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Race and Utilization of Dental Care

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Abstract

Racial discrimination in healthcare has been associated with suboptimal utilisation of dental services which may be linked to inequity in healthcare. Discriminatory behaviour of a healthcare professional could lead to a nocebo effect and a decrease in the oral health related quality of life. Colonialism could be to blame for historically segregating various races according to skin colour, language barriers, religion and socioeconomic status. But continual of such behaviour in the modern era has led to dehumanisation, where the ideal treatment plan may not even be informed to the patient, because the healthcare professional(s) assume that the patient may not / may not be able to avail such services, which results in doubtful obtainment of consent. Also, the lack of dentists belonging to discriminated races also contributes to non-attendance and/or non-availability of dental services for vulnerable patients. Cultural differences among the races, with regards to the importance of dental preventive care, oral hygiene maintenance and individual's dependence on family heads for consent, could result in lack of compliance from patients despite correct advice from dentists. In conclusion, intercultural and international education are necessary components of a dental curriculum. Healthcare professionals need to be trained in remote and international areas in order to imbibe empathy and be respectful towards other races.

Keywords- *Dental care, Racial discrimination, Colonialism, Dehumanisation, Dental education*

Introduction

Racial discrimination in healthcare has been associated with suboptimal utilisation of dental services which may be interlinked to inequity in healthcare. The negative experience associated with incidents of discrimination in other aspects of life may lead to a loss of trust or hopelessness. Such negative emotions may then be associated with healthcare and could result in the patient experiencing the 'Nocebo' effect. [1] 'Nocebo" was introduced as a contradictory term to 'Placebo'. [1] Whereas the placebo effect refers to an improvement in symptoms caused by psychosocial factors such as positive expectations, the nocebo effect manifests as clinical worsening, suboptimal treatment efficacy or the occurrence of adverse events, presumably caused by negative expectations. [1]

Racial discrimination is any discrimination against any individual on the basis of their skin colour, race or ethnic origin.[2] Pertaining to healthcare, satisfaction is a multidimensional concept that considers access, organization and professional-user interaction.[3] The most frequent occurrences which could be perceived as racial discrimination by dentists are: (a) not listened to by dental providers, (b) being treated with less respect compared to others, and (c) receiving poorer service compared to others.[4] A person copes with such discriminatory acts by assertiveness, acquiring management options and undergoing treatment from other dentists. [4]

Colonialism

Historically, an influential determinant is colonialism's effect on social hierarchy, socioeconomic status of various races and the receipt of healthcare by different strata. [5] Organisational change in colonial mindset of certain races/ groups of healthcare professionals, the healthcare / welfare structure and an individual's contribution towards health inequalities could be challenging, but not impossible to consider. Even though formal analysis might not always be possible but describing discriminatory incidents could illuminate the mechanisms that shape these oral health inequities.[5] Certain races have ancestrally belonged to a lower socioeconomic status. Higher prevalence of perceived discrimination have been found in the lower socioeconomic status groups, demonstrating that this phenomenon has been socially distributed, inclusive of the access to health services. [6] People with multiple disadvantaged status experienced more discrimination than those with privileged social status. The meritocratic

ideology, which is widespread in some countries, promotes the belief that every individual is solely responsible for his socioeconomic position, which might increase discrimination.[6]

Dehumanisation

Dehumanisation is the process by which a person is seen as not fully human but like an animal or a thing. The healthcare community has a duty to understand the life circumstances of a person and offer holistic care rather than simply aim to diagnose and treat single conditions.[7] If a healthcare professional views only the patient's disease status/ skin colour / socio-economic status, the concern for the patient as a human being is reduced and accordingly the importance of providing the ideal treatment options, self-care education and consent to the treatment plan are all negatively affected.[4]

Skin Color

Discrimination may not be on the broad basis of race, defined as, a grouping of humans based on shared physical or social qualities into categories generally viewed as distinct by society. [8] It may be specifically linked to the perceived skin colour of the individual seeking treatment regardless of the racial grouping. A person may choose to go to an individual of the same race, more specifically, the same nationality, skin colour, language, etc.[8]

Skin colour and income have been heavily correlated with both general and oral health conditions. Such individuals have presented poorer health conditions, being frequently associated with higher prevalence of periodontal disease and dental caries. [9] Social deprivations in life's course could lead to reduced access to oral healthcare and worse oral health habits, also influencing the quality of life of these individuals. [9] Thus, professionals may also play—albeit unconsciously— important roles in the propagation and replication of discrimination, especially since the majority of these professionals represent, in most cases, a socioeconomically favoured minority. [9] Therefore, the understanding of how this can occur in the clinical routine of professionals from different cities is of great relevance. Dentists chose less complex and cheaper treatment options for the black patient, even when there was no mention of the socioeconomic status of the patient and receiving complete freedom to decide the better treatment.[9]

