



ASSESSMENT OF ORAL HYGIENE KAP AMONG SCHOOL GOING CHILDREN AGED 8-14 YEARS IN MEERUT, UTTAR PRADESH, INDIA.

Dental Science

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ABSTRACT

Aim: The study was conducted to Assess the Oral hygiene KAP among 8-14 years old, School Going children in Meerut, Uttar Pradesh, India.

Materials and Methods: The study was conducted among selected schools in the age group of 8-14 years. About 500 children were selected both males and females through Cluster sampling, The children's answered questionnaire regarding oral Hygiene KAP among school going children.

Results: Overall the level of knowledge score was statistically significant with $P = 0.001$. There was statistically significant difference with $P = 0.001$. Data collected regarding oral Hygiene KAP had been subjected for Statistical Analysis using SPSS Statistical Software 22.0 Chicago Inc. When comparing it was observed that statistically significant difference with $P < 0.001$ was found.

Conclusion: The overall level of oral health knowledge among the surveyed children was low.

KEYWORDS

INTRODUCTION

Oral Health is an integral part of General Health and well-being and is a fundamental human right without distinction of race, religion and political belief, economic and social condition. A healthy mouth enables an individual to talk, eat and socialize without experiencing active disease and discomfort. Health is defined as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Children spend most of their time in school (7-8 hours) and the school is an ideal place for learning and growing up^[1,2]. Oral Health status of an individual, special groups and general population depends on nutritional status and can be determined by various factors like life style, Dietary habits, socio-economic conditions, occupational environment and the quality of life is reduced due to loss of teeth and intraoral diseases^[3,4]. Poor oral health has proven to have unfavourable effects on general health and maintaining hygiene of one's own and also of the surroundings helps in creating a healthy environment for the whole society^[5]. Hence the current study was planned to provide the baseline data regarding Oral Health status and the factor effecting it with the aim of knowing their awareness level regarding Oral Health.

MATERIALS AND METHODS

The study was approved by Institutional Review Board and permission to conduct the study was given by the Ethical committee of the institution. The Study work was carried out in 8-14 years old school going Children in Meerut, District, Uttar Pradesh. Through Cluster sampling, the number of 500 children had been selected. Self structured questionnaire used by Al-Omiri MK, Al-Wahadni, Saeed KN^[6]. The data collected had been subjected for statistical analysis using Statistical Package for Social Sciences version 22.0 Chicago Inc.

Children's Oral Health Survey Questionnaire

Q1. What do you use for cleaning your teeth?

1. Toothbrush + toothpaste.
2. Dental floss.
3. Mouthwash.
4. Toothpicks.
5. Finger

Q2. What type of tooth brushing methods do you employ?

1. Vertical
2. Horizontal
3. Combined

Q3. How often do you brush your teeth?

1. Once per day.
2. Twice per day.
3. More than twice per day.

Q4. When do you brush your teeth?

1. Morning.
2. Afternoon (after lunch).
3. Before going to bed.
4. Other times (specify)

Q5. For how long do you brush your teeth?

1. Less than one minute.
2. One minute.
3. Two minutes.
4. More than two minutes.

Q6. My parents...

1. Watch me while brushing my teeth.
2. Do not watch but advise me.
3. Never cared.
4. Only my mother watches me.

Q7. Do you experience gum bleeding while brushing your teeth?

1. Yes
2. Sometimes
3. Never

Q8. What do you do when your gums bleed?

1. I stop brushing my teeth
2. I brush slowly
3. I visit a dentist

Q9. How often do you visit your dentist?

1. Regularly every 6-12 months.
2. Occasionally.
3. During dental pain.
4. Never visited a dentist.

Q10. When you last time visited a dentist?

1. Six months ago.
2. Last 6-12 months.
3. Last 1-2 years.
4. Last 2-5 years.
5. More than 5 years.

RESULTS

The study was conducted to Assess the Oral hygiene KAP among 8-14 years old, School Going children in Meerut, Uttar Pradesh, India. About 500 children were selected both males and females through Cluster sampling. The children answered questionnaire regarding oral Hygiene KAP as shown in table1 to table 10.

