

# Awareness of Tooth Brushing Techniques and Proper Oral Hygiene among School Children

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**Abstract:****Aim:**

To study 250 school children on their awareness of proper tooth brushing techniques and related to knowledge of oral health.

**Objective:**

A cross sectional questionnaire study was conducted among school students.

**Background:**

Improved oral hygiene is a result of proper oral hygiene habits and the frequency. A well-balanced diet is also essential for proper oral hygiene. Frequent snacking and consumption of aerated beverages can have a detrimental effect on teeth. All these can form a conducive environment for dental caries.

**Reason:**

This study will be helpful in spreading awareness about tooth brushing techniques and its desirable frequency among school children.

**Conclusion:**

The study has exposed a need for further thrust on awareness initiatives concerning oral health concomitant with parental participation.

**Key Words:** Tooth brushing techniques, Oral hygiene, Oral health awareness

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**INTRODUCTION:**

Diseases affecting oral cavity is one of the major public health problems which can potentially cause significant social impact[1]. Studies on oral health awareness in rural areas shows the lack of awareness among them[2]. Among oral diseases, dental caries is a prevalent dental problem among children[3], as they consume lots of sweets and aerated drinks. Brushing and flossing are practices to maintain good dental health, along with regular dental visits[4]. Oral health knowledge is essential for proper oral hygiene and better oral health[5]. People living in developing countries, and concomitantly, of lower socio-economic status have a lacunae in oral health awareness mirrored in their practice of oral hygiene habits. This study aimed to evaluate oral hygiene practices and knowledge among 12-17 year old school going children.

**MATERIAL AND METHODS:**

The present study was carried among randomly selected 250 school children from different schools in Chennai which includes government, aided and private schools. The students who participated were from 6-12<sup>th</sup> standard, in order to aid their understanding of the questionnaire. Permission was obtained from the relevant school authorities, to conduct the survey. The study involved around 25 questions which includes personal oral hygiene like frequency of brushing, cleaning aids used etc and knowledge like meaning of plaque, calculus, bleeding gums etc.

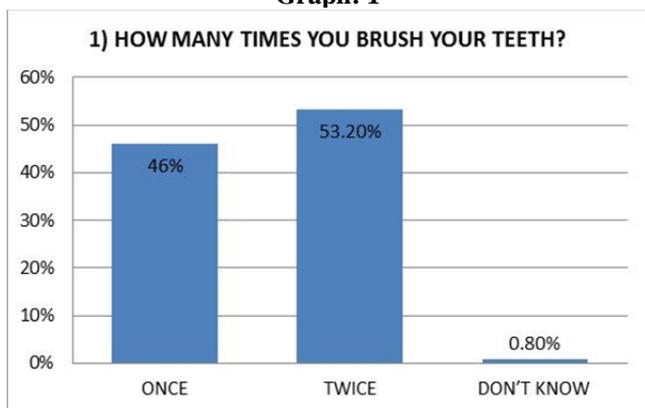
**RESULTS:**

In this study 250 school children were given the questionnaire, the data was then analyzed and has been tabulated along with charts for each question. When asked about brushing habits, the results show that the majority

