ORAL HEALTH NEEDS FOR TRANSGENDER POPULATION-A LITERATURE REVIEW

R. Piradhiba¹, Madhumitha Nithiyasri², Rajab Ali. R³, Marie Asha Ambroise⁴, Kathijathul Hidhaya. S⁵, Hariharasudhan⁶.

- 1.Reader, Department of Orthodontics, Sri Venkateshwaraa Dental College, Puducherry-605102
 - 2.CRI, Sri Venkateshwaraa Dental College, Puducherry-605102
 - 3. Reader, Department of Orthodontics, Sri Venkateshwaraa Dental College, Puducherry605102
 - 4. Senior Lecturer, Department of Orthodontics, Sri Venkateshwaraa Dental College, Puducherry-605102
 - 5. Senior Lecturer, Department of Orthodontics, Sri Venkateshwaraa Dental College, Puducherry605102
 - 6. Senior Lecturer, Department of Orthodontics, Sri Venkateshwaraa Dental College, Puducherry605102

DOI: 10.48047/ecb/2023.12.si4.1597

Abstract:

Objective: Healthcare is a fundamental human right irrespective of gender, race, religion, caste, social status or the community in which they live. This narrative review explores current research articles about transgender adult needs, expectations and perception about dental and orthodontic healthcare.

Methods: An extensive electronic literature search was conducted using databases such as PubMed, Google Scholar, ResearchGate,Academicworks,Medicopublication and Education source.

Keywords: Transgender- Oral health, Needs, Expectations, Orthodontics, Smile aesthetics, Perception

Results Obtained: The search yielded 56 article with a wide range of study designs and methodologies. This review article will help in knowing the information available regarding dental and orthodontic health care and its consideration among transgenders comprehensively.

INTRODUCTION:

Healthcare is a fundamental human right irrespective of gender, race, religion, caste, social status or the community in which they live. Yet the transgender individuals as a community face various disparities in their access to oral and general healthcare [1]. The term "Transgender" is an umbrella term that includes transsexuals, transvestites, intersexed people, and just about anybody else who does not conform to the traditional model of sex/gender [2,3]

The Transgenders belonging to this community are highly diverse and are addressed by various local names in different parts of the world such as hijras in South Asia, Berdache in North America, Zanith in Arabian Peninsula, Sambia boys in Papua New Guinea, female husbands in West Africa, Faafafine in Polynesia, katoey (lady boys) in Thailand[4] and sworn virgins in Balkans[5]. In different parts of India they are vernacularly known as transsexuals, eunuchs, transvestites, alis, kothis, hijras, panthis and double deckers. [3,6].

According to 2011 census, estimated transgender population is 4,87,803 in India where the transgender population of Tamil Nadu and Puducherry occupy about 22,364 and 252 respectively[7,8] and they are often addressed as 'Aravaani' or 'Thirunangai' locally in both the places.[9,10] Despite their inclusion in the census, transgenders face great difficulties in their day-to-day life, especially their access to basic health services [10,11].

Transgenders belong to a community called as LGBTQ+ (lesbian, gay, bisexual, TG, and queer) worldwide. Although the constitution of India(on April 15, 2014) has recognized them as the third gender in the human race after a decade long battle[11,12], still stigma prevails and the community constantly face many inequalities such as discrimination, poverty, harassments, bullying, physical and verbal violence, improper healthcare coverage/legal protection and absence of individual's identity documents which plays a huge impact in their life[13]. Therefore, the current call of the hour is to change the traditional system of education and incorporate the awareness of LGBTQ+ among medical, dental, and various paramedical students so that they can handle them with utmost responsibility and dignity[12].

According to a study, compared to cisgender people there was a marked difference in the transgender people in terms of their perception and treatment needs for oral health as they perceive their teeth to cause nervousness and shame[13]. Hence, new comprehensive treatment policies must be incorporated which not only aids in treatment of oral diseases but also addresses their unmet needs and aesthetic expectations as perception of smile and facial aesthetics are indicators of social value and it plays a vital role in one's self esteem. Orthodontists play a huge role in achieving this desired smile. Smile pattern vary between men and woman as there are lot of differences between masculine and feminine teeth arrangement. Therefore, it is important as a clinician to be aware of these differences while treating trans patients in their transition process [15].

