Original Article

Prevalence Of Dental Myths Among Dental Patients In Melmaruvathur, Tamilnadu- A Cross Sectional Questionnaire Survey

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Abstract

Background: The misconceptions about the dental treatment prevailing among the population was considered as one of the important barriers for non- utilization of oral health services. The purpose of the present study was to find out the prevalence of common myths related to oral health and in the treatment aspects among the rural population of Tamilnadu, India.
Methods: A cross sectional questionnaire survey was conducted among the outpatients attending a dental college in Tamilnadu. The questionnaire included demographic details and18 questions related to the traditional beliefs.
Result: Out of 371 patients, 70 (18.9%) thought that the extraction of upper teeth will affect their eyesight.49.1% felt that extraction during rainy season will cause infection. Around 38% believe scaling leads to weakening of the teeth. Chi-square test showed no statistically significant difference exists among the gender and as well as education.
Conclusion: The myths related to dentistry still exist which requires further studies based on using appropriate technology to eliminate myths among the community.

Keywords: dental myths, periodontal diseases, utilization

INTRODUCTION

Every culture has its own concepts of health, sickness and health promotion depicting values, beliefs, knowledge and practices shared by its people[1,2]. Indian population consists of people from different cultural backgrounds and there is a strong influence of the various myths on health seeking behavior[3]. Myths are defined as stories shared by group of people and inherited and handed them over to next generation without understanding the principle behind it[4].People believe in spiritual treatment and alternative forms of medicine over a doctor and the field of dentistry is all there is no exception[3].

This misconception about the dental treatment prevailing among the population is considered to be one of the important barrier for non utilization of oral health services. Still in this scientific era, many people despite having health education within ease of access, we find lacunae in the 'correct scientific knowledge' about the oral health. Understanding the prevailing myths and misconceptions among the population helps the oral health care provider to promote healthy behavioral changes among the population. Therefore, in this present study we aimed to find out the prevalence of common myths related to oral health and in the treatment aspects among the rural population in and around Melmaruvathur, Tamilnadu which will tell us the magnitude of this issue among this rural population and help us to plan for future awareness and treatment program and also help us to understand how much theses myths acts as a barriers in the utilization of health services among the population.

AIMS AND OBJECTIVES

To find out the prevalence of common myths related to oral health and in the treatment aspects among the rural population in and around Melmaruvathur, Tamilnadu

MATERIALS AND METHODS

The present study was a questionnaire based cross sectional survey conducted among the outpatients attending Adhiparasakthi dental college and hospital, Melmaruvathur during September 2017 to November 2017. The ethical clearance was obtained from the institutional review board of the college. Sample size was calculated as 371 by using formula $4pq/d^2$ based on the frequency from the previous study conducted by Sharma et al[5] with a response rate of 59.3 % for the question that cleaning of teeth by dentist causes loosening of teeth. All the outpatients aged 15 to 70 years who are willing to participate in the study were included. Those who did not give

informed consent were excluded. The questionnaire was framed in vernacular language (Tamil) with the help of a language expert. The questionnaire was pretested among 30 patients and necessary corrections were made. The questionnaire consists of socio demographic details (age, gender, educational status and occupation) and18 questions related to the traditional beliefs, myths, misconception about oral health and dental treatment aspects. The nature and purpose of the study was explained to the subjects and a signed informed consent was obtained. By using random sampling technique a total of 371 out patients were included in the study. The questionnaire was distributed to patients in the waiting areas of each department and instructions were given about how to fill and return back to avoid bias. For illiterates, face to face interviews were done to collect the information. The collected data was entered in the MS Excel spreadsheet and analyzed using the SPSS software version 22. Descriptive analysis was done and chi-square test was carried out to assess the association between gender and dental myths.

OBSERVATION AND RESULTS

A total of 371patients participated in the present study including177 males (47.7%) and 194 females (52.3%). Most of the study participants belong to 15-24 years age group (37.5), followed by 25-34 years (28.6%). Based on educational qualification, most participants were graduates (42.0%). Figure I describes the study population based on their age and gender. Table I describes the educational qualification of the study population.

