Knowledge, Attitude, and Practices of Mothers Related to their Oral Health Status of 6-12 Years Old Children in Bhilai City, Chhattisgarh, India

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Abstract

Aim and Objectives: The aim of the study was to assess the oral health status of 6-12 year old children and their mother's knowledge, attitude, and practices in Bhilai city. Moreover, this study was also carried out to determine whether mother's oral health related knowledge, attitude, and practices have a significant influence on the oral health of their children. **Materials and Methods:** A cross- sectional study was conducted among children (n=600) aged between 6-12 years, attending both government and private schools accompanied with their mothers in Bhilai city. The oral health status of the children was evaluated by using WHO Oral Health Assessment Form (2013). The parents were then asked to fill 25 item based on self-administered questionnaire. Mother's knowledge, attitude, and practices were assessed by direct contact with mothers using close ended questionnaire. Statistical Analysis: The data was then entered and analysed using SPSS (Statistical Package for Social Sciences, SPSS Inc., Chicago, IL, USA). Also, p value≤ 0.05 was considered to be statistically significant. **Results:** The result of the study showed that 90% of mothers had good knowledge, 75% mothers had average attitude, and 51% mothers had high level practices related to oral health. An inverse relationship was found between children's oral health status and their mother's knowledge, attitude, and practices about oral health. Thus, the findings were highly significant. **Conclusion:** Results showed that mother's oral health related to knowledge, attitude, and practices had a significant impact on oral health status of their children.

Keywords: Knowledge, Attitude, Dental Caries, Practice, schools, Mothers

Introduction

"Make every mother and child count" was the World Health Day theme for the year 2005. They count because we value every human life (WHO, 2005). Healthy mothers and children are the backbone of healthy societies and nations. To reduce sufferings and death, we must use effective knowledge and equipments. Oral health is an essential part of general health and we can say that oral cavity is the archway of the body (Erickson et al., 1997).

One of the health objectives set by the US Department of Health and Human Services states that "by 1990, at least 95% of school children and their parents should be able to identify the principle risk factors related to dental diseases and be aware of the importance of fluoridation and other measures in controlling these diseases." (USDHHS, Public health services, Promoting health /preventing disease. Objectives for nation, Washington DC, Government printing office, 1980:54). In the life of a child, healthy mouth and dentition plays a very important role, as it helps in intake of nutrition, provides an interactive means of showing happiness and sadness, and it also allows proper verbalization. Therefore, a healthy mouth with full adjunct of teeth should be the main objective for all children (Kumar et al., 2005).

Children constitute an innocent and considerate component of the society. As a result, society should give oral health care prime importance as it determines the oral health status of the next generation. Childhood is an important period of life that needs to be monitored closely so that the child will grow up healthy (Mani et al., 2010). As a child spends majority of time with their mother, she becomes the primary role model for the children. The mother's health beliefs and attitude towards the oral health care of their children acts as a significant predictor of the child's oral health. Moreover, in school aged children, poor oral health has been related to decreased school performance. The commonest diseases found in children like early childhood caries and periodontal diseases are preventable and strongly influenced by the life style of the children (Peterson et al., 2004).

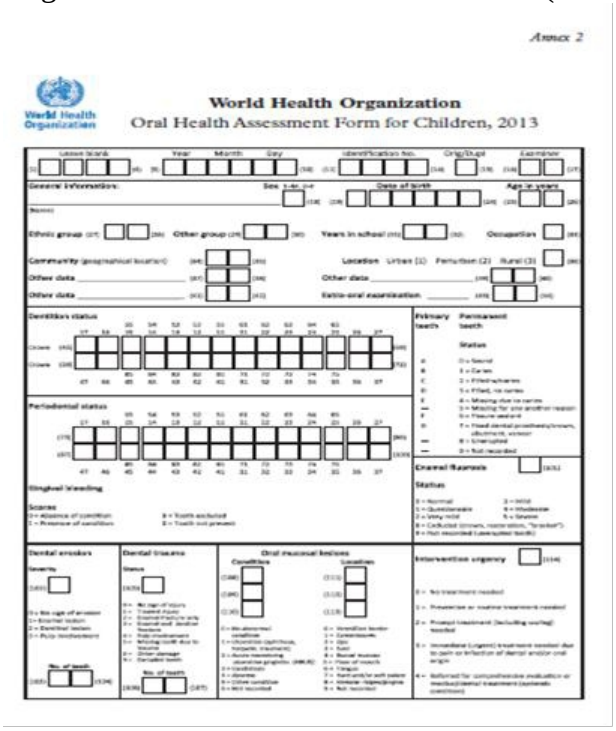
Parental knowledge, attitude, and beliefs have a significant effect on the child's oral health. Parents are the decision-makers for their children. Oral health status of the child is affected by mother's attitude towards dental health. A positive attitude of the mother will result in better oral hygiene of their children (Peterson et al., 2004). Maternal attitude are likely to modify the child's behavior and thus play an important role in healthy oral hygiene practices (Pullishery et al., 2013).

