



## Oral health status, dental awareness and treatment needs among transgender population in Pune, Maharashtra.

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Submitted: 20-02-2024

Accepted: 02-03-2024

### I. INTRODUCTION

Transgender and gender nonconforming (TGNC) individuals, encompassing a diverse spectrum of gender identities misaligned with birth-assigned sexes, confront multifaceted challenges. Originating from the Greek term meaning "keeper of the bed," the term "eunuch" finds a counterpart in India known as "Hijra," encompassing the transgender or third gender community[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]. They are also known by many other synonymous terms such as transsexuals, eunuchs transvestites and as alis, kothis, hijras, panthis and double deckers vernacularly in India [2] Despite an estimated 1.5 million Hijras in India, the absence of census data perpetuates their marginalized and secretive status[1].

In India, research on Hijras primarily delves into risk behaviors, sidelining crucial aspects like oral health. This oversight is significant given that transgender individuals, facing stigma and leading secretive lives, often grapple with a heightened prevalence of oral diseases, hindered by barriers in accessing healthcare. The impact of poor oral health on their quality of life, nutritional status, and overall well-being underscores the urgency for comprehensive studies.

In recent years, there has been a growing recognition of the unique healthcare needs of transgender individuals, with a focus on mental health, hormone therapy, and gender-affirming surgeries. However, one crucial aspect that often goes overlooked is oral health. Oral hygiene is a fundamental component of overall health, and understanding the oral hygiene status and practices among transgender individuals is essential for providing comprehensive healthcare.

Transgender and gender nonconforming individuals, constituting a diverse spectrum of

identities misaligned with birth-assigned sexes, encounter multifaceted challenges. Within the medical lexicon, terms like male-to-female (MTF) or female-to-male (FTM) are interchangeably used with transgender women and men. Clinically, this population wrestles with gender dysphoria, causing severe distress when gender identity clashes with assigned sex[3].

Amid heightened social stigma, threats of violence, and socioeconomic adversities, TGNC individuals encounter heightened vulnerabilities to mental health issues, such as depression, anxiety, and substance use disorders[3]. In the realm of dental care, these challenges manifest through barriers like reluctance to report oral health issues and financial constraints, underscoring the critical need for a trans-ready dental healthcare system. Access to gender-affirming oral health services is pivotal in addressing the unique dental health concerns faced by the TGNC community, ensuring comprehensive care that aligns with their specific needs and experiences.

India has the second highest number of HIV-infected people in the world, with estimates ranging from 3 to 4 million in 2001. 1 Since the first AIDS case was reported in 1986, 2,3 more than 350,000 Indians have died of AIDS.[4]

Globally oral malignancies are considered as the sixth most common cancer. When compared to general population, transgender people are about 49 times at higher risk of living with Human Immunodeficiency Virus (HIV) [5]. The social stigma and transphobia related to HIV create barriers to access of HIV testing and treatment services by this community [5].

Adding to this complexity, oral health among TGNC individuals introduces another layer of intricacy. The prevalence of oral mucosal lesions, particularly oral candidosis, is significant, potentially signaling underlying conditions. However, a comprehensive understanding of the spectrum of oral mucosal lesions and oral health status within this population remains underexplored.



Periodontal diseases are chronic and multifactorial influenced by multiple factors which ranges from local site-specific accumulation of plaque and calculus, anatomic factors, iatrogenic factors such as faulty restorations to systemic diseases that can modify course and outcome of periodontal disease[6]. . Dental caries and chronic periodontitis are the most common dental diseases and chronic negligence in seeking dental care typically leads to tooth loss [7].

Failure to provide adequate treatment and care for oral diseases can lead to tooth loss and hence, negatively affects the quality of life leading to inability to chew, speak and also results in unpleasant esthetics [8]. Periodic oral health screening also aids in the early diagnosis of periodontal and dental caries, and minimizes the negative effects of these diseases and also to promote oral health care [9,10].

Avoidance or delay in receiving oral healthcare or involvement in selective disclosure about their transgender identity to healthcare providers is common among their communities due to fear of discrimination [11]. This leads to poor oral health as well as lack of physical and mental health outcomes. A selective disclosure will eventually result in inappropriate care or missed opportunities for preventive care. This leads to a poor oral health condition among the transgender community [11].

The Eunuchs population represents a special community deserving attention in both oral and general health due to the discrimination they face daily. Eunuchs lead isolated lives based on their unique traditions, rituals, and practices. Accessibility to medical and dental facilities for these individuals is nearly non-existent. It becomes imperative to extend knowledge and facilities to improve their overall health status. Studies related to the oral health status and treatment needs of the Eunuchs population in India are scarce.

Therefore, the present study was undertaken to explore their oral hygiene practices, personal habits, and oral health information or indicators among the Eunuchs community. This research seeks to contribute to understanding the unique challenges faced by the Eunuchs

population, aiming to improve their oral and overall health outcomes.