Tab.1 What do you use for cleaning your teeth							
	Toothbrush + toothpaste	Dental Floss	Mouthwash.	Toothpick	Finger	Chi Square Value	P value
Meerut	264	95	67	37	37	103.12	0.001
	52.9%	19.0%	13.2%	7.4%	7.4%		(Significant)

Tab.2 What type of tooth brushing methods do you employ?					
	Vertical	Horizontal	Combined	Chi Square Value	P value
Meerut	151	206	143	19.38	0.001
	30.3%	41.1%	28.6%		(Significant)

Tab.3 How often do you brush your teeth?					
	Once per day	Twice per day	More than twice	Chi Square Value	P value
Meerut	168	194	138	32.33	0.001
	33.3%	38.9%	27.6%		(Significant)

Tab.4 When do you brush your teeth?						
	Only Morning.	Afternoon (after lunch).	Before going to bed	Other Times	Chi Square Value	P value
Meerut	204	137	110	49	80.531	0.001
	40.7%	27.5%	22.0%	9.8%		(Significant)

Tab.6 Parental supervision...						
	Watch me while brushing my teeth	Do not watch but advise me	Never Care	Only My Mother watches me	Chi Square Value	P value
Meerut	190	186	103	21	39.994	0.001
	37.9%	37.3%	20.6%	4.2%		(Significant)

Tab.7 Do you experience gum bleeding while brushing your teeth?					
	Yes	Sometimes	Never	Chi Square Value	P value
Meerut	192	212	96	132.641	0.001
	38.3%	42.5%	19.2%		(Significant)

Tab.8 What do you do when your gums bleed?					
	Stop brushing my teeth	Brush slowly	Visit a Dentist	Chi Square Value	P value
Meerut	199	209	70	51.435	0.001
	39.9%	41.9%	18.2%		(Significant)

Tab.9 How often do you visit your dentist?						
	Regularly every 6-12 months	Occasionally.	. During dental pain	. Never visited a dentist.	Chi Square Value	P value
Meerut	138	124	138	100	184.61	0.001
	27.7%	24.8%	23.0%	24.5%		(Significant)

Tab.10 When you last time visited a dentist?							
	Six months ago	Last 6-12 months	Last 1-2 years	Last 2-5 years	More than 5 years	Chi Square Value	P value
Meerut	141	110	106	81	62	152.72	0.001
	28.3%	22.0%	21.2%	16.2%	12.3%		(Significant)

DISCUSSION

In the present study regarding the oral health of children, 52.9%, 19.0% and 13.2% used to clean their teeth by using tooth brush and tooth paste followed by dental floss and mouthwash. Whereas similar results were reported by WHO (83%) and Puntha and Sivaprakasam (62.9%), in a rural population in Uttaranchal state and Kanchipuram district respectively [71,8]. This results is not in accordance with that of the study by Mahesh Kumar et al in Chennai, where in his study sample some of the children resorted to the use of charcoal as a medium to brush their teeth than the tooth brush [9]. Usage of other oral hygiene aids was found limited. Similar results have been reported by Priya et al in 2013 [4]. 7.4% children used toothpick to clean their teeth and it was seen 5% used wooden sticks and toothpicks to clean their teeth as the study done in 2016 by Bashir R et al in Pakistan [5]. While in the present study 7.4% used fingers to clean their teeth. In case of method of brushing it was seen that 30.3% used Vertical method to brush their teeth and 41.4% participants followed Horizontal method of tooth brushing. 28.6% children followed combined method to clean their teeth while brushing. Mumghamba EGS et al done a study in which horizontal technique (75.2%) that was commonly practiced and the least practiced technique was the vertical (22.8%) and combined technique (0.6%) [5]. In this study 33.3% of the participants performed the recommended practice of brushing their teeth once a day and was similar to the study done Jordanian children by Al-Omiri MK et al, where majority of them brushing once per day [6]. It was reported by Harikiran AG et al in 2008 that 38.5% brushed their teeth two or more times a day [10]. In contrast, King A and Petersen BE found that a high percentage [42%] of the sample they studied in north eastern Ontario used dental floss [11,12]. In the present study 38.9% performed the recommended practice of brushing their teeth twice a day. This is similar to that observed in some industrialized countries of East Europe [13,14] but low when compared to Western industrialized countries [13,14]. Harikiran et al done a study in which 38.5% children

