

A Survey of Oral Hygiene Habits of Patients Presenting to Rehman College of Dentistry

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Abstract

Background and Objectives: Wide range of oral hygiene maintenance practices exist in this part of world. While generally modern techniques of maintaining oral hygiene have become a norm in the society, no data exists regarding correct use of these practices and the frequency in which they are employed. This study is an attempt to quantify these techniques and record their usage.

Methodology: A cross sectional analytical study was planned and a questionnaire was developed. A total of 200 adult patients presenting to Rehman College of Dentistry were interviewed. Data was recorded and analyzed using SPSS software.

Results: Results in general show that people are using modern techniques along with traditional methods like Miswak on regular basis to clean their teeth.

Conclusion: Further awareness regarding oral hygiene practices and their correct use needs to be created. People also need more guidance regarding alternative oral hygiene techniques, and the importance of regular dental checkups and scaling.

Key Words: Oral hygiene, Miswak, Toothbrush, use, frequency

Introduction:

Factors that impact oral hygiene and increase risk of caries include socioeconomic status, frequency of sugar intake and snacking between the meals.¹ Other factors that may have a bearing upon oral health include medical conditions like autism, multiple sclerosis, cerebrovascular accident and prolonged bed ridden status.^{2,3,20}

Historically, people in this region used to clean their teeth with Miswak (*Salvadora Persica*) and Dandasa (walnut tree bark).⁴ However, in recent times oral hygiene habits have been changing and people are increasingly using modern devices like tooth brush, tooth picks and dental floss.⁵ Similarly, through practice of religion, every Muslim is supposed to rinse their mouth at least fifteen times a day which ensures further improved oral hygiene.

While these practices are in place, no solid data exists that may indicate whether population at large is using oral hygiene measures in a correct and internationally standardized way. Hence a survey was planned to assess these habits of the patients presenting to RCD with various dental problems

Methodology:

A cross sectional analytical study was planned and a questionnaire was developed through literature search. Ethical approval was obtained from the institutional ethical.

Patients presenting to Rehman College of Dentistry were interviewed after taking a consent and confidentiality was maintained. A total of 200 patients were included. Only adult patients were included in this study. All the patients with any medical condition that may have prevented the patient from using oral hygiene measures properly were excluded. Data was collected, recorded and analyzed using SPSS software.

Results:

Average age of the patients was 33 years with minimum of 18 years and maximum 84. There were 134 (67%) females and 65 (33%) males in the study. While majority were residents of Peshawar, patients from all over Khyber Pakhtunkhwa were represented in the survey. Majority of patients were either house wives (27.5%) or students (25.5%).

Overall, 96% (191) patients did brush their teeth. Results of frequency, technique, type of tooth brush, change over time and time spent on brushing is summarized in table 1.

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Table No. 1 Tooth Brushing

Tooth Brushing	Frequency	Technique	Type of Brush	Changing Brush	Time spent
Yes 191	Once: 78	Circular: 81	Soft: 100	3 months : 103	1 min: 54
No 8	Twice: 101	Horizontal: 121	Medium: 76	6 months : 47	2 min: 104
	More: 12		Hard: 13	9 months : 16	5 min: 25
				More: 26	More : 9

Of the 200 patients, 16% (30) used Miswak. Frequency, technique, trimming and duration of its use are summarized in table 2.

Table 2: (Miswak)

Miswak use	Frequency	Technique	Trimming	Duration
Yes: 30	Once: 7	Up down: 21	Yes: 17	1 min: 18
No: 163	Twice: 4	Sideways: 8	No: 10	2 min: 7
	More: 18			5 min: 3

Use of various adjuncts were used by the people. These adjuncts included oral rinse, flossing, tooth pick, mouth wash, frequent dental checkup and scaling. The frequency of these tools usage was recorded in table 3.

Table 3:(Oral hygiene adjuncts)

Oral Rinsing	Flossing	Tooth Pick	Mouth wash	Dental checkup	Scaling
Yes: 147	Yes: 43	Yes: 80	Yes: 55	Yes: 88	Yes: 103
No: 52	No: 155	No: 118	No: 145	No: 110	No: 96

Discussion:

Inability to maintain satisfactory oral hygiene leads to formation of plaque. Bacteria grow in this environment and lead to oral infection, recession of gingival tissue and erosion of tooth surface. ⁶ To maintain healthy oral environment, optimum amount of cleaning should be performed. While under cleaning teeth leads to formation of plaque, over cleaning can cause damage

to the oral tissue. ⁷ To maintain such balance, various dental world bodies have produced set of recommendations as a guide for general public.⁸ These organizations include American Dental Association, British Dental association, Australian Dental Association and other Dental organizations.