To date, there is minimal knowledge pertaining to the needs, expectations and perception of Orthodontic Healthcare among Transgender Adults. So, this review article will help in knowing the information available regarding dental and orthodontic health care and its consideration among transgenders comprehensively.

RESULTS AND DISCUSSION:

An extensive electronic literature search was conducted using databases such as PubMed, Google Scholar, ResearchGate, Academicworks, Medicopublication and Education source. The Keywords used for the literature search were Transgender- Oral health, Needs, Expectations, Orthodontics, Smile aesthetics, Perception. The search yielded 56 article with a wide range of study designs and methodologies. The results obtained has been sequentially described as follows:

1.BARRIERS TO HEALTH CARE:

a. Stigmatization and discrimination:

Most of the difficulties faced by transgender individuals which range from exclusion from their own families(interpersonal), social ridicule, exclusion from participating in certain economic rights, lack of social security and livelihood options or social welfare schemes and health care policies and services(structural), inability to utilize existing schemes due to discrimination(individual) - all of these factors arise from social stigma associated with transgender community.

A study which involved a huge transgender population of nearly 27,000 individuals [16,17,18]revealed that nearly one third of the participants reported at least one negative health care experience which are:

- Insensitivity to one's gender identity,
- Awkward interactions believed to be related to gender identity,
- Refusal to care,
- Substandard care
- Verbal abuse
- Being forced to seek psychiatric treatment
- Color/Racial indiscrimination etc...

These above stated discrimination instances forced these individuals from utilizing the available healthcare Facilities and schemes due to fear of being mistreated or worse being rejected.[3,14,18,19]

b.Violence

Nearly 84% of the trans-individuals have reported various incidents or personal experience of some sort of assault verbally, physically or sexual abuse owing to one's gender identity or expression. In terms of all violence categories, higher rates of being victims of sexual assault were mostly reported by trans-woman of colour.[20,21,22]

c. Other Barriers:

- Lack of health insurance policies for their community
- Higher rates/ Cost of treatment procedures due to the bias against transgender's makes them non-affordable to procure adequate treatment.
- Social Stigma and Transphobia surrounding transgenders and their risk of being related to HIV infection enough barrier from screening these patients and providing them care.
- Higher rates of illiteracy and unemployment
- Low economic status
- Non ownership of citizenship cards such as AADHAR/Ration cards etc...

• However, the most commonly cited barrier is said to be 'lack of knowledge of oral healthcare professionals about transgender community, their psychosocial health conditions, unmet needs, self- perception and expectations.[18,20-24]

All these above-mentioned barriers force about 50% of transgenders to make use of parallel providers such as barbers/ roadside dentists or quacks or medically unqualified practioners, who don't use standard equipment's and materials; also transgenders tend to engage in self-administration of medications and unmonitored hormone treatment, as a result of which they face lot of adverse effects[13,25]

2. PSYCHOSOCIAL ORAL HEALTH IMPLICATIONS:

The availability of both dental healthcare and medical facilities for transgender community in India is very scarce[3]. Due to these social inequalities, blatant discrimination and social stigma, these individuals tend to develop stress which creates an expectation that in future too they will have to face rejection and violence in any dental and other healthcare setting. This expectation of psychosocial response is termed as 'Minority Stress'[13]. This stress in turn results in adverse effects in oral health such as:

- Poor oral hygiene
- Prolonged infection and inflammation resulting in periodontal conditions such as bleeding gums, gingivitis, periodontitis and in turn mobility.
- Aphthous stomatitis
- Cold sores
- Bruxism
- TMJ pain
- Poor eating habits due to body disorders/dissatisfaction which causes enamel erosion and increased rate of caries [22]

