

Knowledge and Practices Regarding Preventive Oral Health Care Among Undergraduate Students of Karachi, Pakistan

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ABSTRACT

Objective: To assess the knowledge and practices regarding preventive dental care among different universities undergraduate students in Karachi, Pakistan.

Study Design: Cross sectional study

Place and Duration of Study: This study was conducted at the Dental Biomaterials Department, Jinnah Medical and Dental College, Karachi from September 2017 to December 2017.

Materials and Methods: This survey was conducted using a self-administered questionnaire, that assessed oral health and hygiene knowledge and practices of 400 students from various professions (i.e. ACCA, BA, BCOM, BBA, B.S.) Data was analyzed using descriptive statistics and chi-square tests using SPSS VERSION 21. Significance level was set at $p < 0.05$

Results: The survey revealed that 48.8% students used tooth brush with toothpaste and considered as an oral hygiene aid. About 36.5% cleaned their teeth once every morning. 57.3% were aware of the role of fluoride in caries prevention. 44.3% frequently changed their toothbrush i.e. every 3 months. While 63.0% were aware of the dental problems, occur when oral hygiene is not maintained properly.

Conclusion: It can be concluded that most of the students used toothbrush along with toothpaste only, and were not aware of interdental cleaning aids. Interdental cleaning were much below than our expected levels and we must create awareness through programs in educational institutions to reduce the dental disease burden.

Key Words: Oral hygiene, Knowledge, Attitude, Students

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INTRODUCTION

The word hygiene is obtained from *hygienia*, the Greek goddess of health, cleanliness, asepsis, sterility and sanitation. So, hygiene refers to the conditions and a set of exercises that support to rebuild health and arrest illness from the spread of bacterial or viral infections and other diseases.¹

Dental cleaning knowledge is deemed to be the most essential factor in oral disease prevention that helps us in maintaining esthetics, communication and mastication.^{2,3}

Oral health is now as essential as the general health. In current years gingival diseases have been linked to a number of health issues, which might be a bi-faced

relationship for many conditions such as cardiovascular problems, respiratory conditions, diabetes mellitus, osteoporosis, obesity, pancreatic cancer, Alzheimer's disease, preterm labor and low birth weight babies.⁴⁻⁸

Fortunately many of the oral health issues are preventable and curable too, their onset can be reverted back.⁹ Many factors like diet, smoking, alcohol, poor hygiene, stress are transformed to a broad range of high morbidity diseases; moreover these factors are also responsible for developing many oral diseases. That is why WHO is also approaching to stop a wide range of conditions including oral diseases.¹⁰

It is presumed that mass media, dental faculty and dental literature are the actual sources of oral health concept for people. By maintaining oral health, dentists, dental hygienists and rest of dental health providers become role model for their patients, families, relatives and friends. Knowledge about the idea of oral health and its significance at the university level are presumed to be more easily understood and implemented by them.¹¹ A study¹² related to oral hygiene behavior had been conducted among university students that have focused on the knowledge, attitude and exercises of non-professional college students for oral health. Our current study therefore focuses undergrad students belongs to professional but non-medical universities.

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MATERIALS AND METHODS

The study was conducted at Jinnah Medical And Dental College. It's a descriptive cross-sectional study. The participants were university level undergraduates above 18 years. An 8-item self-administered questionnaire was distributed to 400 students to collect the information related to oral hygiene using convenience sampling. Students were approached individually, purpose of the study was explained and consents were taken from each of them. Data were entered into the SPSS version 21 and analyzed. Test of association was done using chi square statistics.

Inclusion criteria: Age above 18 years, non-medical undergraduate students, above intermediate level.

Exclusion criteria: Age below 18 years, non-medical students, below intermediate level.