## II. MATERIALS AND METHODOLOGY

A cross-sectional study was conducted among Transgender population of Pune, India. The sample was collected by random sampling method and verbal consent at the time of examination was taken. The sample was collected from 3 different locations GultekdiMarketyard, Fergusson College Road, Rakshak Chowk Aundh. In this study the examination was conducted by WHO guidelines using WHO Performa 2013 the assessment was conducted in Hindi and Marathi. The Data was recorded using Mouth Mirror, Dental Explorer. The findings such as Dentition status, brushing technique, habit, and demographic data was recorded. All of the data was entered into excel sheets, the data was analyzed and reported.

## III. RESULT

A total of 50 transgender were taken up for the study and all were included for the analysis. It was observed that 16% of study participants had completed their secondary schooling, 10% had a college degree and 6% had no formal schooling (Table1). Table shows 5 38%(19) of participants had 8-10 teeth affected by caries 48% (24) had 11-14 teeth affected. 6% (3) were having poor oral hygiene while 8% (4) had Good Oral Hygiene Status while only 86% (43) had Fair Oral Hygiene Status. (Table4)

The number of participants use finger for brushing were 26%(13) while 73%(37) brushed using toothbrush which is depicted in (fig 2). It was observed that 20% (10) study participants presented with Tobacco pouch oral lesions while 80% (40) did not have any lesion. Table 3 shows the incidence of malocclusion which was in 30% (15) participants. It was observed that about 22% of study participants smoked tobacco (in various forms), 46% of study participants consumed chewing tobacco and majority consumed smoking and smokeless tobacco. According to WHO dentition status 90.1% Participants had caries in permanent dentition. While 85.2% Participants with untreated caries. 14.2% had treated caries.

Demographic Data & education status

TABLE 1

Demographic details		
AGE	(N)	Percentage
18-28	16	32.0
29-38	13	26.0
39-48	13	26.0



49-58	8	16.0
<b>Education Status</b>	<b>(N)</b>	<b>Percentage</b>
no primary schooling	3	6.0
primary school	21	42.0
high school	13	26.0
secondary school	8	16.0
college/university completed	5	10.0
Total	50	100.0

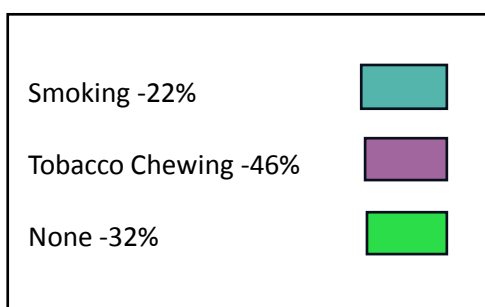
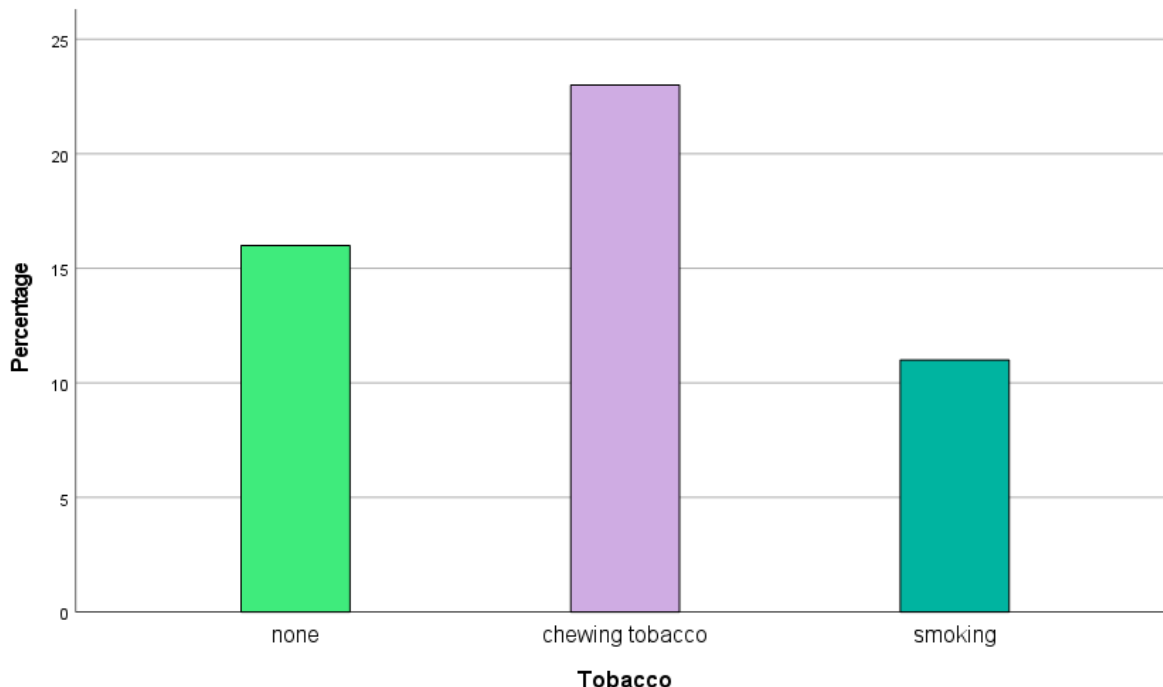