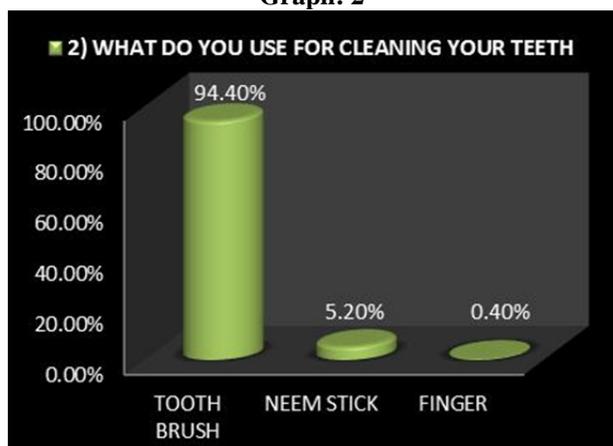
(53.20%) brush their teeth twice a day, while 46% brush once daily. The rest 0.8% are not sure about their brushing practice (GRAPH:1). Majority of students (94.4%) practice brushing with tooth paste, only (5.20%) use neem stick for brushing their teeth. The rest 0.4% i.e. only one student revealed that he uses his hand for brushing (GRAPH: 2). 34.80% of the student population use random direction method to brush their teeth, only few (i.e.) 20% of the students follow specific tooth brushing techniques (GRAPH: 3). 48.80% of student population said that they brush for 1-2 minutes and 40.80% of students brush more than 2 minutes, 14.40% brush their teeth for 30 secs (GRAPH:4). When students were asked how often they change their tooth brush, 39.20% change their brush within 3 months and 38% of students change their brush every month, 10% had no reckoning of the event questioned (GRAPH:5). 80% of student population brush their teeth to keep it clean, While 14.8% students brush to avoid pain and only few students (20%) said that it is important for their aesthetics (GRAPH:6). 79.60% of students said that their mom taught them to brush, whereas 11.20% said that they learnt from their dad and 4.40% of students said that their teacher taught them to brush, 4.80% were not aware how they learnt to brush (GRAPH:7). According to this study majority of student 56.60% start brushing by themselves at the age of 4-5 yrs under the supervision of their parents (GRAPH:8). When asked about the kind of tufted brush they use for brushing, 41.60% students said that they use soft tufted brush while 49.60% use medium tufted brush and rest 8.80% of students use hard tufted brush for brushing (GRAPH:9). When asked about the importance of fluoride in dental health, 19.20% thought that it prevents discolouration of teeth, but majority (36.40%) were aware that fluoride

strengthens their teeth. 17.20% thought that it prevents from bad breath with 27.20% not being aware about the importance of fluoride (GRAPH:10). 49.60% of students know that sugary diet will affect their oral health while 27.20% said it will not cause any problems and rest 23.20% of students were not aware that sugary diet will cause them oral health problems(GRAPH:11). 55.60% of students know that soft drinks will cause dental problems while 36.40% said it will not cause any problems and rest 8% had no idea whether it may cause dental caries or not(GRAPH:12).

