

Original Research Article

Exploring dentists' attitudes and perceptions towards transgender patients: a cross-sectional study in Karnataka, India

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ABSTRACT

Background: Transgender individuals in India face significant social, economic, and healthcare challenges. Despite growing recognition of transgender rights, the healthcare community, including dental professionals, may lack the necessary training and sensitivity to adequately serve this marginalized group. This study aimed to assess the attitudes and perceptions of practicing dentists in Karnataka, India, toward providing dental care to transgender individuals and to identify barriers to care within the dental healthcare setting.

Methods: A cross-sectional internet survey was conducted among 127 practicing dentists in Karnataka. The survey included demographic questions and nine items from a dentist perception questionnaire to gauge attitudes toward transgender patients.

Results: Most participants believed that transgender people are a viable and contributing members of society and agreed that healthcare providers should care for LGBTQ patients. However, many participants reported awareness of negative attitudes toward transgender individuals among dental and healthcare staff, which they viewed as a barrier to providing care. 83% of participants believed that healthcare camps exclusively for transgender people would improve access to care. Despite the generally positive attitudes toward transgender patients, significant gaps in training and awareness were identified.

Conclusion: There is an urgent need for improved education on transgender healthcare within dental and medical curricula, as well as policies to address discrimination and enhance healthcare access for the transgender community. Further research is necessary to explore these issues and develop evidence-based solutions to improve care.

Keywords: Transgender, Perception, Dentist, Health care, Stigma

INTRODUCTION

Individuals whose gender identity or expression does not match the sex they are assigned at birth are referred to by the general term "transgender".¹ Bakla in the Philippines, xaniths in Oman, serrers among the Pokot people of Kenya, and kinnars, jogappas, hijras, jogtas, or shiv-Shaktis in South Asia are some of the names by which they are recognized around the world.² In India, transgender individuals often face significant challenges and are considered a vulnerable group that requires special

attention and support. While discrimination against this community is a global issue, in India, there are additional social barriers rooted in cultural conservatism and prevailing societal attitudes.³ According to the 2011 decennial census, the total population of transgender persons was estimated to be 4.88 million and the transgender data was included under the "male" category in the primary data which was later corrected.⁴ They were officially declared as the third gender in 2014.⁵

The transgender community faces significant societal pressures and discrimination.⁶ Among the many challenges they face are less acceptance from family and friends, a lack of employment opportunities, verbal and physical abuse, isolation, and rejection. Transgender people are more likely to drop out of school, move away from family and friends, and encounter workplace discrimination, limiting their educational and economic opportunities. Excluded from much of the workforce, transgender people often rely on limited means of livelihood such as begging or sex work.⁷

It is unsurprising that stress-related addictions, including smoking, consumption of alcohol, and drug use, are observed in a high prevalence in these societies.⁸ Studies have shown there is an increased prevalence of dental problems among this community.⁹⁻¹² In addition to all these, a lack of awareness about dental hygiene among this marginalized community will increase the disease burden.¹³ There are cases where medical professionals are hesitant to provide healthcare services to this community particularly those who are perceived to be poor, engaged in sex work, or are HIV positive. This could be due to a lack of understanding of the unique healthcare needs and biology of these individuals.^{14,15}

To the best of our knowledge, there are very few studies assessing dentists' attitudes toward transgender patients in India. Therefore, this study aimed to evaluate the attitudes and perceptions of practicing dentists of Karnataka in providing dental care to transgender individuals.

METHODS

An internet survey was conducted among the practicing dentists in Karnataka from January 20, 2020 to January 20, 2021 using a nine-item structured questionnaire.¹⁶ This study focused on understanding local attitudes toward transgender patients in Karnataka, but future research

could expand to include dentists from other regions of India to enhance the generalizability of the findings. Selection criteria were defined prior to the study, with inclusion of practicing dentists in Karnataka who consented to participate, and exclusion of incomplete responses.

The questionnaire consisted of two parts: demographic details and other containing nine questions from the dentists' perception questionnaire. Ethical approval was obtained from the Institutional Ethical Committee, M.R. Ambedkar Dental College and Hospital, Bangalore (Ref no: MRADC/EC/0677). Excluding the incomplete responses, a total of 127 responses were obtained. The data obtained were compiled systematically in Microsoft Excel, descriptive statistics were performed, and the data were presented in the form of tables.

RESULTS

The total number of study participants who took part in the study was 127. Of these, 91 (72%) were female and 36 (28%) were male. The age group was categorized into four categories. 20–30 years, 31–40 years, 41–50 years, and >51 years. The majority of the 120 participants (95%) were young dentists belonging to the age group of 20–30 years. The remaining age groups altogether contributed to the remaining 5% of the study participants.

