

A Study to Assess the Periodontal Status of Transgender in Chennai City

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To assess the Periodontal status of the Transgender To suggest the measures to improve their existing Periodontal status Prior permission was obtained from AHEAD. [Aravanigal Health Empowerment And Development]. All the available 137 members were examined at the AHEAD Office with their consent. Through questionnaire information regarding demographic details, dietary habits, Oral hygiene practices, and personal habits was obtained. The Periodontal status was recorded on the WHO oral health assessment form 1997 (modified). The examination was carried out under natural light by using mouth mirrors, and CPI probe. 5.73% were with different stages of periodontal diseases and 16.8 % had loss of periodontal attachment. Significant observation was that 5.73% were with different stages of periodontal diseases and 16.8 % had loss of periodontal attachment and high gutka chewing habits (35 %) which might be the reasons for high prevalence of periodontal diseases. Smoking and pan chewing habits were 6.6%, 5.8% respectively.

Key words: Periodontal Status; Periodontal diseases ;
Loss of attachment ; CPI ; LOA; Eunuchs; Ali; Hijras; Transgender.

Health is multi-factorial, the factors which influence health lie both within the individual and externally in the society in which he or she lives. It is a truism to say that what man is and to what disease he may fall victim depends on a combination of two sets of factors his genetic factors and the environmental factors to which he exposed.¹

Transgender population represents a special population group or community who deserve to be attended both on their oral and general health due to the various discrimination they encounter in their daily life.

Transgender or 'Hijras' or 'Ali' or Aravanis are people who are segregated from the society. The Transgender are those who lead a life of isolated existence, based on their own traditions, rituals and practices.

Transgender are a special group of population where stress, alcoholism, gutka like pernicious habits, sexual risk behaviors involved. Transgender have lower socioeconomic status and poor oral hygiene, which may influence general and oral health.

The accessibility of these Transgender, to medical and dental facilities is nearly non-existent.

Though they constitute a very little percentage of the total population, it becomes essential to extend our knowledge and facilities in order to improve the overall health status of these Transgender.

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The studies in India, related to Periodontal status of Transgender population are scanty. Hence the present study was undertaken to know their dietary habits, oral hygiene practices, personal habits, and Periodontal status.

This study was designed to provide information on periodontal status of Transgender and serve as a baseline data for further study and comparison.

Profile of transgender

Definition

The English word Eunuch is derived from Greek word Eun means 'bed' and Ekhein means 'to keep' effectively "bed keeper". Eunuch - A man who has been castrated.

Transgender / Hijras / Aravanis / Alis (male-to-female transgender / Trans sexuals) have been in India for centuries. The term 'Transgender' denotes biological males who identify themselves with women and who join the Transgender community.

These persons are usually in female attire and may or may not have undergone emasculation/castration.

Transgender come from very different layers of society and also from different communities, and religions. Once they join the Transgender community they adopt a common religion and religious rituals and cultures.

Why they become transgender?

No documents available for us why and how a man would get himself transformed into a "Eunuch", whether in ancient times or today. We have to depend largely on what we can learn from interviews and observations. According to what we came to know until now, the decision to become a "Eunuch" is different in every case. In most cases, it appears that the wish to be a female already was there in early childhood, whether innate engendered by environment and education.

One of the most distinctive features of Transgender is that though they are from various cultural backgrounds and dietary habits, they practice mixed diet over a period of time.

Transgender have their own distinctive language. Which has got no script. They also speak their mother tongue like Kannada, Tamil, Telugu, Malayalam, Hindi and English also.

Transgender might stay single, cohabit with their male partner or live along with their

Transgender friends or with their 'Guru/Amma'. Many Transgender use alcohol and they might give many reasons for alcohol abuse- feeling of worthlessness, depression, etc. and few of them practice pan parag chewing.

An unknown number of Transgender involve in sex work since they are denied other job opportunities. In addition to sex work, some go for 'Bhasthi' (clapping/getting money from shops). Some also do household jobs, some sell vegetables/flowers, etc. But in reality, the public considers all Transgender as sex workers.