Fig1 – Oral Habit of the study Participants

Table 2

Missing	(N)	PERCENTAGE
0	13	26.0
1	5	10.0
2	14	28.0
3	5	10.0
4	6	12.0
5	3	6.0
11	4	8.0
Total	50	100.0



Table2 - no. of missing teeth in study participants

TABLE 3

Malocclusion		
	(N)	PERCENTAGE
class1	35	70.0
class2	15	30.0
Total	50	100.0

Table3 - Malocclusion in Study participants

TABLE 4

OHIS		
	(N)	PERCENTAGE
good	4	8.0
fair	43	86.0
poor	3	6.0
Total	50	100.0

Table 4- Oral hygiene index in study participants

TABLE 5

Caries		
No of teeth	(N)	PERCENTAGE
1-10	19	38.0
11-14	24	48.0
15-18	7	14.0
Total	50	100.0

Lesion		
	(N)	Percentage
present	10	20.0
absent	40	80.0
Total	50	100.0

TABLE 6 -Tobacco lesion in study participants

#### IV. DISCUSSION

The present cross-sectional study was conducted to determine oral health-related knowledge and practice. A total of 50 transgenders participated and filled the performa which was designed by WHO. The questionnaire was translated to local language for better comprehension and ease of understanding.

As eunuch (Hijra) community is highly secretive and hidden community, very little is known about them. Such kind of “Hidden populations” have two characteristics: First no sampling frame exists, so the size and boundaries of the population are unknown; and second, there exist strong privacy concerns, because membership involves stigmatized or illegal behavior, leading

individuals to refuse to co-operate or give unreliable answers to protect their privacy.[21]

The education level of study participants was found to be good since about 10% were graduates and post-graduates, another 16% had completed their secondary schooling and 26% had completed their high school. This in contrast to a study conducted among eunuchs in Bhopal where majority of eunuchs were illiterate [15].

Transgenders are under stress and often resort to tobacco and alcohol possibly to forget their daily experiences.[16] The present study also reported the consumption of chewing tobacco by 46% and a majority of transgenders used smoking or smokeless form of tobacco. In addition, about 40% reportedly consumed alcohol ranging from



one drink to 4–5 drinks per day. Similar results from previous studies have also reported higher prevalence of both tobacco and alcohol consumption among transgenders[15, 17] that may adversely affect their oral health status.[16] This may be due to the psychosocial stress, lack of awareness on the ill effects of these habits and limited/no sources of information on oral health. Given that we did not make any attempt to elicit their occupation, we have not discussed work related stress in the present study. Exploring use of tobacco and alcohol among transgender population is of vital public health importance, since they are at a disparate risk associated with negative health outcomes associated with tobacco and[18] greater secondary harm following alcohol consumption.[19].

Unmet treatment needs since they do not visit the dentist regularly could be the cause of poor oral hygiene. Saravanan et al.[9] showed that 69.3% had decayed teeth, 23.4% had missing teeth and 5.1% had filled teeth which is similar to our study. In the current study, the need for single-unit prostheses (39%) was more than other prostheses that was in contrast with the study by Shenoy and Hegde[22] in Mangalore where the need for multi-unit prostheses was more than the need for 1-unit prostheses. The impact of dental caries and tooth loss proves the urgent need to encompass dental health also in the overall needs of this population and not be limited to only sexual health.[23]

The reason for high caries prevalence could be due to dietary habits playing a significant role including unmet treatment needs of chronic disease. 50.4% needed extraction, 13.9% needed filling, and 5.1% needed root canal treatment in the studies done by Hongal et al. 2 and Saravanan et al. [20] which is similar to our study where the demand for treatment was high.

This study should serve as the basis for a larger, nationwide survey of oral health among socially deprived communities like eunuchs. To overcome social barriers, the medical and dental practitioners combined, are needed to show responsibility and take a step forward and approach such communities. There is a need to encourage regional dental associations and/or dental institutions to create awareness amongst transgenders regarding their oral health. The general physicians can share an equal responsibility for motivating or educating them, the importance of oral health care and also provide instructions to oral hygiene. However, the results of the present study can hardly be used extensively due to the small sample size. Regular dental check-ups and awareness programs, as well as delivery of dental

services, should be provided through the established health centres for their population

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