Previous research has shown that Hispanic population with dark skin colour experience more untreated tooth decay, tooth loss, and severe periodontal disease than non-Hispanic population with a light skin colour in the USA.[8] A vicious cycle has been created whereby certain groups with low education levels and low income houses have less doctors of the preferred race versus the number of patients. As Smith PD et al (2022) observed having Hispanic / Indigenous dentists improves the poor availability, affordability, and quality of dental care that occurs as a result of fewer dental providers in communities where higher concentrations of these populations reside, poor patient–doctor communication, discrimination, and the populations' historical mistrust of healthcare providers.[8]

Even though the racial diversity of dental professionals has been improving, only 6% of professionally active dentists in the USA were from underrepresented minorities. Recruiting and training more providers from disadvantaged minority backgrounds could improve the racial imbalance between patient and provider populations, such as the dental pipeline program.[10]

When clinical information is limited, clinicians may rely on implicit biases about the social groups to which patients belong. [10] For example, if Blacks have lower socioeconomic status on average, and those with low socioeconomic status are stereotyped as non-adherent, a provider may stereotype a Black person with low socioeconomic status as potentially non-adherent (and thus steer the patient away from treatments that work best with high levels of adherence) if the provider does not know much about the patients' clinical history or level of activation. Such uncertainty can occur when patient-provider communication is poor, which may be more likely when there is race, ethnicity, or language-discordance between providers and patients.[10]

Patel N et al (2019) applied socio cognitive measures of bias to determine if unconscious bias influences dentists' treatment decision making on tooth restorability according to race. Their study showed that clinicians' decisions to recommend root canal treatment were affected by the race of the patient, and there was a clear bias toward root

canal treatment in the White patient model and extraction in the Black patient model. Generally, clinicians had a pro-White bias in both race and cooperation tests irrespective of the patient condition.[11]

Higher self-reported social discrimination was associated with independent variables such as colour/race, sex, and illiteracy. [12] In other words, there is a higher prevalence of discrimination towards young black women and those who are illiterate. Added to this, discrimination within the healthcare services affects people who are socially disadvantaged due to ethnicity, immigration status, and religion. It is important to highlight that social discrimination is a significant contributor to negative health outcomes regarding minority populations and that the use of dental services is higher among individuals with higher income. [12]

Refugees

Discrimination would most often occur in areas where at least two different racial groups are residing. Immigration due to trade, war, employment, has historically led to the interaction of different races with each other. The most vulnerable population being, a homeless refugee, who may or may not be aware of the language and culture of the country of refuge and vice versa. United nations has recorded the number of refugees in the world at approximately 26 million.[13] Even the country's natives may not agree with their government to become a place of refuge. Greece natives protested against the country becoming a refuge due to an internal financial crisis.[13] In such situations where the country of refuge is protesting against the intake of refugees, healthcare of those populations consequently is not a primary concern.

Language Barrier

Moreover, immigration to a foreign land often leads to a language barrier. Healthcare professionals require the patient to ideally describe the chief complaint and its history, in order to decide on further investigations which would ultimately lead to the diagnosis and treatment planning. Explaining the importance of the treatment options along with the prognosis and self-care, in a language that the patient understands, is ideal. Communication between the patient / patient's guardian and the doctor becomes lost in translation with increased dependency on an appropriate interpreter/ translator, in the situation where they don't share a common language and/or don't employ a translator/ interpreter. [14] Paajanen A et al (2022) found that professionals even considered that patients sometimes try to hide the fact that they did not understand the dentist clearly, which might lead to misunderstandings. Some of the dentists considered difficulties in communication tiring and said that it took more energy and effort. They noted that communication took more time when the dentist and patient did not share a common language or when an interpreter was used.[14]

Previously, dentists reported similar ways to cope with language difficulties, which included official and unofficial interpreters (family members or friends of the patient). Poor communication can be the cause of patient dissatisfaction of a dental treatment. Finnish law states that the healthcare professional should try to give information to the patient in such a way that the patient can understand it, and the treatment plan should be done in mutual understanding with the patient. Not knowing the foreign-background patient's background and history has also surfaced in the interviews as a matter to consider by the treating professional.[14]