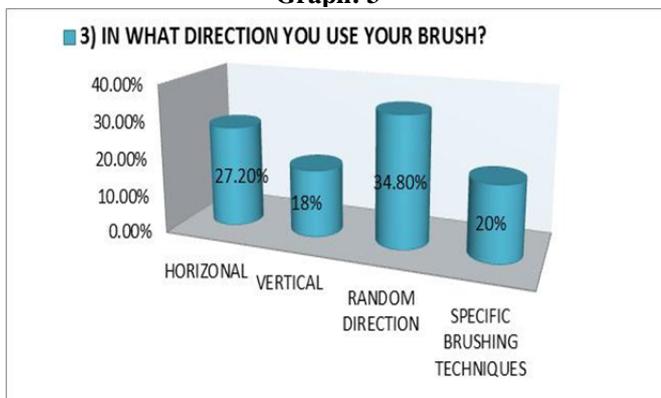
**Graph: 1**



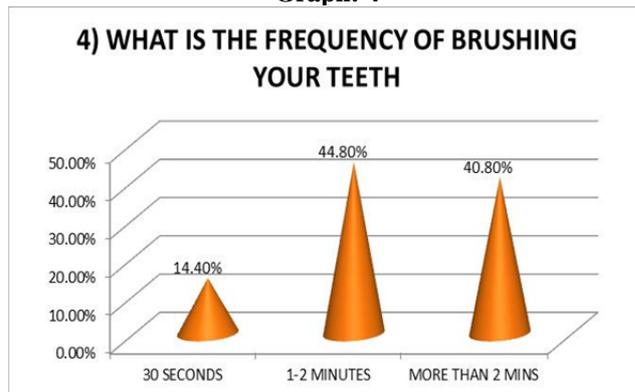
**Graph: 2**



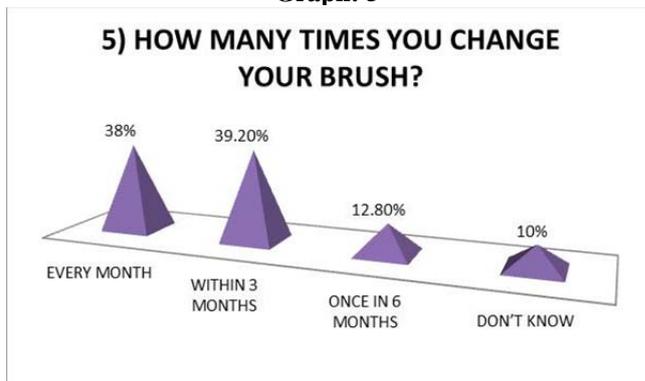
**Graph: 3**



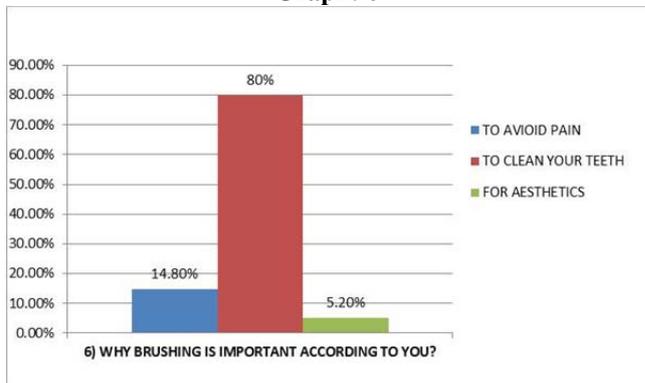
**Graph: 4**



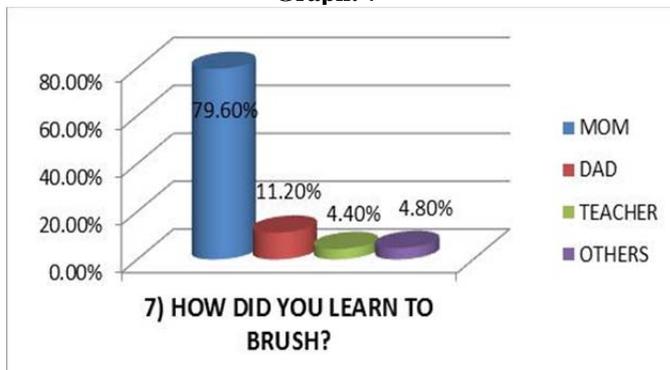
**Graph: 5**



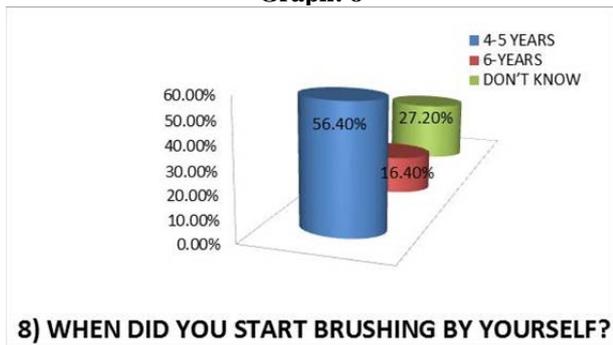
**Graph: 6**



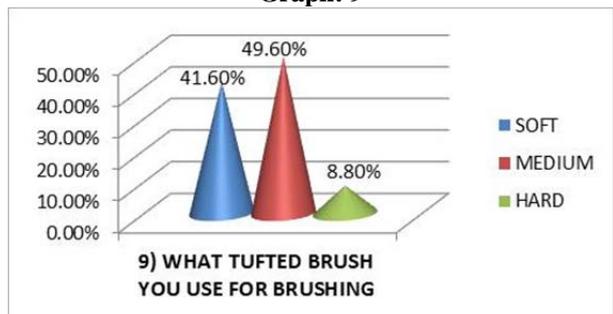
**Graph: 7**



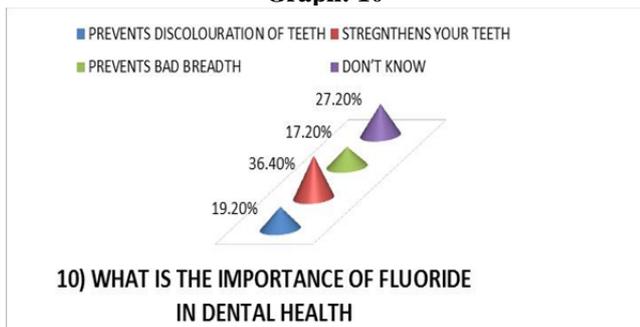
**Graph: 8**



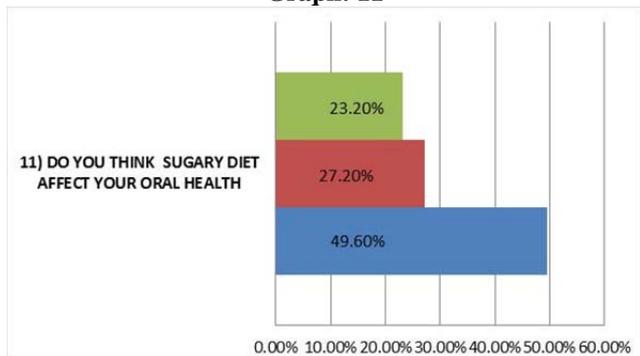
**Graph: 9**



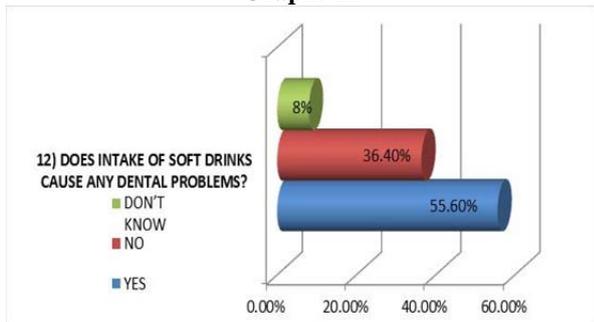
**Graph: 10**



**Graph: 11**



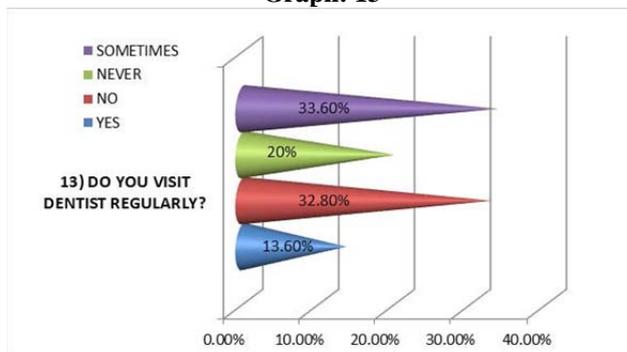
**Graph: 12**



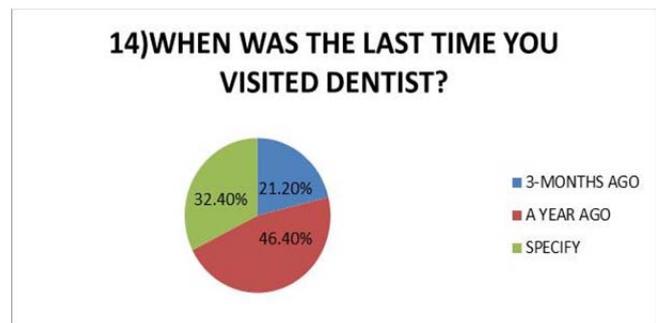
Only 13.6% of students visit dentist regularly while 32.80% of students don't visit regularly, only 20% of students said that they had never been to a dentist and rest 33.60% students said that they visit a dentist rarely (GRAPH:13). 21.2% of students had a dental consultation 3 months ago while 45.4% a year ago and the rest 32.4% recalled their exact visit to the dentist and few even mentioned that they didn't have a dental consultation (GRAPH:14). When asked why they don't like visiting a dentist, 23.60% of students cited fear as the reason whereas 11.6% of students said that there was no dental clinic or hospital near their locality and the rest (64.80%) did not feel the need to (GRAPH:15). 74.80% students said that visiting dentist is important whereas 16.40% thought that the converse with only few around 8.80% of student being unaware of the importance of periodic dental consultations (GRAPH:16).

Questions related to knowledge about oral health were asked, 29.20% of students are aware that plaque is a soft deposit on teeth while 21.20% thought it is a hard deposit on teeth, 19.6% said that it could cause tooth discolouration but 30% of students had no idea about plaque (GRAPH:17).