According to many research studies[3,13,18,22,26,27,28] and NSS[13,26]the increased stress, lower self-esteem, anxiety issues, gender dysphoria and transphobia demonstrate high rates of suicidal tendency and self-harm or risky behaviours. This makes them prone to pernicious habits such as

- Unprotected sexual intercourse and needle practices during blood transfusions/hormone therapies and self-administration of substances like Silicone to change their facial features makes them prone to STI such as AIDS, Gonorrhoea etc... which alters the overall systemic health with several oral implications respectively.[22]
- Consumption of Alcohol; according to National AIDS Control Organization about 50% of transgender have the practice of this deleterious habit.[13]
- Use of Illegal/Illicit drugs or substance abuse[13,18]
- Use of Smokeless tobacco and Smoking form of tobacco can cause various comorbidities along with several other oral health conditions such as Nicotine Stomatitis, Xerostomia, Sjogren's Syndrome, Burning mouth syndrome, Candidiasis,

Leukoplakia, Lichen Planus, Phemphigoid, Fibrosis, Oral Cancer etc...[18]

According to NCTE[13,21] and several studies[16,29-36] due to gender discrimination, social stigma and harassment associated with this community and societal injustice, many homeless Transgender Youth 'are the most affected by these psychosocial barriers and they tend to easily be subjected or forced to these above-mentioned harmful habits and illegal practices for their basic livelihood.

3. DENTAL PRACTITIONER'S COMFORT, AWARENESS AND PREPAREDNESS IN TREATING TRANSGENDER PATIENTS:

According to many studies [15,28,37-42]conducted in US, Canada and UK, the main cause for physician's discomfort in working with LGBTQ+ patients is due to lack of educational training and experience in treating transgender patients. Most participants in these studies reported that even though health care institutions are ready to adapt to a culturally competent educational curricula, there is still insufficient content available on the needs and expectation of these gender minority community.

A study[18,42] was conducted among students of medical, dental and nursing regarding their competence in this area. Results obtained from this study revealed that the dental students are said to be having least preparedness or comfort in treating these patients, hence more programs should be conducted focusing on integrating culturally competent educational training in their curriculum.

It is also important to note that lack of cultural incompetence in LGBTQ+ is not only associated with dental healthcare setup but rather in general it is missing in every other medical and para-medical healthcare setup so developing a culturally competent curricula and training is the need of the hour in case of overcoming lack of knowledge gaps associated with treating LGBTQ+ individuals.[12]

4.INCLUSIVE DENTAL PRACTICE STRATEGIES AND CONSIDERATIONS FOR TREATING TRANSGENDER PATIENTS:

According to Wilkerson, 'LGBT patients have a desire for their health care workers to understand why the LGBT community's risks exists, to talk to them about these risks within the social context, and to offer culturally relevant solutions for reducing harm.'[37,43]

Below are the various strategies and considerations which could be included in every dental health care setup according to various research articles[15,18,27,28,37,40,41,44-46] so as to strengthen the trust and bond between the dental health practioners and transgenders which is the integral part of improving the standards not only for these people but also for health care professional whose main role is to provide honest and comprehensive treatment irrespective of any discrimination.

- Avoiding homophobia and heterosexism and assuming that a patient is heterosexual
- Improving health care workers' knowledge
- Being perceptive to the terminology used by the patient to engender patient trust
- Understanding embarrassment and the importance of affirmation
- Making the patient feel culturally secure by embracing the patient's differences without judgement.

- Avoid social stigma and stereotype of discriminating the patients based on their gender identity and expression
- Simple acts such as displaying an LGBT friendly sticker, pamphlets and reading material in the healthcare setup might help the patient in overcoming their gender dysphoria and will make them feel welcome.
- Promoting gender neutral washrooms and
- Availability of separate offices/cabins to provide confidentiality while discussing health issues not only aids in inclusivity but also acceptance [.4,17,27]

Certain studies suggest that the availability of culturally competent health care services may increase the efficacy of health care providers, thereby reducing errors in both dental and medical setups.[17]

Though the above mentioned several themes emerged from the literature review, there are only limited studies in each theme related to oral health compared to other health issues. And it was surprising to find that only there were only two detailed studies related to Transgender's smile aesthetics. [47] [48]

Apart from the above stated facts, it was even more astonishing to note that among the 56 articles we reviewed, only 7 studies[3,9,10,12,13,19,49]were done in India related to Transgender patients and oral healthcare; again out of which only 2 were from the Union Territory of Puducherry[10,19](only one study[10] was specifically related to Transgender and oral health.) and 3 from Tamil Nadu[9,12,13] respectively.