Community health workers noted that Mexican migrant women patients in North San Diego County USA, avoided making appointments if they knew the provider only spoke English. [15] Community members overwhelmingly described receiving poor patient service due to language barriers. Further, participants felt that providers did not treat patients with respect because they would take advantage of the language barrier and conduct services that clients had not consented to.[15] In such cases, consent to treatment becomes questionable and prone to litigation.[16]

Aarabi G et al (2018) found that elderly participants who immigrated to Germany from abroad, average of 36 years before, had worse oral health and consequently higher treatment needs compared with age-matched native Germans. They found more decayed teeth, papillary bleeding sites, inter-dental plaque-containing sites, and fewer restored teeth. Probably the migrants had worse mouth hygiene and lower oral health care utilization.[17]

It is perceived from these studies that migrants may not understand the importance of oral hygiene and / or utilize sub-standard or non-recommended methods of oral hygiene maintenance; this may be their cultural norm. Fewer

migrants than non-migrants used additional oral hygiene aids next to toothbrush and toothpaste.[16] Experience from Sweden suggests that early instructional sessions on availability and utilization of the host country's health care services and health related topics in the migrants' mother tongue may be useful to attenuate the language barrier with beneficial outcomes.[17]

Even if general dental practitioners promote oral healthcare, encourage the integration of multidisciplinary and a multilingual approach in the public health care system, the community and governing bodies must support the cause and actions. A major concern is the maldistribution of rural dental providers or level of dental insurance coverage available to the population is a structural/ system level issue, concerning government and stakeholders in health services planning. Provider and individual level communication in a non-English language could further bridge dental care gaps for non-English speaking groups.[18]

Religion

Racial categorization has changed historically. Association of race with nationality and as an extension with religion has been a common perception worldwide, albeit with a doubtful accuracy, for example "Christian" West, the "Islamic" Near East, the "Hinduism" of South Asia; and the "Buddhist" Far East—modern nationalist religious formations—for example, French Catholics, German Lutherans, and Chinese Buddhists.[19]

Tandale M et al (2020) observed that religious discrimination had an impact on the mental health of Muslim people through psychologic stress and anxiety associated with negative racist experiences, generating a lack of trust in healthcare professionals in general. Three participants had similar experiences during their dental visits that led them to lose trust in dentists and, ultimately, avoid dental visits. Several participants were generally satisfied with the treatment they received in private dental clinics, mentioning respectful and satisfying treatment from dentists. Most participants preferred to visit dentists with the same religion or ethnic origin to receive respectful behaviours towards their religious beliefs.[20]

Kavathe R et al (2018) reviewed that 2011 and 2012, 24.9% of U.S. adults and 42.9% of those with family incomes at lower than the poverty threshold had untreated dental decay, compared with 58.2% of Sikh adults. To counter this issue, United Sikhs organisational staff have received training and professional development in research and public and oral health-related topics facilitated by the Postal Regulatory Commission USA and New York University Dentistry. The involvement of United Sikhs staff members in oral health programmes, had an added advantage of having the trust of the community. But they also found that the leadership at the host gurdwaras and community participants felt ownership of the project concentrated more on the data collected. NYU investigators and colleagues donated extra substantial time, frequent staff turnover at United Sikhs meant that new team members had to be trained and receive institutional review board approval took longer than expected.[21]

Marcus K et al (2022) described that cultural barriers to dental utilization included differences in cultural practices, race, behaviours and traditions. Gendered roles of Mexican mothers influenced female daughters' (lack of) dental visit. Traditional influences included the use of miswak (a teeth cleaning branch) which was preferred by Iraqi and Lebanese mothers in Melbourne, Australia. Family hierarchical structures, whereby elders upheld decision-making power, was reported with Chinese mothers. [18]

Covid-19

While racial discrimination has been recognized as a risk factor for poor health among minorities prior to the COVID-19 pandemic, the pandemic exposed many of the institutional structures that widened racial disparities. Zhang D et al (2022) reported that almost two thirds of American adults reported delaying or forgoing health care utilization due to the Covid-19 pandemic, one of the reasons being racial discrimination.[22]

Effect On Systemic Health

Suboptimal utilization of dental services could lead to loss of teeth and reduced/lost function and worse, negatively affect other systems of the body. Muralikrishnan M et al (2020) found that racial discrimination is associated with tooth loss among American adults aged 18 to 44 years.[22] AlFotawi R et al (2020) found a significant association between poor oral hygiene (manifested by periodontitis and tooth loss) and impairment of cognitive skill.[24]

