Interfaces between racism and dentistry – the need to recognize in order to change: a literature review

Abstract
The current study aimed at carrying out a narrative literature review about the interfaces between Racism and Dentistry. The bibliographic search was conducted on the PubMed and BVS (Biblioteca Virtual de Saúde) databases between January and October 2023, using the following descriptors: "racism", "dentistry" and "oral health". Publications on the intersections between racism, education and dental practice were selected to comprise this review. It was possible to identify that Dentistry is influenced by racism and works to maintain and legitimize this system of oppression. The absence of racial diversity among professionals, teachers and students in the field, unproblematic dental curricula, the lack of cultural competence among professionals and the racial bias in the indication of dental treatments are important points listed in the literature on the links between Racism and Dentistry. Changing this reality implies making anti-racism a priority in dental teaching and practice. For this to happen, it is essentially necessary to accept that racism exists and that its historical foundations still impact and shape the profession.


Interfaces entre racismo y odontología - la necesidad de reconocer para cambiar: una revisión narrativa

Resumen
El objetivo de este estudio fue realizar una revisión narrativa de la literatura sobre las interfaces entre racismo y odontología. La búsqueda bibliográfica se realizó en las bases de datos Medline (Medical Literature Analysis and Retrieval System Online) via PubMed y BVS (Biblioteca Virtual de Salud), entre enero y octubre de 2023, utilizando los descriptores "racism", "dentistry" y "oral health". Para componer esta revisión se seleccionaron publicaciones sobre las intersecciones entre el racismo, la educación y la práctica dental. Se pudo identificar que la odontología está influenciada por el racismo y trabaja para mantener y legitimar este sistema de opresión. La falta de diversidad racial entre los profesionales, profesores y estudiantes de la especialidad, los currículos odontológicos poco problematizadores, la falta de competencia cultural entre los profesionales y el sesgo racial en la indicación de los tratamientos odontológicos son puntos importantes enumerados en la literatura sobre los vínculos entre racismo y odontología. Cambiar esta realidad implica hacer del antirracismo una prioridad en la enseñanza y la práctica odontológicas. Para que esto ocurra, es esencialmente necesario aceptar que el racismo existe y que sus fundamentos históricos aún impactan y moldean la profesión.


Interfaces entre racismo e Odontologia – necessidade de reconhecer para mudar: uma revisão narrativa

Resumo O presente estudo teve como objetivo realizar uma revisão narrativa da literatura acerca das interfaces entre racismo e a Odontologia. A pesquisa bibliográfica foi realizada nas bases de dados Medline (Medical Literature Analysis and Retrieval System Online) via PubMed e BVS (Biblioteca Virtual de Saúde), entre janeiro e outubro de 2023, a partir da combinação dos descritores "racism", "dentistry" e "oral health". Foram selecionadas para compor esta revisão publicações sobre as interseções entre o racismo, a educação e a prática odontológica. Foi possível identificar que a Odontologia sofre influência do racismo e atua na manutenção e na
INTRODUCTION

Racism is a structural and structuring element of social relations. It is a system that generates behaviors, practices and beliefs that underpin avoidable and unjust inequalities between social groups based on race or ethnicity. It is not merely reduced to a preconception, a discriminatory act, or even a set of actions. Although it oftentimes materializes in racial discrimination acts, Racism is defined by its systemic nature. It is a social process in which conditions of subordination and privilege are distributed across racial groups and reproduced in the realms of politics, economy and everyday relations. Thus, over time, Racism has been determining the social stances of individuals based on their race or ethnicity.

Specifically regarding the Dentistry practice, although oral health care is widely discussed and researched, the literature indicates scarcity of surveys that problematize oral health care and discriminatory practices, especially those motivated by racial factors.

A recent trend in studies has shown that Structural Racism manifests itself in Dentistry in a synergistic manner, both from the patient's and from the professional's side: oppressed racial groups lack access to dental care and to the profession itself. Furthermore, Structural Racism shapes professional practices in Dentistry, which are standardized based on White ideals.

As Dentistry and dental education are deeply rooted in and intertwined with social structures, their policies and practices consciously and unconsciously normalize and reproduce racism, reinforcing the concept of black-skinned people as inherently inferior. In this sense, the literature has evidenced among dentists the presence of discriminatory behaviors and clinical bias in recommending treatments according to the patients' race. In dental education, Racism materializes through the low representation of oppressed racial groups both among students and faculty, as well as in the predominance of academic curricula that fail to problematize issues, reflecting and perpetuating the racial oppression embedded in society. These curricula reinforce the biomedical paradigm and neglect ethical, humanistic and social dimensions.

