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DEBUNKING THE MYTHS ABOUT SCALING: A QUESTIONNAIRE SURVEY

***Dr. Dhanashree More Patil, Dr. Mona U. Shah, Dr. Vidhi Kevadia, Dr. Vishnu Maske**

India.

***Corresponding Author: Dr. Dhanashree More Patil**

India.

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ABSTRACT

Aim: To provide effective oral health care to patients and healthy individuals, it is critical to recognize prevalent myths. Most myths cause patients to follow the wrong protocol in dentistry, which can make treatment difficult for the dentist. This study aims to assess to assess the prevalence and to debunk the myths regarding dental scaling. **Methodology:** A descriptive cross sectional questionnaire survey was conducted among 200 out patients visiting the Pandit Deendayal Upadhyay dental institute, Solapur during the month of February 2021. The participants without a cognitive, hearing, or vision impairment and with limited or no difficulty with interpreting the questionnaire were included in the study. A self designed pretested questionnaire containing 10 questions on myths regarding oral health and hygiene was distributed among the study participants. Demographic details of the subjects were also recorded. Results were statistically analyzed using Chi- square test. **Results:** On average with pre survey 48.9%of patients believed in various myths related to dental scaling, which feared them to undergo scaling treatment. Post survey 37.6% patients myths were cleared and debunked. There was a statistically significant difference seen for the frequencies between time intervals. **Conclusion:** Various myths regarding dental scaling still lurk in the minds of general population. But the efforts of dental professionals to create awareness have been effective in eradicating the false traditional beliefs and there is a need to put coordinated efforts by public health specialists, dental practitioners which will effectively help in making an impact on dental health education and help the people learn and know the reality and take necessary steps to rectify them.

INTRODUCTION

Oral hygiene is an integral part of general health.[1] Dental plaque is considered to be a most common etiological factor in initiation and progression of gingival and periodontal diseases.[2] The most reliable method currently used for prevention of gingival and periodontal diseases would be regular and effective removal of plaque using a toothbrush. However, for many patients it is difficult to achieve a level of plaque control by toothbrushing only, due to the presence of hard to reach areas, as well as inadequate skills, poor motivation and lack of compliance. In order to prevent the progression of these diseases, professional tooth cleaning is required in conjunction with mechanical toothbrushing.[3]

Professional method such as, scaling and root planning is a procedure of removing calculus and plaque from the roots as well as crowns of the teeth by the help of various hand instruments or by ultrasonic scalers. Thus, scaling not only removes the deposits on the tooth but also enhances the aesthetics of tooth.[5]

However, there are many myths and fears regarding oral hygiene maintenance which deters the patients from seeking the treatment. Myths originates from a Greek word mythos meaning thought, story of unknown origin or speech. They are misconception or a fictitious imaginary understanding that has no relevance with reality. Myths differ from country to country and society to society and are generally passed on by word of mouth through many generations and thus it becomes very tough to differentiate between the fact and fiction.[4] A study done by Kanduluru et al stated that majority of the misconceptions were inherited from parents and grandparents.[5]

Freeman et al claimed that people believe in most myths due to their lack of dental health knowledge, which often leads to engagement in dental activities that can be detrimental to the gum or the teeth.[6] Dental scaling is a great fear in the population and there are various myths related to it, which includes scaling causes gaps between the teeth, scaling can weak the tooth and cause mobility in the teeth, gums bleed after scaling. Similar myths were found in the study conducted by Saravananan et al (2011), Vignesh and Priyadarshni et al, Ain et al who showed a higher prevalence of myth among the population in these aspects.[7,8,9]

There are various evidences in medical and dental field stating scaling and root planning (mechanical debridement) as the gold standarad. These findings

corroborate with study done by Cobb C M et al.[10] 2002 where he assessed evidence based perspective of scaling and root planning and concluded that even today, scaling and root planing (SRP) remains an essential part of successful periodontal therapy. The collective evidence from numerous clinical trials reveals a consistency of clinical response in treatment of chronic periodontitis by SRP using manual, sonic, or ultrasonic instrumentation. Thus, SRP remains the 'gold standard' to which more recently developed therapeutic modalities must be compared.

This study therefore, aims to evaluate the myths regarding dental scaling and to correct those wrong beliefs by educating them with informative models and videos and creating awareness regarding maintenance of oral health and trying to debunk their myths by actually daunting the myths into reality.

METHODOLOGY

Study design

A descriptive cross sectional study was conducted among the out patients visiting the Pandit Deendayal Upadhyay dental institute, Solapur to assess the prevalence and to debunk the myths regarding dental scaling. The data collection was done during the month of February 2021.

Source of data

The source of data was primary. It was obtained from a survey, which included a questionnaire based on the myths related to dental scaling.