Figure I: Distribution of study population according to age group and gender

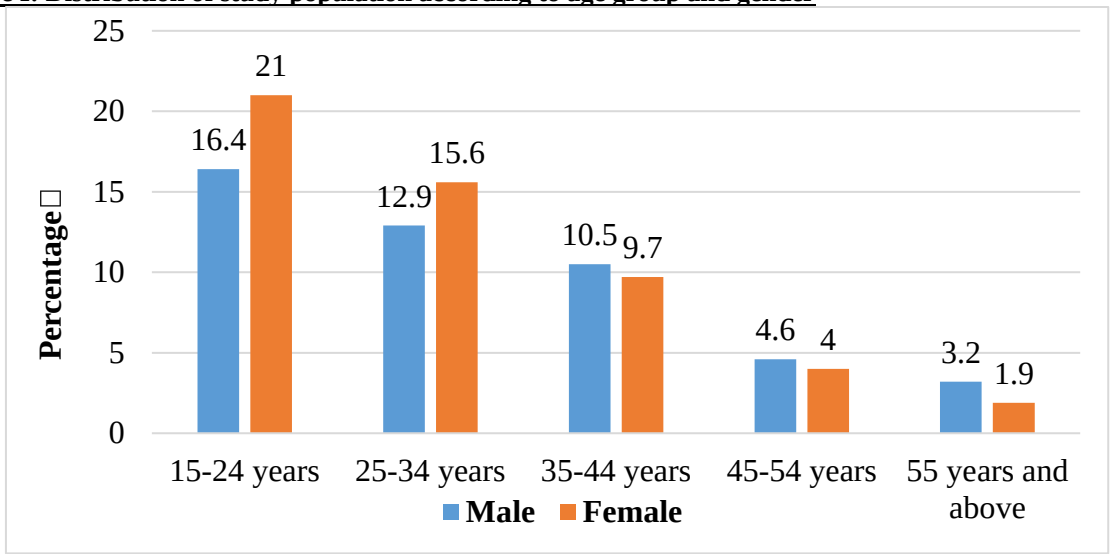

Table I: Distribution based on educational qualification

Educational qualification	Number (%)
Illiterate	6(1.6)
Primary school	26(7.0)
Middle school	29(7.8)
Higher secondary	60(16.2)
Diploma	94(25.3)
Graduated	156(42.0)
Total	**371(100)**

Myths related to oral hygiene practices

More than half of the study population 222 (59.8%) felt the use of neem stick to be better than tooth brush for cleaning teeth. A total of 145 participants (39.1%) believed that teeth will become whiter by using salt/fine sand. Around 126 study participants (34.0%) believed that teeth will become whiter as the duration of brushing gets longer. Out of 371, 124 (33.4%) thought that using brick powder for cleaning the tooth will strengthen the tooth.

Myth related to Dental Fluorosis

About 186 study participants (50.1 %) considered the stains in the front tooth (dental fluorosis stains) which prevail among people in the surrounding region wasdue to biting brinjal / banana during their childhood.

Tobacco related myth

Few study participants 31(8.4%) believed that halitosis will be reduced if they use tobacco. Around 71 participants (19.1%) felt that tobacco chewing will strengthen the teeth. Smokeless tobacco usage was found to reduce dental pain among 71 participants (19.1%).

Dental Treatment related Myths:

Out of 371 patients, 70 (18.9%) thought that the extraction of upper teeth will affect their eye sight. Almost half of the study population 182(49.1%) has a myth that extraction during rainy season will affect their health and it will cause infection. Around 147 (39.6%) of them felt that scaling leads to weakening of the teeth and the treatment should be avoided. The treatment of deciduous teeth was considered to be useless by120 study participants (32.3%) as they felt that the milk teeth will fall. More than half of the study population 191(51.2%) believed that head bath should not be taken for one week after extraction so as to have proper healing and to avoid infection.

About 118 participants (31.8%) regarded that teething will cause diarrhea. Only 58 participants (15.6%) believed that dental caries is contagious and it will spread among the siblings. Very few participants 12 (3.2%) considered the dental caries to be caused due to god's curse. Table II and Table III shows the distribution of myths among the study participants based on education and gender respectively. No significant difference was found among the various educational status, except for longer brushing whitens the teeth and diarrhea occurs during teething. Among the gender statistically significant difference exists for the idea that wisdom tooth eruption increases the knowledge and milk teeth need not to be cared because anyway it is going to fall. Overall, the proportion of people believing in dental myths was found to be less than 30% in the study population.

