

# FAKE NEWS, MYTHS AND REMEDIES REGARDING ORAL HEALTH CARE IN PATIENTS COMING TO A PRIVATE TEACHING DENTAL HOSPITAL OF PESHAWAR, PAKISTAN

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## ABSTRACT

**Objective:** To determine the frequent of myths and remedies rampant among the patients visiting a private teaching dental hospital.

**Materials and Methods:** It was a cross-sectional study at SBDC Peshawar, Pakistan, of patients coming to the hospital in months of Sept-Oct 2019. They were questioned about wrong beliefs, erroneous remedies and fake news among the masses. Data was analyzed using SPSS 16.

**Results:** The sample comprised of 250 adults with 66.8% males and 33.2% females. Mean age was found to be 29.87 with a SD of 11.36. Most common beliefs were that whiter teeth are sign of healthy teeth (77.3%) and intake of antibiotics is mandatory after every extraction and RCT (66.8%). Many believed that scaling can weaken teeth (44%) and amalgam can cause cancer (40.8%). did regular dental checkups were not regarded important by 40.8%. A large number of female population (51.8%) believed in false remedies like treating a painful tooth with clove oil, aspirin and salt water rinses.

**Conclusion:** There is wide spread of misconception in public about oral health care and what constitutes a healthy dentition as well as the proper management of oral health diseases.

**Keywords:** Believe, myths, fakenews, oral health.

## INTRODUCTION

There is more elucidation to Oral health than simply the possession of a healthy dentition. It is a major predictor of positive growth of an individual's own development and the socioeconomic growth it offers to society.<sup>1</sup> The oral health of a population is highly dependent on the individual's perspective regarding their own teeth, and also influenced by

the attitude of the dental professional.<sup>7</sup> There is an observation that sometimes some individuals despite having a well-groomed dentition with habits pertaining to good oral health, still would visit a dentist, yet others despite presenting with symptoms of neglect regarding their oral cavity and its contents, would not seek dental care.<sup>2</sup>

There has been a prominent regressive pattern in the prevalence of oral diseases in developed countries over the past few decades. That goes without saying that the credit can be attributed to their well-greased machination of educational programs pertaining to oral hygiene and the dietary practices, and ideas which encourage uncomplicated access to preventive dental care.<sup>3</sup>

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Unfortunately despite the leaps and bounds in innovation in programs like these all over the world, a major strata of the population of those residing in developing countries, with tight knit communities, having little to no assimilation with urban people, education and facilities, have still a superfluous but persisting assortment of beliefs, customs and traditional values. Still in this time it binds and directs a community's way of living and dictates their practices in sickness and health.<sup>4</sup> Such values have an effect on their perception and practice regarding dental health too, sometimes cementing habits which are not in agreement with current scientific trends. Adequate knowledge comes into play in being a pre-requisite for changing behavior related to disease prevention and maintenance and improvement of pre-existing oral health.<sup>5</sup>

Although modern dentistry has evolved quite a lot, there are still tales shared in order to explain certain phenomenon, and passed through generation based on experience, non-scientific knowledge combined with traditional values, which greatly influence a community's trend in seeking treatment for their dental ailments.<sup>6</sup> These are called myths and overtime they are firmly imbibed within the consciousness of individuals and sometimes wrongly guide them into following the detrimental protocol for dental treatment, which makes the job of the dentist quite difficult to provide adequate evidence based treatment and also satisfy the patient, keeping in mind his/her psyche.<sup>8</sup>

There has been abundance of evidence that indicates that people as influenced by their traditional ethos are more likely to pay attention to and provide care to other ailments of the body and place relative neglect in the symptoms and signs of oral cavity. They may put on hold the required professional treatment until it has exacerbated to unbearable proportions and still fall back to remedies and myths which are ingrained within their culture.<sup>6</sup>

Pakistan is still in the rank of developing countries and as per UNDP, it placed 150th, has a literacy rate of 57%, with 43% of the population below the poverty line.<sup>10</sup> Almost 64% of the population still resides in rural areas, which have little to no communication to upgrade themselves in educational and public health programs.<sup>11</sup> This makes it a hotbed for a plethora of cultural rituals and traditional old

wives tales to be cemented regarding oral health care.