RESULTS

Amongst the 400 undergraduate students of various professions evaluated in the research, in which majority of the students i.e 48.8% of them considered toothbrush and toothpaste as the most common dental cleaning aid, 27.3% of them used toothbrush, toothpaste and mouth wash, 9.8% used tooth brush, tooth paste and dental floss as dental cleaning aids, 8% used tooth brush, tooth paste, mouth wash and dental floss and very few of them i.e. 6.3% used miswak. 44.25% of the students change their tooth brush every 3 months, 12% every 6 months, 23.75% every month, and 20% of them changed their tooth brush whenever they feel that their bristles are spread. 10.5% of the students considered bad breath as a cause of not cleaning their teeth, 9.5% of them think gum disease as a main factor, 17% of them considered tooth decay as a main cause and majority of

Table No.1: Responses of students of knowledge and practices regarding preventive dental care among undergraduate students *Statistically significant p-value

No	Question	Result	P - Value
1.	Not cleaning your teeth everyday can cause? a. Tooth decay b. Gum disease c. Bad breadth d. All of the above	a.17.0% b.9.5% c.10.5% d.63.0%	0.383
2.	What is the cause of mouth odour? a. Improper cleaning of teeth b. Not cleaning your tongue c. Dental caries d. All of the above	a.35.3% b.19.5% c.7.80% d.37.5%	0.059
3.	How often do you visit your dentist? a. Once a year b. Twice a year c. Only when I have dental problem d. I don't visit the dentist	a.13.0% b.13.5% c.50.3% d.23.3%	0.059
4.	Are you aware of fluoridated toothpaste in preventing caries formation? a. Yes b. No	a.57.3% b.42.8%	0.16*
5.	What do you use for cleaning your teeth? a. Miswak b. Tooth brush and a paste c. Tooth brush, paste, mouthwash and dental floss d. Tooth brush paste and mouthwash e. Tooth brush, paste and dental floss	a.6.3% b.48.8% c.8.0% d.27.3% e.9.8%	0.018*
6.	How long you normally take to brush your teeth? a. Less than a min b.1 min c.2 mins d. 3 mins	a.15.0% b.35.0% c.34.0% d.16.0%	0.705
7.	How frequently do you change your tooth brush? a. Every month b .Every 3 months c. Every 6 months d. Whenever I feel bristles are spread	a.23.8% b.44.3% c.12.0% d.20.0%	0.001*
8.	When do you clean your teeth? a. Before breakfast b. After breakfast c. After every meal d. Before going to sleep e. Both A&D f. Both B&D	a.36.5% b.4.8% c.6.30% d.3.5% e.33.5% f.15.5%	0.000*

them i.e. 63% think that halitosis, gum disease and tooth decay all of them are considered to be the causes of not cleaning their teeth. 35.5% of the students considered improper cleaning of the teeth is the main reason of halitosis, 7.8% think dental caries is the main cause, 19.5% think that bad breath occurs because of not cleaning their tongue and majority of them i.e. 37.5% think that all these reasons are considered as the causes of halitosis. 17% of them found tooth decay as the major cause of not cleaning teeth, 10.5% thought bad breath as the main cause and very few 9.5% considered gum disease. 36.5% clean their teeth before breakfast, 33.5% before breakfast and before going to sleep, 15.5% after breakfast and before going to sleep, 6.3% cleaned their teeth after every meal, 4.8% after breakfast and 3.5% before going to sleep. 50.3% of the students only visit the dentist when they face dental problems, 13.0% visit once a year, 13.5% visit twice a year, and about 23.3% of them don't visit the dentist. 57.3% were aware of fluoridated toothpaste in preventing caries formation, while only 42.8% were unaware. 35.0% of the students take 1 minute to brush their teeth, 34.0% take 2 minutes, 16.0% take 3 minutes, and about 15.0% take less than a minute to brush their teeth. Results are shown in table 1.

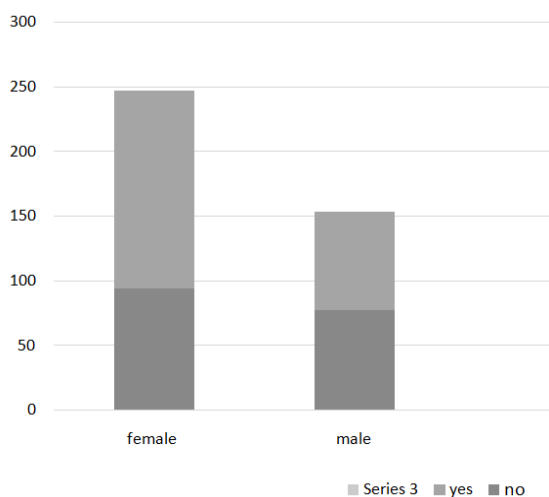


Figure No. 1: Depicts the responses of awareness of fluoridated toothpaste in preventing dental caries according to gender.