CONCLUSION:

Though several studies have been done to understand the needs, expectation and perception of smile aesthetics and its role in boosting self-confidence to cisgender individuals [48], from this literature review it is evident that there is very minimum literature in terms of the oral health status of the trans individual and almost meagre information about the needs expectation and perception of Transgenders in dental and Orthodontic healthcare.

Ludwig and Morrison have stated, "We cannot provide evidence based dental care to a subset of the population, if that population has yet to be studied." [50]

Just how Ludwig and Morrison aptly stated, it is difficult to provide right comprehensive treatment for an individual if the community is not yet studied in detail.

Transgenders are said to have different set of perception, needs and expectations in terms of facial aesthetics'. For good aesthetic and adequate functional balance, maxillary and mandibular dentition should be in harmony. There is scarcely any studies related to Orthodontic Malocclusion and its prevalence among Transgender Adults in Puducherry and Tamil Nadu.

Considering all these points and understanding the current need to study more about this population due to the lacunae present, we have decided to conduct a study which aims to assess Transgender adults' perception, needs and expectations of orthodontic healthcare using self-administered questionnaire and obtain results using statistical test. This study will aid in providing awareness and knowledge related to transgender population and assess the proportion of participants who are in real need of orthodontic healthcare services, thereby making the treatment facilities accessible for the Transgender community in a convenient way.

References

- 1. Kcomt L, Gorey KM, Barrett BJ, Mccabe SE. Healthcare avoidance due to anticipated discrimination among transgender people: A call to create trans-affirmative environments SSM Population Health. 2020;11:1–08.
- 2. Sinha S. Social exclusion of transgender in the civil society: A case study of the status of the transgender in Kolkata. International Journal of Humanities & Social Science Studies. 2016;3(2):178–90.
- 3. Parkash H, Gupta R, Rohatgi L, Das D. Oral Health Needs Including Unmet Dental Needs among Transgender Population- A Review Menon I. ReviewJ Clin of Diagn Res. 2021;15(12):E01-E6.
- 4. Sereemongkonpol P, Ladyboys AS. The secret world of Thailand's third gender. Maverick House; 2015.
- 5. Agoramoorthy G, Hsu MJ. Living on the societal edge: India's transgender realities. J Relig Health [Internet]. 2015;54(4):1451–9. Available from: http://dx.doi.org/10.1007/s10943-014-9987-z
- 6. Mukhopadhyay A, Chowdhury R. The eunuch patient. Trop Doct [Internet]. 2009;39(1):63–4. Available from: http://dx.doi.org/10.1258/td.2008.080016
- 7. TransGender/Others Census 2011 India [Internet]. Census2011.co.in. [cited 2023 Jun 6]. Available from: https://www.census2011.co.in/transgender.php
- 8. Welfare of transgenders [Internet]. Gov.in. [cited 2023 Jun 6]. Available from: https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1575534
- 9. Saravanan N, Thiruneervannan R, Christopher P. A study to assess the periodontal status of transgender in Chennai city. Biosci Biotechnol Res Asia [Internet]. 2014;11(3):1673–8. Available from: http://dx.doi.org/10.13005/bbra/1567
- 10. Oral healthrelated attitude and practices of transgender population in Puducherry UT, IndiaA crosssectional questionnaire survey Sathyanarayanan U, John BM. Oral healthrelated attitude and practices of transgender population in Puducherry UT, IndiaA crosssectional questionnaire survey. J Family Med Prim Care. 2022;11:1815–9.
- 11. Justice L. The Transgender Persons (Protection of Rights) Act, 2019. In: Ministry of Law and Justice. New Delhi; 2019.
- 12. Marlecha R, Keshav, Pradeep, Salam H. Oral health status, dental awareness, and dental services utilization barriers among transgender population in Chennai. Drug Invention Today. 2020;14:1143–8.
- 13. Venkatachalam B, Kandasamy R, Baalann. KP, editors. The Hidden Smile- An Overview of the General and Oral Hygiene Status of Transgenders, Manikandan Shanmugam, Kurunji Kumaran Navaneethakrishnan. Indian Journal of Forensic Medicine & Toxicology. 2021;15(3):324–9.

