ORAL HYGIENE OF STUDENTS IN PRIVATE SCHOOLS OF CANTONMENT REGION LAHORE; AWARENESS & CURRENT STATUS

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ABSTRACT

Objective: *To determine document the comparison of oral hygiene status amongst different groups of school going children.*

Materials and Methods: *A cross section study was condducted started from march 2017 to May 2017 at contorment region of Lahore. The sample size consisted of 4566 individuals categorized in to two groups; 7-12 years old (n= 4356) & 16-21 years old (n= 210). Examiners were calibrated to perform check up on a modified WHO Oral health assessment forms with dental mirrors in natural daylight. Oral hygiene, gingivitis & calculus were the recorded measures. Another parameter measured was bleeding gums with a simple yes & no answer amongst the two age groups. The students were given dental hygiene awareness & subsequently referred for treatment. Chi square test was used to check association. SPSS version 20 was used for analysis.*

Results: *Out of total 4556 students, 7-12-year-old group 1416 (33.40%) were marked with good oral hygiene with proper maintenance, 1828 (43.10%) had fair oral hygiene with occasional mild staining while 994 (23.50%) were categorised with poor oral hygiene with occasional brushing. In the 16-21 year old age category, a total of 202 students were checked. Amongst them, 41 (20.30%) fell in the good hygiene category, 136 (43.10%) had fair oral hygiene while 25 (12.40%) were categorized as having poor oral hygiene. Most of the students in 7-12 years' age group had no bleeding gums. (p-value <0.001). There was association between calculus and age group (p-value < 0.001).*

Conclusion: *High level of unmet dental health care still exists in Lahore as reflected by the comparison groups by their poor oral hygiene.*

Keywords: *Students, Oral Hygiene, Calculus, Gingivitis*

INTRODUCTION

Good oral hygiene is an important factor in maintaining an optimum oral health.[1] Oral health plays an integral part in general health and poor oral health can have adverse effects on general health.1 Oral self-care practices have been proved to be an effective preventive measure at individual level for maintaining good oral health.[2]

The pattern of health behaviour contributes to the variation of disease among individuals exposed to similar environmental risk factors for a disease.[2] One of the underlying factors that influence the pattern of health behaviour is individual's concern about their health.[3] The WHO global review of Oral Health ascertained that despite emphasis on greater improvement in oral health of population in several countries, dental problems persist especially in

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underprivileged populations in both developed and developing countries.[4]

There has been a marked improvement in the oral health of children in the last 20-30 years, nevertheless children hold the highest dental caries burden in the developing countries.[5] Documentation of the oral hygiene status of young children plays a significant role in the development of oral health policies, strategic plans, monitoring and surveillance systems for oral health.[5] Oral health programs have specific goals to achieve, as they seek to prevent the initial occurrence of the disease (Primary prevention) and at the same time they aim to diagnose and arrest the infection through early detection and care (Secondary prevention).[6]

The change to healthy attitude and practice can be brought about by spreading awareness, giving adequate information, motivation and practice guidelines to the subjects.[6] In order to spread such health education, the assessment of knowledge, attitude and practice is essential.[7] Due to the lack of data on oral health issues in Pakistan, there is a need to conduct more school based or community-based surveys in this regard.[8,9] Therefore, the aim of this study was to compare the levels of cleanliness as a measure of oral hygiene status of 7-12 years and 16-21 year-old group of children amongst schools in cantonment region of Lahore, Pakistan.

MATERIALS AND METHODS

The descriptive cross sectional study was carried out amongstvarious school in the cantonment region from March 2017 to May 2017. Ethics approval was obtained from the review committee Institute of Dentistry, CMH Lahore Medical College. Examiners were calibrated for examining 4566 students ranging from 7 to 12 years and 16 to 21 years of age after obtaining prior informed verbal consent from the principle/headmaster of the schools. The examination was performed with a dental mirror under a sunlight. All instrumentswere brought back to the dental clinic, washed, and sterilized in an autoclave. The examination was performed with a dental mirror under day lightand data was recorded on a modified WHO oral health assessment form.Two senior faculty members headed the team, if any researcher was in doubt, any of the two supervisors was called in to confirm the diagnosis. Children examined were handed a report page highlighting the caries, oral hygiene and treatment required. They were given oral hygiene instructions and demonstrations on proper brushing techniques. Medline, ISI web of knowledge and Google Scholar were used to search the databases.

Data was analysed using SPSS version 23 (IBM SPSS). Mean DMFT scores, frequencies of DMFT with genders, needs filling according to ages. Statistical significance was set at <0.005. All age group students (male & female) of 10 Army schools in Lahore were included while mentally, physically, handicapped, medically compromised patients, e.g. suffering from leukaemia, haemophiliac etc were excluded.