The function of teeth includes not only mastication, but also speaking, smiling and defence. Even though losing a tooth cannot be compared to the loss of vital organs but loss of aesthetics and function may negatively affect the emotional perception of one's life further inducing the 'Nocebo' effect.[1] The World Health Organization (WHO) published, in 1995, a project to develop an international method for assessing quality of life, the World Health Organization Quality of Life Assessment (WHOQOL). In 1995, the Quality of Life Group of the WHO Mental Health Division defined quality of life as "the individual's perception of his position in life in the context of the culture and values system in which he lives and in relation to his goals, expectations, standards and concerns". Oral health is part of general health, and is recognized as an essential component for quality of life. Research in this area has developed the concept of "quality of life related to oral health" (QoLROH), which includes four categories: functional factors, psychological factors, social factors and existence of discomfort or pain. These concepts encourage a broad, empathetic, mainly subjective assessment of the perception of a person's QoL.[25]

Discriminated populations might have serious systemic health concerns of which dental concerns may be a result. Structural factors, for instance, living in a poor area/neighborhood, improper dietary patterns, insufficient sanitation, lack of fluoridated water, lack of education, restricted access to standard oral health care could negatively affect such people's perception regarding preventive dental care and tooth loss.[26] Such populations who don't have guidance from fellow family members and surrounding neighbours (micro level) require structural guidance from the society (mesi level) and the governing structure (macro level).[27]

Dental Education

The dental education program must have a stated commitment to a humanistic and empathetic culture which is regularly evaluated. [8, 28] During recruitment and admission procedures, diversification of races among students, faculty and support staff must be encouraged. The dental education program should ensure collaboration, mutual respect, cooperation, and harmonious relationships between and among administrators, faculty, students, staff, and alumni. The dental school should articulate its expectations regarding diversity across its academic community in the context of local and national responsibilities, and regularly assess how well such expectations are being achieved.[8,28] The dental education curriculum is a scientifically oriented program which is rigorous and intensive which must be regularly updated and revised to ensure anti-discrimination policies and guidelines are being taught to and practiced by the students as well as their supervisors.

Graduates must be competent in managing a diverse patient population and have the core skills to function successfully in a multicultural and multinational work environment. Students should learn about factors and practices associated with disparities in health status among subpopulations, including but not limited to, racial, ethnic, geographic, or socioeconomic groups and learn to objectively respect each individual patient's sociocultural mannerisms. Dental education programs must make available opportunities and encourage students to engage in service learning experiences and/or community-based learning experiences. [8, 28]

Conclusion

1. Diagnosis, treatment options and prognosis must be informed to the patient objectively.

2. Without provision of correct information, the patient has acquired insufficient information regarding the management of oral health care and consent to the treatment plan might be considered as invalid.[16]

3. Dental education programmes must be inclusive of intercultural, interracial and international aspects, inculcating respect and empathy across various divides.[8,28]

Limitations:

The prevalence of racial discrimination and dental care in Asia requires extensive research.

References:

[1] Watanabe T, Sieg M, Lunde SJ, Taneja P, Baad-Hansen L, Pigg M, Vase L. What is the nocebo effect and does it apply to dentistry?—A narrative review. Journal of Oral Rehabilitation. 2022 May;49(5):586-91.

[2] Dayal D. Complexion Based Discriminations: Global Insights. Notion Press; 2018 Jun 15.

[3] Bomfim RA, da Cunha IP, Lacerda VR. Health ombudsman and racial inequities in Dental Specialities Centers performance in Brazil: A multilevel analysis. Community Dentistry and Oral Epidemiology. 2022 Feb;50(1):11-8.

[4] Sokoto KC, Platt LF, Alexander LA, Foxman B, Shaffer JR, Marazita ML, McNeil DW. Racism in oral healthcare settings: Implications for dental care-related fear/anxiety and utilization among Black/African American women in Appalachia. Journal of Public Health Dentistry. 2022 Mar;82:28-35.

[5] Nath S, Sethi S, Bastos JL, Constante HM, Kapellas K, Haag D, Jamieson LM. A Global Perspective of Racial–Ethnic Inequities in Dental Caries: Protocol of Systematic Review. International Journal of Environmental Research and Public Health. 2022 Jan 26;19(3):1390.

[6] Junior OL, Menegazzo GR, Fagundes ML, de Sousa JL, Torres LH, Giordani JM. Perceived discrimination in health services and preventive dental attendance in Brazilian adults. Community Dentistry and Oral Epidemiology. 2020 Dec;48(6):533-9.

[7] Reilly J, Ho I, Williamson A. A systematic review of the effect of stigma on the health of people experiencing homelessness. Health & Social Care in the Community. 2022 Jun 28.