There is difficulty in accessing and using public health care services by Transgender and they face discrimination in the health care system. There are many registered and unregistered community groups of Transgender in Tamil Nadu. Some organization in Chennai (NGOs and community based organizations) that provide services like outreach education, condom promotion/distribution, and STD referral services. Estimation of Transgender /Aravanis/Ali population in Tamil Nadu or India is not available. Transgender are 'tolerated' by the Indian society but they are not 'accepted' and are being discriminated in various ways.

Objectives

- 1) To assess the Periodontal status of Transgender in Chennai city
- 2) To suggest possible measures to improve their present Periodontal status.

Methodology

The present study was cross sectional study which carried out to assess the periodontal status and of Transgender in Chennai city. The ethical clearance was obtained from college ethical committee.

The permission to carry out the study and the information regarding the number of Transgender were obtained from the project coordinator of AHEAD [Aravanigal Health Empowerment and Development].

A schedule for the examination was prepared with a help of project coordinator of AHEAD and they in turn informed the study population about the study as well as the date, time, and the place of examination.

The examinations were carried out at the AHEAD Office Chennai and Informed consent was obtained from all Transgender who took part in the study.

The study involved completion of a predesigned questionnaire that collected information about age, education levels, occupation, income levels, diet, and sweet consumption, oral hygiene practices, personal habits, dental visit and also the systemic problems. The examination was conducted by a single examiner who was trained and calibrated in the Department of Public Health Dentistry, JSS Dental College and Hospital, Mysore.

The examination was done under natural light, by using mouth mirror, CPI probe, kidney trays, and cotton rolls with the study subject seated on an ordinary chair. All the instruments were sterilized by cold sterilization.

The data regarding their periodontal status was obtained through direct oral examination of the study subjects using modified WHO oral health assessment form (Basic Oral Health Surveys, 1997)².

After the completion of oral examination, the examiner himself filled the questionnaire by asking the subjects questions in the questionnaire to ensure uniformity in data collection and to avoid misinterpretation of the questions by the study subjects.

Assistance was taken from AHEAD project coordinator for co-operation of the study population at the time of interviews and examinations

All the available members of the AHEAD were examined during the period of October 2004. Thus the study population comprised of 137 subjects ranging in age from 17 years to 60 years.

The data was analyzed by using SPSS Version 10 (Statistical package software).

RESULTS

Mean age

The overall mean age along with the S.D values were 28.97 ± 9.8 . These trends are shown in Table 1

Oral hygiene practices

Cleaning habits

In the total study subjects about 86.1 % of them use Toothbrush, 11.7 % of them use finger and 11.8% of them use both toothbrush and finger ($CC = 0.656$; $P < .000$) (Table 2).

Table 1. Distribution of study population according to mean age

Age Group in years	Mean	Standard deviation
Below 20	18.8	1.01
21-30	24.82	3.01
31-40	35.05	2.65
41-50	45.35	2.49
51+	53.1	3.54
Total	28.97	9.8

Table 2. Distribution of study population according to oral hygiene habits

Oral Hygiene Habits	Age in years											
	Below 20		21-30		31-40		41-50		51+		Total	
	No	%	No	%	No	%	No	%	No	%	No	%
a. Cleaning												
T.Brush	21	100	76	100	14	82.4	07	41.2	00	00	118	86.1
Finger	00	00	00	00	03	17.6	08	47.1	05	83.3	16	11.7
T.Brush & Finger	00	00	00	00	00	00	02	11.8	00	00	02	11.8
Others	00	00	00	00	00	00	00	00	01	16.7	01	0.7
Total	21	100	76	100	17	100	17	100	06	100	137	100
b. Materials												
T.Paste	20	95.2	75	98.7	10	58.5	00	00	00	00	105	76.6
T.Powder	01	4.8	01	1.3	06	35.3	15	88.2	00	00	23	16.8
T.Paste & T.Powder	00	00	00	00	01	5.9	02	11.8	05	29.5	08	5.8
Others	00	00	00	00	00	00	00	00	01	70.5	01	0.8
Total	21	100	76	100	17	100	17	100	06	100	137	100

Cleaning Contingency coefficient = 0.656; $P < .000$ HS

Materials Contingency coefficient = 0.794; $P < .000$ HS

Material used for oral hygiene practices

In the total study subjects about 76.6 % of them use Tooth paste 16.8 % of them use Tooth powder, 5.8 % of them use both and 0.8 % of them use other materials for their oral hygiene practices (CC = 0.794; P<.000) (Table 2).

