

An Evaluation Of The Level Of Dental Awareness Among The School-Age Population In Central India

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Abstract

Background: It has been reported by professionals in the field of dentistry that the general population pays very little attention to their oral health, despite the fact that having healthy teeth and gums is one of the most important aspects of overall health. If you start taking care of your gums and teeth from a young age, you'll have healthier gums and teeth as you get older. The purpose of this study was to investigate the levels of oral hygiene knowledge and practise held by school-aged children in central India who were between the ages of 10 and 15 years old.

Material and methods: A cross-sectional study was conducted on 879 kids between the ages of 10 and 15; 500 of them (or 56.88 percent) were boys, while 379 (or 43.12 percent) were girls. A self-administered, structured questionnaire in English was used to conduct the survey, which consisted of 20 multiple-choice questions about the manner and method of brushing and flossing teeth, the necessity of rinsing the mouth afterward, the use of dental floss, the frequency of dental visits, the prevention and treatment of tooth decay, and the impact of fluoride on teeth. Student's t-test was used to analyse the differences in mean scores by age and gender, and the chi-squared test was used as a test of significance for the proportions. Descriptive statistics using frequency distribution, mean percentage scores, and standard deviation were also calculated.

Results: The mean percentage knowledge scores were 4.11 ± 1.46 and for practice scores were 4.50 ± 1.365 for all the children. Among the total number of participants(879) , 98.1% of them use tooth brush to clean their teeth and dental floss was found to be used by 35.3% of the participants. The participants of this study show high awareness (66.1%) of the link between oral health and systemic well-being, while only 33.9% of the participants were unaware of this fact.

Conclusion: These results indicate a positive but a low level of oral health awareness among 10–15-year-old school children in Central India. The present study showed the need for the oral health education of the school children aiming at improving oral health knowledge and continuous implementation of school oral health promotion programs.

Keywords: School awareness, School program, School Children

INTRODUCTION

“While the eyes may be the window to the soul, our mouth is a window to our body’s health”.^[1,2] The state of our oral health can offer lots of clues about our overall health. Oral health may be defined as a standard of health of the oral and related tissues which enables an individual to eat, speak and socialize without active disease, discomfort or embarrassment and which contributes to general well being.^[1,3,4] Oral conditions affect 3.9 billion people globally; the global burden of which increased 20.8% from 1990-2010^[5,6]. Dental caries affects 60-90% of school-age children and most of the adults. Periodontal disease is prevalent in 50-90% of adults, becoming severe in 10-15% of them, while gingival diseases occur in majority of children and adolescents^[7,8] In India, dental caries affects more than four fifths of children (6-19years)^[7]. Prevalence of periodontal diseases ranges from 55% in adolescents to 80% in adults^[9]. Adolescence is a stage in which general health is presented at its best, though it is a period of increased risk to oral health because of the greater independence with regards to consumption of sugary foods and a certain revulsion regarding oral hygiene.^[4]

The past fifty years have witnessed a reduction in the severity and prevalence of oral disease among the population of the developed countries whereas there is an up rise in the dental diseases in the developing countries.^[10,11,13] Dental care has been systematically organized to improve dental health attitudes among children and the young in the developed nations.^[10,14] This development has improved children’s dental health and changed the dental caries patterns affecting them.^[10,12,13] But in several developing countries a further improvement in oral health needs to be brought about, which can be achieved by of improving public health measures, coupled with changing living conditions, lifestyles and improved self-care knowledge and practices. It has been found that a considerable number of children in developing countries have limited knowledge of the causes and prevention of oral disease.^[4,16-21] The traditional behavior change model states that imparting knowledge will enhance the attitude and health related behavior. Children can be provided with knowledge that

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enables them to make healthy choices, to adopt a healthy lifestyle and to deal with conflicts. Children are the ideal target group for an early intervention because healthy behaviors and lifestyles developed at a young age are more sustainable.^[4,15] Hence the present study was aimed to assess the oral health awareness, attitude and practice of 10-16 year old school children in central India.