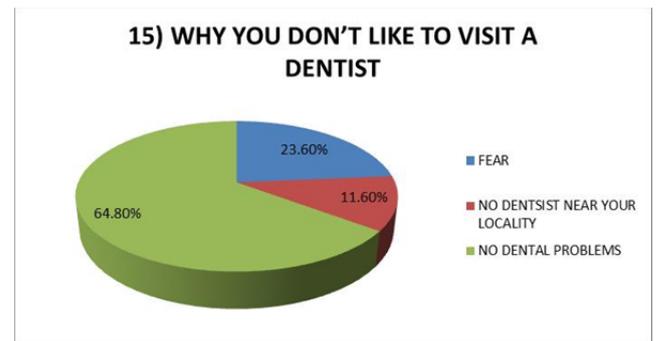
**Graph: 13**



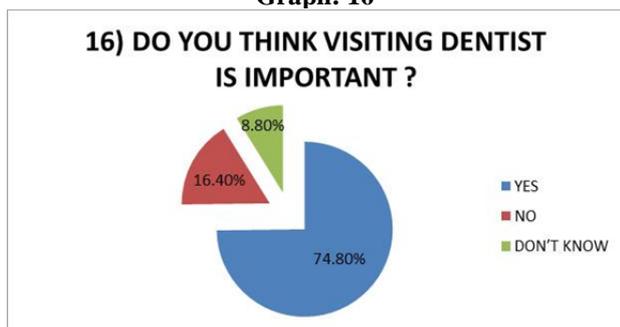
**Graph: 14**



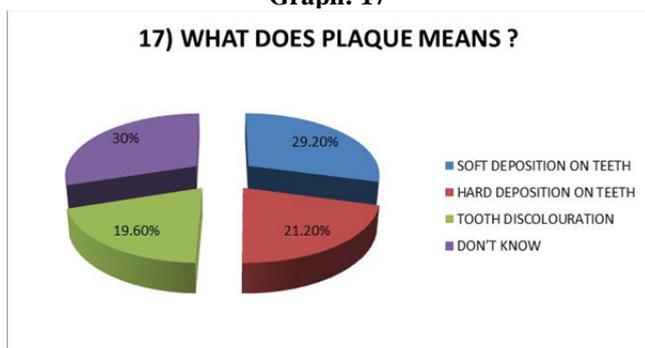
**Graph: 15**



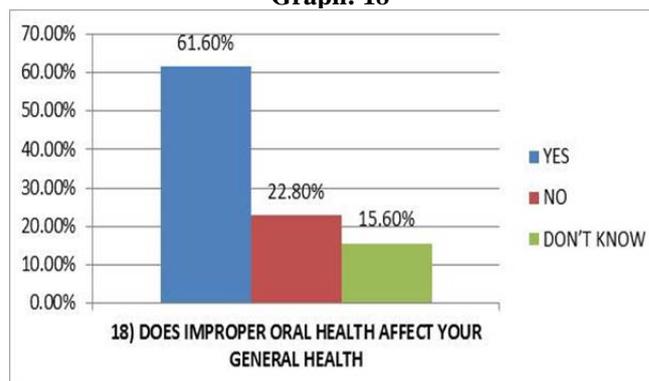
**Graph: 16**



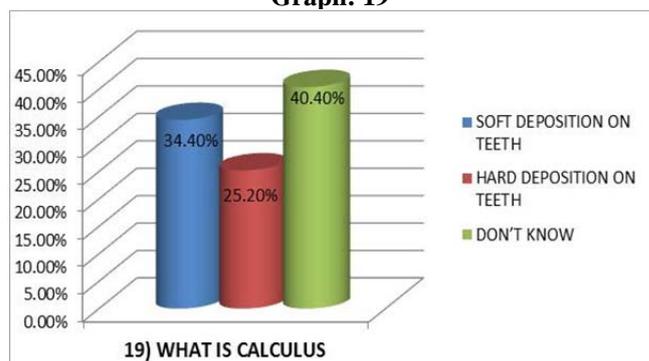
**Graph: 17**



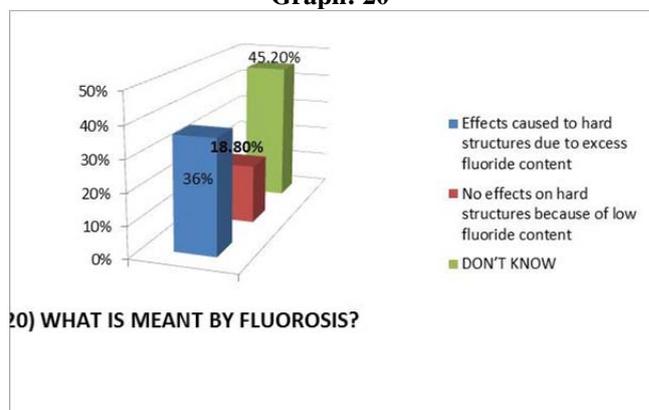
**Graph: 18**



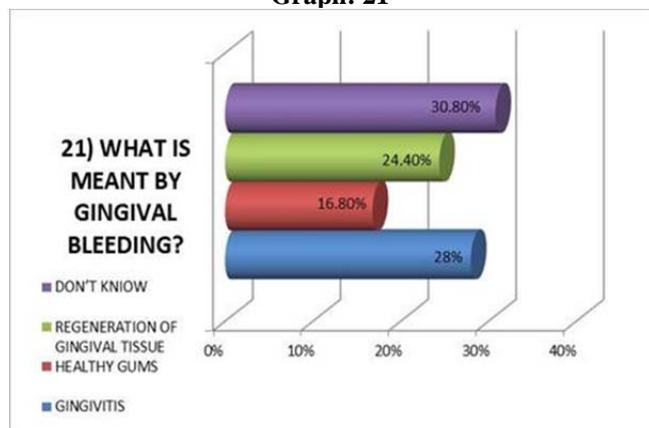
**Graph: 19**



**Graph: 20**

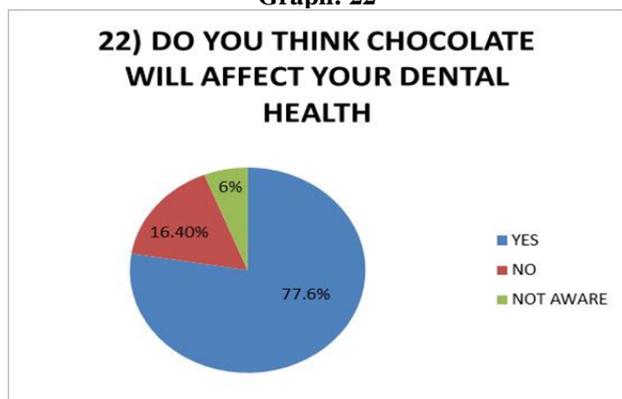


**Graph: 21**

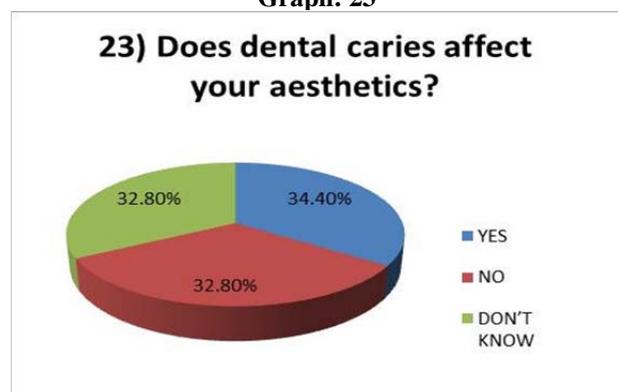


61.6% of students said that improper oral health will affect their general health, 22.80% of students said that it will not cause any problems and rest 15.60% of students had no idea about it(GRAPH:18). When asked about calculus,34.40% of student said that calculus is a soft deposit on teeth only 25.20% identified it to be a hard deposit on teeth, majority of student population 40.40% were not aware about the meaning of calculus(GRAPH:19). 36% of student population knew the exact meaning of fluorosis t whereas 18.80% of students said that it doesn't cause any effect on hard tissue due to low fluoride content and rest 45.20% had no idea about fluorosis(GRAPH:20). Only 28% of students knew that gingival bleeding can be a manifestation of gingivitis while 16.80% of student said that gingivitis refers to healthy gums, around 24.40% of student thought that it is the regeneration of gingival tissue and rest 30.80% of students had no idea about gingival bleeding(GRAPH:21). 77.6% of students were positive that the intake of chocolate will affect dental health whereas 16.4% of student thought the converse with 6% of students not being aware of the effect.(GRAPH:22). The student population when questioned about the effect of dental caries on aesthetics, 34.40% thought that dental caries would affect their aesthetics, Whereas 32.80% students opined that it will not and the rest (32.80%) of students had no idea about it(GRAPH:23). When asked about adjunct cleaning aids used by students, 41.20% of students use mouthwash along with tooth paste as cleaning aids,17.20% uses tongue cleaner,8.40% uses floss,24.40% uses salt and water and rest of them i.e.8.80% don't use any other cleaning aids other than tooth paste(GRAPH:24). Only 46.80% of students who participated had some awareness about dental health, the rest of the student population had not participated in any awareness program till now(GRAPH:25).

