

Prevalence of Myths Regarding Oral Health, among Patients Attending a Dental Institute: A Study from Taif, Saudi Arabia

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ABSTRACT

Introduction: To provide good dental health care to patients and healthy individuals, understanding the myths and misconceptions is very important. In the field of dentistry, most myths lead the patients to a wrong protocol, which intern can lead the dentist to a state where it is difficult to provide proper and satisfying treatment.

Aim: To determine the prevalence of myths and misconception regarding oral health in Saudi Arabia.

Materials and Methods: A cross-sectional questionnaire survey was administered on the patients visiting a dental institute in Taif city, from March 2018 to April 2018. The questionnaire consists of 14 self-structured close-ended questions about common dental myths. The questionnaire was administered to patients at the registration counter. Completion of the questionnaire took 10-15 minutes and participation in the study was completely voluntarily. The data collected were coded and entered into SPSS inc., IBM, version 21.0. Descriptive statistics were expressed in the form of frequency

and percentage. Chi-square test was applied to determine the statistical significance.

Results: A total of 121 subjects participated in the study. Majority of the participants (69%) were in the 20-40 year age group, 81% of them were males and about 67% of the subjects had completed University level education. Males and subjects with a higher level of education fared better in their responses. More than half of the respondents 56% believed that "When gums bleed it is better not to brush your teeth". A few respondents (44%) believed that "Using home stuff like coal, salt, etc., make your teeth whiter". Around 35% of participants in the study believed that "Placing of milk bottle inside the mouth of the baby during sleep does not harm teeth". About 34% of the subjects believed that no dental treatment should be done during pregnancy.

Conclusion: Results of this study show that generally, people believe in various myths in dentistry which results in poor oral health. This might be due to lack of knowledge and awareness about dental health and its importance.

Keywords: Beliefs, Dental education, Dental treatment, Misconception

INTRODUCTION

Myths are defined as a popular belief, misconception or imaginary understanding of a thing or story shared by a group of people, which are part of their cultural identity and has no relevance with reality [1,2]. Factors related to development of false myth are Lack of education along with traditional beliefs and socio-cultural factors [3]. To provide good dental health care to patients and healthy individuals, understanding of the myths and misconceptions is very important.

In the field of dentistry, most myths lead the patients to a wrong protocol, which intern can lead the dentist to a state where it is difficult to provide proper and satisfying treatment [4].

Oral health maintenance reflects on general health. It is the absence of mouth and facial pain, periodontal disease, dental caries, dental loss, and associated diseases and diseases that limit an individual's capacity in chewing, facial expression, talking, psychological, and social wellbeing [5]. Poor oral health resulting from untreated dental ailments can have a significant impact on the quality of life which may lead to deterioration of general health [6]. The condition of oral health of the people is not only determined by the attitude of the people towards their teeth, but also by that of the dental professionals [7].

In the age, where dentistry has evolved to focus on preventive and comprehensive care, surpassing the traditional curative aspects, people refraining themselves because of lack of education, traditional beliefs, lack of knowledge, etc., are at a loss. Some of the myths in dentistry are so deeply rooted, that they prevent people

from seeking dental care even when it's utmost necessary, leading to a deterioration in the quality of life [1,2]. Since these myths are passed on from generations, sometimes it's difficult to differentiate between fact and fiction [8].

Globally, oral diseases are highly prevalent, affecting a significant proportion of the world's population. Awareness and knowledge about the importance of oral health are usually low in these populations [1].

Saudi Arabia is a developing nation, currently ranked 38th on the United Nation's Human Development Index with an adult literacy rate for ages 15 and older of 94.7%. Population with at least some secondary school education for ages 25 and older has a literacy rate of 72.1% in male and 63.3% in females [9].

The search of literature regarding myths among people in Saudi Arabia has revealed limited inputs on this aspect [10]. The aim of the present study was to assess the prevalence of myths regarding oral health, among patients attending a dental institute in Taif, Saudi Arabia and to suggest possible measures to raise the awareness regarding oral health.