MATERIALS AND METHODOLOGY

In an epidemiological cross-sectional survey, 10-15year old school children of private school, Nagpur, India were examined to assess the dental awareness among them. All the students of 5th to 10th class in school, who were present on the day of data collection, formed the study group. Students who were below ten years of age were not invited to participate in the study as they were too young to understand and complete the questionnaire by themselves. The study sample consisted of 879 subjects. Before starting the survey ethical approval was obtained from the Department of Public health dentistry, Deemed University of Datta Meghe institute of medical sciences of Sawangi, India and official permission was obtained from the authorities (Principal/Director) of VT Convent of Nagpur district, India. Parents' approval and the subject's informed consent were obtained before recruiting the children into this study. A survey form was prepared with help of a self-administered structured questionnaire written in English. Prior to the start of the study, the questionnaire was tested on 50 study subjects. Cronbach's alpha and split-half reliability values for knowledge were 0.762 and 0.646; and for practice were 0.86 and 0.88 respectively. The questions were subsequently revised before commencing the main study, for the better understanding of the students. The revisions were related to clarity of 3 questions of knowledge and 4 questions each from behavior. The results of the pilot study were not included in the main study, only the reliability and validity was assessed. The pilot study subjects did not take part in the main study. The final questionnaire included 20 multiple choice questions. The survey form included the following:

- 1) Oral health knowledge and practice: The assessment of participant's oral health knowledge included 8 questions of the number including method of cleaning teeth, need to rinse mouth, use of dental floss, etc.
- 2) Oral health practices: 12 questions on practices followed towards regular dental visits, treatment of tooth decay, etc

All the children available on the days of survey were asked to respond to each item according to the response format provided in the questionnaire. The response format included multiple choice questions in which the students were instructed to choose only one response from provided list of options. The students received a full explanation of how to fill in the questionnaire. Furthermore, the investigator was always available during the completion of the questionnaire and the participants were encouraged to approach the investigator for clarification of any queries. The students who were asked to fill in the questionnaire without discussion with each other took an average of 20 min to complete the procedure. It was later checked by the investigator that none of the questions were left un-attempted. A total of 879 children of 10-15 years old participated in the survey, of which 500 (56.88%) were boys and 379(43.12%) were girls. No attempt was made to pursue the children absent on the day of investigation.

Statistical analysis:

The data were entered into the MS Excel (MS Office version 2007 developed by Microsoft, Redmond, WA) and Intercooled STATA version 9.2 (StataCorp, TX, USA) was employed to perform statistical analysis. For the purpose of analysis, each correct answer was given score 'one' and wrong and don't know answers were given score 'zero' in the questions included in knowledge and practice sections of the questionnaire.

RESULTS:

This survey was conducted to assess oral health knowledge and practice among 10-15 years old school students of V T Convent, a private school, Nagpur, India. A total number of 879 children were participated in the survey of which 500 (56.88%) were boys and 379(43.12%) were girls. The distribution of the study participants by gender is illustrated in Table 1. The mean percentage knowledge scores were 4.11 ± 1.46 and for practice scores were 4.50 ± 1.365 for all the children.

Brushing: Among the total number of participants(879) , 98.1% of them use tooth brush to clean their teeth while in response to other methods to clean the teeth, 1.0% were using finger, 0.5% using neemstick and 0.5% use other aids. It is also found that 25.8% of them were brushing once a day, 70.0% were brushing twice a day, 3.2% of them brushing after every meal and 1% brushing once in a week. Horizontal method for brushing was used by 32.0% of children while, 17.4 % of children use vertical method, 46% use circular method and 4.7% of children using none of these methods. Majority of the participants (69.2%) did not know that an electronic tooth brush is more effective in cleaning teeth while, 30.8% of them did know that an electronic toothbrush is more effective than a manual toothbrush.

