

**Oral Health Related Cultural Issues: Myths and Misbelief among North Indian Population**

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**Abstract**

**Introduction:** Cultural beliefs and practices are engraved in our society which influences the every aspect of daily living. Traditional Indian beliefs and taboos have been found to correlate inversely with preventive dental health behavior in the population.

**Aim:** To assess the prevalence of various cultural myths and taboos regarding dental treatment, oral health and oral hygiene practices among the Indian population and to ascertain the impact of various socio-demographic factors on the prevalence of myths.

**Methodology:** A cross-sectional study was conducted among patients visiting outreach health centers distributed across Delhi. A structured, close ended questionnaire in Hindi language was used as study tool to determine the existence of myth. To avoid any type of bias, patients were asked to fill the questionnaire then and there itself. The descriptive data analysis was carried out using SPSS Version 20.

**Results:** In the present study it was found that most of the people have misconceptions about oral health and their treatment. They strongly believe in myth and taboos

related to oral health. There was almost an equal distribution of myths among various religious groups. Also the ratio of existence of myths was found higher among low socioeconomic strata (SES).

**Conclusion:** Various myths are prevalent among people of different religion and SES with no scientific background. A dental surgeon should be aware of prevalent myths in respective geographic location in order to educate and treat them accordingly. At community level various health education programs needs to be planned to modify such myths and to provide factual information for improvement of oral health.

**Keywords:** Oral Health, Myth, Society, Teeth, Pregnancy, Newborn

**Introduction**

Health cannot be secluded from its social framework. The social and economic factors have as much impact on health as medical interventions.<sup>1</sup> According to 2011 census, around 69% of population resides in rural India. India is a multicultural country with diversity in language, ethnicity and religion. Patient’s trust for spiritual treatment and alternative forms of medicine are the factors which

influence the prevalence of myth regarding health in Indian society.<sup>2</sup> Influence of culture is seen in every discipline of health and medical practices, along with dentistry. Society and culture influence the behavioral patterns which in turn influence the health outcomes of a population.<sup>2</sup>

Cultural beliefs and practices have become an inherent trait of mankind. They are present in every aspect of daily living. These myths and misbeliefs have a great impact on the teeth and mouth through diet, care seeking behavior, or use of home remedies. Myths related to oral diseases and oral health-related practices are very common in Indian population.<sup>3</sup> It is difficult to modify the human behavior regarding these myths as they are deep-rooted in the society and understanding them becomes essential to provide a good care. Hence, importance should be given for public health awareness via scientific approach to modify the behavior regarding myths about oral health at the individual as well as community level.

With increasing literacy and awareness, these taboos and beliefs are gradually disappearing, but still they persist and are frequently encountered.<sup>4</sup> Traditional Indian beliefs and taboos have been found to correlate inversely with preventive dental health behavior in the population.<sup>4</sup> Hence the study was conducted with aim to assess the prevalence of various cultural myths and taboos regarding dental treatment, oral health and oral hygiene practices among the Indian population and to ascertain the impact of various socio-demographic factors on the prevalence of myths.

### **Methodology**

The present cross-sectional study was conducted over a period of three month from September 2017 to November 2017 in the Department of Public Health Dentistry, Maulana Azad Institute of Dental Sciences, Delhi. Sample size of 972 was estimated after setting level of

significance as 5%, power of study as 90% and prevalence of myths as 35% (obtained from the pilot conducted in August 2017 in the OPD of MAIDS). Study subjects were selected from the various outreach centers of MAIDS distributed across Delhi by convenient sampling. Inclusion criteria was the subject should be literate, so that he can read and fill the questionnaire himself. Those who refused to give informed consent were excluded from the study. All the participants were informed and briefed regarding study and written consent was obtained before data collection. The project was approved by the Institutional ethics committee.

A structured, self-administered, close ended questionnaire consisting of 20 questions in Hindi language was prepared and validated through pilot study. For content validity, questionnaire was given to 10 subject experts and necessary changes were made. Internal consistency of the questionnaire was assessed using Cronbach alpha and the value obtained was 0.92.

The questionnaire comprised socio-demographic details of the participants such as their age, gender, religion, education level, employment status and income, followed by 20 questions regarding common myths and perceptions of participants towards dental treatment, oral health and their oral hygiene practices. For 17 questions responses were recorded as yes, no or don't know. And remaining three questions were open ended. To avoid any type of bias, patients were asked to fill the questionnaire then and there itself. The data analysis was carried out using SPSS Version 20.

### **Results**

Study was conducted with aim to find the frequency of myth and taboos about dental treatment, oral health and oral hygiene practices among Indian population. Most of the people have misconceptions about teeth and their treatment. They sturdily believe in myth and taboos

related to oral health. There were 972 respondents in the study from which 63.7% were male and 36.3% were female. Religious and socio economic details of the patient have been provided in table 1.