MATERIALS AND METHODS

Study design: A cross-sectional questionnaire survey was conducted on the patients visiting a dental institute in Taif city, during the period of March 2018 to April 2018. Participants aged at least 18 years and above were chosen for inclusion in the survey. Also, the participants were without cognitive, hearing or vision impairment and having either limited or no difficulty in understanding the questionnaire. A total of 121 subjects participated in the study; the present study was

conducted on a limited number of subjects, taking into consideration the short time duration allotted to complete student research projects by the university. Subjects who refused to participate in the study were excluded.

Research instrument: The questionnaire consisted of two sections. Section A was to collect the socio-demographic details of the participants. Section B consisted of 14 self-administered close-ended questions about common dental myths. Questions were prepared, based on the previously published literature [1-4], as well as the common myths prevalent in this geographical region. Information about the common myths was collected during routine dental treatments of the patients previously. The questionnaire was prepared in English and then translated to Arabic. It was further retranslated into English to obtain a valid questionnaire. The questionnaire was administered to patients at the registration counter. Completion of the questionnaire took 10-15 minutes and participation in the study was completely voluntarily.

Ethics and informed consent: Ethical clearance for the survey was obtained from the Institutional Ethics Committee of the college. The patients were fully informed about the study undertaken and written informed consent was obtained. The participants were also assured about the confidentiality of information collected during the course of the survey. They were told that their unwillingness to participate in the survey would not affect their treatment.

STATISTICAL ANALYSIS

Results were statistically analysed using SPSS package version 21.0 112 (SPSS, Chicago, IL, USA). Descriptive and inferential statistical analysis was carried out. Chi-square test was used to determine if there were any associations found between demographics and the myths. p-value <0.05 was considered statistically significant.

RESULTS

The present study was of a cross-sectional design, using a self-administered structured pretested questionnaire. The questionnaire was validated by administering to 10 subjects in the university dental clinic; the same procedure was repeated on the same subjects again to complete the test-retest validation of the questionnaire. It was conducted among patients who visited dental college and hospital for their routine dental check-up and necessary treatment.

A total of 121 subjects participated in the study. The response rate was 100%.

The demographic characteristics of the study subjects are shown in [Table/Fig-1].

	Criteria	Frequency	Percentage	Total	χ^2	p-value
Age	<20 years	15	12.4	121	71.521	<0.01
	20-40 years	84	69.4			
	>40 years	22	18.2			
Gender	Male	98	81.0	121	46.488	<0.01
	Female	23	19.0			
Education	Primary	7	5.8	121	121.479	<0.01
	Middle-school	7	5.8			
	High-school	26	21.5			
	University	81	66.9			

[Table/Fig-1]: Demographic characteristics of the study subjects.

The distribution of 'yes' responses to the questionnaire according to age are given in [Table/Fig-2].

The [Table/Fig-3] gives the details of 'yes' responses of study subjects based on gender. Most of the males believed in the myths as compared to females. The difference in responses according to gender was found to be significant for questions 2, 5 and 13.

The [Table/Fig-4] is the distribution of 'yes' responses of study participants according to education. Though there were differences in the responses, they were not statistically significant.

DISCUSSION

The present study was conducted to find out the prevalence of myths among the patients attending the OPD of a dental college in Taif, Saudi Arabia. Lack of education, culture, traditional beliefs and social misconceptions, etc plays a role in the prevalence of myths. These myths can have a significant impact on the general health of people [11].

It was found that 31% of respondents believed that Brushing with hard bristles makes the teeth whiter. The subjects were unaware, that right brushing technique is important rather than forceful brushing which could lead to abrasion. This myth was less prevalent, as compared to a study done by Vignesh R and Priyadarshni I, in