American Academy of Pediatric Dentists (AAPD) and American Dental Association

(ADA) has made guidelines for the prevention of dental caries and the maintenance of child's oral hygiene practices. These includes first dental visit of child within six months of eruption of first primary tooth, twice daily brushing, and limited snacks in between meals (AAPD Reference manual, 2002-03, Cleaning your gums and teeth, Oral Hygiene, Chicago, IL: ADA; 2005). Child's oral hygiene patterns are affected by socio- economic status and mother's oral hygiene behavior. Mother's oral health status and her health beliefs have a significant effect on their children's oral health status. Many factors are responsible such as gestational component, oral hygiene, diet, frequency of dental appointments, parent's anxiety/ nervousness, lower educational level of mothers, child's temperament towards the dental appointments (Costa et al., 2012).

Materials and Methods

A descriptive cross sectional study was conducted to assess the oral health status of 6-12 year old children and their mother's oral health related knowledge, attitude, and practices in Bhilai city. For this study, data was collected from 600 children under the age of 6-12 years attending various schools in Bhilai city, Chhattisgarh. The oral health status of the children was evaluated by using WHO Oral Health Assessment Form (2013).


Annex 2

World Health Organization

Oral Health Assessment Form for Children, 2013

Figure 1. WHO Oral Health Assessment Form 2013

Before the data collection, the purpose and the methodology of the survey was explained to the teachers and parents. Institutional consent was taken from the head of the institutions where the study was conducted. School dental check-up camp was conducted. The study was carried out on mothers and their children under the age group of 6-12 years. Patient's parent/school consent was taken prior to the commencement of the study.

The examiner visited the schools on the predetermined dates according to the schedule with the help of a trained recorder. The sample consisted of 600 children. A self- administered questionnaire was prepared in the local language, Hindi and English respectively. Survey contained questionnaire with 3 parts: knowledge, attitude, and practices of mothers. The questionnaire was close ended having multiple choices. While participants filled the questionnaires, they were inspected by one examiner, but no hints were given by the examiner. The participants were given all the details regarding the aim and objectives of the study. All the participants were assured that all information belonging to them would be kept confidential.

Statistical Analysis

All the collected data was entered into the Microsoft Office Excel Sheet 2007 version. Also, the data obtained was analyzed using the SPSS (Statistical Package for the Social Sciences) version 16.0 for the descriptive analyses and statistical significance. Descriptive statistics, frequency distribution tests, and chi- squared analysis were employed. Confidence was kept at 95% and p value≤ 0.05 was considered to be statistically significant.

Results

Table 1. Age wise Descriptive Statistics

Age Group	**Sex**		**Frequency**	**Percent**
	Male	**Female**		
6	40	58	98	16.3
7	60	30	90	15.0
8	38	38	76	12.7
9	28	40	68	11.3
10	72	54	126	21.0
11	38	38	76	12.7
12	38	28	66	11.0
Total	314	286	**600**	**100.0**

Table 2. Gender- wise distribution

Table 2 : Gender -wise Descriptive statistics		
Sex	**Frequency**	**Percent**
Male	314	52.3
Female	286	47.7
Total	**600**	**100.0**