As a result, this makes it quite vexing when due to unbearable symptoms they have to visit the dental hospitals in urban areas where they face a sharp contrast between opting for the evidence-based treatment of the dental profession or be tenaciously clinging to his belief regarding the proper oral treatment. This also provides dental quacks with the opportunity to provide substandard dental care to the patient, pawing it as the optimal one, further strengthening the false perceptions and myths within the minds of the uneducated.

This study is aimed at investigating the prevalence of the most common myths and remedies pertaining to oral health care practices, among a population visiting a private dental teaching hospital of Peshawar.

## MATERIALS AND METHODS

The study was analytical cross-sectional carried at out patient department of Sardar Begum Dental Hospital, Peshawar, Pakistan. The ethical committee of Gandhara University approved the study. Sample comprised of patients coming to the hospital during the months of Sept-Oct 2019. Consecutive sampling technique was used. The questionnaire included questions about wrong beliefs, erroneous home remedies and fake news common among the masses and demographic variables like name, age, education and gender. Pilot study was done initially in order to gauge the common myths in the population. After obtaining written consent in the form of signature or thumb impressions, the individuals were interviewed. Data was analyzed using SPSS 16. Basic demo-graphs like age, gender and education were analyzed using analytical and descriptive analysis.

## RESULTS

The total sample comprised of 250 adults with 66.8% males and 33.2% females. Mean age was found to be 29.87 with a SD of 11.36. Some of the most common beliefs found were that whiter teeth were sign of healthy teeth (77.3%) and intake of antibiotics is mandatory after extraction and RCT (66.8%). Almost half believed that scaling can weaken teeth (44%) and amalgam can cause cancer (40.8%). 40.8% of the population does not regard regular dental checkups important. A large number of female population (51.8%) believes in false remedies

like treating a painful tooth with clove oil and salt water rinses. There was the assumption among 33% that brushing the teeth harder will lead to cleaner teeth. Tooth extraction was regarded as the ultimate treatment for oral maladies among 28%. Another 28% did not pay any heed if their gums would bleed during brushing their teeth. Some of the population (23.6%) believed that all root canal teeth will eventually be extracted, while 26% also believed that oral cancer can be subsequently caused by extraction of teeth and also weaken the eye sight in 21%. A quarter of the participants were of the thought that if they had their healthy teeth covered by crown, it would be a permanent solution to protect them

from all diseases. Almost half the population 40% presumed that severe gum diseases can be treated by brushing, medications and mouthwashes without intervention from a dental professional, while 55% had in mind that tooth decay is caused by calcium deficiency. The P value for few of the answers in terms of gender and education was found significant while no answers was found significantly associated with age. (Table 2).

**DISCUSSION**

There has been an era of innovation in the field of dentistry and it has been quite transformative from its primitive aspects, but a significant portion of the

**Table: 1 Questions regarding fake news, myths and remedies regarding oral health care**

Questions	Yes	No	Don't Know
1. You will get cleaner teeth if you brush your teeth harder.	33.2%	63.3%	3.2%
2. Whiter teeth are a sign of healthier teeth.	73.2%	22.0%	4.8%
3. Diet drinks are not harmful to teeth.	25.6%	58%	16.4%
4. Amalgam cause many serious diseases and oral cancers.	40.8%	21.6%	37.6%
5. Hard bristle tooth brushes are better for cleaning teeth and have no side effects.	16.4%	74.4%	9.2%
6. Root canal treatment causes cardiac problems.	13.2%	46.0%	40.8%
7. Scaling weakens teeth.	44.0%	37.6%	18.4%
8. Tooth extraction is the ultimate treatment of tooth related diseases.	28.0%	61.2%	10.8%
9. Bleeding of gums while brushing is normal.	28.0%	69.2%	2.8%
10. If your gums bleed while brushing its best to not brush anymore.	17.6%	76.0%	6.4%
11. If nothing is bothering you, you don't need a dental checkup.	40.8%	56.4%	2.8%
12. Baby teeth are not important and in case of any decay or caries they should be extracted.	31.6%	52.0%	16.4%
13. Oral health is not connected to the health of rest of body.	21.6%	71.6%	6.8%
14. Root canal treated teeth eventually need extraction.	23.6%	44.8%	31.6%
15. Putting crowns/covers on healthy teeth will protect them from all diseases.	26.8%	47.6%	25.6%
16. Extraction of teeth can sometimes lead to oral cancer.	26.0%	47.2%	26.8%
17. After extraction and root canal treatment antibiotics are mandatory.	66.8%	18.8%	14.4%
18. Before going to dentist for any procedure, it is better to take antibiotics.	21.2%	66.4%	12.4%
19. After getting prescribed for antibiotics by dentist, it's alright to stop them as soon as the pain goes away.	29.6%	58.8%	11.6%
20 Extraction weakens eyesight.	21.6%	54.0%	24.4%
21. Treatment of tooth can be done by applying aspirin, clove oil and salt water rinse on painful tooth.	40.8%	48.0%	11.2%
22. Remove calculus by hard bristle brushes.	24.8%	66.0%	9.2%
23. Severe gum diseases can be treated by only brushing, antibiotics and mout washes.	40.0%	42.8%	17.2%
24. Tooth decay and wear is caused by calcium deficiency in adults	54.8%	16.0%	29.2%
Your data will remain confidential and will only be used for research purpose. Thank you			