SI No.	Question	Age			Total 'yes' responses	Percentage	χ^2	p-value
		<20 years	20-40 years	>40 years				
1.	Brushing with hard bristles make your teeth whiter	3	27	7	37	31	0.903	0.637
2.	Using miswak only is enough, and there is no need for tooth brush and paste	6	27	8	41	34	0.425	0.809
3.	When gums bleed it is better not to brush your teeth	8	48	12	68	56	0.105	0.949
4.	Removal of calculus lead to loosening of teeth	7	25	8	40	33	1.776	0.411
5.	Using home stuff like {coal, salt} make your teeth more whiter	6	39	8	53	44	0.818	0.664
6.	Candy is the only cause for tooth decay	5	17	8	30	25	3.101	0.212
7.	Decay is hereditary	4	16	10	30	25	6.552	0.038*
8.	For a tooth having pain, the best treatment is extraction	2	9	3	14	12	0.198	0.906
9.	If you have pain on a particular tooth placing a {pain killer} tablet on that tooth reduce pain	8	40	11	59	49	0.183	0.913
10.	No need to take care of baby teeth, because it will fall any way	5	8	1	14	12	8.349	0.015*
11.	Placing of milk bottle inside mouth of baby during sleep does not harm teeth	6	27	9	42	35	0.803	0.669
12.	Teething causes fever	7	60	16	83	69	3.836	0.147
13.	No dental treatment should be done during pregnancy	6	26	9	41	34	1.057	0.589
14.	During pregnancy, the baby absorbs calcium from teeth and bone of his mom	14	68	21	103	85	3.807	0.149

[Table/Fig-2]: Distribution of 'yes' responses according to age.

Question	Gender		Total 'yes' responses	Percentage	χ^2	p-value
	Male	Female				
1.	32	5	37	31	1.045	0.307
2.	29	12	41	34	4.240	0.039*
3.	56	12	68	56	0.187	0.666
4.	34	6	40	33	0.624	0.430
5.	38	15	53	44	5.291	0.021*
6.	24	6	30	25	0.025	0.873
7.	23	7	30	25	0.485	0.486
8.	9	5	14	12	2.870	0.090
9.	46	13	59	49	0.685	0.408
10.	9	5	14	12	2.870	0.090
11.	31	11	42	35	2.155	0.142
12.	66	17	83	69	0.373	0.541
13.	29	12	41	34	4.240	0.039*
14.	81	22	103	85	2.486	0.115

[Table/Fig-3]: Distribution of 'yes' responses according to gender.

teeth. The result is in contrast to a study done by Saravanan N and Thirineevannan R, where only 10% believed in the myth [12]. One finding in the present study was that 75% of respondents did not believe that "Candy is the only cause for tooth decay". This positive finding indicates that health professionals are not restricted to stressing on avoiding candy only. They have started educating them that dental caries belongs to the group of common diseases considered as "complex" or multi-factorial.

It was found that 75% of participants did not believe that "Decay is hereditary". This indicates that the participants were aware of oral health. This myth was less, as compared to a study done by Gambhir RS et al., where 62.7% believed in it [5]. About 88% of participants did not believe that "For a tooth having pain, the best treatment is extraction". This indicates that the participants were aware of different dental procedures which can save the tooth such as fillings and root canal treatment. This myth was less, as compared to a study done by Ain TS et al., where 59.6% believe in it [2].

In the present study, around 49% of respondents believed that "If you have pain on a particular tooth placing a {pain killer} tablet

Question	Education				Total 'yes' responses	Percentage	χ^2	p-value
	Primary-school	Middle-school	High-school	University				
1.	3	1	9	24	37	31	1.606	0.658
2.	4	3	11	23	41	34	3.855	0.278
3.	7	4	11	46	68	56	7.508	0.057
4.	4	3	5	28	40	33	4.468	0.215
5.	4	4	9	36	53	44	1.917	0.590
6.	2	3	7	18	30	25	1.629	0.653
7.	4	3	5	18	30	25	5.872	0.118
8.	2	2	2	8	14	12	4.564	0.207
9.	3	2	15	39	59	49	2.082	0.556
10.	3	1	3	7	14	12	7.426	0.059
11.	5	2	7	28	42	35	4.977	0.173
12.	4	4	18	57	83	69	0.976	0.807
13.	3	3	7	28	41	34	1.082	0.781
14.	6	7	22	68	103	85	1.319	0.725

[Table/Fig-4]: Distribution of 'yes' responses according to Level of Education.