Table 3. Knowledge of mothers about their child's oral health

Sr. No.	Questions	Responses		
		Yes	No	Don't Know
1.	Do you know your teeth is an important part of your body?	596	4	0
2.	Do you think children should have their teeth brushed by an adult until they are in preschool?	582	18	0
3.	Do you know that some toothpaste contains fluoride?	360	118	122
4.	Do you know that using fluoridated tooth paste is good for your children's teeth?	338	116	146
5.	Do you think that consumption of snacks like candies and cookies that stick to teeth will cause dental decay?	582	10	8
6.	Do you think that pain and loss of teeth due to dental caries in certain teeth can be prevented by sealing at early stage?	514	28	58
7.	Do you think that Dentist play an important role in the prevention of oral diseases?	580	4	16
8.	Do you think that is it necessary to go for dental check-up?	522	54	24

Table 4. Attitude of mothers about their children's oral health

Table 4. Descriptive statistics of Attitude					
Sr. No.	Questions	Responses			
		Strongly agree	Agree	Disagree	Strongly disagree
1.	Do you think it is good oral health is related to the general health of your child?	380	194	20	6
2.	Do you think that it is necessary to clean the child's teeth after every meal?	326	220	54	
3.	Do you think that cleaning of the child's teeth should be guided by mother?	454	142	4	
4.	Do you believe that milk teeth are essential for children to chew food properly?	376	190	14	20
5.	Do you think that by brushing and flossing your child's teeth will help in preventing tooth decay?	346	236	8	10
6.	Do you think that milk teeth do not require good care as it is going to fall away?	444	144	6	6
7.	Do you think that is it necessary to take your child for regular dental visits?	382	174	34	10
8.	Do you believe that visiting the dentist is only necessary only when your child experiences pain?	170	132	204	94

Table 5. Practice of mothers about their children's oral health

		Responses				
Sr. No.	**Question**	**Soon After First Milk Tooth Had Been Erupted**	**After 4-6 Milk Teeth Had Erupted**	**After All Milk Had Been Erupted**	**After First Birthday Of Your Child**	
1	**When did you commence the cleaning of your child's teeth**	**86**	**256**	**136**	**122**	
	Question	**Finger**	**Tooth Brush**	**Twig**	**Any Other**	
2	**Which of the following aids do you use to clean your child's teeth?**	32	564	4	--	
	Question	**Once A Day**	**Twice In A Day**	**Sometimes A Week**	**Never**	
3	**Do you use tooth brush and fluoridated tooth paste for tooth brushing?**	134	406	6	60	
	Question	**Up- Down**	**Sideways**	**Circular Motion**	**Not Particular**	
4	**Which motion do you use to brush your child's teeth?**	388	148	32	32	
	Question	**yes**	**no**	**never**	**----**	
5	**Do you ask your child to rinse his mouth after each meal?**	496	66	38	---	
	Question	**once in 15 days**	**once in a month**	**every 2-3 months**	**once the bristle frays out**	
6	**When do you change your child's toothbrush?**	64	316	184	36	----
	Question	**With Meals**	**In Between Meals**	**Before Going To Bed**	**Not Particular**	
7	**At what times do you give the sugary food items to your child?**	104	56	34	406	----
	Question	**6 Months After Birth**	**After The Eruption Of First Milk Teeth**	**1 Year After Birth**	**His First Dental Visit**	**Only When There Is Any Problem**
8	**When was your child's first dental visit?**	12	22	42	170	354
	Question	**Once Every 6 Months**	**Once In A Year**	**Only When There Is Pain**	**Never**	
9	**When do you take your child to visit the dentist?**	**80**	**64**	**410**	**46**	

Discussion

Distribution of Study Subjects according to Age

In the present study, **Table 1** shows descriptive statistics for the age-wise distribution of study subjects. The frequency distribution table shows the study sample 600(100%) consisted of school children out of which 6 years 98(16.3%), 7 years 90 (15.0%), 8 years 76(12.7%), 9 years 68(11.3%), 10 years 126(21.0%), 11 years 76(12.7%), 12 years 66(11.0%) participated respectively.