The participating dentists' fields of work were divided into three categories: student/intern, clinician, and academician. 72 (57%) belonged to the student category, 42 (33%) belonged to the clinician category, and the rest, 13 (10%), belonged to the clinician and academician category. Most study participants had a clinical practice experience of five years or less (Table 1). The responses to the dentists' perception questionnaire were given in Table 2.

Table 1: Distribution of participants according to demographic and professional profile.

Characteristics	Number of study subjects	Percentage
Gender	Male	36
	Female	91
Age group (years)	20-30	120
	31-40	4
	41-50	2
	>51	1
Field of work	Student/intern	72
	Clinician	42
	Clinician and academician	13
Location	Urban	90
	Rural	37
Years of practice	Less than 1	41
	1-5	70
	5-10	12
	>10	4

Table 2: Distribution of the participants based on responses to the questionnaire.

Questions	Strongly agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly disagree (%)
I prefer not to treat transgender patients	4 (3.1)	4 (3.1)	6 (4.7)	17 (13.4)	96 (75.6)
I believe that it would be beneficial to society to recognize the state of being transgender as natural	85 (66.9)	34 (26.8)	6 (4.7)	-	2 (1.6)
I believe that transgender individuals are viable and contributing members of our society	71 (55.9)	44 (34.6)	10 (7.9)	1 (0.8)	1 (0.8)
I believe it is the responsibility of all healthcare providers to care for LGBTQ patients	80 (63)	41 (32.3)	4 (3.1)	-	2 (1.6)
I believe that a decreased hospital attendance of transgenders is a result of the perception of society towards them, and we healthcare professionals cannot do anything about it	13 (10.2)	23 (18.1)	28 (22)	38 (29.9)	25 (19.7)
I am aware of dentists or advanced practice providers who exhibit negative attitude towards the transgender population, which I feel is a barrier to providing care	12 (9.4)	41 (32.3)	37 (29.1)	32 (25.2)	5 (3.9)
I am aware of front desk staff who exhibit negative attitude towards the transgender population, which I feel is a barrier to providing care	13 (10.2)	49 (38.6)	45 (35.4)	18 (14.2)	2 (1.6)
I am aware of nursing staff/attenders who exhibit negative attitude towards the transgender population, I feel is a barrier to providing care	13 (10.2)	43 (33.9)	45 (35.4)	21 (16.5)	5 (3.9)
I believe that a healthcare camp exclusively for transgenders will help them in delivering appropriate treatment	48 (37.8)	56 (44.1)	16 (12.6)	6 (4.7)	1 (0.8)

DISCUSSION

The transgender population in India encompasses individuals with diverse gender identities, collectively forming a distinct cultural group.¹⁷ This community has existed in India for centuries, playing significant roles in religious texts and occupying important positions in royal courts and government during the Mughal period.¹⁸ However, under British colonial rule, various laws were enacted to criminalize and suppress this community.¹⁹ Despite the fact that these laws were later repealed after independence, the stigma against this community still exists.²⁰ They face numerous challenges including fear, shame, social discrimination, unemployment, lack of educational facilities, and access to public amenities.²¹ Moreover, healthcare access, including medical and dental facilities, remains severely limited for this marginalized group. As a result, many transgender individuals experience high levels of stress, which may lead to harmful coping behaviours such as substance abuse, including alcoholism and chewing gutkha.²² Studies have also shown that the burden of oral health conditions among transgender individuals is disproportionately high compared to the general population.⁹⁻¹¹ In addition, some healthcare professionals exhibit reluctance in treating

transgender patients, further exacerbating these challenges.¹⁴

This study, therefore, aimed to understand the attitude and perception of practicing dentists in Karnataka state toward transgender patients. The total number of study participants was 127. Most of the study participants, 91 (72%), were female, belonging to an age group of 20–30 years. Over one-half of the participants were students (72%). The rest belonged to the category of clinicians and clinicians and academicians. Also, most of the study participants (90, or 71%) were residing in urban areas of the state.