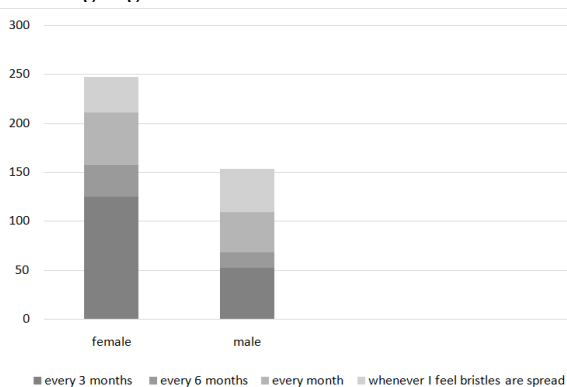


Figure No. 2: Depicts the responses of frequency of changing their tooth brush according to gender

DISCUSSION

Health and hygiene work synergistically. For leading a healthy life it is necessary for one to maintain personal hygiene and incorporated it daily routine. Hygiene practice should be initiated from oral cavity because practicing oral hygiene in a correct way can be helpful in preventing unfavorable effects on general health. Students are considered to be an ideal population for an early intervention towards development of a healthy behavior and practices at younger age.¹³ Many studies have been conducted on perceived behavior for oral hygiene, targeting school children and medical students. We therefore chose undergraduate non-medical students (ACCA, BBA, BA, B.COM and BS) as our target population in our study. A study¹⁴ also states that assessing knowledge of these students is imperative and reflects their mind set. Good oral hygiene practice that gets incorporate in their lifestyle at this age, will last for a lifetime. In this study 48.8% prefer using tooth brush and tooth paste, 27.3% use tooth brush, paste and mouth wash, 9.8% use tooth brush, paste along with dental floss, 6.3% used miswak and only 8.0% were using proper interdental cleaning aids. Similar results were found in study conducted among adult Nigerians.¹⁵ The study suggest that the largest proportion of participants i.e. 81% were using tooth brush and tooth paste while 10.5% dental floss and 9.6% used miswak. It is assumed that use of miswak was common among Saudi population due to their cultural belief but in study of Riyadh¹⁶ it was observed that less than 10% used miswak for oral hygiene.

The study on oral hygiene habits on basis of gender difference conducted in Nigeria¹⁷ revealed that regular changing of toothbrush was observed in 27% of males and only 12% of females study participants. In our study it clearly signifies that females (31.3%) are more regular in changing their tooth brush after 3 months as compared to males (13%) (figure 1).

In present study, it was found that females are more aware of use of fluoride tooth paste (38.3%) than males (19%) (figure 2). In Iran¹⁸ 37.9% of the study population had high knowledge of fluoride toothpaste and 62.9% had intermediate knowledge, but knowledge among males was more than females.

Frequency of brushing twice daily i.e. before bed and before breakfast is found common more among females (25%) than males (8.5%) in the current study. These twice daily practices are consistent with result from studies done in Georgia and Yemen respectively.^{19,20} A study conducted in Lahore, Pakistan had similar results.²¹

CONCLUSION

It can be concluded that most of the students use only toothbrush along with toothpaste and are not aware of interdental cleaning aids. Interdental cleaning is much

below than our expected levels and we must create awareness through programs in educational institutions to reduce the dental disease burden.

Author's Contribution:

Concept & Design of Study: Anjum Tariq
 Drafting: Anam Jawed
 Data Analysis: Faiza Sattar, Muhammad Tariq
 Revisiting Critically: Anjum Tariq, Anam Jawed
 Final Approval of version: Anjum Tariq

Conflict of Interest: The study has no conflict of interest to declare by any author.

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