Ideally, children should be examined between their 5th and 6th birthdays. This age is of interest in relation to the level of caries in primary dentition which might result to changes within a short time span. It is also the age at which the child starts primary school. In countries where school entry is deferred to 6 or 7 years of age, these ages can be used, although the mean

age should be reported with the results. Twelve years is the global monitoring age for dental caries. Oral health of 12 year old children is the entity of several epidemiological studies conducted around the world. According to World Health Organization (WHO, 2013), this age group is important because it is the age that children leaves primary school. Thus, in many countries, it is the last age in which data can be easily obtained through reliable sample of the school system. For these reasons, children aged 12 years have been chosen as the global indicator age group for international comparisons and surveillance of disease trends.

Distribution of Study Subjects according to Gender (Table 2)

It shows gender- wise distribution among the total study population. Out of 600 school children, there were 314(52.3%) males and 286(47.7%) females.

Descriptive Statistics about Mother's Knowledge about Oral Health (Table 3)

The oral health knowledge of parents/mothers stipulates the oral health and related habits of the children during infancy. Hence, it is maintained throughout the preschool years. Parents, especially mothers, play a major role for their children. There are very scarce data for the oral health of the children during the early childhood period in developing countries. A better understanding of mother's knowledge, attitude, and practices is necessary for the effective enforcement of oral health promotion efforts aimed at improving the dental health of preschool children (Chhabra & Chhabra, 2012).

In this study, almost all mothers knew that the teeth is an important part of body (99%), 97% mothers agreed that children should have their teeth brushed by an adult until they are in pre-school, and 77.3% mothers knew that children get two sets of teeth in their life. These findings were similar to studies done by Suresh et al. (2010) and Kumar et al. (2005). Thus, they also reported that mothers had enough knowledge about the importance of primary teeth.

60% mothers knew that some toothpaste contains fluoride and 56.3% mothers agreed that using fluoridated toothpaste is good for their children's teeth. This means half of the mothers had knowledge about the benefits of fluoridated tooth paste for their children. These results are in accordance with studies done by Suresh et al. (2010) and Isong (2012). In the present study, 97% mothers thought that consumption of sticky snacks like candies and cookies will cause dental decay. The result of the current study also revealed similar findings with studies done by Mohiuddinn, Sadaat, and Qureshi (2011) and Mani et al. (2010), whereby 99% mothers had the knowledge

about the cariogenicity of sugary food. On the contrary, a study showed that Mexican, American, and Latino mothers had limited depth of knowledge about cariogenicity of sugary food. 85.6% mothers agreed that pain and loss of teeth due to dental caries in certain teeth can be prevented by sealing at an early stage. Similar findings were seen in a study conducted by Kawashita et al. (2011). They concluded that dental caries is a curable disease, and it can be arrested and even potentially altered at its initial stages. In the present study, 96.6% mothers believed that dentist play an important role in the prevention of oral disease, while 87% believed that one should visit the dentist for their dental check- up.

Descriptive Statistics about Mother's Attitude on Oral Health (Table 4)

In the present study, 63.3% mothers strongly agreed that good oral health is related to general health. Children showed positive attitude towards their dentist and high awareness of the link between oral health and general health. Similar findings were seen in studies done by Mirza et al. (2011), Al-Omiri and Al- Wahadni (2006), and Smyth et al. (2007).

In the present study, 75.6% mothers strongly agreed that it is important to brush the teeth in the morning and last thing before sleep, 54.3% mothers strongly agreed that it is necessary to clean the child's teeth after every meal, and 75.6% mothers strongly agreed that cleaning of the child's teeth should be guided by the mother. Additionally, very scanty i.e. 0.66% mothers disagreed with this. They felt that children should not be guided by their mother. Similar studies done in Jordan by Al-Omiri et al and Rajab et al recorded that parents of Jordanian children failed to supervise their children while brushing.

62.6% mothers strongly agreed that milk teeth are essential for children to chew food properly. Similarly in this study, 59.8% mothers observed their children while brushing. These results were similar with studies done by Kowash (2015), Reang and Bhattacharya (2014), and Begzati et al. (2014).