Study population

The study population included all the patients visting the dental institute and those who were willing to participate in the study. Demographic details based on age and gender of the patients was obtained. The participants without a cognitive, hearing, or vision impairment and with limited or no difficulty with interpreting the questionnaire were included in the study.

Informed consent

The nature and purpose of the study was explained to the subjects and a signed consent was obtained. Additionally, participants were assured of the confidentiality of the information they provided in the survey.

Patient education and demonstration

Sampling methodology

All the patients visiting the dental institute who gave consent to participate were included in the study until the required sample size was met.

Sample size

200 participants.

Statistical analysis

All data were entered into a computer by giving coding system, proofed for entry errors

- Data obtained was compiled on a MS Office Excel Sheet (v 2019, Microsoft Redmond Campus, Redmond, Washington, United States).
- Data was subjected to statistical analysis using Statistical package for social sciences (SPSS v 26.0, IBM).
- Descriptive statistics like frequencies and percentage for categorical data, Mean & SD for numerical data has been depicted.
- ✓ Comparison of frequencies of categories of variables with groups was done using chi square test.

For all the statistical tests, $p<0.05$ was considered to be statistically significant, keeping α error at 5% and β error at 20%, thus giving a power to the study as 80%.

* = statistically significant difference ($p<0.05$)
** = statistically highly significant difference ($p<0.01$)
# = non significant difference ($p>0.05$) … **for all tables.**

Questionnaire

A self administered, pre-tested questionnaire in the vernacular language was given to the patients. It included 10 close ended questions. It consisted of questions which had to be answered in yes, no and don't know format. The questions were about common myths related to scaling which was administered to patients and relatives reporting to OMDR department to assess their fear or willingness to get scaling done. Post the survey the patient was educated with the help of informative video, models and their doubts were clarified verbally. All the patients then willing for scaling were taken to department of periodontics for oral prophylaxis. Patient was then recalled after 1 week for polishing, when a second survey from was provided to assess whether we were able to debunk the myths.

QUESTIONNAIRE

Patients name:
Address:
Age:
Contact number:

1. Is it necessary to get scaling done even after regular brushing?
   a. Yes
   b. No
   c. Don't know
2. Will scaling make the tooth loose?
   a. Yes
   b. No
   c. Don't know
3. Does scaling make the teeth sensitive?
   a. Yes
   b. No
   c. Don't know
4. Will scaling increase the gaps between the teeth?
   a. Yes
   b. No
   c. Don't know
5. Does scaling weakens the tooth enamel?
   a. Yes
   b. No
   c. Don't know
6. Do gums bleed after scaling?
   a. Yes
   b. No
   c. Don't know
7. Will teeth shine like pearls after scaling?
   a. Yes
   b. No
   c. Don't know
8. Is scaling of tooth a painful procedure?
   a. Yes
   b. No
   c. Don't know
9. Does scaling of teeth means removal of caries?
   a. Yes
   b. No
   c. Don't know
10. Does scaling of teeth cost more?
    a. Yes
    b. No
    c. Don't know