Other oral hygiene aids: When oral hygiene practices were assessed, dental floss was found to be used by 35.3% of the participants and other 64.7% did not use dental floss. 34.1% use floss for cleaning food stuck between their teeth, 56.9% toothpick, 6.8% use finger, 2.2% children do not use any interdental cleaning aids. It is also found that 91.5% of participants clean their tongue while 8.5% of them do not clean while brushing every day whereas 59.7% of children use mouth wash while 40.3% of them do not use it.

Oral hygiene practices:

A majority of the participants (85.7%) rinse their mouth after every meal, while only 14.3% of the students did not follow this practice. According to 37.3% of the population, mouthwash should be used after every meal, 48.5% answered that mouthwash should be used once a day, 7.2% said that mouthwash should be used once a week and 7.1% of the population stated that mouthwash should never be used. Out of them 19.9% answered that mouthwash prevents tooth decay, 17.6% answered that mouthwash prevents bad breath, while 49.8% thought that mouthwash prevents tooth decay as well as prevents foul odor, and 12.6% thought that mouthwash whitens teeth.

Visiting the dentist: Regular dental checkup has significant impact on oral health, 19.8% of the participants had visited the dentist for regular dental checkup once a year, out of them 18.8% had visited twice a year, 7.3% of them visited less than once in a year, 54.2% of them visited whenever needed out of total participants 34.6% children got their teeth cleaned by a dentist 1 year ago, while 25.8%, 12.1 % got their teeth cleaned 1-2 years ago and 3-4 years ago respectively and 27.4 % of the subjects never got their teeth cleaned by a dentist.

Frequency of professional cleaning was assessed and it was found that 27.1% of the population consider it appropriate to get their teeth cleaned by a dentist twice a year, 22.0% get their teeth cleaned once a year, 7.4% answered once in two years for the same question while 43.6% answered that it is appropriate to get their teeth cleaned by a dentist whenever required.

Correlation between oral health and other health conditions: The participants of this study show high awareness (66.1%) of the link between oral health and systemic well-being, while only 33.9% of the participants were unaware of this fact.

Prevention and treatment of dental caries:

It is said that prevention is better than cure, thus knowledge regarding prevention of dental caries is extremely important. When questioned regarding the best method of preventing tooth decay 22.3% of the participants answered limiting sugary snacks, 28.7% of them answered use of fluoridated water and dental fluoride products, 18.3% responded Brushing once a day and 30.7% of the participants did not know the answer. Restoration of caries in deciduous teeth is essential for the prevention of caries in their successors, 54.8% of the participants answered correctly while 45.2% answered incorrectly. Majority of the students (45.5%) answered that calcium makes their teeth stronger and 4.7%, 41.4% gave magnesium and salt as their answers, while only 8.4% of the students were aware of the fact that fluoride present in water helps make teeth stronger.

DISCUSSION:

The intention of this study was to provide systematic information on the oral health awareness (knowledge) and practice of the 10-15 year old school children in Central India. According to the present study 98.1%(862) subjects used tooth brush for cleaning their teeth, which was similar to the study by Bhat.P et al in Bangalore, India; out of which 70%(615) brushed twice in a day ^[22]. The results of the present study were higher than the study conducted by WHO (2008) which showed that 44.4% of the participants brushed their teeth twice a day. ^[23]

The use of dental floss was still not very popular among the secondary school students as evident in this study 35.3%(310) when compared to survey conducted in San Francisco where 75% of the 12-14 years old students use dental floss at least once per day (Walsh, 1985) ^[24] and in Iraq where over half of the students used dental floss once or more a week (Russel *et al.*, 1989) ^[25]; whereas our findings were higher than the findings of Cheah Whye Lian et al, Malaysia (11.5%) ^[26] and also in the study by Bhat.P et al in Bangalore, India (7%) ^[22]. This could be attributed to lack of oral health education via social media and/or cost of such aids. The low percentage of participants who use floss in this study emphasizes the urgent need for educating and motivating the public to use this efficient method for oral health care.