- 14. Prates SG, Jesuíno RD, Paranhos LR, Herval ÁM, Gontijo LPT. Oral health self-perception for transgender people: a controlled cross-sectional study. Biosci J [Internet]. 2021;37:e37003. Available from: http://dx.doi.org/10.14393/bj-v37n0a2021-55794
- 15. Dentist San Marcos, CA [Internet]. Nyhowarddds.com. [cited 2023 Jun 6]. Available from: https://www.nyhowarddds.com/assets/docs/article0518
- 16. Macdonald DW, Grossoehme DH, Mazzola A, Pestian T. Tamrat SB. "I just want to be treated like a normal person": oral health care experiences of transgender adolescents and young adults. J Am Dent Assoc. 2019;138(3):748–54.
- 17. Heima M, Heaton LJ, Ng HH, Roccoforte EC. Dental fear among transgender individuals-a cross-sectional survey. Spec Care Dentist. 2017;37(5):212–22.
- 18. Tamrat J. "Trans-forming" dental practice norms: Exploring transgender identity and oral health implications. Can J Dent Hyg. 2022;56(3):131–9.
- 19. Palve SB, Seetharaman, Lochan, Patil R, Lokeshmaran. Health issues among transgenders in urban Pondicherry. Indian J Community Health [Internet]. 2018;30(4):323–33. Available from: http://dx.doi.org/10.47203/ijch.2018.v30i04.004
- 20. James SE, Herman JL, Rankin S, Keisling M, Mottet L, Anafi M. The report of the 2015 US transgender survey. Washington, DC; 2016.
- 21. PREVENTING TRANSGENDER SUICIDE [Internet]. Transcentralpa.org. [cited 2023 Jun 6]. Available from: http://transcentralpa.org/ content/downloads/Preventing Transgender Suicide.pdf
- 22. Understanding tr onoun is she: Understanding transgender identity ansgender identity and oral health care needs Macri D, Wolfe K. My preferred pronoun is she: Understanding transgender identity and oral health care needs. Can J Dent Hyg. 2019;53:110–7.
- 23. White Hughto JM, Reisner SL, Pachankis JE. Transgender stigma and health: A critical review of stigma determinants, mechanisms, and interventions. Soc Sci Med [Internet]. 2015;147:222–31. Available from: http://dx.doi.org/10.1016/j.socscimed.2015.11.010
- 24. Suicide prevention resource center. Choice (Middletown) [Internet]. 2016 [cited 2023 Jun 6];53(09):53-3794-53–3794. Available from: https://www.sprc.org/scope/attempts
- 25. Winter S, Diamond M, Green J, Karasic D, Reed T, Whittle S, et al. Transgender people: health at the margins of society. Lancet [Internet]. 2016;388(10042):390–400. Available from: http://dx.doi.org/10.1016/S0140-6736(16)00683-8
- 26. Claes L, Bouman WP, Witcomb G, Thurston M, Fernandez-Aranda F, Arcelus J. Non-suicidal self-injury in trans people: Associations with psychological symptoms, victimization, interpersonal functioning, and perceived social support. The Journal of Sexual Med.
- 27. Alzate-Urrea S, Agudelo-Suarez AA, Monsalve-Orrego JY, Londono-Candanoza FE, Chinome-Florez G del C, Julio-Perez AL, et al. Self-perceived discrimination in LGBT population in oral health services. Medellin, Colombia: A qualitative approach. Glob J Health Sci [Internet]. 2016;8(12):152. Available from: http://dx.doi.org/10.5539/gjhs.v8n12p152
- 28. Horisk K, Underwood E, Petch M, Johnson A. Considerations in the management of trans patients. Br Dent J [Internet]. 2021;230(5):283–4. Available from: http://dx.doi.org/10.1038/s41415-021-2695-7