Maduravoyal where 70% of subjects believed in this myth [4]. Around 34% of respondents believed that "Using Miswak only is enough, and there is no need for a toothbrush and paste", whereas 66% "Preferred to use toothpaste". This finding was significantly related to age and educational level of participants. This myth was less, as compared to a study done in India where 57% preferred using tree stick whereas 43% opted for toothpaste for cleaning teeth [4]. Miswak has potent antimicrobial and antiplaque substances but can cause trauma to gingiva [4].

More than half of the respondents 56% believed that "When gums bleed it is better not to brush your teeth". This belief commonly seen due to the fact that brushing provokes bleeding, however most of them were unaware, that it is not the real reason behind this. This myth is more as compared to other study conducted in Maduravoyal where 51.6% believed in this myth [4]. It was found that 66.9% of participants did not believe that "Removal of calculus lead to loosening of teeth". This positive finding indicated that people have started getting aware of the dental procedures due to various awareness camps in schools. This response was not in accordance with the previous study conducted by Ain TS et al., where 72.7% believed in this myth [2].

A few respondents (44%) believed that "Using home stuff like coal, salt, etc., make your teeth whiter". The subjects seem to be unaware of the abrasive ability of salt and charcoal. These abrasive agents commonly give a feeling of scrubbed and clean gums and

on that tooth reduce pain". In a study by Ain TS et al., 75% of respondents believed that placing clove over a particular tooth could reduce pain [2]. Regarding the importance of deciduous teeth, only 12% of participants believed that "No need to take care of baby teeth, because it is will fall any way". The participants were hence aware of the importance of milk teeth in chewing, aesthetic and for maintaining the space for permanent successors to erupt. This myth was less as compared to a study done by Gambhir RS et al., where 52% believed in it [5].

Around 35% of participants in the present study believed that "Placing of milk bottle inside the mouth of the baby during sleep does not harm teeth". The participants were unaware, that bacteria can thrive on the lactose, causing caries. Contrastingly about 78% of participants in a study by Ain TS et al., opined that "A child's milk teeth need not be cleaned" [2]. More than half of participants 69% believed that "Teething causes fever" in the present study. This was almost similar to 63% as reported by Ain TS et al., [2].

When asked about dental treatments during pregnancy, about 34% of the subjects believed that no dental treatment should be done. This could be due to the reason that undergoing dental treatment during pregnancy would affect the development of the fetus. However, they were unaware of the fact that treatment has to be done when in emergency and other procedures could be done during the 2nd trimester [5]. This was less when compared to a study done by Gambhir RS et al., where 71% believed in it [5].

The findings of this study revealed that age had an impact on the perception of myths in dentistry. It was noted that younger individuals had a more positive perception as compared to older individuals. Surprisingly, participants who were more educated responded less positively toward the perception of dental related myths. In a survey report from Pakistan, it was noted that more of illiterates and older person had beliefs in one or more dental myths [3]. These findings suggest that delivery of a good education system to all age-groups helps to alleviate the ignorance of the population about myths and helps them to overcome this cultural barrier.

LIMITATION

Though most of the questions were based on the myths reported in earlier literature, few of them were included, keeping in mind the beliefs on oral health and hygiene commonly encountered in day-to-day practice in this geographical area. Hence the exact comparison for a few of the myths reported in the present study have no comparison in literature. A more comprehensive study covering a vast geographical area is definitely recommended, focusing on the basic concepts of oral health, oral hygiene practices, and common oral diseases.

CONCLUSION

Most of the subjects participating in the present study have beliefs in various myths related to dentistry. The middle-aged (20-40 years), as well as the educated subjects too, believed in these myths. This speaks about this deep-rooted misconception among the people of this region. This is one of the important barriers to seek dental care. Though the government takes efforts to provide easy and affordable dental services to the needy, it's the presence of such factors, which act as a hindrance. As dental professionals, it is the duty of Doctors

to take the measures to drive away these misconceptions and instil a positive attitude towards dentistry. For this, we can take help from governmental and non-governmental health organisations and make the approach more acceptable to the people in a comprehensive way.

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