Personals habits

Alcohol 62.8%, Gutka chewing 35%, Tobacco 29.9%, Smoking 6.6%, pan chewing 5.8% of them were found to have personal habits (Table 3).

Table 3. Distribution of study population according to personal habits

Personal Habits	Age in years											
	Below 20		21-30		31-40		41-50		51+		Total	
	No	%	No	%	No	%	No	%	No	%	No	%
Alcohol												
No	20	95.2	16	21.1	15	88.2	00	00	00	00	51	37.2
Yes	01	4.8	60	78.9	02	11.8	17	100	06	100	86	62.8
Total	21	100	76	100	17	100	17	100	06	100	137	100
Gutka												
No	21	100	34	44.7	11	64.7	17	100	06	100	89	65.0
Yes	00	00	42	55.3	06	35.3	00	00	00	00	48	35.0
Total	21	100	76	100	17	100	17	100	06	100	137	100
Tobacco												
No	21	100	62	81.6	03	17.6	07	41.2	03	50.0	96	70.1
Yes	00	00	14	18.4	14	82.4	10	58.8	03	50.0	41	29.9
Total	21	100	76	100	17	100	17	100	06	100	137	100
Smoking												
No	21	100	74	97.4	15	88.2	15	88.2	03	50.0	128	93.4
Yes	00	00	02	2.6	02	11.8	02	11.8	03	50.0	09	6.6
Total	21	100	76	100	17	100	17	100	06	100	137	100
Pan												
No	21	100	76	100	17	100	11	64.7	04	66.7	129	94.2
Yes	00	00	00	00	00	00	06	35.3	02	33.3	08	5.8
Total	21	100	76	100	17	100	17	100	06	100	137	100
Alcohol	Contingency coefficient = 0.585; P<.000 HS											
Gutka	Contingency coefficient = 0.463; P<.000 HS											
Tobacco	Contingency coefficient = 0.493; P<.000 HS											
Smoking	Contingency coefficient = 0.381; P<.000 HS											
Pan	Contingency coefficient = 0.485; P<.000 HS											

Table 4. Age wise distribution of study population according to periodontal status

Age in Years	Healthy		Bleeding		Calculus		4-5mm		6 mm		Excluded		Total	
	No	%	No	%	No	%	No	%	No	%	No	%	No	%
Below 20	18	85.7	02	9.5	01	4.8	00	00	00	00	00	00	21	100
21-30	19	25.0	08	10.5	49	64.5	00	00	00	00	00	00	76	100
31-40	00	00	02	11.8	13	76.5	02	11.8	00	00	00	00	17	100
41-50	00	00	00	00	02	11.8	15	88.2	00	00	00	00	17	100
51+	00	00	00	00	00	00	00	00	03	50.0	03	50.0	06	100
Total	37	27.0	12	8.8	65	47.4	17	12.4	03	2.2	03	2.2	137	100

Contingency coefficient = 0.822; P<.000 HS

Age wise distribution of periodontal status

The healthy segment we can find more in the younger age group. While there was more of bleeding in the age groups of 21-30 yrs. Maximum calculus was observed in the age group of 31-40 years. Higher the age group, more were the periodontal pockets of 4-5mm and 6mm (CC = 0.822; $P < .000$) (Table 4)

Age wise distribution of loss of attachment

From the table it is evident that younger age groups had lesser loss of attachment compared to older age groups. We can see a gradual increase in loss of attachment as the age of the study population increased (CC = 0.799; $P < .000$) (Table 5).

