and Human Sciences in Public Health. *Saúde e Sociedade e Sociedade.* 2011;20(1):16-21. doi:10.1590/S0104-12902011000100003
- Newton T. Behavioural sciences and dentistry. *Evid Based Dent.* 2022;23(2):46-47. doi:10.1038/s41432-022-0278-3
- McNeil DW, Randall CL, Baker S, et al. Consensus Statement on Future Directions for the Behavioral and Social Sciences in Oral Health. *J Dent Res.* 2022;101(6):619-622. doi:10.1177/00220345211068033
- Randall CL, McNeil DW. Harnessing the behavioral and social sciences to promote oral health: Where do we go from here? *Community Dental Oral Epidemiol.* 2023;51(1):149-152. doi:10.1111/cdoe.12834.Harnessing
- Cohen LK. Dentistry and the behavioral/social sciences: An historical overview. *J Behav Med.* 1981;4(3):247-256. doi:10.1007/BF00844250
- Langdon EJ, Wiik FB. Anthropology, Health and Illness: an Introduction to the Concept of Culture Applied to the Health Sciences. *Rev Lat Am Enfermagem.* 2010;18(3):173-181. doi:10.1590/s0102-311x1986000200017
- Neville P, Waylen A. Why UK dental education should take a greater interest in the behavioural and social sciences. *Br Dent J.* 2019;227(8):667-670. doi:10.1038/s41415-019-0809-2
- Zahra FS, Dunton K. Learning to look from different perspectives-what can dental undergraduates learn from an arts and humanities-based teaching approach? *Br Dent J.* 2017;222(3):147-150. doi:10.1038/sj.bdj.2017.109
- McGrath C. Behavioral Sciences in the Promotion of Oral Health. *J Dent Res.* 2019;98(13):1418-1424. doi:10.1177/0022034519873842
- Williams DM, Sheiham A, Watt RG. Oral health professionals and social determinants. *Br Dent J.* 2013;214(9):427. doi:10.1038/sj.bdj.2013.436
- da Fonseca MA, Avenetti D. Social Determinants of Pediatric Oral Health. *Dent Clin North Am.* 2017;61(3):519-532. doi:10.1016/j.cden.2017.02.002
- Watt RG. From victim blaming to upstream action: Tackling the social determinants of oral health inequalities. *Community Dent Oral Epidemiol.* 2007;35(1):1-11. doi:10.1111/j.1600-0528.2007.00348.x
- Heilmann A, Sheiham A, Watt RG, Jordan RA. [The Common Risk Factor Approach - An Integrated Population- and Evidence-Based Approach for Reducing Social Inequalities in Oral Health]. *Gesundheitswesen.* 2016;78(10):672-677. doi:10.1055/s-0035-1548933
- Narvai PC. Collective oral health: ways from sanitary dentistry to buccality. *Rev Saude Publica.* 2006;40(spe):141-147. doi:10.1590/s0034-89102006000400019
- Soares CLM, Paim J, Rossi TA, Chaves S. O espaço da saúde bucal coletiva: contribuições para compreensão da formulação e implementação das políticas de saúde bucal no Brasil O espaço da saúde bucal coletiva. In: Books S, ed. *Política de Saúde Bucal No Brasil: Teoria e Prática.* ; 2016:137-170.
- Loyola MAR. A Saga das Ciências Sociais na área da Saúde Coletiva: elementos para reflexão. *Physis: Revista de Saúde Coletiva.* 2008;18(2):251-275. doi:10.1590/s0103-73312008000200004
- Zanin L, Florio FM, Santos RB dos, Souza PP. Evaluation of scientific production in the field of Dentistry in Public Health from 1999 to 2009. *Rev Odontol UNESP.* 2014;43(2):131-136. doi:10.1590/rou.2014.015
- Russo JA, Carrara SL. Sobre as ciências sociais na Saúde Coletiva - com especial referência à