Table: 2 Association of education and gender with questions.

Questions	Variable	P-VALUES
Extraction of teeth can sometimes lead to oral cancer	Education	0.024
If your gums bleed while brushing then its best to not brush anymore.	Education	0.012
Tooth extraction is the ultimate treatment of tooth related disease	Education	0.032
Treatment of tooth can be done by applying aspirin, clove oil and salt water rinse on painful tooth.	Gender	0.013
Tooth decay and wear can be treated by calcium tablets	Gender	0.033

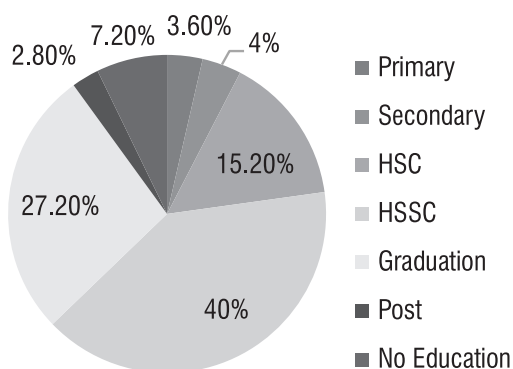


Fig 1: Education status of study participants

population is still facing alienation from the socio-economic part pertaining to their health and quality of life. Pakistan has faced constraints in dishing out appropriate budget to the public health sector, and the rather stagnant literacy rate is not helping.<sup>10</sup> Low literacy and poor socioeconomics predispose to lack of oral health care and treatment expenses far beyond the masses reach force them to look for cheaper alternatives and conjure up home remedies. Despite being such a crucial aspect of public health, relatively few studies have been done to address the prevalence of myths related to oral health so comparison could be drawn against meagre number of researches.

The results of our current study showed that a significant amount of people (73.2%) still associate whiter teeth as a sign of good oral health, and the way to get to them is through brushing the teeth with more force application (16%), while India had more prevalence regarding this myth (63%). India had more than 50% of the same belief about white teeth while more than half the population (54%) and (73%) believed that hard bristled brushes are more effective cleaning aids.<sup>1,13</sup> This however is contrary to evidence, as we know that such practices can lead to the abrasive deterioration of the tooth structure and subsequently a lattice in which plaque and bacteria can find attachment.<sup>12</sup>

There was a shocking revelation from many (40%) that amalgam can cause serious ailments and even lead to oral cancer. To the best of our knowledge, there was no apparent investigation of this question from similar researches we came across, but one point of concern in India was held against dentifrices, in which Fluoride was thought to be poisonous by 22%, while some 21% held the belief that it always contained animal products that are distasteful to their creed.<sup>1</sup> The myth regarding fluoride has apparently some scientific origin as one research stated its potential toxicity in over dosage.<sup>3</sup> Even though despite being a treasure trove of simple sugars, easily taken up by the bacteria of the oral cavity and its acido-genic effects, a quarter of our participants did not believe they posed any harm to the teeth.<sup>15</sup> It is quite similar to north India where a quarter of the population held similar belief that sweet, foods do not have any harmful impact on teeth.<sup>8</sup>

