The Professional Medical Journal
www.theprofesional.com

DOI: 10.17957/TPMJ/17.4134

ORIGINAL PROF-4134

ORAL HEALTH;

PERCEPTION OF ORAL HEALTH AND PREVALENCE OF DENTAL CARIES AMONG THE STUDENTS' OF LIAQUAT MEDICAL UNIVERSITY JAMSHORO.

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Article received on:
29/06/2017
Accepted for publication:
20/10/2017
Received after proof reading:
29/11/2017

ABSTRACT… Objectives: This study was carried out to evaluate the dental students' perception about condition of their gums and teeth and prevalence of dental caries. **Study Design:** Descriptive cross sectional study. **Setting:** Liaquat University of Medical and Health Sciences. **Period:** July 2011 to December 2011. **Material and Method:** The sample size was 200 students comprising of both male and female. Clinical Oral examination was performed with the help of mouth mirror and explorer in dental chair. The perception of dental students about condition of their gums and teeth was obtained through questionnaire. **Results:** The results revealed that 25 % of students in present study had dental decay. The mean DMFT score was 0.625. Moreover, the mean DMFT score for male and female students was 0.658 and 0.576 respectively. The results about distribution of DMFT components indicated that the decayed (D) teeth were in greatest number followed by filled (F) and missed (M) teeth. **Conclusion:** There was statistically no significant association between dental caries and gender. Moreover, prevalence of dental caries was significantly different between those who perceived their gums and teeth condition excellent and good compared to the students who perceived their gums and teeth condition as poor.

Key words: Caries, DMFT, dental students, Prevalence, Perception, teeth and gums.

Article Citation: Mirani SA, Shah SYA, Sahito MA. Oral health; Perception of oral health and prevalence of dental caries among the students' of liaquat medical university jamshoro. Professional Med J 2017;24(12):1894-1898.
DOI:10.17957/TPMJ/17.4134

INTRODUCTION

The perception of individuals' personal oral health is a process of self-consciousness and this determines importance given to oral health care. This perception is subjective and varies from person to person irrespective of actual condition. Therefore, two individuals having same oral health problem may reflect on in highly distinct way.[1,2] The evidence indicates that perception of low income populations about oral health is one of the main obstacle in attaining it up to optimum level.[3]

The occurrence of oral diseases including dental caries in adult population has negative effect on their daily routine jobs and overall quality of life.[4] However, young population especially in developed world now retain their natural dentition for relatively long life.[5] This improvement of oral health in developed world has been attributed to changed lifestyles, easy access to oral health care, regular practice of oral hygiene and widespread use of fluoride containing dentifrices and other products.[6] On the contrary, the magnitude of oral diseases in population of developing world is still alarming due to lack of access to quality oral health care services and lack of awareness regarding oral hygiene practices and its impact on their overall health.[7]

Dental caries is the public health problem affecting all age groups.[8] The pathogenesis of dental caries comprises of complex interaction among several factors including cariogenic bacteria, fermentable carbohydrate, structure and morphology of teeth over a period of time.[9] The most of adult population experience dental caries. In addition, 60-90% prevalence of dental decay among children in industrialized countries has been reported. The prevalence is relatively higher in developing countries.[10,11] A survey conducted in Karachi revealed that most of children were suffering

from caries.[12] Dental caries is the preventable disease. All the individuals irrespective of age and gender are prone to the development of dental caries any time during their lifetime.[13-15] the majority of population in developing countries give less importance to signs and symptoms of oral diseases including dental caries compared to general diseases. Therefore, they delay the treatments of these problems or approach quacks and get substandard treatment.[16] Moreover, recent data regarding perception of oral health and dental caries prevalence among the dental students of Liaquat Medical University hospital is not available. Furthermore, only few researchers have determined rate of caries in adult population of Pakistan. Therefore, present study evaluated the perception of teeth and gums condition, prevalence and severity of dental caries among dental students of Liaquat Medical University Hospital Hyderabad. To best of our knowledge, no studies for caries prevalence and severity among 18-25 year-old dental students have been conducted in Pakistan. The data about prevalence and severity of dental caries may help in improving dental screening, treatment and prevention strategies.

MATERIAL AND METHODS

This descriptive cross-sectional study was carried out during July 2011 to December 2011. The dental students with age from 18-25 years of either gender were included and those with gross dental defects such as amelogenesis imperfecta, dentinogenesis imperfecta and fixed orthodontic appliances were excluded. The convenient sampling technique was used. Informed and voluntary written-consent was obtained prior to clinical examination. The clinical examination was performed on dental chair using examination instruments. The WHO caries' diagnostic criteria were used for determining the prevalence and severity of dental caries in permanent teeth. The DMFT index (decayed, missing and filled tooth surfaces) was used.[15]

Statistical analysis

The data were analyzed by SPSS software version 16. The frequencies have been given for categorical variables whereas for continuous variables mean and standard deviation are provided. The association between dental caries and gender was established using chi-square test. *P value* $\leq$ 0.05 was taken as significant.

