



## Original Article

## Oral Hygiene Awareness Among Transgenders in Twin Cities of Pakistan

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## ABSTRACT

An Individual's oral health condition is related to awareness of the practices that can enhance oral hygiene. The transgender community is less privileged in society. As a result, they may be more vulnerable to oral diseases due to limited access to healthcare and adverse living conditions. The aim of this study was to assess the oral hygiene awareness among the transgenders residing in Rawalpindi and Islamabad (Twin cities). **Material and methods:** A questionnaire-based descriptive cross-sectional was conducted on the transgender community residing in the twin cities. The study questionnaire was translated in Urdu language and distributed among trans-genders in person. The convenience sampling technique was used to recruit the participants. Data analysis was conducted by utilizing SPSS version 26. **Results:** A total of 73 individuals (Rawalpindi=60.3%, Islamabad=39.7%) participated in the study out of the 100 that were approached. Most of the participants (52%) were from the 25-34 years age group. The relationship between oral hygiene awareness and age/city was found to be statistically insignificant. Only 26% transgenders used toothpaste for teeth cleaning and 70% did not use any adjunctive aid for teeth cleaning. Moreover, 98.7% of the participants noted that they are using either betel nut, pan, or tobacco. **Conclusion:** The study participants were aware of the basic oral hygiene requirements; however, their oral hygiene practices were to be well below the established standards. It is recommended that public and private sector welfare organizations should fund and organize oral health promotion programs among the transgender communities. Moreover, healthcare professionals should be encouraged and trained to deal with the transgender community with empathy and care.

## INTRODUCTION

Pakistan has a total population of 216.6 million according to the 2017 census, with a total transgender population of 21,744 [1]. In 2009, the Supreme Court of Pakistan finally granted legal rights to transgenders or more commonly known as 'Khwaja siras' in Pakistan. Khwaja siras are one of the most marginalized individuals not only in Pakistani society but all over the world [2-4]. They are seen with skepticism not only because of their ambiguous physical attributes but also due to the belief that they possess special powers to bless and curse [5]. Most transgenders leave their homes at an early age after being socially

ridiculed or isolated by their friends and family and seeking refuge in the marginalized transgender communities [6]. Lack of family support and acceptance of their identity in society results in very little formal education and consequently fewer job opportunities. Consequently, many transgenders end up as beggars, street performers, sex workers, and drug addicts, making them prone to sexually transmitted diseases. Lack of acceptance in society, inferior social status, living in secluded transgender communities, unhealthy lifestyle, and limited access to health care services makes them vulnerable to many

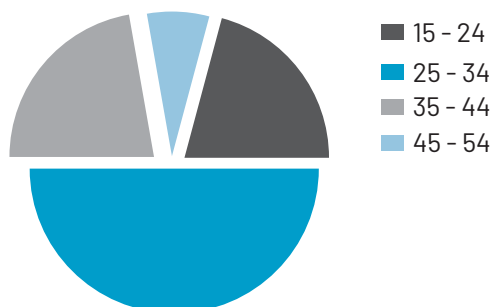
medical and dental problems [7-10]. Oral health condition is strongly related to the knowledge and awareness of oral hygiene practices [11, 12]. The social stigma attached to the transgender communities and lack of formal education are barriers to attaining awareness about their oral health. Oral health status and oral hygiene awareness of the transgender community have not been given due importance [13]. Studies on the awareness of oral health in transgenders are very scarce, henceforth, this research was conducted in the twin cities of Islamabad and Rawalpindi to assess the oral hygiene awareness among the transgenders.

## METHODS

A cross-sectional study was conducted to assess oral hygiene awareness of transgenders in twin cities of Pakistan using a self-administered questionnaire on oral hygiene awareness. The questionnaire was translated into Urdu, the national language of Pakistan. The study was conducted from December 2021 to February 2022. Ethical approval was obtained from the Ethical Review Board at Riphah International University. A sample size of 73 transgenders was calculated using OpenEpi (version 3.01) with a total population size of 21,744 at a 90% confidence interval and 10% absolute precision. A convenient sampling technique was used and only those individuals were included who gave consent to be part of the research. Out of 100 transgenders who were approached from the main hubs of the transgender community, 73 consented to fill out the questionnaire. Participation in the survey was voluntary and the responder's identities were kept anonymous. The questionnaires were distributed in the hard copy and responses were collected in person. The data collected were analyzed using IBM SPSS (version 26.0).

## RESULTS

Seventy-three individuals who identified themselves as transgenders filled the forms which were given to them by hand. 60.3% were from Rawalpindi and 39.7% were from Islamabad. Most of the transgender people (52%) were from the 25-34 years age group while the least (8%) were from the 45-54 years age group as shown in Figure 1



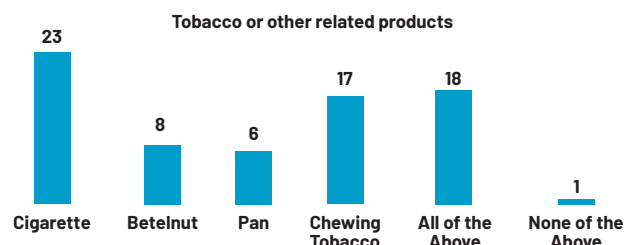
**Figure 1:** Different age groups of the participants.