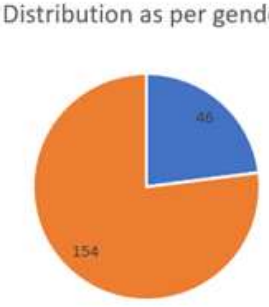
RESULTS

Table showing mean & SD of age

	N	Minimum	Maximum	Mean	Std. Deviation
AGE	198	18	65	35.67	11.120

Distribution as per gender

	Frequency	Percent
F	46	23.0
M	154	77.0
Total	200	100.0

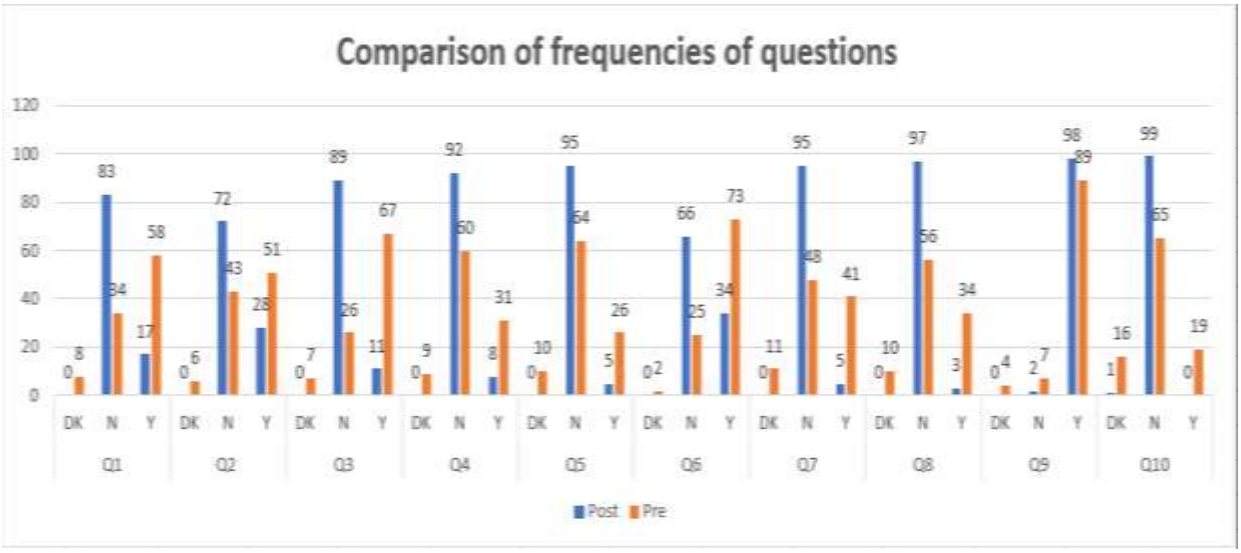


Comparison of frequencies of questions

Questions	Responses	Post	Pre	Chi-Square value	p value of Chi-Square test
Q1	DK	0	8	50.935	0.000**
	N	83	34		
	Y	17	58		
Q2	DK	0	6	20.009	0.000**
	N	72	43		
	Y	28	51		
Q3	DK	0	7	81.718	0.000**
	N	89	26		
	Y	11	67		
Q4	DK	0	9	29.301	0.000**
	N	92	60		
	Y	8	31		
Q5	DK	0	10	30.270	0.000**
	N	95	64		
	Y	5	26		
Q6	DK	0	2	34.687	0.000**
	N	66	25		
	Y	34	73		
Q7	DK	0	11	54.621	0.000**
	N	95	48		
	Y	5	41		
Q8	DK	0	10	47.499	0.000**
	N	97	56		
	Y	3	34		
Q9	DK	0	4	7.211	0.027*
	N	2	7		
	Y	98	89		
Q10	DK	1	16	39.284	0.000**
	N	99	65		
	Y	0	19		

Out of 200 patients, 154 were males and 46 were females with age group 18-65 yrs and a mean deviation of 35.67%. On average with pre survey 48.9%of patients believed in various myths related to dental scaling, which feared them to undergo scaling treatment. Post survey 37.6% patients myths were cleared and debunked. There was a statistically significant difference seen for the frequencies between time intervals.

Q1with higher freq for N with post, Y with pre
Q2 with higher freq for N with post, Y with pre
Q3with higher freq for N with post, Y with pre
Q4with higher freq for N with post, Y with pre
Q5with higher freq for N with post, Y with pre
Q6with higher freq for N with post, Y with pre
Q7with higher freq for N with post, Y with pre
Q8with higher freq for N with post, Y with pre
Q9with higher freq for N with post, Y with pre
Q10with higher freq for N with post, Y with pre



DISCUSSION

Incidence of various misapprehensions and taboos harmfully affected the dental health of our community. Appropriate education makes the people more practical and realistic.

Results of our research illustrates that most participants believed that scaling of teeth means removal of caries. The reason for such type of thinking is lack of knowledge and improper beliefs followed by population. But with the help of various aids such as informative videos and demonstration on models these myths were debunked.

Another most common myth was gums bleed after scaling. They were educated by informing them that gums that bleed during professional dental cleanings usually are due to accumulation of bacteria and when instruments disrupts that bacteria tucked under the edges of your gums, the swollen tissues start to bleed which eventually resolves after a period of time if proper oral hygiene is maintained.

Many respondents believed that one of the most prevailing myths of teeth scaling is that professional cleaning by a dentist weakens and loses the tooth but the patients were informed that the truth is quite the opposite. These results were in line with findings of study done Nagraj et al and Ramandeep et al.[11,12] and also were consistent with previous studies by Ain et al.[9] where 72.7% believed in this myth, and Mary et al where 72.8% believed in this myth. The patients were informed that deposits that accumulate on the teeth over time form "semi- calcified" layer between the gums and teeth. When cleaning is done, it primarily removes tartar deposits, which gives you the impression that your teeth are loosening but the truth is that this support had previously provided by the tartar deposits itself. After the scaling, your gums will gradually reattach to the teeth.

Another most prevalent myth was that scaling increases the spacing between the teeth among the most individuals. Vignesh et al.[7] noted 82% prevalence of a similar myth. The myths were debunked by showing them the informative videos – when teeth are not properly cared, gum disease develops quickly and it is the progression of the "gum disease that causes the gaps between the gums, where tartar accumulates. The gaps are only temporary if the tartar is removed through scaling. The scaler tip is ineffective at pushing the gums away and creating gaps between teeth. When tartar deposits between the teeth are removed, the spacing caused by the tartar deposits becomes visible. The logic is that the gums will return to their original position in a few weeks, assuming there are no other issues.