In contemporary society, Racism occurs in a veiled manner, making it difficult to acknowledge its existence. In particular, Brazil seeks to maintain the image of a cordial country characterized by the presence of a peaceful people without racial or religious preconceptions. This denial precisely aims at sustaining the racial hierarchy in its current position, contributing to maintaining Racism and White privileges. In this sense, it is believed that recognizing and highlighting the existence of Racism in Dentistry is the first step towards change. Given the above, this study aimed at conducting a critical literature review on the interfaces between Racism and Dentistry, highlighting the existence of this problem and aiming to contribute to the proposal of changes to achieve dental education and practice based on anti-racism.

LITERATURE REVIEW

A narrative literature review was conducted, an appropriate method for describing and discussing the development or "state-of-the-art" of a particular subject matter from a theoretical or contextual perspective. Through it, it is possible to obtain a broad description of the topic without the need to exhaust all information sources, as its implementation does...
not involve systematic data searches and analyses. Its importance lies in quick updating of knowledge about a specific topic\textsuperscript{15,16}.

The guiding question for this review was as follows: "Which are the interfaces between Racism and Dentistry?" To answer this question, a search for articles was conducted in the Medline (Medical Literature Analysis and Retrieval System Online) database via PubMed and in BVS (Biblioteca Virtual de Saúde) between January and October 2023, using the combination of the following descriptors: "racism", "dentistry", "oral health" (Medical Subject Headings, MeSH) and their respective versions in Portuguese (Descritores em Ciências da Saúde, DeCS). The *AND* Boolean operator was used in the search strategy. There were no restrictions in terms of language or year of publication. Additionally, a search in the Grey Literature on the topic was also conducted.

This review included articles, books and other materials published in scientific journals, such as editorials, comments and brief communications, on the relationships between racism, education and dental practice. No exclusion criteria were adopted regarding language or publication date.

The literature shows that the first way in which Racism materializes in Dentistry is through the absence of racial diversity among professionals, faculty and students in the field\textsuperscript{6,17}. As a consequence of the lack of Black representation in the academic field and decision-making spaces, there are curricula that fail to address issues, resulting in the training of professionals with little or no cultural competence. Cultural competence refers to the ability to provide effective, comprehensive and respectful care that is compatible with the users' health beliefs and practices\textsuperscript{6,12}. Therefore, the profile of the trained professionals is marked by whiteness and by no cultural competence, resulting in a dental practice that produces, reproduces and maintains racism, with attitudes that include racial bias in the recommendation of procedures and in the treatment of patients by professionals\textsuperscript{6,12,17,18}.

The analysis of the available literature on the subject matter allowed categorizing the interfaces between Racism and Dentistry into two perspectives, which are discussed as follows: I) Racism in dental education; and II) Racism in dental practice.

*Racism in dental education: absence of racial diversity and academic curricula that fail to address issues.*

It is important to note that the path to the dental profession occurs within society at large. Thus, dental schools' environments are microcosms of society in general\textsuperscript{19}. In this sense, the absence of racial diversity in Dentistry is not surprising when considering the high cost of education and existing disparities in income, wealth and schooling levels across racial groups due to structural racism and the overlap between systems of exploitation and oppression\textsuperscript{7}. As a consequence, elitism and whiteness characterize the profile of the faculty, students and professionals in Dentistry who are trained worldwide\textsuperscript{6}.

Black-skinned dental students attend higher education institutions where racist ideologies and anti-Black stereotypes permeate their social and learning spaces, particularly in historically White colleges and universities\textsuperscript{16}. Studies have shown that black-skinned students receive and endure discriminatory messages of not belonging in the academic space, being treated as lazy, criminals and less intelligent than their non-Black peers. As a consequence, black-skinned students may feel discriminated against, demoralized and excluded, experiencing a sense of non-belonging, minority stress, low self-esteem and impostor syndrome, doubting their own abilities and feeling like fakes\textsuperscript{17,19,20}.

Especially in Brazil, although the quota system enables greater access to higher education for the Black population, black-skinned university students continue to face difficulties related to staying in undergraduate courses due to financial constraints. Additionally, black-skinned Brazilian university students report that the academic environment sometimes proves to be hostile and segregating\textsuperscript{21}.