[8] Smith PD, Evans CA, Fleming E, Mays KA, Rouse LE, Sinkford J. Establishing an antiracism framework for dental education through critical assessment of accreditation standards. Journal of dental education. 2022 Sep;86(9):1063-74.

[9] Chisini LA, Noronha TG, Ramos EC, dos Santos-Junior RB, Sampaio KH, Faria-e-Silva AL, Corrêa MB. Does the skin color of patients influence the treatment decision-making of dentists? A randomized questionnaire-based study. Clinical Oral Investigations. 2019 Mar;23(3):1023-30.

[10] Singhal A, Jackson JW. Perceived racial discrimination partially mediates racial-ethnic disparities in dental utilization and oral health. Journal of public health dentistry. 2022 Mar;82:63-72.

[11] Patel N, Patel S, Cotti E, Bardini G, Mannocci F. Unconscious racial bias may affect dentists' clinical decisions on tooth restorability: A randomized clinical trial. JDR Clinical & Translational Research. 2019 Jan;4(1):19-28.

[12] Bulgarelli AF, Dos Santos CM, Rech RS, Baumgarten A, Goulart BN. Tooth Loss Condition and Social Discrimination in Brazilian Healthcare Services. International Journal of Public Health. 2021 Mar 12;66:586597.

[13] Lyttleton J. The total number of refugees in the world is growing. The Mil Source. 2021 May 13.

[14] Paajanen A, Karaharju-Suvanto T, Koivumäki J, Kaila M. Finnish dentists' experiences with foreign-background patients—a qualitative study. Acta Odontologica Scandinavica. 2022 Mar 10:1-6.

[15] Velez D, Palomo-Zerfas A, Nunez-Alvarez A, Ayala GX, Finlayson TL. Facilitators and barriers to dental care among Mexican migrant women and their families in North San Diego County. Journal of immigrant and minority health. 2017 Oct;19(5):1216-26.

[16] Shah P, Thornton I, Turrin D, et al. Informed Consent. [Updated 2022 Jun 11]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK430827/

[17] Aarabi G, Reissmann DR, Seedorf U, Becher H, Heydecke G, Kofahl C. Oral health and access to dental care–a comparison of elderly migrants and non-migrants in Germany. Ethnicity & health. 2018 Oct 3;23(7):703-17.

[18] Marcus K, Balasubramanian M, Short S, Sohn W. Barriers and facilitators to dental care among culturally and linguistically diverse carers: A mixed-methods systematic review. Community Dentistry and Oral Epidemiology. 2022 Mar 27.

[19] Wimbush VL. International Encyclopedia of the Social Sciences. Encyclopedia.com. 2022 Nov 29.

[20] Tandale M. We Are What We Are: Religious Discrimination and Oral Health Care Among Muslim People in Montreal. McGill University (Canada); 2020.

[21] Kavathe R, Islam N, Zanowiak J, Wyatt L, Singh H, Northridge ME. Building capacity in the Sikh Asian Indian community to lead participatory oral health projects. Progress in community health partnerships: research, education, and action. 2018;12(1):3.

[22] Zhang D, Li G, Shi L, Martin E, Chen Z, Li J, Chen L, Li Y, Wen M, Chen B, Li H. Association between racial discrimination and delayed or forgone care amid the COVID-19 pandemic. Preventive Medicine. 2022 Sep 1;162:107153.

[23] Muralikrishnan M, Sabbah W. Is Racial Discrimination Associated with Number of Missing Teeth Among American Adults?. Journal of Racial and Ethnic Health Disparities. 2021 Oct;8(5):1293-9.

[24] ALFotawi R, Alzahrani S, Alhefdhi R, Altamimi A, Alfadhel A, Alshareef A, Aldawsari B, Sonbol S, Alsubaie F, Alwahibi A, Aljoharah AS. The relation between teeth loss and cognitive decline among Saudi population in the city of Riyadh: A pilot study. The Saudi Dental Journal. 2020 Jul 1;32(5):232-41.

[25] Spanemberg JC, Cardoso JA, Slob EM, López-López J. Quality of life related to oral health and its impact in adults. Journal of stomatology, oral and maxillofacial surgery. 2019 Jun 1;120(3):234-9.

[26] Bastos JL, Celeste RK, Paradies YC. Racial inequalities in oral health. Journal of Dental Research. 2018 Jul;97(8):878-86.

[27] Bedos C, Apelian N, Vergnes JN. Social dentistry: An old heritage for a new professional approach. British dental journal. 2018 Aug;225(4):357-62.

[28] Ray K. Creating culturally competent dentists using integrative race education in dental schools. Journal of American College of Dentists. 2021.