Brushing and flossing which will help in preventing tooth decay was strongly agreed by 57.6% mothers. On the other hand, 74% strongly agreed that milk teeth did not require good care as it is going to fall away. Similar findings were given in studies done by Chhabra and Chhabra (2012) and Harrison and Wong (2003). They reported that parents believed that as primary teeth are present in the mouth only for a short period of time and since they will be replaced by their successor teeth, so taking care of the primary teeth is not necessary. As a result, they become more vulnerable to early childhood caries (Riedy et al., 2001).

63.6% mothers strongly believed that it is necessary to take their children for regular dental visits while 34% mothers disagreed with it. They

felt that visiting the dentist is necessary only when their child experiences pain. These findings are similar with study done by Kaur (2009).They found that mothers were not concerned regarding dental visit. However, this was in contrast with studies done by Ashkanani and Akpabio.

Descriptive Statistics about Mother's Practice on Oral health (Table 5)

In the present study, 14.3% mothers started cleaning their child's teeth soon after first milk tooth had erupted, whereas 42.6% mothers commenced the cleaning of their children's teeth after 4-6 milk had erupted. Also, a small percentage i.e. 22.66% mothers started brushing after the eruption of all the primary teeth. Similar findings were seen in the study conducted by Suresh (2010) in which most of the parents started brushing when all the primary teeth had erupted. Thus, this reflected a lack of oral hygiene practices among parents.

In the present study, most of the mothers (94%) used tooth brush, 5.33% mothers used their fingers, and very few (0.66%) used twig as a cleaning aid to clean their child's teeth. In the present study, 67.6% mothers used tooth brush and fluoridated tooth paste twice in a day, while 1% used fluoridated toothpaste sometimes in a week. On the contrary, 10% mothers never used tooth brush and fluoridated tooth paste for tooth brushing. It was observed that most of the school children have practical perspective towards brushing their teeth twice daily with the help of tooth brush and toothpaste as a cleaning aid for cleaning their teeth. These results are consistent with other studies conducted in Sweden, Denmark, Germany, Austria, and Norway. However, they reported that about 73-83% of school children use to brush their teeth twice a day. 64.6% mothers used up down motion, 5.33% mothers used circular motions, whereas 5.3% mothers do not have any particular motion for brushing their child's teeth. Most of the students brushed their teeth in random direction (34.80%) along with a certain set of students using horizontal (27.20%) and vertical (18%) brush strokes. The students with knowledge of and practicing specific tooth brushing techniques amount to only 20% (Mohammed & Gheena, 2015). In the present study, 82.6% mothers asked their children to rinse their mouth after each meal, while 6.33% mothers never asked their children to rinse their mouth after each meal. 52.6% mothers often changed their children's tooth brush once in a month, while 10.66% mothers changed once in 15 days. Also, 6% mothers changed their tooth brush only when bristles frayed out. The literature lacks studies about frequency of changing tooth brush and the effect of demographic as well as oral hygiene variables. A study done in Karachi noted that the overall frequency of changing brush within 3 months was 65.5% (Mirza et al., 2011).

In the present study, 17.3% mothers gave sugary food items with meals, whereas 5.66% mothers gave in between meals. 67.6% mothers did

not have any particular time to give sugary food items to their children. Similar findings were seen with studies carried out in China where they had concluded that there is an association between frequency of sugar consumption and dental caries (Peng et al., 1997). In the present study regarding the first dental visit of the child, 2% mothers visited dentists 6 months after birth, 3.66% mothers visited after the eruption of first milk teeth, whereas 59% mothers visited dentist only when there is any problem i.e. pain or trouble in their child's teeth. It was found in another study conducted in Sudan that 84.6% mothers claimed that their children did not complain, giving a hint that most Sudanese parents did not take their children to a dentist unless there is pain or trouble (Kowash, 2015; Begzati et al., 2014). According to AAPD, "the first dental visit should be with the eruption of the first primary tooth and no later than 12 months of age (AAPD, 2014). Thus, this is supported by studies done by Begzati et al and Ashkanani et al. On the contrary, a study done by Mirza et al showed that half of the study population i.e. 52% had never visited a dentist. So, there is strong need to spread awareness about the necessity of dental treatment among parents.