The tool used to assess various myths was a questionnaire comprising of 17 close-ended questions having options “yes”, “no”, “do not know” and three open ended questions. Questions were regarding the most commonly prevalent myths and taboos regarding Oral Health and treatment. As seen in table 2, around 29% subjects stated during pregnancy women should not brush her teeth and 21% said dental procedures should be avoided during pregnancy. 54% subjects believe that removal of tooth under local anesthesia affects eyesight. Bad luck due to prenatal teeth is quite common among population as around 26% subjects stated presence of teeth during birth in newborn have bad effect on family and around 12% reported appearance of upper front tooth as first tooth brings bad luck. Around 17% subjects reported brushing with tobacco rich tooth powder like Gul, strengthen the gums and 2% said *Gul manjan* prevent caries.

Most of the people (65%) dispose the exfoliated deciduous tooth in dustbin whereas others bury in ground or rat hole or under the water container or bury in cow dung or wheat as shown in Table 3. Around 44.4% of the subjects received some kind of dental treatment, from which only 20% received preventive care. From these, 18% received care in clinic, 13% in mobile dental van and 12% in government hospital.

Pearson correlation test showed there is a slightly positive correlation between myths and religion ( $r=0.04, p>0.05$ ) and myth and lower socioeconomic status ( $r=0.08, p>0.05$ ). It shows myths are found to be common among all the socioeconomic strata (SES) and equally distributed among all the religious groups.

## Discussion

Myth is a faith among population which has no significance with reality. Myths are existent in society due to various reasons such as lack of knowledge and awareness, cultural beliefs, and social fallacy.<sup>5</sup> They are usually handed from one generation to the other with time. Myths have grown not only in the field of medicine but also in the specialty of dentistry, while many of these are harmless, others lead people to take inadequate care of their teeth, or cause them to avoid visiting the dentist regularly.<sup>3,5,6,2</sup> They act as a roadblock for patients for receiving treatment from dentist.<sup>7</sup> To eliminate myths attitude, knowledge and behavior of society needs to be changed which is possible only after knowing the myths prevalent among them and understanding the cause for these myths.<sup>3</sup> Hence the present study was conducted to assess the frequency of various cultural myths and taboos regarding dental treatment, oral health and oral hygiene practices among the Indian population and to ascertain the impact of various socio-demographic factors on the prevalence of myths.

In present study, 59% subjects believed cleaning of teeth by dentist leads to tooth mobility. And it was found to be most common among all the socioeconomic strata (SES) except higher class and equally distributed among all the religious groups. Actual reason is the calculus filling the gap between the teeth and gum, mask the mobility and prevent the exposure of dentin for its sensitivity. Only after ultrasonic scaling, calculus is removed and the patient will have a feeling of mobile teeth. Results obtained were in accordance with former studies where subjects believed that professional scaling leads to sensitivity, loosening of teeth, and creates space in-between them.<sup>3,8,9</sup>

Around 54% respondents especially belonging to lower SES thought removal of tooth under local anesthesia

affects eyesight. This may be due to improper infraorbital local anesthetic nerve block followed which may cause slight blurring of vision until the effect of local anesthesia wears out.<sup>8</sup> This might be attributed to lack of awareness, low educational levels, anxiety, apprehension, and myths about dental treatment entrenched in their minds. and they are unaware that there is no relationship between eyesight and upper teeth.<sup>3</sup> The result obtained were in contrast to the study done by N. Saravanan and R. Thirineervannan where only 20% believed in the myth<sup>6</sup> but results were in accordance with few studies.<sup>38</sup>

Around 29% subjects stated during pregnancy women should not brush her teeth and 21% said dental treatment to be avoided during pregnancy. Both the myths were equally common among various religious groups. This is because the people generally believe that fetus can get affected by the drugs and the treatment modality provided. But they are not aware that treatment has to be done when in emergency and other procedures can be done during second trimester when organogenesis is complete.<sup>8-10</sup> Such myths can be dealt by understanding of the importance of social and cultural influences on patients' health beliefs and behaviors; considering how these factors interact at multiple levels of the health care delivery system; and, finally, devising interventions that take these issues into account to assure quality health care delivery to diverse patient populations.<sup>11,12</sup>

Around 26% subjects stated presence of teeth during birth in newborn brings bad luck for family and around 12% reported appearance of upper front tooth as first tooth brings bad luck. Results obtained are in correspondence with study done by Raina SA et al. in which 36.4% stated that teeth at birth are harmful to grandparents.<sup>2</sup> This kind of fallacy is inherited due to false information publicized by those who had experienced negativity in family due to prenatal teeth. This might be attributed to lack of

awareness, low educational levels, apprehension and anxiety in their minds. Focus group discussion (FGD) needs to be conducted to identify the risk factors responsible for such myths.