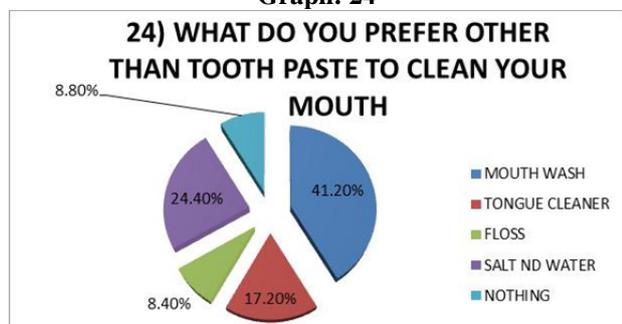
Graph: 22



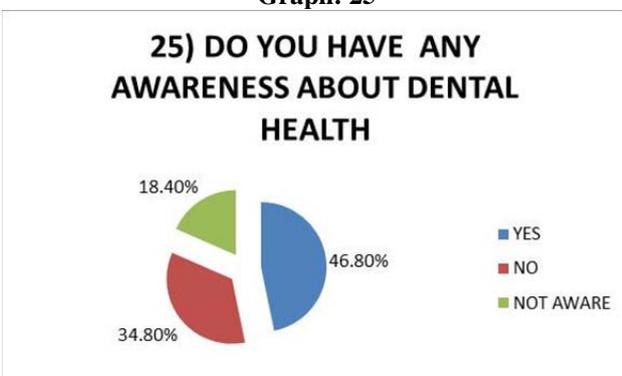
Graph: 23



Graph: 24



Graph: 25



**DISCUSSION:**

This paper has focused on oral health knowledge and practices among school children in Chennai. The results showed that 53.20% brushed their teeth twice a day. A

similar study conducted in kerala by jayakumary Muttappillymyalil et al [6] reported that more than 75% of students brush twice a day but the present study result can be compared with study conducted by zhu et al[7], which shows that 44.4% student brush twice a day.

Most of the students brush 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 in knowledge of and practicing specific tooth brushing techniques amount to only 20%.

A perturbing result came out when students were asked about various questions on dental knowledge.30% of students don't know the meaning of plaque while 19.60% said it is the discolouration of tooth. Only 30% were able to answer that plaque means soft deposits on teeth. Similar result was obtained when asked about calculus, only 25.20% of student were aware that it means hard deposit on teeth. Only 34.4% of students were aware that dental caries can affect their oral health similar to 36.4% of the student population only knowing that fluoride strengthens teeth, the rest having erroneous knowledge or being completely unaware. 46.8% of the student population answered in the affirmative that they are aware of the importance of oral hygiene. Only 36% of the students knew the meaning and the adverse effects of fluorosis and only 28% of the student population knew that gingival bleeding could be due to improper oral hygiene practices. These results implicate a lack of awareness and knowledge of oral hygiene practices and the impact of it on oral health, thus, bringing to light the immediate need of vigorous awareness initiative concerning oral health.

Some of the positive results that were brought out were that 94.40% use tooth brush for cleaning their teeth, though, a small percentage of children indicate the use of neem stick and finger. This could be due to low socioeconomic status and lack of proper oral hygiene knowledge. It coincides with the results of another study done by prashanth et al 2011[8].A majority of the student population were aware of the importance of oral hygiene practices exposing a contradiction in their knowledge component. Almost half of the student population brush for 1-2 minutes, change their tooth brush within the stipulated time, use medium tufted brush and use other aids like mouthwash.

Many participants (64.80% )said that they don't visit dentist because they don't have any dental pain. The results also showed that a majority of group(49.60%, 55.6%, 77.6%) are aware that sugary diet, soft drinks, chocolate can affect oral health respectively. The questionnaire also highlighted the importance of parental awareness and participation in oral hygiene practices.

**CONCLUSION:**

Cumulative analysis exposed a lacunae in the awareness of oral hygiene and knowledge regarding oral health similar to a study by Grewal N and Kaur M[9] implying an urgent need for awareness initiative for oral health at the grassroots level in primary educational institutions with the co-operation and participation of parents in the implementation of good oral health practices.

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