The racial quota system in federal higher education institutions constitutes an important tool in Brazil for historical reparation and an attempt to reduce social inequality between white- and black-skinned individuals in higher education\textsuperscript{21}. According to the Study of Social Inequalities by Skin Color or Race in Brazil, black-skinned or mixed-race students account for 50.3\% of the Brazilian public universities and 46.6\% of the private ones\textsuperscript{22}. 

The literature shows that the first way in which Racism materializes in Dentistry is through the absence of racial diversity among professionals, faculty and students in the field.
In a study involving the Federal University of Alfenas, Lopes, Silva and Ferreira (2021)\textsuperscript{23} conducted a simulation regarding the admission of black-skinned students if there were no affirmative action policies and reserved spots for this population. The study concluded that, in the field of Biological Sciences and Health, most of the self-declared black-skinned, mixed-race and indigenous students from public schools that applied in these areas would not have been admitted without the quota law\textsuperscript{24}, a result that becomes even more pronounced when racial self-declaration intersects with income. Data like these reinforce the importance of affirmative action policies within universities. However, policies for the retention of black-skinned students in courses, especially in Dentistry, should also be considered, taking into account that inequalities are socioracial\textsuperscript{21}.

The Dentistry course requires a wide and costly list of instruments and materials\textsuperscript{25}, Santos et al. (2015)\textsuperscript{25} conducted a survey in a public university regarding the cost of the complete list of instruments and estimated a high financial investment for each student throughout the course, which amounted to approximately 24 minimum wages at the time in 2014. The study by Martins, Menezes and Queiroz (2019)\textsuperscript{26} showed that this is a constant concern and a major challenge for 80% of the Dentistry students that participated in the study. The financial cost of the course is even considered a barrier to retaining low-income students\textsuperscript{27}. Furthermore, those who acquire lower-quality instruments due to their financial condition experience discrimination from the professors\textsuperscript{26}.

Similarly to black-skinned students experiencing the negative effects of racism in predominantly White institutions, black-skinned professors are also affected. Although there is little research describing the experiences of black-skinned faculty in Dental schools, studies in the Medicine and Nursing fields suggest that, in addition to Impostor Syndrome, black-skinned faculty may experience the so-called "minority tax", which hinders their career advancement and professional promotion\textsuperscript{28,29}. The "minority tax" is defined as the "imposition of additional responsibilities on faculty from minority racial groups in the name of efforts to achieve diversity". For black-skinned professors, the "minority tax" materializes, for example, in unpaid service where they must mentor black-skinned students and staff, in work in non-designated roles, in trading clinical time for community service, and in receiving additional work that hinders their ability to meet promotion and tenure standards. It is certain that, even in an institution striving to be humanistic, the additive effects of the "minority tax" and Impostor Syndrome can accumulate as experiences of race-based stress and, if persistent, of racial trauma\textsuperscript{17}.

Some studies highlight the importance of increasing racial diversity in Dentistry and show that a racially diverse faculty positively affects learning outcomes, helps break stereotypes, and exerts a significant impact on the students’ personal development\textsuperscript{6,17}.

Gurin \textit{et al.} (2002)\textsuperscript{30} postulated and tested a theory on how experiences with diversity influence university students’ educational outcomes. Based on psychological concepts, the researchers explained that experiences with diversity, particularly interaction with diverse peers and curricular exposure to diversity, provide the necessary challenge for developing a healthy sense of identity and more complex cognitive structures.

Furthermore, the organizational climate and institutional culture of Dentistry courses impact how students learn\textsuperscript{17}, and their curricula also reflect and perpetuate the racial oppression embedded in society. Curricula can be defined as environments in which different groups seek to establish their hegemony. Thus, the curriculum field operates as a potent means of discourse production, creating truths, interests and concepts\textsuperscript{31}.

Traditional health curricula that focus on biomedical sciences have various deficiencies, especially regarding lack of self-reflexivity. Recent curricular restructurings have brought about discussions about the social determinants of health; however, curricula based on "determinants" reinforce the biomedical paradigm, as they end up presenting the "social" as a risk factor in a decontextualized manner, neglecting the analysis of the root causes of health inequalities\textsuperscript{32}.