Table II: Distribution of myths based on education

S.No	Questions		Illiterate n(%)	Primary school level n(%)	Middle school level n(%)	High school level n (%)	Graduate level n(%)	Post graduate level n(%)	Total N (%)	p-value
1.	Longer brushing duration whitens teeth	Yes	3(0.8)	12(3.2)	20 (5.4)	25 (6.7)	27(7.3)	39 (10.5)	126 (34.0)	0.000 *
		No	3(0.8)	14(3.8)	9(2.4)	35 (9.4)	67(18.1)	117 (31.5)	245 (66.0)	
2.	Tooth removal affects eyesight	Yes	2(0.5)	3(0.8)	8(2.2)	13 (3.5)	18(4.9)	26(7.0)	70 (18.9)	0.553
		No	4(1.1)	23(6.2)	21(5.7)	47 (12.7)	76(20.5)	130 (35.0)	301 (81.1)	
3.	Wisdom teeth eruption improves knowledge	Yes	2(0.5)	5(1.3)	8(2.2)	14 (3.8)	12(3.2)	19 (5.1)	60 (16.2)	0.102
		No	4(1.1)	21(5.7)	21(5.7)	46 (12.4)	82 (22.1)	137 (36.9)	311 (83.8)	
4.	Removing tooth during rainy season affects health	Yes	3(0.8)	13(3.5)	11 (3.0)	30 (8.1)	50 (13.5)	75 (20.2)	182 (49.1)	0.825
		No	3(0.8)	13(3.5)	18 (4.9)	30 (8.1)	44 (11.9)	81 (21.8)	189 (50.9)	
5.	Betel nut chewing strengthens teeth	Yes	1(0.3)	4(1.1)	10(2.7)	13 (3.5)	23 (6.2)	30 (8.1)	81 (21.8)	0.487
		No	5(1.3)	22(5.9)	19(5.1)	47 (12.7)	71 (19.1)	126 (34.0)	290 (78.2)	
6.	Tobacco usage reduces bad breath	Yes	1(0.3)	1(0.3)	6(1.6)	5 (1.3)	9(2.4)	9 (2.4)	31 (8.4)	0.129
		No	5(1.3)	25(6.7)	23(6.2)	55 (14.8)	85 (22.9)	147 (39.6)	340 (91.6)	
7.	Tobacco usage reduces	Yes	2(0.5)	6(1.6)	9(2.4)	17 (4.6)	14 (3.8)	23 (6.2)	71 (19.1)	0.075

	tooth pain	No	4(1.1)	20(5.4)	20(5.4)	43 (11.6)	80 (21.6)	133 (35.8)	300 (80.9)	
8.	**Tooth cleaning using dental equipment weakens teeth**	Yes	2(0.5)	10(2.7)	12(3.2)	30 (8.1)	38 (10.2)	55 (14.8)	147 (39.6)	0.532
		No	4(1.1)	16(4.3)	17(4.6)	30 (8.1)	56 (15.1)	101 (27.2)	224 (60.4)	
9.	**Staining of teeth occurs due to biting raw vegetables like Brinjal/ Banana stem**	Yes	4(1.1)	13(3.5)	20(5.4)	23 (6.2)	48 (12.9)	78 (21.0)	186 (50.1)	0.148
		No	2(0.5)	13(3.5)	09(2.4)	37 (10.0)	46 (12.4)	78 (21.0)	185 (49.9)	
10.	**Brick powder strengthens teeth**	Yes	2(0.5)	12(3.2)	12(3.2)	20 (5.4)	23 (6.2)	55 (14.8)	124 (33.4)	0.274
		No	4(1.1)	14(3.8)	17(4.6)	40 (10.8)	71 (19.1)	101 (27.2)	247 (66.6)	
11.	**Neem stick is better than tooth brush for cleaning teeth**	Yes	3(0.8)	13(3.5)	21(5.7)	37 (10.0)	54 (14.6)	94 (25.3)	222 (59.8)	0.621
		No	3(0.8)	13(3.5)	08(2.2)	23 (6.2)	40 (10.8)	62 (16.7)	149 (40.2)	
12.	**Teeth appears whiter if we use salt/ sand**	Yes	2(0.5)	12(3.2)	13(3.5)	25 (6.7)	35 (9.4)	58 (15.6)	145 (39.1)	0.905
		No	4(1.1)	14(3.8)	16(4.3)	35 (9.4)	59 (15.9)	98 (26.4)	226 (60.9)	
13.	**Fallen milk teeth should be buried**	Yes	3(0.8)	10(2.7)	9(2.4)	17 (4.6)	27 (7.3)	41 (11.1)	107 (28.8)	0.691
		No	3(0.8)	16(4.3)	20(5.4)	43 (11.6)	67 (18.1)	115 (31.0)	264 (71.2)	
14.	**No need to take care of milk teeth because it is anyhow going to fall**	Yes	3(0.8)	05(1.3)	14(3.8)	22 (5.9)	30 (8.1)	46 (12.4)	120 (32.3)	0.195
		No	3(0.8)	21(5.7)	15(4.0)	38 (10.2)	64(17.3)	110 (29.6)	251 (67.7)	
15.	**Diarrhea occurs due to teething**	Yes	4(1.1)	7(1.9)	15(4.0)	26 (7.0)	32(8.6)	34 (9.2)	118 (31.8)	0.001 *
		No	2(0.5)	19(5.1)	14(3.8)	34 (9.2)	62(16.7)	122 (32.9)	253 (68.2)	
16.	**Tooth decay will spread among siblings**	Yes	2(0.5)	3(0.8)	9(2.4)	10 (2.7)	16(4.3)	18 (4.9)	58 (15.6)	0.104
		No	4(1.1)	23(6.2)	20(5.4)	50 (13.5)	78(21.0)	138 (37.2)	313 (84. 4)	
17.	**Tooth decay occurs due to God's curse**	Yes	0(0)	1(0.3))	1(0.3)	2 (0.5)	1(0.3)	7 (1.9)	12 (3.2)	0.786
		No	6(1.6)	25(6.7)	28(7.5)	58 (15.6)	93(25.1)	149 (40.2)	359 (96.8)	
18.	**Head bath should not be**	Yes	3(0.8)	14(3.8)	18(4.9)	34 (9.2)	47(12.7)	74 (19.9)	190 (51.2)	0.684