Regarding the use of toothbrushes, only 26% transgenders in this study use toothbrushes for cleaning their teeth while most of them use their fingers alone or in combination with dental powder or toothpaste as shown in Table 1. 70% transgenders in this study clean their teeth once daily, while 28.7% twice daily and only 1.3% after every meal as shown in Table 1. 49% transgenders do not clean their tongue as part of their oral hygiene maintenance and 70% transgenders in this study do not use any adjunctive dental cleaning aid such as dental floss and mouthwashes as shown in Table 1.

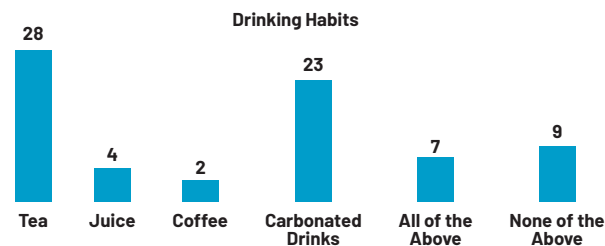
Question Statement	Frequency (%)			
	How do you clean your teeth	I use my finger 15 (20.5%)	I use dental powder with finger 10 (13.5%)	I use tooth paste with finger 29 (40%)
Which additional dental aids do you use?	Mouth-wash 18 (24.7%)	Interdental Brush 1 (1.3%)	None 51 (70%)	Did not answer 3 (4%)
	How frequently do you clean your teeth	Once Daily 18 (24.7%)	Twice Daily 1 (1.3%)	After Every Meal 51 (70%)

**Table 1:** Responses to questions related to methods and frequency of tooth cleaning

All the respondents except 1 (98.7%) use either betelnut, pan or tobacco (cigarette and chewable) and most of them (88%) use tea, coffee, or other carbonated drinks as shown in Figure 2 & 3. Almost half of them (49%) never visited a dentist in their lifetime.



**Figure 2:** Use of tobacco and related products among participants



**Figure 3:** Drinking habits of transgenders in twin cities

## DISCUSSION

In a developing country like Pakistan where people face a lot of problems like hunger, poverty, health, education, and economy; challenges of minor communities like

transgenders are not brought into light. The education and health of these communities are largely ignored by the Government. The current study was conducted with the aim to assess the oral hygiene awareness among the transgender community of the twin cities. Reaching out to the transgender community was a challenge in itself because of the ongoing pandemic situation and the general lack of mistrust of the targeted community towards survey teams and health professionals [14]. This study reported that 26% transgenders use toothbrushes as a method of maintaining regular dental hygiene. Few studies have been carried out to assess the oral hygiene awareness of transgenders in India which reported the use of toothbrushes as a method of dental cleaning ranging from 57-93% [15-17]. Less frequent use of toothbrushes in the twin cities draws attention to the dire conditions of oral hygiene prevailing in the transgender community as compared to India. This study identified that 70% transgenders of the twin cities clean their teeth once daily which is close to what is reported by the school children and their teachers in some of the schools of the peri-urban locality of Islamabad [18]. But we must keep in mind that in our study most transgenders use their fingers in place of the toothbrush as their primary device for cleaning their teeth. Regarding the cleaning of the tongue, 51% transgenders in our study responded with yes which corresponds to the findings of one of the studies in Japan [19]. Tobacco or other related products such as betel nut and pan are reportedly used by 98.6% of the transgenders in this study; mostly in the form of tobacco smoking as compared to 57% in Pune City, India [17]. This again shows that the prevailing adverse practices in our transgender communities are detrimental to their general and oral health. The current study inquired about their visits to a dentist and 49% transgenders in this study never visited a dentist which is comparable to the findings of the study on transgenders in Chennai, India, which reported that over 60% of the transgender population never visited a dentist in their lifetime [20]. This could be due to the mistrust of the transgender community on the healthcare professionals and may also be related to their economic and financial woes. Socioeconomic status has been shown to be strongly related with oral health awareness and prevention of oral diseases. As most of the participants in this study belonged to the low socioeconomic strata, this study did not address the impact of socioeconomic status on the awareness and practice of oral hygiene measures exclusively in the transgender community. This may be considered as the limitation of this study. The study furthered our understanding of the oral hygiene practices prevailing in transgender communities. Future studies should also target the clinical assessments of the oral

hygiene indices in the transgender communities in different cities of Pakistan. The goal should be to educate everyone, especially the marginalized communities such as transgender on their general and oral health needs.

## CONCLUSION

The study highlighted the oral health awareness among the transgender community in the twin cities. Although the transgender community was aware of the basic oral hygiene needs, their oral hygiene practices were not up to the mark. Furthermore, the government and non-governmental organizations should fund transgenders' dental assessments and take steps to shift the mindset of our society toward the transgender community by sensitizing the health professionals to properly communicate and handle such patients with equal care.