Conclusion

The present epidemiological study has revealed the extent of problem related to the mother's knowledge, attitude, and practices of oral health and the oral health status of their children. Therefore, this may help to plan out the appropriate measures to correct them. Prevalence of caries was more among the males in both deciduous and permanent dentition. The caries prevalence was high in both deciduous dentition and permanent dentition among the government school going children. Upper lower socio-economic class was more affected with caries in both primary and permanent dentition and it was found to be statistically significant. Thus, there was a significant correlation between mother's education and the prevalence of dental caries. Caries prevalence was found to be high among those children whose mother's education level was only up to primary level. There is very high need to emphasize the importance of oral health education in government schools. Dental camps should be organized regularly in the government schools so that children from low socio-economic status can get benefits and services which they are deprived of due to their low family income. Oral health education should be made an integral part of education in schools in India.

Regarding the knowledge, attitude and practices, we can conclude that most of the mothers failed to state that toothpaste contains fluoride, and fluoridated toothpaste was good for preventing dental decay. Most of the mothers thought that it was necessary to visit a dentist only when their child experienced pain in the teeth. Regarding brushing motion, no particular method of brushing was seen among most of the children.There was no

particular time for giving sugary food items by the mothers to their children. At the time of commencement of the survey, it was found that most of the children had their first dental visit.

Further studies are required to collect the data regarding children, as these types of studies are very few in this region. Awareness needs to be created among the mothers and caregivers as they are the role models for their children. Awareness should also be done in schools because the child spends most of his/her time in school. The data from the present study provides valuable information regarding the oral health status and associated risk factors. Therefore, primary prevention by means of oral health education of mothers, children, and school caretakers by the public health authorities should be implemented to upgrade knowledge, reshape attitude, and to readapt the good practices, thereby improving the overall oral health of their children.

References:

1. Akpabio, A., Klaunsner, CP., & Inglehart, MR. (2008). Mother's/ Guardian's knowledge about promoting children's oral health. Journal of Dental Hygiene 82(1):1-11.
2. Al-Omari, MK. & Al-Wahadni, AM. (2006). Oral health attitudes, knowledge and behaviour among school children in North Jordan. Journal of Dental education 70(2):179-87.
3. American Academy of Pediatric Dentistry Reference Manual (2002-03). Guidelines on infant oral health care.
4. American Dental Association (2005). Cleaning your gums and teeth (oral hygiene). Chicago, IL.
5. Ashkanani, F. & Al-Sane, M. (2013). Knowledge, attitude and practices of care-givers in relation to oral health of preschool children.Medicine Principal Practice 22:167–72.
6. Begzati, A., Bytyci, A., Meqa, K., Latifi-Xhemajli, B., & Berisha, M. (2014). Mother's behaviours and knowledge related to caries experience of their children. Oral Health of Preventive Dentistry12(2):133-40.
7. Chhabra, N. & Chhabra, A. (2012). Parental knowledge, attitudes and cultural beliefs regarding oral health and dental care of preschool children in an Indian population: A quantitative study. European Arch Paediatric Denistry13(2):76-82.
8. Costa, SM., Martins, CC., BonfimMde, L., Zina, LG., Pavia, SM., & Pordeus, IA. (2012). A systemic review of socioeconomic indicators and dental caries in adults. International Journal Environmental Res Public Health 9(10):3540-74.