	taken for a week after tooth removal	No	3(0.8)	12(3.2)	11(3.0)	26 (7.0)	47(12.7)	82 (22.1)	181 (48.2)	

Table III: Gender wise distribution

S.No	Questions	Answers	Male n(%)	Female n(%)	Total n(%)	p-value
1.	**Longer brushing duration whitens teeth**	Yes	68(18.3)	58(15.6)	126(34.0)	0.052*
		No	109(29.4)	136(36.7)	245(66.0)	
2.	**Tooth removal affects eyesight**	Yes	36(9.7)	34(9.2)	70(18.9)	0.288
		No	141(38.0)	160(43.1)	301(81.1)	
3.	**Wisdom teeth eruption improves knowledge**	Yes	41(11.1)	19(5.1)	60(16.2)	0.000*
		No	136(36.7)	175(47.2)	311(83.8)	
4.	**Removing tooth during rainy season affects health**	Yes	82(22.1)	100(27)	182(49.1)	0.184
		No	95(25.6)	94(25.3)	189(50.9)	
5.	**Betel nut chewing strengthens teeth**	Yes	37(10.0)	44(11.9)	81(21.8)	0.387
		No	140(37.7)	150(40.4)	290(78.2)	
6.	**Tobacco usage reduces bad breath**	Yes	15(4.0)	16(4.3)	31(8.4)	0.542
		No	162(43.7)	178(48)	340(91.6)	
7.	**Tobacco usage reduces tooth pain**	Yes	34(9.2)	37(10.0)	71(19.1)	0.539
		No	143(38.5)	157(42.3)	300(80.9)	
8.	**Tooth cleaning using dental equipment weakens teeth**	Yes	65(17.5)	82(22.1)	147(39.6)	0.162
		No	112(30.2)	112(30.2)	224(60.4)	
9.	**Staining of teeth occurs due to biting raw vegetables like Brinjal/ Banana stem**	Yes	85(22.9)	101(27.2)	186(50.1)	0.250
		No	92(24.8)	93(25.1)	185(49.9)	
10.	**Brick powder strengthens teeth**	Yes	60(16.2)	64(17.3)	124(33.4)	0.470
		No	117(31.5)	130(35)	247(66.6)	
11.	**Neem stick is better than tooth brush for cleaning teeth**	Yes	100(27)	122(32.9)	222(59.8)	0.126
		No	77(20.8)	72(19.4)	149(40.2)	
12.	**Teeth appears whiter if we use salt/ sand**	Yes	69(18.6)	76(20.5)	145(39.1)	0.527
		No	108(29.1)	118(31.8)	226(60.9)	
13.	**Fallen milk teeth should be buried**	Yes	52(14)	55(14.8)	107(28.8)	0.458
		No	125(33.7)	139(37.5)	264(71.2)	
14.	**No need to take care of milk teeth because it is anyhow going to fall**	Yes	64(17.3)	56(15.1)	120(32.3)	0.082
		No	113(30.5)	138(37.2)	251(67.7)	
15.	**Diarrhea occurs due to teething**	Yes	48(12.9)	70(18.9)	118(31.8)	0.041*
		No	129(34.8)	124(33.4)	253(68.2)	
16.	**Tooth decay will spread among siblings**	Yes	29(7.8)	29(7.8)	58(15.6)	0.406
		No	148(39.9)	165(44.5)	313(84.4)	
17.	**Tooth decay occurs due to God's curse**	Yes	5(1.3)	7(1.9)	12(3.2)	0.449
		No	172(46.4)	187(50.4)	359(96.8)	
18.	**Head bath should not be taken for a week after tooth removal**	Yes	90(24.3)	100(27)	190(51.2)	0.488
		No	87(23.5)	94(25.3)	181(48.8)	