- 29. Macdonald DW, Grossoehme DH, Mazzola A, Pestian T, Schwartz SB. Transgender youth and oral health: a qualitative study. J LGBT Youth [Internet]. 2022;19(1):92–106. Available from: http://dx.doi.org/10.1080/19361653.2020.1798839
- 30. Grossman AH, Ar D. Transgender youth and lifethreatening behaviors. Suicide Life Threat Behav. 2007;37:527–37.
- 31. Ream GL. An investigation of the LGBTQ+ youth suicide disparity using National Violent Death Reporting System narrative data. J Adolesc Health [Internet]. 2020;66(4):470–7. Available from: http://dx.doi.org/10.1016/j.jadohealth.2019.10.027
- 32. Rhoades H, Rusow JA, Bond D, Lanteigne A, Fulginiti A, Goldbach JT. Homelessness, mental health and suicidality among LGBTQ youth accessing crisis services. Child Psychiatry Hum Dev [Internet]. 2018;49(4):643–51. Available from: http://dx.doi.org/10.1007/s10578-018-0780-1
- 33. Hafeez H, Zeshan M, Tahir MA, Jahan N, Naveed S. Health care disparities among lesbian, gay, bisexual, and transgender youth: A literature review. Cureus [Internet]. 2017;9(4):e1184. Available from: http://dx.doi.org/10.7759/cureus.1184
- 34. Levine DA, the Committee ON Adolescence. Office-based care for lesbian, gay, bisexual, transgender, and questioning youth (technical report). In: Pediatric Clinical Practice Guidelines & Policies. American Academy of Pediatrics; 2014. p. 755–73.
- 35. Raisin JA, Keels MA, Roberts MW, Divaris K, Jain N, Adkins DW. Barriers to oral health care for transgender and gender nonbinary populations. J Am Dent Assoc [Internet]. 2023;154(5):384-392.e4. Available from: http://dx.doi.org/10.1016/j.adaj.2023.02.009
- 36. Mustanski BS, Garofalo R, Emerson EM. Mental health disorders, psychological distress, and suicidality in a diverse sample of lesbian, gay, bisexual, and transgender youths. Am J Public Health [Internet]. 2010;100(12):2426–32. Available from: http://dx.doi.org/10.2105/AJPH.2009.178319
- 37. Enhancing Dental and Dental Hygiene Student Awareness Aguilar E, Fried J. Enhancing dental and dental hygiene student awareness of the lesbian, gay, bisexual and transgender population. J Dent Hyg. 2015;89(1):11–6.
- 38. Hanson YG, Evans MC. Dental Students' Attitudes, Comfort, Knowledge, and Training on the Oral Health of Transgender Individuals Journal of Dental Education Students' knowledge, comfort, attitudes, and training on oral health of transgender individuals: A pilot study J Dent Educ 2023 Feb 19;, CJ. J Dent Educ. 2023;
- 39. Pennant ME, Bayliss SE, Meads CA. Improving lesbian, gay and bisexual healthcare: a systematic review of qualitative literature from the UK. Diversity Health Care. 2009;6:193–213.
- 40. Enhancing equity with research in oral health care for transgender patients Enhancing equity with research in oral health care for transgender patients. School of Dentistry.
- 41. Treating the Transgender Patient Following are strategies to support oral health professionals in their efforts to meet the needs of this patient population and to identify barriers to care Treating the Transgender Patient Dimensions of Dental Hygiene.
- 42. Greene MZ, France K, Kreider EF, Wolfe-Roubatis E, Chen KD, Wu A, et al. Comparing medical, dental, and nursing students' preparedness to address lesbian, gay,

bisexual, transgender, and queer health. PLoS One [Internet]. 2018;13(9):e0204104. Available from: http://dx.doi.org/10.1371/journal.pone.0204104