## REFERENCES

- [1] Final Results (Census-2017) | Pakistan Bureau of Statistics [Internet]. [cited on 2022 Jun 22]. Available from: <https://www.pbs.gov.pk/content/final-results-census-2017>
- [2] Saddique KA, Mirbehar S, Batool H, Ahmad I, Gang C. Transgender issues in Pakistani community. *European Academic Research*. 2017;4(10):9048-57.
- [3] Zwickl S, Wong AF, Dowers E, Leemaqz SY, Bretherton I, Cook T, et al. Factors associated with suicide attempts among Australian transgender adults. *BMC psychiatry*. 2021 Dec; 21(1):1-9.
- [4] Vincent BW. Studying trans: recommendations for ethical recruitment and collaboration with transgender participants in academic research. *Psychology & Sexuality*. 2018 Apr; 9(2):102-16. doi/abs/10.1080/19419899.2018.1434558
- [5] Rath AK. Transgender studies in india: Locating folklore and autobiographies as transgressive sites. *In Women's and Gender Studies in India 2019* Apr: 225-34. Routledge India.
- [6] Koken JA, Bimbi DS, Parsons JT. Experiences of familial acceptance-rejection among transwomen of color. *Journal of Family Psychology*. 2009 Dec; 23(6):853. doi.org/10.1037/a0017198
- [7] Fuller KA, Riggs DW. Family support and discrimination and their relationship to psychological distress and resilience amongst transgender people. *International Journal of Transgenderism*. 2018 Oct; 19(4):379-88. doi.org/10.1080/15532739.2018.1500966
- [8] Operario D, Soma T, Underhill K. Sex work and HIV status among transgender women: systematic review and meta-analysis. *JAIDS Journal of Acquired Immune Deficiency Syndromes*. 2008 May; 48(1):97-

103. doi: 10.1097/QAI.0b013e31816e3971
- [9] Riggs DW, Bartholomaeus C. Transgender young people's narratives of intimacy and sexual health: implications for sexuality education. *Sex Education*. 2018 Jul; 18(4):376–90. doi.org/10.1080/14681811.2017.1355299
- [10] Romanelli M, Lindsey MA. Patterns of Healthcare Discrimination Among Transgender Help-Seekers. *American journal of preventive medicine*. 2020 Apr; 58(4):e123–31. doi.org/10.1016/j.amepre.2019.11.002
- [11] Tadin A, Poljak Guberina R, Domazet J, Gavic L. Oral hygiene practices and oral health knowledge among students in Split, Croatia. *InHealthcare* 2022 Feb; 10(2): 406. MDPI.
- [12] Kumar G, Sethi AK, Tripathi RM, Barman D. Assessment of knowledge, attitude, and practice of dental and medical interns toward toothbrush maintenance and replacement in Bhubaneswar city, Odisha, India. *Journal of pharmacy & bioallied sciences*. 2018 Apr; 10(2):77.
- [13] Kumar G, Sethi AK, Bagchi A, Rai S, Tamilselvan P. Knowledge, attitudes and behaviour towards oral hygiene of transgenders in Bhubaneswar during COVID-19. *Journal of Family Medicine and Primary Care*. 2021 Mar; 10(3):1353.
- [14] D'Avanzo PA, Bass SB, Brajuha J, Gutierrez-Mock L, Ventriglia N, Wellington C, Sevelius J. Medical mistrust and PrEP perceptions among transgender women: a cluster analysis. *Behavioral Medicine*. 2019 Apr 3; 45(2):143–52. doi/abs/10.1080/08964289.2019.1585325
- [15] Saravanan N, Thiruneervannan R, Christopher P. A Study to Assess the Periodontal Status of Transgender in Chennai City. *Biosciences Biotechnology Research ASIA*. 2014; 11(3):1673–8. doi.org/10.13005/bbra/1567
- [16] Knowledge, attitude, and practice on brushing habits among transgenders residing in Chennai City: Cross-sectional questionnaire Study [Internet]. [cited on 2022 Jun 22]. Available from: <http://scopeindex.org/handle/sc/1402>
- [17] Kumbhalwar A, Shetiya SH, Kakodkar P, Mehta V. Oral Health Status and Treatment Needs of Transgender in Pune City, Maharashtra, India: A Pilot Survey. *International Journal of Current Research and Review*. 2021; 13(19):159–63. doi.org/10.31782/IJCRR.2021.131914
- [18] Oral hygiene practices in primary school children and their teachers in a peri-urban locality of Islamabad | Pakistan Oral & Dental Journal [Internet]. [cited 2022 Jun 22]. Available from: <http://podj.com.pk/index.php/podj/article/view/139>
- [19] Matsuda S, Saito T, Yoshida H, Yoshimura H, Sano K. Prevalence of Tongue Cleaning Using a Toothbrush: A Questionnaire Survey in Fukui Prefecture, Japan. *BioMed Research International*. 2019; 2019. doi.org/10.1155/2019/6320261
- [20] Bharath Marlecha R, Mary AV, Kesavan R, Christopher P, Nagavalli KB, Salam H. Oral health status, dental awareness, and dental services utilization barriers among transgender population in Chennai. *Drug Invent Today*. 14:2020