In our study, 54.1%(475) of the students did not know the ideal method to brush their teeth, which is comparable with the study carried out in south India by Kuppuswamy V et al (69%) ^[5]. Lack of parental health education as well as attention towards their child's brushing practice may be the reason for implementation of improper brushing technique. Out of the total number of participants only 8.4% were aware that fluoride helps to strengthen teeth, this was considerably lesser than observed in the study carried out by Manjunath G, Kumar NN in Andhra Pradesh in which 47.2% of the participants were aware about this fact. ^[27] Lack of awareness about the beneficial effects of fluoride on teeth may be due to lack of oral health education and social media.

The awareness among the participants regarding the ideal methods of preventing tooth decay by limiting sugary snacks was 22.3%, using fluoridated toothpaste was 28.7% and brushing teeth was 18.3% in current study, while the scores of the study carried out in Udaipur by Sharada A et al were 34.6%, 12.6% and 40.5% respectively ^[4]. Misconceptions regarding the ill effects of fluoride and fluoride anti-lobbies may be the reason for the limited use of fluoridated toothpastes. Restoration of dental caries in deciduous teeth is extremely important to prevent further spread of caries in

their permanent successors, 54.8% of the participants in the present study agreed with this; while only 38.2% of the participants were aware of it in the study carried out by Ling Zhu et al in China.^[17]

Oral health may be considered as a key to general health; 66.1% of the participants in the present study were aware about the correlation between oral health and general health, the findings were in agreement with the studies carried out in Kuching, Sarawak and Jordan which show that 67.0% and 54.2% of the study participants also agreed for the same^[26, 10]. This may be attributed to the increase in awareness about oral health, general health and their correlation.

It has been proven that professional dental cleaning should be carried out twice a year for maintenance of good oral hygiene. In the current study, the participants who got their teeth cleaned by the dentist in last 1-2 years were 25.8%; which was similar to the findings of Ling Zhu et al in China (22.2%).^[28]

CONCLUSION:

Strong oral health knowledge led to better oral hygiene. By providing sufficient information, motivation, and practise, subjects can adopt healthy habits. The study found that schoolchildren have poor oral hygiene, oral health awareness, and knowledge. These programmes' oral health education would benefit these kids. To change attitudes, parents and teachers need dental care education and motivation. This suggests a school-based oral health education programme for rural schoolchildren, parents, and teachers. Due to certain issues, the evaluation in this study may be invalid. A small, one-school cross-sectional study was conducted. Rural differences were unknown. All study participants were wealthy. This study did not assess participant attitude. Longitudinal research is needed to understand children's oral hygiene and oral health seeking behaviour in different settings.

REFERENCES:

- [1]. Prasad AK, Shankar S, Sowmya J, Priyaa CV. Oral health knowledge attitude practice of school students of KSR Matriculation School, Tiruchengode. J Indian Acad Dent Spec 2010;1:5-10
- [2]. <http://www.wm.edu/offices/hr/benefits/commonhealth/oralhealth/index.php>. Accessed on 09.06.2014
- [3]. Department of health. An oral health strategy for England, London: dept. of health, 1994.
- [4]. Sharda A, Shetty S, Dr. Ramesh N, Sharda J, Bhat N, Asawa K. Oral Health Awareness and Attitude among 12–13-Year-Old School Children in Udaipur, India; INTERNATIONAL JOURNAL OF DENTAL CLINICS 2011 VOLUME 3 (ISSUE 4) Pg16
- [5]. Kuppuswamy V1,2, Murthy S2, Sharma S2, Surapaneni K1,2, Grover A3, Joshi A4. Oral Hygiene Status, Knowledge, Perceptions and Practices among School Settings in rural South India OHDM. March, 2014; Vol. 13 (Issue No. 1) Page no.
- [6]. Marcenes W, Kassebaum NJ, Bernabé E, Flaxman A, Naghavi M, Lopez A, Murray CJL. Global Burden of Oral Conditions in 1990-2010. A Systematic Analysis. *Journal of Dental Research*. 2013; **92**: 592-597.
- [7]. Lin S, Mauk A. Diseases in Rural India. Implementing Public Health Interventions in Developing Countries. 105-129.
- [8]. Al-Mutawa SA, Shyama M, Al-Duwairi, Soparkar P. Oral hygiene status of Kuwaiti school children. *Eastern Mediterranean Health Journal*. 2011; **17**: 387-91.
- [9]. Broadbent JM, Thomson WM, Boyens JV, Poulton R. Dental plaque and oral health during the first 32 years of life. *Journal of the American Dental Association*. 2011; **142**: 415-426
- [10]. Mahmoud K. Al-Omiri; Ahed M. Al Wahadni, Khaled N. Saeed. Oral Health Attitudes, Knowledge, and Behavior Among School Children in North Jordan; JDE Feb 2006; page no. 179
- [11]. Downer MC. The improving oral health of United Kingdom adults and prospects for future. *Br Dent J* 1991; 23:154-8.
- [12]. Burt BA. Trends in caries prevalence in North American children. *Int Dent J* 1994;44:403-13
- [13]. Marthaler T, O'Mullane DM, Vrbic V. The prevalence of dental caries in Europe 1990-1995. *Caries Res* 1996; 39:237-55.
- [14]. Holst D, Schuller A, Grytten J. Future treatment needs in children, adults, and the elderly. *Community Dent Oral Epidemiol* 1997;25:113-8.
- [15]. A.J. Sharda and S. Shetty. A comparative study of oral health knowledge, attitude and behavior of medical non-medical and para-medical students in Udaipur City, Rajasthan, India. *Int J Dent Hygiene*, 2010, 8: 101–109.
- [16]. Al-Tamimi, Petersen PE. Oral health situation of schoolchildren, mothers and schoolteachers in Saudi Arabia. *International Dental Journal*, 1998, 48: 180-6.
- [17]. Petersen PE, Zhou E. Dental caries and oral health behaviour situation of children, mothers and schoolteachers in Wuhan, People's Republic of China. *International Dental Journal*, 1998, 48: 210-6.
- [18]. Rajab LD, Petersen PE, Bakaeen G, Hamdan MA. Oral health behaviour of schoolchildren and parents in Jordan. *International Journal of Paediatric Dentistry*, 2002, 12: 168-76.
- [19]. Petersen PE, Danila I, Samoilă A. Oral health behaviour, knowledge, and attitudes of children, mothers and schoolteachers in Romania in 1993. *Acta Odontologica Scandinavica*, 1995, 53: 363-8.
- [20]. The World Oral Health Report 2003. WHO/NMH/NPH/ORH/03.2, pg no 10

- [21]. Chand S, Hadyait M. Oral Health-Related Knowledge, Attitude, And Practice Among School Children From Rural And Urban Areas Of District Sheikhupura, Pakistan; Pakistan Oral & Dental Journal March 2014 Vol 34 (No1):Pg 109-110
- [22]. Bhat. P , Kumar A, N.C Aruna, Preventive oral health knowledge, practice and behaviour of patients attending dental institution in Bangalore, India; J. Int Oral Health August 2010 Vol2 (Issue 2)
- [23]. WHO (2008). Population nutrient intake goals for preventing diet-related chronic diseases. [Online]. Retrieved Accessed on 09.06.2014 from the world wide web:
http://www.who.int/nutrition/topics/5_population_nutrient/en/index18.html
- [24]. Walsh MM (1985). Effect of school-based dental health education on knowledge, attitudes and behavior of adolescents in San Francisco. *Community Dent Oral Epidemiol*, **13**(3): 143-147.
- [25]. Russel BA, Horowitz AM and Frazier PJ (1989). School-based preventive regiments and oral health knowledge and practices of sixth graders. *J Public Health Dent*, **49**(4): 192-200.
- [26]. Lian C, Phing T, Chat C, Shina B, Baharuddina L, Jalila Z et al. Oral health knowledge, attitude and practice among secondary school students in Kuching, Sarawak; Archives of Orofacial Sciences (2010), 5(1): 9-16
- [27]. Manjunath G, Kumar N N. Oral health knowledge, Attitudes and Practices among school teachers in Kurnool-Andhra Pradesh; Journal of oral health and community dentistry, Jan 2013;7(1)
- [28]. Zhu L, Petersen P, Wang H, Bian J, Zhang B. Oral health knowledge, attitudes and behavior of children and adolescents in China; International Dental Journal 2003, Vol. 53 (issue no. 5)