67% of patients believed that scaling makes the teeth sensitive but they were informed when tartar is removed by scaling, the teeth get exposed to oral environment and become moderately sensitive and in most cases, the sensitivity vanishes in a couple of days as and when the gums get attached to the teeth. Post survey, 57% patients myths were debunked.

An average number of respondents believed that teeth scaling involves removing the enamel (upper layer of teeth). By using visual aids these myths were cleared as ultrasonic scaling entails mechanical vibration of the blunt scaling tips, as well as continuous irrigation of the tips. It is used to remove hard calculus from tooth's surface and has no effect on the enamel or oral tissue.

34% of patients believed that with regular brushing there is no need to get scaling done. They were educating that – bleeding gums is a classic sign of gingival inflammation, known as gingivitis and gingivitis requires proper brushing and dental scaling or it can progress to periodontitis. It is important to have scaling done every six months to maintain a good oral hygiene. Plaque and calculus removal on a regular basis strengthens the teeth

such as gingival inflammation and bad breath. Post survey, 83% believed.

Some individual also related that scaling is an expensive procedure. They were informed that concerns about the cost of scaling and dental teeth polishing are common and varies, but it is typically an affordable investment in your long-term oral health.

A number of respondents also believed that teeth will shine like pearls after scaling. These myths were debunked by informing them that there are 2 types of stain on teeth- intrinsic (inside the tooth) and extrinsic (outside the tooth) only the extrinsic stains can be removed by scraping but for intrinsic stains, more intensive treatments like bleaching or veneering may be necessary.

There are certain limitations in this study. There is no established literature on most myths included in this study. It was mainly frame based on the beliefs that are commonly encountered in day to day practice.

CONCLUSION

Thus, based from the results of the study we conclude that various myths regarding dental scaling still lurk in the minds of general population. But the efforts of dental professionals to create awareness have been effective in eradicating the false traditional beliefs and there is a need to put coordinated efforts by public health specialists, dental practitioners, which will effectively help in making an impact on dental health education and help the people learn and know the reality and take necessary steps to rectify them.

REFERENCES

1. Reddy LV, Verma A, Shankar R. Assessment of oral health status and access barriers of patients reporting to a dental college in Lucknow. J. Indian Assoc. Public Health Dent., 2019 Jul 1; 17(3): 192.
2. Fine HD. Chemical agents to prevent and regulate plaque development. Perio 2000, 1995; 8: 87-107.
3. Nagunuri D, Babitha GA, Prakash S. Comparative Evaluation of 0.1% Turmeric Mouthwash with 0.2% Chlorhexidine Gluconate in Prevention of Plaque and Gingivitis: A Clinical Study. CODS J Dent., 2016; 8(1): 16-20.
4. Vinay Kumar Gupta et al Myths Related to Dentistry in People of Lucknow: A Crossectional Study. Saudi J Oral 123 Dent Res, 2021; 6(3): 123-128.
5. Kanduluru, A., Manasa, S., Narayan, D. P., Reddy, M. T., & Sujatha, B. K. Assessment of misconceptions about oral health care and their source of information among out-patients attending dental college in Bangalore-A cross sectional survey. Journal of Indian Association of Public Health Dentistry, 2013; 11(4): 77.
6. Freeman R, Doughty J, Macdonald ME, Muirhead V: Inclusion oral health: advancing a theoretical framework for policy, research and practice. Community Dent Oral Epidemiol., 2020, 48: 1-6.
7. Vignesh R, Priyadarshni I: Assessment of the prevalence of myths regarding oral health among the general population in Maduravoyal, Chennai. . J Educ Ethics Dent., 2012; 2: 85.
8. Saravanan N, Thirineervannan R: Assessment of dental myths among dental patients in Salem city. JIPHD, 2011; 18: 359-63.
9. Ain TS, Gowhar O, Sultan S: Prevalence of perceived myths regarding oral health and oral cancer-causing habits in Kashmir, India. Int J Sci Stud., 2016; 4: 45-9.
10. Cobb CM. Clinical significance of non-surgical periodontal therapy: an evidence-based perspective of scaling and root planing. J Clin Periodontol., 2002 May; 29 Suppl 2: 6-16.
11. Gambhir RS, Nirola A, Anand S, Gupta T. Myths regarding oral health among patients visiting a dental school in North India: A Cross- sectional survey. Int J Oral Health Sci., 2015 Jan 1; 5(1): 9.
12. Nagraj A, Ganta S, Yousuf A, Pareek S. Enculturation, myths and misconceptions regarding oral health care practices among rural female folk of Rajasthan. Studies on Ethno- Medicine, 2014 Aug1; 8(2): 157-64.