The National Curriculum Guidelines (\textit{Diretrizes Curriculares Nacionais}, DCNs) for Dentistry represent an effort to overcome the biomedical model in higher education in the profession. The DCNs for Dentistry in 2002 already included human and social sciences among the essential contents for the Dentistry course\textsuperscript{33}. Homologated in 2021, the new DCNs reassert this guideline and emphasize that the curricular structure of undergraduate Dentistry courses should "take into account the health needs of users and populations alike, including the ethical, humanistic and social dimensions, oriented towards citizenship and human rights, with Human and Social Sciences as a cross-cutting axis of formation"\textsuperscript{34}. 

Rev ABENO. 2024;24(1):2199 - http://dx.doi.org/10.30979/revabeno.v24i1.2199 - 4
However, there are still difficulties in implementing the DCNs, among which inadequate understanding by a large number of principals, coordinators and professors of Dentistry courses in Brazil stands out. This delays their direct implementation and hinders the training of professionals compatible with the reality of the country's social demands.

Thus, although it is possible to find some specific references to the relationship between race and health in current curricula, such as the higher prevalence of certain diseases in the black-skinned population, there is no explicit evidence of discussions that problematize the racial inequities that permeate dental care.

Changes in dental education curricula are necessary, including interdisciplinary perspectives in conjunction with social and human sciences, teaching students to understand institutional mechanisms and the omnipresence of racism and to combat it, even in their own practices.

When discriminatory issues are not addressed in health education, we end up with professionals that lack reflection and view others as instruments or objects, rather than as social actors capable of questioning social structures and contributing to their transformation. An education that is primarily technical and lacks focus on issues defined in the field of human and social sciences, including racism, can contribute to dentists grounding their clinical decisions on preconceived and misguided ideas about social groups.

Racism in dental practice: racial bias in treatment recommendations, discriminatory behaviors and lack of cultural competence.

Struggling with ethical conflicts since their training and immersed in a broader context of racism, dental professionals oftentimes indulge in behaviors that suggest little reflection on racial issues and, therefore, discriminate against certain segments of the population.

A number of studies extensively show the presence of clinical bias in treatment decision-making based on the patient's race, with the recommendation of more invasive, faster and lower-cost procedures for black-skinned patients compared to white-skinned ones.

A research study conducted in northeastern Brazil showed that, in a clinical scenario of total equality of conditions among patients, the dentists recommended tooth extraction more frequently for black-skinned users than for white-skinned ones. Another study, conducted by Patel et al. (2019) in Italy, also showed a pro-White bias in the recommendation of more conservative dental treatments. In the study, the professionals were significantly more likely to recommend endodontic treatment for white-skinned patients and significantly more prone to recommending extraction for black-skinned users. Plessas (2019) sought to assess the impact of ethnic and social characteristics on dentists' decision-making in the United Kingdom through the analysis of clinical cases. As a result, approximately 86% of the professionals recommended endodontic treatment for white-skinned patients, when compared to 60% for black-skinned ones.

Racial bias has also been documented in the recommendation of restorative and prosthetic treatments, with a higher likelihood of recommending less complex and lower-cost procedures for black-skinned patients. The study conducted by Chisini et al. (2019) in four Brazilian municipalities showed that, both for extensively decayed teeth and for poorly adjusted amalgam restorations, dentists chose less complex and cheaper treatment options for black-skinned patients, even when there is no mention of the patient's socioeconomic status and when they are given total freedom to decide the best treatment option. The results showed that white-skinned patients with extensive caries lesions were twice as likely to be referred for prosthetic treatment, while their black-skinned counterparts predominantly were offered direct restorations. The findings by Chisini et al. (2019) also showed that racial bias in treatment choices takes place regardless of local racial diversity, as in both regions of the country analyzed (the South region, with less racial diversity, and the Northeast, with greater racial diversity), the patients' skin color influenced the dentists' treatment decision-making.

In addition to treatment recommendations based on the patient's race, lack of cultural competence is an important element in maintaining racism in dental practice, as it impairs the relationship between professional and patient.
Coined in the American context, the term "cultural competence" is the most widely used in the literature, within the health context, to refer to the intercultural relationship between health professionals and patients\(^1\). In a context where generalizations, stereotypes, privileges and racism are ingrained in society and also present in the relationship between professionals and patients, cultural competence might be described as a lifelong commitment to: i) self-assessment and self-critique for existing power imbalances in the professional-patient relationship; ii) developing mutually beneficial clinical partnerships; and iii) non-paternalistic advocacy with communities, on behalf of individuals and populations. Culturally safe health care practices are characterized by actions that recognize, respect and nurture the unique cultural identity of a given people and meet their needs, expectations and rights. It takes place when a health professional develops cultural sensitivity and is able to identify and reflect on their own culture and the influence it has on their practice. In this way, the interaction between both is not harmful, and dignity and respect are maintained for both\(^2,3\).