Table 1: Distribution Of the Study Participants according to Age, Sex and Standard

Sr.No	VARIABLES	STANDARD						TOTAL(Mean±SD)
		5TH STD	6TH STD	7TH	8TH STD	9TH STD	10TH STD	
1	AGE	10YRS n(%)	11YRS n(%)	12YRS n(%)	13YRS n(%)	14YRS n(%)	15YRS n(%)	12.77±1.74
2	SEX :MALE	67(54.03)	70(51.85)	76(57.57)	84(57.93)	82(55.4)	121(59.02)	500(56.88)
	FEMALE	57(45.96)	55(40.74)	56(42.42)	61(42.07)	66(44.59)	84(40.97)	379(43.11)

Table 2: Distribution of knowledge among the participants according to standard/age

QUESTION	5TH STD (10YRS) %(n)	6TH STD (11YRS) %(n)	7TH STD (12YRS) %(n)	8TH STD (13YRS) %(n)	9TH STD (14YRS) %(n)	10TH STD (15YRS)% (n)	TOTAL %(n)
How many times in a day should you ideally brush your teeth?							
a) Once.	2.3(20)	1.5(13)	0.2(2)	1.7(15)	1.6(14)	3.4(30)	10.7(94)
b) Twice	9(79)	10.4(91)	13.7(120)	13.9(122)	13.9(122)	18.7(164)	79.4(698)
c) After every meal.	2.3(20)	2.2(19)	1.1(10)	0.9(8)	1.3(11)	1.3(11)	9(79)
d) Once in few days	0.5(4)	0.2(2)	0(0)	0(0)	0.1(1)	0.1(1)	0.9(8)
Is it essential to rinse your mouth after every meal?							
a) Yes	12.5(110)	11.1(98)	12.6(111)	13.9(122)	13.2(116)	22.3(196)	85.7(753)
b) No	1.5 (13)	3.1(27)	2.4(21)	2.6(23)	3.6(32)	1.1(10)	14.3(126)
How many times should mouthwash be used?							
a) After every meal.	5.5(48)	7.4(65)	5.1(45)	5.1(45)	6.6(58)	7.6(67)	37.3(328)
b) Once a day	5.7(50)	4.9(43)	7.7(68)	8.9(78)	8(70)	13.3(117)	48.5(426)
c) Once a week	1.1(10)	1.1(10)	1.9(17)	1.3(11)	1.3(11)	0.5(4)	7.2(63)
d) Never	1.7(15)	0.8(7)	0.2(2)	1.3(11)	1(09)	2(18)	7.1(62)
4. What constituent of water in limited quantities makes your teeth stronger?							
a) Calcium	8.2(72)	4.8(42)	3.2(28)	9.1(80)	8.8(77)	11.5(101)	45.5(400)
b) Magnesium	0.9(8)	0.2(2)	2.2(19)	0.2(2)	0.8(7)	0.3(3)	4.7(41)
c) Fluoride	0.6(5)	1.1(10)	1.6(14)	1.1(10)	1.4(12)	2.6(23)	8.4(74)
d) Salt	4.3(38)	8.1(71)	8.1(71)	6(53)	5.9(52)	9.0(79)	41.4(364)
What effect does mouth wash have on your oral cavity?							
a) Prevents tooth decay.	4.7(41)	2.6(23)	2.7(24)	3.4(30)	1.3(11)	5.2(46)	19.9(175)
b) Prevents bad breath	1.5(13)	2.2(19)	2.8(25)	3.4(30)	2.9(34)	3.9(34)	17.6(155)
c) Whitens teeth.	3.8(33)	3.2(28)	0.5(4)	1.1(10)	2.8(25)	1.3(11)	12.6(111)
d) Both a and b	4.1(36)	6.3(55)	9.0(79)	8.5(75)	8.9(78)	13.1(115)	49.8(438)
Do you think it is necessary to restore (fill) carious milk teeth?							
a) Yes	6.9(61)	6.9(61)	8.3(73)	8.6(76)	8.4(74)	15.6(137)	54.8(482)
b) No	7.1(62)	7.3(64)	6.7(59)	7.8(69)	8.4(74)	7.8(69)	45.2(397)
Is an electronic tooth brush more effective in cleaning teeth than manual toothbrush?							
a) Yes	67(7.6)	50(5.7)	4.1(36)	3.3(29)	5(44)	5.1(45)	30.8(271)
b) No	56(6.4)	75(8.5)	10.9(96)	13.2(116)	11.8(104)	18.3(161)	69.2(608)
Is there any correlation between oral health and other health conditions							
a) Yes	8.6(76)	7.6(67)	8.2(72)	9(79)	12.7(112)	19.9(175)	66.1(581)
b) No	5.3(47)	6.6(58)	6.8(60)	7.5(66)	4.1(36)	3.5(31)	33.9(298)
In your opinion which one of these is best method for preventing tooth decay							
a) Limiting sugary snacks	3.2(28)	2.2(19)	3.4(30)	3.4(33)	5(44)	4.8(44)	22.3(196)