Almost all study participants (90%) believed that transgender people are a viable and contributing members of society and it would be beneficial to society to recognize the state of being transgender as natural. 95% of the study population believed that it is the responsibility of all healthcare providers to provide care for LGBTQ patients. This result is similar to several studies on the knowledge and attitude of medical students towards LGBTQ patients.^{23,24} One-half of the study participants strongly believed that a decreased hospital attendance of transgenders was a result of the perception of society

towards them, and they cannot do anything about it. Though this community faces discrimination in all parts of the world, the attitude towards transgender people in Indian society is particularly discriminatory and biased. The conservative nature of Indian society and constricted mindset can be quoted as a few reasons for this.²⁵

42% of the study participants were aware of dentists or advanced practice providers who exhibit negative attitudes towards the transgender population that they feel was a barrier to providing care. About half of the study participants strongly agreed with the statement "I am aware of front desk staff who exhibit negative attitudes towards the transgender population, which I feel is a barrier to providing care." 44% of the study participants were aware of nursing staff/attenders who exhibit negative attitude towards the transgender population which they feel was a barrier to care. It is unavoidable to acknowledge the fact that transgender patients experience obstacles from healthcare professionals and other staff in hospitals. A clear need exists for increasing training in transgender health care among physicians, dentists, nurses, and other staff. Including transgender healthcare in the medical and dental curriculum stressing the special health care needs will create a better understanding of providing treatment to this special population. 83% of the study participants believed that a healthcare camp exclusively for transgender people will help them in delivering appropriate treatment. Insecurity about their identity and general reluctance to socialize with society can be barriers to accessing medical services. Healthcare camps involving specially trained health professionals will help this community access appropriate healthcare services.

Our findings align with those of a national-level cross-sectional study that used the same questionnaire to assess dentists' perceptions of transgender patients. Both studies have identified substantial gaps in prior training and clinical exposure related to transgender healthcare, along with awareness of negative attitudes among healthcare staff. These parallels reinforce that while dentists across India generally demonstrate positive attitudes, structured sensitization and educational initiatives are still required to bridge the knowledge and practice gaps in transgender inclusive healthcare.²⁶

Further research is essential to fully understand the healthcare needs and barriers to care faced by the transgender population. In particular, raising awareness about oral healthcare is crucial. To foster a positive attitude toward dental health and encourage healthy oral hygiene behaviors, targeted education within the transgender community is necessary. These findings were highlighted through a cross-sectional survey conducted among transgender individuals in Puducherry UT, India.²⁷

One major limitation of the study was that most of the participating dentists were from the age group of 20 to 30 years. Younger professionals often have a more progressive outlook and are better informed about

LGBTQA+ populations, making it difficult to generalize these findings to all dentists nationwide. Additionally, attitudes and perceptions regarding transgender patients are shaped by social, cultural, religious, and educational factors, further limiting the generalizability of the results. Despite these limitations, the study highlights the urgent need for the inclusion of transgender health and awareness education within dental curricula, which could foster more positive attitudes toward sexual and gender minorities. Moreover, the findings underscore the importance of developing policies and institutional guidelines to address discrimination and improve healthcare access for transgender individuals. Further exploratory and qualitative research is necessary to uncover the often hidden discrimination faced by this community and to inform evidence-based policy and welfare measures that ensure equitable treatment in healthcare settings.

CONCLUSION

This study highlights that while most dentists exhibit positive attitudes toward transgender patients, significant gaps remain in training and awareness regarding their unique healthcare needs. However, negative attitudes among some staff and societal stigma persist as barriers to care. These findings emphasize the need for enhanced education on transgender healthcare within dental and medical curricula, as well as the development of specialized healthcare services to better serve the transgender community. Further research is essential to address these challenges and improve care accessibility for transgender individuals.

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REFERENCES

1. Kuper LE, Nussbaum R, Mustanski B. Exploring the diversity of gender and sexual orientation identities in an online sample of transgender individuals. *J Sex Res*. 2012;49(2-3):244-54.
2. Fannana A. The causes behind the cause: an explanatory analysis on transgender deviance in Dhaka, Bangladesh. *Global Perspect People Process Pract Criminal Justice*. 2021;86-97.
3. Bhattacharya S, Ghosh D. Studying physical and mental health status among hijra, kothi and transgender community in Kolkata, India. *Soc Sci Med*. 2020;265:113412.
4. Mandal C, Debnath P. 'Other-gender' in India: an analysis of 2011 census data. *Soc Sci Spectr*. 2020;6(1):63-72.
5. Dixit V, Garg B, Mehta N, Kaur H, Malhotra R. The third gender in a third world country: major concerns and the "AIIMS initiative". *J Hum Rights Soc Work*. 2023:1-6.