- 43. Wilkerson JM, Rybicki S, Barber CA, Smolenski DJ. Creating a culturally competent clinical environment for LGBT patients. J Gay Lesbian Soc Serv [Internet]. 2011;23(3):376–94. Available from: http://dx.doi.org/10.1080/10538720.2011.589254
- 44. Carabez RM, Eliason MJ, Martinson M. Nurses' knowledge about transgender patient care: A qualitative study. ANS Adv Nurs Sci [Internet]. 2016;39(3):257–71. Available from: http://dx.doi.org/10.1097/ANS.0000000000000128
- 45. Horisk K, Underwood E, Petch M, Johnson A. Considerations in the management of trans patients. Br Dent J [Internet]. 2021;230(5):283–4. Available from: http://dx.doi.org/10.1038/s41415-021-2695-7
- 46. Transgender patients report feeling discrimination when visiting dentist [Internet]. The Daily. 2014 [cited 2023 Jun 6]. Available from: https://thedaily.case.edu/transgender-patients-report-feeling-discrimination-when-visiting-the-dentist/
- 47. Treatment Considerations for a Full-Mouth Reconstruction of a Transgender Patient Nishimura BJ. Treatment Considerations for a Full-Mouth Reconstruction of a Transgender Patient. Compendium of Continuing Education in Dentistry. 1995;38(8):544–51.
- 48. Islam R, Alam MK, Mukai A, Murakami Y, Shoumura M, Osuga N, et al. Morphometric analysis of tooth size and its relationship with BMI in transgender population: A new exposure in dentistry. J Hard Tissue Biol [Internet]. 2017;26(4):361–8. Available from: http://dx.doi.org/10.2485/jhtb.26.361
- 49. Kumbhalwar A, Shetiya SH, Kakodkar P, Mehta V. Oral health status and treatment needs of transgender in Pune city, Maharashtra, India: A pilot survey. Int J Curr Res Rev [Internet]. 2021;13(19):159–63. Available from: http://dx.doi.org/10.31782/ijcrr.2021.131914
- 50. Ludwig DC, Morrison SD. Should dental care make a transition? J Am Dent Assoc [Internet]. 2018;149(2):79–80. Available from: http://dx.doi.org/10.1016/j.adaj.2017.11.035
- 51. Dentistry for transgender people [Internet]. Transgender Map. 2019 [cited 2023 Jun 6]. Available from: https://www.transgendermap.com/medical/dentistry
- 52. Tharp G, Wohlford M, Shukla A. Reviewing challenges in access to oral health services among the LGBTQ+ community in Indiana and Michigan: A cross-sectional, exploratory study. PLoS One [Internet]. 2022;17(2):e0264271. Available from: http://dx.doi.org/10.1371/journal.pone.0264271
- 53. Oral Health and Transgender Visibility: Jayson Fricke's Story Transgender Day of Visibility. Delta Dental Of Washington.
- 54. Raisin JA, Adkins D, Schwartz SB. Understanding and caring for LGBTQ+ youth by the oral health care provider. Dent Clin North Am [Internet]. 2021;65(4):705–17. Available from: http://dx.doi.org/10.1016/j.cden.2021.06.007
- 55. Oral health status and dental service utilization of persons who identify as lesbian, gay, bisexual, transgender, and queer in Iowa City Adekugbe, Olayinka Catherine. "Oral Health Status and Dental Service Utilization of Persons Who Identify as Lesbian, Gay, Bisexual, Transgender, and Queer in Iowa City. 2020.

56. Ahmed SB, Beach LB, Safer JD, Veale JF, Whitley CT. Considerations in the care of transgender persons. Nat Rev Nephrol [Internet]. 2023;19(6):360–5. Available from: http://dx.doi.org/10.1038/s41581-023-00713-0