In our survey, 96% of patients reported cleaning their teeth daily with toothbrush. While it is encouraging, only 53% of these patients brushed their teeth twice a day while the rest did so either once or more than twice a day. Comparing this practice with the international guidelines, most dental associations recommend cleaning teeth twice daily using soft toothbrush and with fluoride containing toothpaste.⁹The technique of tooth brushing is also important. Again, most dental websites recommend a technique similar to modified bass technique in order to clean teeth. This technique involves toothbrush to be placed at 45 degrees to the teeth and giving it circular movements while moving in forward and backward directions.¹⁰ Other methods like Fones and Scrub technique are also widely practiced.¹¹ In our group of patients, only 40% of patients were using a somewhat like modified bass technique while the rest were using flat horizontal technique (scrub Technique) to clean their teeth.

When it comes to the shape and structure of a toothbrush, a wide variety is available.¹² While most agencies recommend soft toothbrushes, almost half of our patients were using medium to hard toothbrush bristles. Similarly, when compared against other recommendations, almost half the patients reported that they were brushing their teeth for either too long or too short while the recommendation is for 2 minutes.¹³Regarding changing toothbrushes, once again almost half the patients were using their toothbrushes for a very long time while generally the recommendation is to change it after every 3 months.

Millions of people throughout the world use organic toothbrushes that are usually extracted from plants and given the shape of a brush. One such organic toothbrush that is used very commonly in South Asia is Miswak (SalvadoraPersica). Haque et al in an excellent review paper has described extensively the antibacterial, antifungal, antiviral, antioxidant, antiplaque, analgesic, anti-inflammatory and other therapeutic effects of this plant.¹⁴ While there is no published literature on comparison between these organic toothbrushes and the effectivity of plastic bristled toothbrush and paste, still these organic brushes need to be used in a scientific way. Their brush should be freshened every day and they need to be used not too forcefully in such a manner that they do not damage dental and periodontal tissue.¹⁵ In our group of patients, only 16% (30) reported using Miswak. The majority used it in vertical direction and trimmed its brush every day.

74% of our patients reported rinsing of mouth after every meal. While no clear guidelines exist regarding regular rinsing of oral cavity, it can only be regarded as beneficial habit that removes food debris from oral cavity. Use of dental floss was not reported

to be as popular as one may expect. Only 22% of patients reported using it. Yao et al in a similar study of oral health behavior among dental and medical students, reported almost 50% used dental floss on regular basis.¹⁶ Generally, dental organizations recommend their use on a regular basis. Use of mouth wash as an adjunct to other mechanical methods was reported by as many as 28% patients without any therapeutic indication. James et al in a large literature review of 51 studies with 5345 patients concluded that regular use of chlorhexidine mouthwash for 4 to 6 weeks reduced gingivitis by 0.21 (Gingival index 0 to 3) as compared to control, placebo or no mouth rinse. In patients with Gingivitis index from 1.1 to 3, there was insufficient data to determine any effect. They, however, found it to be quite effective in plaque control.¹⁷ While most dental organizations and studies recommend regular dental checkup and scaling for all patients of all ages, only 44% of our patients reported visiting dentists on a regular basis and 52% reported having scaling done in the past.^{18,19}

Conclusion:

While it is encouraging to see majority of people reporting cleaning their teeth daily, message needs to be sent further widespread about correct technique and frequency of toothbrush usage. People need more guidance regarding alternatives like Miswak and dental hygiene tools like dental floss, toothpick and judicious use of over-the-counter mouth washes. People also need further education regarding the importance of regular dental checkups and scaling.

CONFLICT OF INTEREST : None

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Author Contributions

1. Warda Fayyaz- Literature review, Manuscript Writing, Data Collection
2. Mashal Ahmad- Data Analysis and Data Interpretation
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4. Maimoona Ayaz - Data collection, Literature Review
5. Zubair Durrani- Conceptualization, Study Design and Review