brushes twice a day [10] and WHO study (49%) [7], although this effort was not fully supported by parents since most of them advised and never observed their children during brushing. These findings agree in part with Ali MS et al who reported 51.5% children brush once daily and 42.6% brush twice daily [12] and Prasad et al reported 66.9% children brush once and 30.7% brush twice daily in Tamil Nadu, India [14]. About 46.0% of the subjects used to brush for less than one minute, while 22.4% children's used to brush one minute. In this study it was seen 27.6% children's used to brush more than two minutes. In the present study it was reported that 40.7% children used to brush their teeth in morning which was less (81.6%) as compared to the study done by Bashir R et al in 2016 Karachi, Pakistan [5]. 27.5% children used to brush their teeth in afternoon. While 22.0% preferred to brush before going to bed and 9.8% children used to brush other times. According to AAPD, the first dental visit should be with the eruption of the first primary tooth and no later than twelve months of age [15]. The parental supervision during brushing was found 37.9% and 37.3% parents don't watch their children's during brushing but advice that daily brushing prevents tooth decay while 20.6% parents never cared about their children during brushing, hence the overall effort was not fully supported by the parents. In the present study about 26.9% of the children visit a dentist due to family advice while 20.2% children visit a dentist due to dentist advice. Barker and Horton done a study on pre-school children in California showed that parents played a major role in influencing their children's oral health and access to care [16]. Al-Darwish MS in 2016 reported that parents were the most popular 69.1% source of oral health knowledge information for children. As children spend most of their daily time with their parents, the optimal way to raise children's dental health awareness would be to furnish accurate information to parents. There is a need, therefore, to increase provision of oral health knowledge information to the parents [17]. About 38.3% of children have gum bleeding during brushing their teeth and it was similar to the study done by Linn [18]. Most of the

children were not aware about bleeding gums and the consequences of dental plaque. Only few children were aware of gingival bleeding as an indicator to periodontal diseases and tooth brushing as a valuable tool to fight against this problem^[19]. Similar study was done by Sharma et al in 2013 in which he reported that the overall prevalence of gingivitis among children was 53.4%^[20]. In the present study 39.9% children's stop brushing their teeth during gum bleeding and 41.9% children's brush slowly during gum bleeding. 18.2% of the children visit a dentist after gum bleeding while brushing their teeth. Nicolas et al^[21]

reported that frequent exposure to dental experiences might be a positive factor in helping to reduce patient's anxiety levels. Previous studies among Jordanians showed that approximately 80% of Jordanian adults and children received dental examinations and treatment on an irregular basis and visited the dentist only for emergencies^[22]. In the present study 24.8% visit a dentist occasionally. The findings from the analysis revealed that the children's visit a dentist due dental complain and it was seen 23.0% visit a dentist due to dental pain, while 24.5% of the children's never visited a dentist. In general, the children have less understanding about major oral diseases, this may be seen in the light of fact about the regular visit to their dentist. According to a study done by Zhu et al 73.6% of the children in China knew that regular dental check-ups are necessary^[23].

Similarly, 71.6% of the children in Chennai agreed with the importance of regular dental visit, but in reality only 19.1% of them practiced it. This scenario observed in Malaysian, Jordanian studies and in study done by Mirza BA et al in Pakistan 2011 reported 57% of high socio-economic school children were only aware of brushing to prevent dental problems^[24,25]. There were 13.4% who would seek dental service only when they suffered from dental pain. It was observed that 21.2% of the subjects visited a dentist before 1-2 years and 16.5% of the children reported that they have visited dentist 2-5 years ago. 12.3% of the children's reported that they have visited dentist more than 5 years ago. Bharathi MP et al in 2012 reported in her study that the majority of the children had never visited a dentist^[26]. The drive for the last visit was due to pain in 32.4% of the children in Chennai, which is less compared with a study done by Punitha and Sivaprakasam among rural children of Kanchipuram where 58.97% of them visited the dentist since they suffered from pain^[8].

CONCLUSION

The current study shows that the knowledge, attitude and practice among school going children about oral health was not satisfactory due to lack of poor oral hygiene practices, lack of parental guidance, socio-demographics with the lack of knowledge and frequent exposure to cariogenic foods. Oral health education programs could be included in school curriculum for the children in order to enhance the awareness among children to impact positive attitude towards oral health..

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