In present study around 82% subjects believed worms destroy the tooth and lead to cavities. Results obtained are in congruence with results of the study carried out by Singh et al. where 94.4% patients believed that worms on tooth are responsible for dental caries.<sup>13</sup> Around 16% subjects stated brushing with tobacco rich tooth powder like Gul, Mishri strengthen the gums and prevent dental caries. Usage of tobacco products as dentifrices range from 6%(Goa) to 68%(Bihar).<sup>14</sup> Results obtained are in contrast to study conducted by Singh et al. where 83.3% subject's clean teeth with mishri for maintain oral hygiene.<sup>13</sup>

Around 21% subjects thought chewing tobacco strengthen the gums and other body muscles and 29.7% stated chewing tobacco is safer then smoking tobacco. Results obtained are similar to studies reported in literature where people believed smokeless tobacco is safer then smoking tobacco.<sup>8,13</sup> Smokeless tobacco is responsible for cardiovascular diseases and also for oral and esophageal cancer.<sup>13</sup> It was mainly associated with relieving toothache, cleaning teeth, relieving acidity, preventing constipation and as a social status.<sup>15</sup>

There were few limitations in the study. The study was restricted small group of population of a particular geographical area which can limit the generalizability of results. As the response of subjects may vary according to geographic location, and change the prevalence of myths. A longitudinal multicentric study with large sample size needs to be conducted to get more valid results. Longitudinal study design to assess the risk factors will help in preparing tailored made health education for eradication of myths.

Barriers related to utilization of health services can be resolved by behavior change. Community participation is must to understand the risk factors for such myths, their needs and demands so that their behavior can be modified accordingly using health education model. Before creating awareness among people, dental health care professionals need to be trained during their graduation regarding oral health promotion considering cultural competence.

### Conclusion

Various myths are prevalent among people of different religion and SES with no scientific background. A dental surgeon should be aware of prevalent myths in respective geographic location in order to educate and treat them accordingly. At community level various health education programs needs to be planned to eradicate such myths from our society and to provide factual information for improvement of oral health.

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Table 1: Sociodemographic details

Variables		Percent
Gender	Male	67.5
	Female	32.5
Religion	Hindu	60.0
	Muslim	40.0
Socio Economic Scale	Upper Middle	7.5
	Lower Middle	12.5
	Upper Lower	65.0
	Lower	15.0

Table 2: Frequency of subjects according to their responses to questionnaire

Sl. No.	Question	Yes	No	Don't Know
1	Removal of tooth under local anesthesia affects eyesight	54	29.1	16.9
2	Worms destroy the tooth and lead to cavities	82	12.6	5.4

3	Dental treatment should be avoided during pregnancy	21.4	52.6	26
4	Cleaning of teeth by dentist leads to tooth mobility	59.1	27.1	13.8
5	Presence of teeth during birth in newborn have bad effect on family	25.7	44.6	29.7
6	Massage of gums with oil and salt strengthen them	44.6	45.7	9.7
7	Brushing with tobacco rich tooth powder like Gul, strengthen the gums	16.6	71.1	12.3
8	If pregnant women goes out during solar/ lunar eclipse, the newborn will have deformed body parts	43.4	22.6	34
9	Intelligence of a person is related to his/ her third molar	20	48.9	31.1
10	Chewing tobacco strengthen the gums and other body muscles	21.2	65.1	13.7
11	Chewing tobacco is safer then smoking tobacco.	29.7	10	60.3
12	Shall we get the treatment done from road side quacks?	8.9	91.1	0
13	Chewing tobacco helps in relieving tooth pain	19.4	65.2	15.4
14	During pregnancy women should not brush her teeth	29.2	47.1	23.7
15	Appearance of upper front tooth as first tooth brings bad luck	11.7	32.6	55.7



16	No treatment is required for milk teeth as they are going to fall anyway	33.4	47.1	19.5
17	Spacing between upper front teeth brings luck	23.1	30	46.9

Table 3: Responses of subjects to the open ended questionnaire:

Questions		Percent
What you do with exfoliated milk tooth?	Bury below water container	1.4
	Bury in ground	20.9
	Bury in rat hole	4.0
	Throw with Cow dung and mud	1.1
	Keep in milk	3.7
	Throw it in dustbin	64.8
	Throw with Wheat	4.0
	Total	100.0
What dental treatment you have got it done?	No Treatment	56.6
	Extraction	8.9
	Prosthesis	2.0
	Root canal treatment	2.6
	Restoration	10.0
	Scaling	20.0
	Total	100.0
From where you got the treatment done?	Clinic	18.3
	Dental van	12.9
	Hospital	12.3
	No	56.6
	Total	100.0