RESULTS

Total 200 dental students comprising of both male and female were examined for dental caries. The results revealed that out of 200 study participants 50 students had dental decay. The total prevalence of dental caries was 25 %. The frequency of decayed, missed and filled teeth among students is illustrated in Table-I. The results about distribution of DMFT components indicated that the decayed (D) teeth were in greatest number followed by filled (F) and missed (M) teeth.

Base line characteristics of patients	N (%)
Gender	
Male	89(44.5 %)
Female	111 (55.5%)
Decayed Teeth	45
Missed Teeth	28
Filled Teeth	41

Table-I. Base line characteristics of dental students

The mean DMFT score was 0.625. It was discovered that mean DMFT for male and female students was 0.658 and 0.576 respectively. There was no statistically significant association between dental caries and gender (Table-II).

Gender of subject	Caries status		DMFT Score (SD)	P-value
	Yes	No		
Male	25	64	0.66±1.02	0.552
Female	25	86	0.64±1.1	
Total	50	150		

Table-II. Prevalence of dental caries (DMFT score) and gender

In this study, total 20 students perceived their gums and teeth condition as excellent, 124 students thought their gums and teeth condition was good, whereas 47 and 9 students perceived their gums and teeth condition as fair and poor respectively. The only three students out of 20 who perceived their gums and teeth condition as

excellent had dental caries. Out of 124 students who perceived their gums and teeth condition as good 32 were found to suffer from dental caries. Whereas among 47 students who perceived their gums and teeth condition as fair, 24 had dental decay. Interestingly, out of 9 students who had perception that their gums and teeth condition was poor, 8 were having dental caries. The prevalence of dental caries was significantly difference between those who perceived their gums and teeth condition excellent and good compared to students who perceived their gums and teeth condition to be poor.

Students perceived gums and teeth condition	Students (N)	Students with Dental Caries (N)	P-value
Excellent	20	3	0.001
Good	124	32	
Fair	47	24	
Poor	9	8	

Table-III. Students dental caries status and perception of gums and teeth health

DISCUSSION

Among oral diseases the dental caries is the major public health problem affecting both gender and all age groups.[17] Dental caries initiates and progresses by interaction among various factors including tooth surface, time, bacteria and fermentable carbohydrate.[18]

In present study, female students outnumbered the male students, similar findings have been reported in other countries too including France, the United States and Japan.[19-20] The results of this study revealed that the total prevalence of dental caries was 25%. One study carried out in Tunisia regarding prevalence of dental caries reported that 43.0% of dental students were affected by dental decay.[21] The difference between two studies may be due to variable dietary and oral hygiene practices of study participants.

Data regarding prevalence of dental caries among dental students is limited; hence comparison of our results is difficult.[22] Moreover, the study design, sample size and other parameters of study participants such as eating and oral hygiene measures adopted vary across the countries. The results about distribution of DMFT components indicated that the decayed (D) teeth were in greatest number followed by filled (F) and missed (M) teeth. Since students of dentistry have knowledge and access to dental care they might exhibit improved oral health in future studies. The present study data may serve as baseline for planning oral health programs for target population. Moreover, preventive strategies need to be adopted in order to further decrease the burden of dental caries.[23] The mean DMFT score in present study was 0.625, which is slightly higher than Irfan et al, they reported 0.3 DMFT score among students of Khairpur.[24] The difference may be due to method of clinical examination observed in two studies. In present study examination instruments were used and students were examined in dental chair, whereas in study carried out by Irfan et al students were examined in day light. The significant association between caries prevalence and perception of students' gums and teeth condition was observed in present study. The findings of this study are in agreement with Maru AM and Narendran S 2012 and other studies.[25-27] Regular checkup and preventive strategies shall be vigorously adopted for public in general and dental students in particular to decrease the burden of dental caries.

CONCLUSION

The total prevalence of dental caries was 25%. The results about distribution of DMFT component indicated that the decayed (D) teeth were in greatest number followed by filled (F) and missed (M) teeth.

The prevalence of dental caries was significantly difference between those who perceived their gums and teeth condition excellent and good compared to students who perceived their gums and teeth condition to be poor.

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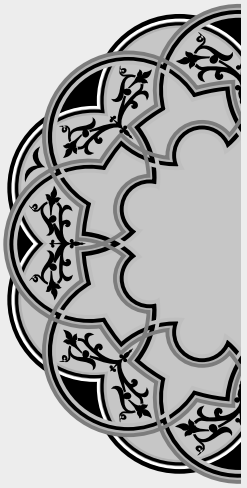

"To a great mind, Nothing is little."

Sherlock Holmes

AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author-s Full Name	Contribution to the paper	Author=s Signature
1	Shahid Ali Mirani	Concept of paper, data collection and write up.	
2	Syed Yousif Ali Shah	Critical review of manuscript.	
3	M. Ameen Sahito	Literature review and data entry and analysis	