9. Dentistry, AAP. (2014). Policy on Early Childhood Caries (ECC): Classifications, consequences, and Preventive Strategies. Pediatr Dent. 37:50-52.
10. Erickson, RT. & Thomas, HF. (1997). A survey of the pediatric dentistry membership infant oral health care. Pediatric Dentistry 19(7):17-21.
11. Harrison, RL. & Wong, T. (2003). An oral health promotion program for an urban minority population of preschool children. Community Dentistry of Oral Epidemiology31(5):392-9.
12. Isong, IA., Luff, D., Perrin, JM., Winickoff, JP., & Ng, MW. (2012). Parental perspectives of early childhood caries. Clinical Pediatric(Philadelphia)51(1):77-85.
13. Kaur, B. (2009). Evaluation of oral health awareness in parents of preschool children. Indian Journal of Dental Research 20(4):463-5.
14. Kawashita, Y., Kitamura, M., & Saito, T. (2011). Early childhood caries. International Journal of Dentistry 725320.
15. Kowash, MB. (2015). Severity Of early childhood caries in preschool children attending AL- Ain Dental Centre, United Arab Emirates. European Arch Paediatric Dentistry16(4):319-24.
16. Kumar, M., Joseph, T., Varma, RB., & Jayanthi, M. (2005). Oral Health status of 5 and 12 years school going children in Chennai city-An epidemiological study. Journal of Indian Societyof Pedodontics and Preventive Dentistry 23(1):17-22.
17. Mani, SA., Aziz, AA., John, J., & Ismail, NM. (2010). Knowledge, attitude and practice of oral health promoting factors among caretakers of children attending day-care centers in Kubang Kerian, Malaysia: A preliminary study. Journal of Indian society of Pedodontics and Indian Soc Pedo Prev Dent 28(2):78-83.
18. Mirza, BA., Syed, A., Izhar, F., & Ali Khan, A. (2011). Oral health attitudes, knowledge, and behaviour amongst high nad low socio-economic school going children in Lahore, Pakistan. Pakistan Oral Dentistry of Journal 31:396-401.
19. Mohammed, A. & Gheena, S. (2015). Awareness of tooth brushing techniques and proper oral hygiene among school children. Journal of Pharmaceutical Science & Research 7(6):367-372.
20. Mohiuddin, S., Sadaat, S., & Qureshi, A. (2011). Oral health knowledge, attitude and practices of a public school children of Karachi, Pakistan. Journal Dow University Health Science Karachi 5(3);126-28.
21. Peng, B., Peterson, PE., Fan, MW., & Tai, BJ. (1997). Oral health status and oral health behaviour of 12-year- old school children in the People's Republic of China. Community Dental Health14(4):238.

22. Peterson, PE. & Lennon, MA. (2004). Effective use of fluorides for the prevention of dental caries in the 21st century: the WHO Approach. Community Dental Oral Epidemiology 32(5):319-21.
23. Pullishery, F., Panchmal, GS., & Shenoy, R. (2013). Parental attitudes and tooth brushing habits in Pre-school children in Manglore, Karnataka: A Cross- sectional study. International Journal Clinical Pediatric Dentistry 6(3):156-60.
24. Rajab, LD., Petersen, PE., Bakaeen, G., & Hamdan, MA. (2002). Oral health behaviour of school children and parents in Jordan. International of Journal Paediatric Dentistry12(3):168-76.
25. Reang, T. & Bhattacharjya, H. (2014). Mother's knowledge and practice regarding oral hygiene and challenges in the prevention of dental caries of under- five children in an urban resettlement colony. International Journal of Medicine and Science Public Health 3:76-80.
26. Riedy, CA., Weinstein, P., Milgrom, P., & Bruss, M. (2001). An ethnographic study for understanding children's oral health in a multicultural community. International Dental Journal 51(4):305-12.
27. Smyth, E., Cammano, F., & Fernandez- Riveiro, P. (2007). Oral health knowledge, attitudes and practice in 12-year-old school children. Med Oral Patol Oral Cir Bucal12(8):614-20.
28. Suresh, BS., Ravishankar, T., Chaitra, TR., Mohapatra, AK., & Gupta, V. (2010). Mother's knowledge about preschool child's oral health. Journal of Indian Society of Pedodontics and Preventive Dentistry28(4):282-7.
29. US Department of Health and Human Services (1980). Public Health service. Promoting health/preventing disease. Objectives for the Nation. Washington, DC: Government Printing Office, 1980:54.
30. World Health Organization (1997). Basic oral health surveys. 5th edition, 35-55.
31. World Health Organization (2005). "Make every mother and child count" – World Health Day.
32. World Health Organization (2013). Oral Health Survey, Basic methods, 5th edition; Pg.14.