b)Using fluoridated water and dental fluoride product	3.3(29)	4.0(35)	5.1(45)	5.1(48)	3.5(31)	7.3(62)	28.7(252)
c)Brushing once a day	2.4(21)	2.3(20)	2(18)	2(18)	3.6(32)	5.1(45)	18.3(161)
d) don't know	5.1(45)	5.8(51)	4.4(39)	4.4(39)	4.7(41)	6.3(55)	30.7(270)
How often should you get your teeth cleaned by a dentist							
a)Once a year	3.6(32)	1.9(17)	3.5(31)	2.5(22)	4.3(38)	6(53)	22(193)
b)Twice a year	2.6(23)	4.2(37)	6.1(54)	5.3(47)	4.2(37)	4.6(40)	27.1(238)
c)once in two years	1.3(11)	1.1(10)	1(9)	0.7(6)	1.7(15)	1.6(14)	7.4(65)
d)Whenever needed	6.5(57)	6.9(61)	4.3(38)	8(70)	6.6(58)	11.3(99)	43.6(383)

Table 3: Distribution of Practice among the participants according to standard/age

QUESTION	5TH STD (10YRS) %(n)	6TH STD (11YRS)%(n)	7TH STD (12YRS)%(n)	8TH STD (13YRS)%(n)	9TH STD (14YRS)%(n)	10TH STD (15YRS)%(n)	TOTAL %(n)
With what do you clean your teeth?							
a) Toothbrush.	13.7 (120)	14 (123)	14.6 (128)	16.2 (142)	16.5 (145)	23.1 (203)	98.1 (862)
b) Finger	0 (0)	0.2 (2)	0.5 (4)	0 (0)	0.2 (2)	0.1 (1)	1 (9)
c) Neem stick.	0 (0)	0 (0)	0 (0)	0.3 (3)	0.1 (1)	0 (0)	0.5 (4)
d) Other	0.3 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0.1 (1)	0.5 (4)
	14 (123)	14.2 (125)	15 (132)	16.5 (145)	16.8 (148)	23.3 (205)	100 (879)
How many times in a day do you usually brush your teeth?							
a) Once.	3.3 (29)	3(26)	2.2(19)	2.8(25)	5.8(51)	8.8(77)	25.8(227)
b) Twice	9.4(83)	10.2(90)	11.8(104)	13.4(118)	10.7(94)	14.2(125)	70(615)
c) After every meal.	0.9(8)	0.9(8)	0.7(6)	0.2(2)	0.2(2)	0.2(2)	3.2(28)
d) Once in few days	0.3(3)	0.1(1)	0.3(3)	0 (0)	0.1(1)	0.1(1)	1(9)
How do you brush your teeth?							
a) Horizontal motion.	5.2(46)	6.1(54)	3.8(33)	6(53)	4.7(41)	6(53)	32(281)
b) Vertical motion	3.4(30)	2.6(23)	3.3(29)	1.8(16)	2.4(21)	3.9(34)	17.4(153)