RESULTS

Out of total 4556 students, in 7-12-year-old group in oral hygiene status measured in good, fair and poor, 1416 (33.40%) were marked with good oral hygiene with proper maintenance, 1828 (43.10%) had fair oral hygiene with occasional mild staining in one or a few teeth while 994 (23.50%)were categorised with poor oral hygiene with occasional brushing.(Table: 2)In the 16-21 year old age category, a total of 202 students were checked. Amongst this group, 41 (20.30%) fell in the good hygiene category, 136 (43.10%) had fair oral hygiene while 25 (12.40%) were categorized as having poor oral hygiene. (Table: 2)

In 7-12 year olds (n=4356) 161 (3.70%) reported with bleeding gums while the remainder 4195 (91.87%) reported with no bleeding gums. (Figure: 1) In the 16-21 year old category (n=210), 28 (13.30%) reported bleeding gums while 182 (86.70%) had no bleeding gums issues.(Figure: 1)The association between age group and oral hygiene was statistically significant (p-value < 0.001). (Table: 1)

Comparison of age group with dental calculus deposition revealed that in 7-12 year old age group (n= 4356) 433 (9.90%) had deposits of calculus while 3923 (90.10%) had no calculus. In the 16-21-year-old category (n=210), 143 (68.10%) had no deposits while 67 (31.90%) had dental calculus present in the oral cavity (Table: 1).

Last but not the least, study sample participants who required dental scaling with a yes and no answer were also caliberated.In the 7-12 age group (n=4356) 3605 (82.80%) were plaque and calculus free thus did

not require scaling while the remainder 751 (17.20%) required scaling. In the 16-21 age group (n=210) 107 (51%) was prescribed scaling for either gingivitis of calculus deposition whereas 103 (49 %) had no problems. (Table:1) The association between age group and need of scaling was statistically significant (p-value <0.001). (Table:1)

DISCUSSION

Upkeep of oral cleanliness is known as an indispensable part of the oral wellbeing.10 As poor oral cleanliness prompts accumulation of dental

Table: 1 Comparison of Age-group According to Bleeding Gum, Calculus and Need for Scaling

Bleeding Gum				Calculus			Need Scaling		
Age group	No	Yes	P Value	No	Yes	P value	No	Yes	P Value
7-12	4195	161	<0.001	3923	433	<0.001	3605	751	<0.001
	96.3%	3.7%		90.1%	9.9%		82.8%	17.2%	
16-21	182	28		143	67		103	107	
	86.7%	13.3%		68.1%	31.9%		49%	51%	
Total	4377	189		4068	498		3708	858	
	95.9%	4.1%		89.1%	10.9%		81.2%	18.8%	

Most of the students in 7-12 years' age group had no bleeding gums. The difference was statistically significantly different (p-value <0.001). There was association between calculus and age group (p-value < 0.001)

Table: 2 Comparison of Age group according to Oral Hygiene

Age group	Poor	Good	Fair	P value
7-12	994	1416	1828	<0.001
	23.5%	33.4%	43.1%	
16-21	25	41	136	
	12.4%	20.3%	67.3%	
Total	1019	1457	1964	
	23.0%	32.8%	44.2%	

The association between age group and oral hygiene was statistically significant (p-value <0.001)

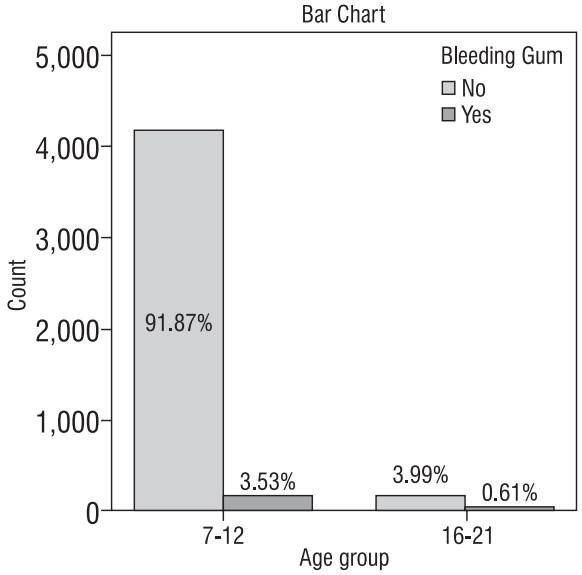

Fig 1: Illustrating bleeding gums amongst two different age groups

plaque, which can cause gingivitis that is portrayed as gingival aggravation without distinguishable loss of bone or clinical connection and is normal among youngsters.[10,11] The relationship between age and oral hygiene is statistically significant. Younger age group tend to neglect the daily brushing habit. The older age group are aware of the importance of oral health thus maintain proper hygiene.

Bleeding gums were reported more in the 7-12-year-old than the 16-21-year-old counterpart. As mentioned above, the oral hygiene awareness and practicesare the most likely reasons of no bleeding in adolescent age in comparison with the young age.

Dental calculus is formed by hardened plaque due to neglecting brushing for few days.[11,12] In our study sample more individuals were in fair oral hygiene category depicting that brushing once a

day was practised. Calculus formation was mostly present in oral cavity marked as poor oral hygiene.

CONCLUSION

High level of unmet dental health care still exists in Lahore as reflected by the comparison groups by their poor oral hygiene. In 7-12-year-old, the prevalence of gingivitis and poor dental hygiene.

In 16-21-year old group reported with calculus and gingivitis. Further reduction in disease is linked with periodic oral awareness programs being conducted regularly to update individuals/students in proper brushing technique using cleaning aides (e.g., dental floss and mouthwashes).

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