There was a lack of knowledge regarding root canal, in that almost 12% expressed reservations at the thought that it can cause cardiac problems, while some 40% did not know whether this statement holds any truth. Another apparent thought associated with treatment of teeth is that tooth extraction is the ultimate treatment for diseases related to the tooth expressed by 28% and even if root canal is performed, they will be eventually extracted by 23%. The reason behind the myth of RCT treated tooth being eventually extracted might be that some dental quacks perform unsatisfactory root canal treatments that mostly result in extraction of the teeth. This was almost shared by almost half the population (49.3%) when investigated in Karnataka, India.<sup>4</sup> Despite the favorability for extraction among a certain percentage, there is also a great degree of fear associated as, 22% thought that exodontia would cause weakening eyesight, while almost a quarter (24.4%) expressed, no knowledge regarding this issue. This myth was

shared by many investigations done elsewhere, Indian Punjab (49%), Karnataka (64%), and Haryana (72%).<sup>1,4,13</sup> Associated with this was the alarming belief that oral cancer can be caused by extraction of teeth as expressed by 26%.

Almost 41% expressed lethargy with regards to oral health care, as they would not visit a dentist in the absence of symptoms. This was shared by 33% and 77% of the population in India in different studies.<sup>4,13</sup> A quarter of the population would use hard bristled brush for removing calculus, a practice shared by 53% in Kochar S study,<sup>13</sup> However, hard bristles complemented by application of excessive force, is a predisposing factor for abrasion of tooth surface and trauma infliction to the soft tissue. Upon the occurrence of gingival bleeding, 28% would consider it a normal phenomenon, instead of visiting a dentist for their affliction which corresponded with a great percentage of participants (63%) from Karachi, and 63.3% from India.<sup>4,6</sup> Some 17% of them would thereby stop brushing when noticing apparent signs of bleeding from the gums. Bleeding from the gums, is classically associated with gingivitis.<sup>16</sup> Interestingly, 40% thought that severe gum diseases can be treated at home with brushing and taking over the counter antibiotics and medicated mouth washes. One of the main treatments for managing periodontal afflictions is scaling to remove the calculus,<sup>16</sup> however there is a widely circulated speculation that it somehow has something to do with loosening of teeth as remarked by 44%, this despite the fact that the procedure is done for the purpose to avoid that. This was cited in numerous articles as there were varying numbers 65%, 59%, 57%, and 34%.<sup>4,8,13,18</sup>

As one the main aims of the study was to investigate trend for home remedies without scientific evidence for back- up, it was interesting to see that almost 41% believed that many maladies of the tooth can be treated by applying aspirin, clove oil and salt water rinses on the painful tooth. This was supported by India where 57% would use clove and suparis for their tooth ache,<sup>13</sup> from Barralieu almost all the participants (96%) put this into practice, 1 while the participants in Begalaru, India agreed to this practice at 54%.<sup>8</sup> There have been a number of researches on the benefits and risks of using clove oil and some may suggest that it can be used as a “First-aid” for symptomatic relief of dental pain.<sup>17</sup>

Baby teeth are not important and in case of any decay or caries they should be extracted was the belief of 31.6%. This belief was shared by many others in India, Karnataka 58%,<sup>4</sup> Bhopal 38%,<sup>19</sup> north India 52%,<sup>8</sup> Chennai 64%,<sup>18</sup> and in Karachi 35.5% believed that retaining deciduous teeth till 6 years of age is not important.<sup>6</sup> But dental personals do know that early loss of deciduous teeth can affects child’s chewing and nourishment, cause drifting of adjacent teeth and result in crowding.<sup>21</sup> Almost 41% expressed lethargy with regards to oral health care, as they would not visit a dentist in the absence of symptoms. This was shared by 33% and 77% of populations in India in different studies.<sup>4,13</sup>

Antibiotics misuse was eminent in majority of people. Unfortunately, 66.8% of people considered antibiotics to be mandatory after RCT and extraction whereas 21.2% believed in taking antibiotics before even coming to dentist for any procedure. 29.6% believed that after getting prescribed for antibiotics by dentist, it’s alright to stop them early as soon as the pain goes away. Such practices are perilous as they can lead to severe antibiotic resistance. Very high prevalence of antibiotic resistance was noted in Peshawar.<sup>22</sup> Such misuse of antibiotics due to various myths and unawareness has affected the entire society leading to high antibiotics resistance.

## CONCLUSION

There is a staggering number of people who believe fake myths, beliefs and home remedies related to oral health, some of which may cause more harm than good to their oral health. Strong oral health education and promotion programs can help to counter disinformation regarding oral health and mitigate the adverse effects.

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