Table 5. Age wise distribution of study population according to loa scores

Age in Years	Healthy		Bleeding		Calculus		4-5mm		6 mm		Excluded		Total	
	No	%	No	%	No	%	No	%	No	%	No	%	No	%
Below 20	21	100	00	00	00	00	00	00	00	00	00	00	21	100
21-30	76	100	00	00	00	00	00	00	00	00	00	00	76	100
31-40	15	88.2	02	11.8	00	00	00	00	00	00	00	00	17	100
41-50	02	11.8	15	88.2	00	00	00	00	00	00	00	00	17	100
51+	00	00	00	00	03	50.0	00	00	00	00	03	50.0	06	100
Total	114	83.2	17	12.4	03	2.2	00	00	00	00	03	2.2	137	100

Contingency coefficient = 0.799; $P < .000$ HS

DISCUSSION

The present study was conducted to assess the periodontal status of Transgender in Chennai city, a modified WHO proforma (1997) and a predesigned questionnaire was used.

A total of 137 study populations were examined. The overall mean age and S.D was 28.97 ± 9.8 (Table 1).

In the present study, the study population had poor brushing habits (86.1%) (Table 2)

In our study Alcohol 62.8%, Gutka chewing 35%, Tobacco 29.9%, Smoking 6.6%, pan chewing 5.8% of them were found to have personal habits (Table 3).

The previous study stated that the negative life style was more common in the lower social class with combined lifestyle variable, frequency of tooth brushing and frequency of dental visits were associated with dental diseases.³

Periodontal status

In the present study the prevalence of periodontal disease was 83% with bleeding gums (8.8%), calculus (47.4%), pocket 4-5 mm (12.4%) and 6mm (2.2%). It was observed that higher percentage of calculus (47.4%). (Table 4).

Loss of attachment

In the present study, the prevalence of

loss of attachment due to periodontal diseases (16.8%) (Table 5).

This could be possible due to prevalence of pernicious habits like alcohol (62.8 %), gutka chewing (35.0%), tobacco (29.9%) smoking (6.6%), pan chewing (5.8 %) and also poor oral hygiene practices (86.1%) (Table 2 and 3).

These findings were in conformity with the earlier study which concludes periodontal pocketing increased with diminishing tooth brushing frequency and an unhealthier life style.⁴

Limitations of the study

Small sample size that limits true representation of the study.

CONCLUSION

1. Periodontal status of Transgender population was relatively poor with periodontal health (83%)
2. A significant finding was all the study subjects practicing mixed dietary habits.
3. Lower awareness levels, socioeconomic status and pernicious habits like alcoholism, smoking, pan, gutka and tobacco, and sexual risk behavior seemed to influence the periodontal status of the Transgender
4. Almost all the study subjects required oral prophylaxis.

Suggestions and recommendations

Oral health education should be given to the Transgender population about the oral health problems and also ill effects of pernicious habits like alcoholism, smoking, and chewing habits by the available public Medias

Prevention of oral diseases among Transgender requires modifications of personal habits, and their occupations.

Regular dental check ups as well as delivery of dental services should be provided through the established health centers for Transgender population.

Development of specific dental care programme involving both health education and preventive and curative dental care within the setting of the health services would seem to be relevant.

To avoid sexual risk behavior among Transgender a behavioral intervention programme should be developed to help this specific population, which should also aim at providing alternative jobs to this group. This could be done in collaboration with government and non-government organizations.

Further studies need to be conducted to explore the dental problems among Transgender.

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REFERENCES

1. Park K. Park's Textbook of Preventive and social medicine. 17th ed., Jabbalpur, M/s Banarsidas Bhanot, 2002; 16.
2. World Health Organization, Oral Health Survey's Basic Methods, 4th ed. New Delhi, A.I.T.B.S Publishers and Distributors, 1999; 26-29.
3. Sakki TK. Lifestyle, dental caries and number of teeth. *Community Dent Oral Epidemiol* 1994; **22**: 298-302.
4. Tero K. Sakki. Association of lifestyle with periodontal health. *Community Dent Oral Epidemiol* 1995; **23**: 155-58.
5. <http://indianglbtthealth.info/Home/index.html> (Indian GLBT Health & Research Information Center).