c) Circular motion	4.9(43)	4.3(38)	7.2(63)	8(70)	9.2(81)	12.4(109)	46(404)
d) None of the above	0.5(4)	1.1(10)	0.8(7)	0.7(6)	0.6(5)	4.7(41)	4.7(41)
How often do you visit the dentist for routine dental checkup?							
a) Once a year.	4.2(37)	2.2(19)	3.8(33)	2.7(24)	3(26)	4(35)	19.8(174)
b) Twice a year	2.5(22)	2.6(23)	2.7(24)	4.2(37)	3.6(32)	3.1(27)	18.8(165)
c) Less than once a year	0.2(2)	0.2(2)	3.1(27)	0.7(6)	1.9(17)	1.1(10)	7.3(64)
d) When ever needed	7.1(62)	9.2(81)	5.5(48)	8.9(78)	8.3(73)	15.1(133)	54.2(476)
Do you use dental floss?							
a) Yes	6(53)	5.1(45)	5.7(50)	6(53)	4.4(39)	8(70)	35.3(310)
b) No	8(70)	9.1(80)	9.3(82)	10.5(92)	12.4(109)	15.4(135)	64.7(569)
Do you use mouth wash?							
a) Yes	8.5(75)	8.6(76)	9.8(86)	11.4(100)	9.6(84)	11.7(103)	59.7(525)
b) No	5.5(48)	5.6(49)	5.2(46)	5.1(45)	7.3(64)	11.6(102)	40.3(354)
Do you clean your tongue along with brushing your teeth everyday?							
a) Yes	12.9(113)	13.2(116)	13.8(121)	15.4(135)	15.6(137)	20.6(181)	91.5(804)
b) No	1.1(10)	1(9)	1.3(11)	1.1(10)	1.3(11)	2.7(24)	8.5(75)
How do u clean food stuck in between your teeth							
a)Floss	3.5(31)	4.4(39)	5.5(48)	5.2(46)	6.9(61)	8.5(75)	34.1(300)
b)Toothpick	8.9(78)	8.6(76)	6.7(59)	10.5(92)	8.1(71)	14(123)	56.9(500)
c)Finger	1.1(10)	0.9(8)	1.9(17)	0.7(6)	1.5(13)	0.7(6)	6.8(60)
d)Don't clean	0.5(4)	0.2(2)	0.9(8)	0.1(1)	0.3(3)	0.1(1)	2.2(19)
When was the last time your teeth were cleaned by the dentist?							
a) Less than 1 year ago	4.2(37)	4.1(36)	5.8(51)	5.1(45)	6(53)	9.3(82)	34.6(304)
b) 1-2 year ago	3.8(33)	3.8(33)	4.8(42)	5(44)	3(26)	5.6(49)	25.8(227)
c) 3-4 years ago	1.8(16)	1.8(16)	1.9(17)	2(18)	1.8(16)	2.5(22)	12.1(106)
d) Never	4.2(37)	4.6(40)	2.5(22)	4.3(38)	5.9(52)	5.9(52)	27.4(241)