- Antropologia. *Physis*. 2015;25(2):467-484. doi:10.1590/S0103-73312015000200008
30. Brito JHM. *Faculdade de Odontologia - Cem Anos de História 1898-1998*. Faculdade de Odontologia da UFRGS; 1998.
  31. Fernandes DC, Freitas DA, Pedrosa AK, Silva E do N. Dentistry Curriculum and the National Curriculum Guidelines. *Revista Portal: Saúde e Sociedade*. 2016;01(02):104-115. doi:10.28998/2525-4200.2016v1n2.104-115
  32. Freitas MCL de, França CE. História Da Sociologia E De Sua Inserção No Ensino Médio. *Movimentação*. 2016;3(5):39-55.
  33. Oliveira A. Sentidos e Dilemas do Ensino de Sociologia: Um Olhar Sociológico. *Revista Inter-Legere*. 2013;1(9):25-39.
  34. Neville P, Zahra J, Pilch K, Jayawardena D, Waylen A. The behavioural and social sciences as hidden curriculum in UK dental education: A qualitative study. *European Journal of Dental Education*. 2019;23(4):461-470. doi:10.1111/eje.12454
  35. Uchôa E, Vidal JM. Medical Anthropology: Conceptual and Methodological Elements for an Approach to Health and Disease. *Cad Saude Publica*. 1994;10(4):497-504. doi:10.1590/s0102-311x1994000400010
  36. Alves P. Itinerário terapêutico e os nexos de significados da doença. *Política & Trabalho*. 2015;(42):n/a.
  37. Alves PC. Experiencing Illness: theoretical considerations. *Cad Saude Publica*. 1993;9(3):263-271. doi:10.1590/s0102-311x1993000300014
  38. Frank AW. *The Wounded Storyteller: Body, Illness and Ethics*. University of Chicago Press; 1997.
  39. Kleinman A. *Patients and Healers in the Context of Culture*. University of California Press; 1981.
  40. Skrzypek M. The social origin of the illness experience - an outline of problems. *Annals of Agricultural and Environmental Medicine*. 2014;21(3):654-660. doi:10.5604/12321966.1120619
  41. Conrad P. *The Medicalization of Society: On the Transformation of Human Conditions into Treatable Disorders*. The John Hopkins University Press; 2007.
  42. Foucault M. *O Nascimento Da Clínica*. 7th ed. Forense Universitária; 2011.
  43. Camargo Jr KR. A biomedicina. In: Hucitec, ed. *Biomedicina, Saber & Ciência Uma Abordagem Crítica*. ; 2003.
  44. Boltanski L. A relação doente-médico. In: *As Classes Sociais e o Corpo*. Editora Paz e Terra; 2004.
  45. Parsons T. *The Social System*. Routledge and Kegan Paul; 1951.
  46. Albuquerque OMR de, Abegg C, Rodrigues CS. Pregnant women's perceptions of the Family Health Program concerning barriers to dental care in Pernambuco, Brazil. *Cad Saude Publica*. 2004;20(3):789-796.
  47. Mendonça TC. Dental mutilation: rural workers' concepts of responsibility for tooth loss. *Cad Saude Publica*. 2001;17(6):1545-1547. doi:10.1590/s0102-311x2001000600040

<sup>i</sup> The National Curriculum Guidelines (NCGs) guide the essential contents of the disciplines in the Dentistry undergraduate program in the direction of relating to the health-disease process of the citizen, family, and community, with epidemiology as the foundation.<sup>31(p109)</sup>

<sup>ii</sup> Available at: <https://www1.ufrgs.br/RepositorioDigitalAbreArquivo.php?78F9DA79D693&115>

<sup>iii</sup> According to Vieira (2004), "In the pursuit of autonomy for dentistry in relation to medicine, its representatives sought to claim for themselves a specific area in the human body as their object of study, namely the mouth and teeth, which both liberated and confined dentistry within itself."<sup>7(pp34-35)</sup>

<sup>iv</sup> On May 9th, 2023, President Luiz Inácio Lula da Silva sanctioned Law No. 8131 of 2017, which the National Congress approved in November 2022. This Law provides universal, equitable, and continuous access to oral health services, which are now permanently integrated into the SUS (Unified Health System). Therefore, the provision of dental services cannot be interrupted or sidelined by federal, state, and municipal managers.

<sup>v</sup> These indicators are published in the National Oral Health Report from the Ministry of Health. Available at: <https://aps.saude.gov.br/biblioteca/>