6. Hendricks ML, Testa RJ. A conceptual framework for clinical work with transgender and gender nonconforming clients: an adaptation of the minority stress model. *Prof Psychol Res Pract*. 2012;43(5):460-7.
7. Chatterjee S. Problems faced by LGBT people in the mainstream society: some recommendations. *Int J Interdiscip Multidiscip Stud*. 2014;1:317-31.
8. Ruppert R, Kattari SK, Sussman S. Prevalence of addictions among transgender and gender diverse subgroups. *Int J Environ Res Public Health*. 2021;18(16):8843.
9. Torwane NA, Hongal S, Saxena E, Rana PT, Jain S, Gouraha A. Assessment of periodontal status among eunuchs residing in Bhopal city, Madhya Pradesh, India: a cross-sectional study. *Oral Health Dent Manag*. 2014;13(3):628-33.
10. Hongal S, Torwane NA, Chandrashekar BR, Saxena V, Chavan KR. An evaluation of dental prosthetic status and prosthetic needs among eunuchs (transgenders) residing in Bhopal city, Madhya Pradesh, India: a cross-sectional study. *Ann Med Health Sci Res*. 2014;4(6):943-8.
11. Torwane NA, Hongal S, Goel P, Chandrashekar B, Saxena V. Assessment of oral mucosal lesions among eunuchs residing in Bhopal city, Madhya Pradesh, India: a cross-sectional study. *Indian J Public Health*. 2015;59(1):24-9.
12. Manpreet K, Ajmal MB, Raheel SA, Saleem MC, Mubeen K, Gaballah K, et al. Oral health status among transgender young adults: a cross-sectional study. *BMC Oral Health*. 2021;21(1):575.
13. Hongal S, Torwane NA, Goel P, Byarakele C, Mishra P, Jain S. Oral health-related knowledge, attitude and practices among eunuchs (hijras) residing in Bhopal City, Madhya Pradesh, India: a cross-sectional questionnaire survey. *J Indian Soc Periodontol*. 2014;18(5):624-31.
14. Pandya AK, Redcay A. Access to health services: Barriers faced by the transgender population in India. *J Gay Lesbian Ment Health*. 2021;25(2):132-54.
15. UNDP, Asia Pacific Transgender Network (APTAN). Lost in transition: transgender people, rights and HIV vulnerability in the Asia-Pacific region. New York: UNDP. 2012. Available at: <https://www.undp.org/asia-pacific/publications/lost-transition-transgender-people-rights-and-hiv-vulnerability-asia-pacific-region>. Accessed on 27 April 2026.
16. Madhavan A, Umashankar GK, Akshay V, Chandran MP. Development of a questionnaire to assess the perception of dentists towards transgender patients. *Paripex Indian J Res*. 2022;11(5).
17. Kalra G, Shah N. The cultural, psychiatric, and sexuality aspects of hijras in India. *Int J Transgend*. 2013;14(4):171-81.
18. Penrose W. Hidden in history: female homoeroticism and women of a "third nature" in the South Asian past. *J Hist Sex*. 2001;10(1):3-39.
19. Gichki M. Deconstructing transgender identities in Pakistan, India, and Iran in colonial and post-colonial context. *Development*. 2020;63(1):31-7.
20. Chatterjee DP. From being a eunuch (Hijra) to a third gender in India: a socio-legal study on gender disability of eunuchs. *Med Law Soc*. 2022;15(2).
21. Spicer SS. Healthcare needs of the transgender homeless population. *J Gay Lesbian Ment Health*. 2010;14(4):320-39.
22. Prasanth BK, Krishnan M. Insights of transgenders in India: a review. *Indian J Forensic Med Toxicol*. 2020;14(4).
23. Wahlen R, Bize R, Wang J, Merglen A, Ambresin AE. Medical students' knowledge of and attitudes towards LGBT people and their health care needs: Impact of a lecture on LGBT health. *PLoS One*. 2020;15(7):e0234743.
24. Arthur S, Jamieson A, Cross H, Nambiar K, Llewellyn CD. Medical students' awareness of health issues, attitudes, and confidence about caring for lesbian, gay, bisexual and transgender patients: a cross-sectional survey. *BMC Med Educ*. 2021;14;21(1):56.
25. Saranya TS, Sreelatha K, Kumar M. The pain of existence: The problems and crisis of transgender people with special emphasis on discrimination and livelihood. *Int. J. of Health Sci*. 2022;6(S2):8031-4.
26. Sidhu L, Ragavane P, Chandrasekaran P, Pauljoseph AH, Ashika K, Raj V. Perceptions of dentists in India towards transgender patients: a cross-sectional study. *J Pharm Bioallied Sci*. 2024;16(Suppl 4):S3380-2.
27. Sathyanarayanan U, John BM. Oral health-related attitude and practices of transgender population in Puducherry UT, India: a cross-sectional questionnaire survey. *J Family Med Prim Care*. 2022;11(5):1815-9.

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