DISCUSSION

India is a land of diversity with various languages, culture, beliefs and customs. Among them the rural India differ considerably from one region or state to another. The influence of same can be observed in people's beliefs pertaining to maintenance of general and oral health[6.] Many beliefs and myths play a considerable role as the barriers for

utilization of dental services.

39.6% of people in the present study (thought that scaling, results in weakening of the tooth and those patients neglect the treatment option. The fact is that calculus would have been masking the mobility, and after removal of calculus, the actual attachment lost would have been felt by the patient. Similar results were found in the study conducted by Saravanan et al [2011]et al[7], Bidyalaksmi M et al in 2018 [8] and in study conducted by Ain TS et al [9] in Kashmir showed the highest prevalence by 72.7% [2016]and in studies conducted by Vignesh R et al[4], Pandey et al [10], Sharma R[5], Agarwal B et al[11], Raina SA[3], Nagaraj A[12], V, Ragunathan[13] , Badiger AB et al study[14] (43.8%) also shows a higher prevalence of myth among the population in this aspect.

In the present study, 222 people (59.8%) felt that neem stick is better than tooth brush for cleaning which is in relevance with the study done by Gambhir RS et al [15], Kiran GB et al[16,] Ain TS et al[9], Gupta et al [17] and Bidyalaxmi M et al[8].Among the study participants,33.4% (124) of the people believed that teeth will become whiter on cleaning using salt and fine sand, similar to the study performed by Kiran GB et al[16] were 52.5% and Vignesh R et al [1] with 56.8%.

Around 19% believed that betel quid will strengthen the teeth and placing tobacco over painful teeth will reduce the pain. Tobacco use was perceived to decrease malodor by 31 participants (8.4 %). This finding was lesser when compared to the study done by Singh S et al[18] and Gambhir RS et al[15] wherein 41.6% and 68.1% of the study population told that paan chewing is good for health. And it was similar to the study conducted by Saravanan et al[6], Raina SA, Gupta et al[7], Agarwal B et al ,Bidyalaxmi M et al. More than 90% of the participants in Singh S et al survey believed that chewing betel quid will remove the malodor. A statistically significant result was seen in the study by Kiran GB et al regarding the use of tobacco or tobacco products as a remedy for tooth pain is effective.

In the present study, 70 participants (18.9%) thought that the extraction of teeth will affect their eye sight which is comparatively lesser than the study results of Ain Ts et al (73.7%) Gambhir RS et al(72.8%), Agarwal B (71.2%), 68% by Mohite et al[19] , Sharma R (64%)[5], Raina SA et al (52.4%), Khan et al (47%)[20], Vignesh R(48.8%), Pandey et al(42.75)[10] .

In spite of esthetics being given more importance in today's modern era, the present study revealed that 120 participants (32.3%) felt that there is no need for dental care for the primary teeth as it going to fall someday. People are still unaware that it is the one of cause for future complex orthodontic problems and indirectly leads to malnutrition among the children and inability to perform well in their academics due to pain and loss of school hours. Studies conducted by Bidyalaxmi M (65%), Ain TS (64.2%), Sharma R et al (58.7%) [5], Kiran et al (58.6%) [16], Raina SA et al (42%)[3] shows negligence in the dental care of primary dentition.

In the present study, around 32%thought that teething will lead to diarrhea contrary to the Jordan study where 85% of the sample reported same.

CONCLUSION

Even after the advancements in the field of dentistry, the myth related to dentistry still exists which requires further studies based on using appropriate technology to eliminate myths among the community.

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