However, this "culturally safe health care practice", in which different cultural identities are recognized and respected, is far from the reality in dental practice. Discriminatory attitudes and behaviors by professionals based on the patients' race have been documented in the literature, with less respectful behaviors and less autonomy given to black-skinned patients when compared to white-skinned patients, as well as greater accountability of black-skinned individuals for treatment failures when compared to their white-skinned counterparts\(^4\).

Respecting a person's autonomy entails recognizing their capacity and right to govern themselves, seeking to understand their reasons and objectives. Assigning greater or lesser autonomy based on racial characteristics is a discriminatory attitude that should be problematized both in professional training and in the practice. The top-down perspective of the professional-patient relationship, where the former is solely responsible for clinical decisions and the patient's concerns are silenced, is characteristic of a model of practice marked by lack of cultural competence, which should be overcome\(^4\).

**How can Dentistry become anti-racist?**

In the first place, it should be clear that the root cause of racial inequalities is structural racism. To make progress in reducing racial disparities, dental professionals need to be actively engaged in anti-racist work\(^5,6\).

Considering the urgency of addressing the effects of Racism in Dentistry and people's oral health, widely circulated international journals such as the *Journal of Public Health Dentistry*, and important organizations in the dental field, including the *American Dental Education Association* (ADEA), the *Diverse Dental Society* (which includes the *National Dental Association*, the *Hispanic Dental Association* and the *Society of American Indian Dentists*), the *Oral Health Progress and Equity Network* (OPEN) and *Community Catalyst*, are engaged in developing anti-racist practices in Dentistry\(^40\).

The *Journal of Public Health Dentistry* special edition published in 2022 (volume 82, issue S1) was devoted to advancing knowledge on anti-racism and oral health, showcasing anti-racist approaches in the areas of scientific research, education, practice and policy. The topics included guidance on anti-racist methodological approaches in research and studies on anti-racism in dental public health education and workforce, as well as examples of anti-racist programs.

The *American Dental Education Association* outlines important guidelines for anti-racist practice in Dentistry, including: supporting and increasing the diversity of faculty, students and professionals in dental education; using public needs as a reference to determine the types of diversity required in dental education; and continually assessing the diversity of public needs and dentists' ability to meet those needs\(^41\).

It is necessary to racialize discussions and curricula in higher education, promoting racial literacy and awareness. It is essential to develop curricula that break away from an essentially technical education and encompass broader and more problematizing issues. For this new form of knowledge to be generated, it is necessary not only to educate students but also to provide ongoing training for faculty and everyone who works in educational institutions. This way, educational institutions as a whole would be better prepared to deal with social subjectivities and equipped to instruct and guide. Only in this way will it be possible to develop professionals capable of engaging with society and discussing and rethinking humanized and humanizing practices\(^9\).
Scientific progress regarding racial injustice in Dentistry depends on the adoption of actively anti-racist narratives in academic circles, moving away from the current descriptive and impartial language regarding health disparities and towards deeper discussions about the social and historical dynamics that underlie power and oppression among ethnic groups and also support the idea of racial categorization.\(^2\)

This study has limitations inherent to the review method adopted. Although narrative reviews allow for a quick update of knowledge and the identification of the state-of-the-art on a given topic, this method precludes data reproduction, nor does it produce quantitative data regarding the literature analyzed.

**CONCLUSIONS**

The review highlighted that Dentistry is influenced by structural racism and also contributes to maintaining and legitimizing this system of oppression. Absence of racial diversity among professionals, faculty and students in the field, non-problematizing dental curricula, lack of cultural competence among professionals, and racial bias in the recommendation of dental treatments are important points identified in the literature on the interface between Racism and Dentistry.

Changing Dentistry’s racist reality involves prioritizing anti-racism across its various axes, including education, research and dental practice. For this to happen, it is essential to acknowledge that racism exists and that its historical foundations impact and shape dental education and practice. Only in this way will it be possible to have students and professionals with anti-racist attitudes and praxis, contributing to breaking down access barriers, deconstructing Eugenic practices, and reducing racial inequities affecting the population.

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