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Knowledge And Awareness Of Oral Hygiene Among General Population- A Survey

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ABSTRACT:
AIM : To assess the awareness of oral hygiene among the general population **BACKGROUND:** Oral health is important for general health and good quality of life which affects the psychological well-being .Self care is necessary to maintain good oral health. Brushing the tooth daily along with mouth washing are the basic daily oral hygiene practices **MATERIALS AND METHODS:** This is a cross-sectional study conducted among the general population. There were a total of 113 members participating in the study. The data of the study was carried out using self -administered questionnaire in online through "google docs'' as a innovative technique for responding it.the obtained data was tabulated and analysed on Statistical packages of social sciences version 23.**RESULTS:** In this present study majority of the males had awareness of oral hygiene.Tooth brushing was the common daily oral hygiene practice along with mouth washing.Most of the people visited the dentist at least once in a year.Majority of the population had awareness on oral hygiene.The result was statistically significant with p=0.03(<0.05). **CONCLUSION:** Oral health can be easily maintained by self care. Though most of the population were aware of oral hygiene practices, following the same was not achieved by the entire population. This can be minimised by encouraging them for routine dental checkup through dental camps.
KEYWORDS: Oral hygiene, Innovative technique, Tooth brushing, floss, Dental caries, Mouthwash

INTRODUCTION:

Oral health is essential for a person's health. Oral health is a functional, aesthetic, structural, physiological and psychological state of well-being and necessary to all individuals for General health and quality of life nowadays, improvement of technologies to very high areas cleaning with manufactured toothbrushes (1).

Oral self care practices is an effective measure by the individual for maintaining good oral health as it is a part of general health(2).There are many studies showing that brushing with fluoride toothpaste,regular dental checkups,visiting dentist at least once in a year, do not use tobacco products,limit alcoholic drinks is necessary for maintaining proper oral health.Oral self care includes tooth brushing more than once a day,mouth washing regularly,lesser consumption of sugar containing snacks(3).

Improper oral health may lead to physical discomfort,pain,infection and sometimes tooth loss(4).Plaque is a sticky matrix in which bacteria thrive in. If plaque isn't removed regularly with brushing and flossing, it builds up, hardens, and migrates down the length of your tooth.

Gingivitis is a disease that occurs when the gums become inflamed(5).

Tooth brushing anToothbrushing too vigorously or with the wrong brush for the technique can cause cervical tooth abrasion, gingival discomfort, and gingival recession, or all three. Irritation, ulceration, or defects of the gingiva may result from uncontrolled or excessively vigorous dental flossing.Toothbrushing too vigorously or with the wrong brush for the job can result in abrasions(6). Our team has extensive knowledge and research experience that has translated into high quality publications (7-26). Thus, the present study is to evaluate the awareness about oral hygiene among the general population.

MATERIALS AND METHODS:

Study design

A cross sectional study was conducted through an online survey from February to April 2021 among undergraduates.

Study subjects

A simple random sampling was used to select the study of totally 113 participants . All the general population who were willing to participate were included.

Ethical considerations

Returning the filled questionnaire was considered as implicit consent as a part of the survey. Ethical approval for the study was obtained from the Institutional Review Board (IRB), Saveetha Dental College.

Study methods

Self administered questionnaire of close-ended questions was prepared and it was distributed among dental students from February to April 2021 through the online survey "google forms". The collected data were checked regularly for clarity, competence, consistency, accuracy and validity. Demographic details were also included in the questionnaire.

Statistical analysis

Data was analysed with the SPSS version (23.0). Descriptive statistics as percent were calculated to summarise qualitative data. "Chi square test was used to analyze and comparative bar graphs were plotted and it is statistically significant only if the p value is less than 0.05".

QUESTIONNAIRE:

S.NO	QUESTIONS	Option 1	Option 2	Option 3	Option 4
1	According to you, is there any relationship between oral health and general health?	Yes	No	Maybe	-
2	Mention your daily oral hygiene practice?	Toothbrushing	Toothbrushing, Mouth washing	Toothbrushing, Dental flossing	-
3	How often do you visit your dentist for cleaning your teeth?	In three months	In six months	Once in a year	Never visit
4	How many times do you brush your teeth?	Once daily	Twice daily	More than two times	-
5	How much time do you take to brush your teeth?	One minute	Two minutes	More than two minutes	-
6	How do you brush your teeth?	Horizontal Stroke	Vertical stroke	Roll stroke	Not aware
7	How often do you change your toothbrush?	One month	Two months	More than three months	Not aware
8	How much toothpaste should be placed on the brush?	Small pea size	Full length	Does not matter	-
9	Do you clean your Tongue after brushing?	Yes	No	-	-
10	Do you rinse your mouth with water after meals?	Yes	No	-	-

11	How do you treat bad breath?	By drinking more water	By Rinsing mouth after every meals	Using mouth freshener	-

RESULTS:

In the present study out of 113 students 61% were males and the remaining 39% were females in which males had more awareness on oral hygiene and health. More awareness in males was found between the age of 18 to 25. Almost 70% of the population knew that there is a relationship between oral health and general health and only 8% of the population were not aware about the relation.Tooth brushing was the most common daily oral hygiene practiced by many people only 18% of the people did dental flossing daily. Majority of the people visited dentists only once in a year 35% and nearly 33% of the population never visited dentists at least once in a year unless they had dental problems.50% of the population has a habit of having teeth twice a day which took 2 minutes for 47% of people. Along with brushing many of them cleaned their tongue after brushing and 67% of people rinse their mouths with water after every meal which helped 58% of the population to treat bad breath.

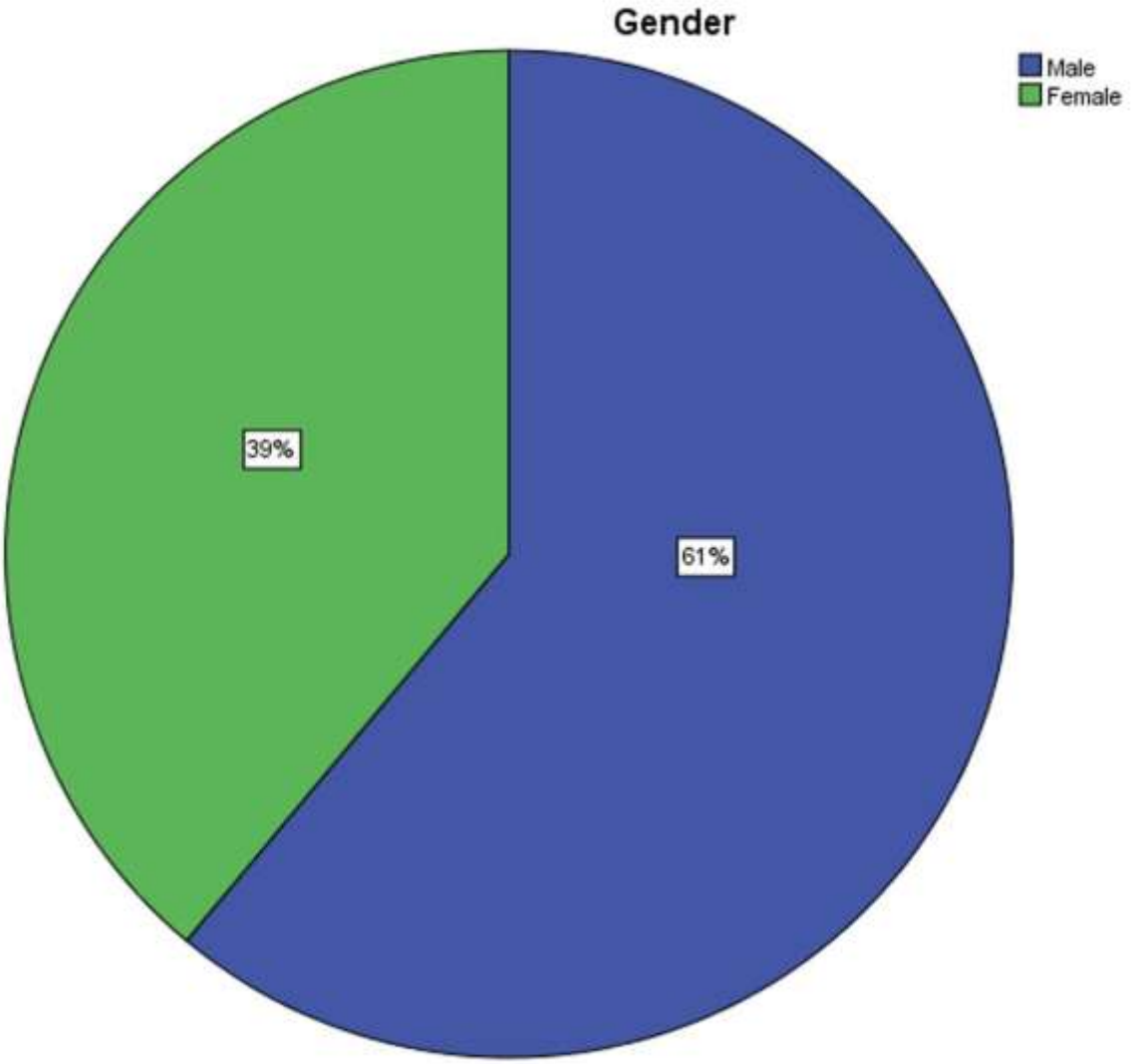

Figure1: Shows the percentage gender of the participants. Blue indicates the number of males and Green indicates the number of females and 61% participants were male and the remaining 39% were

females.

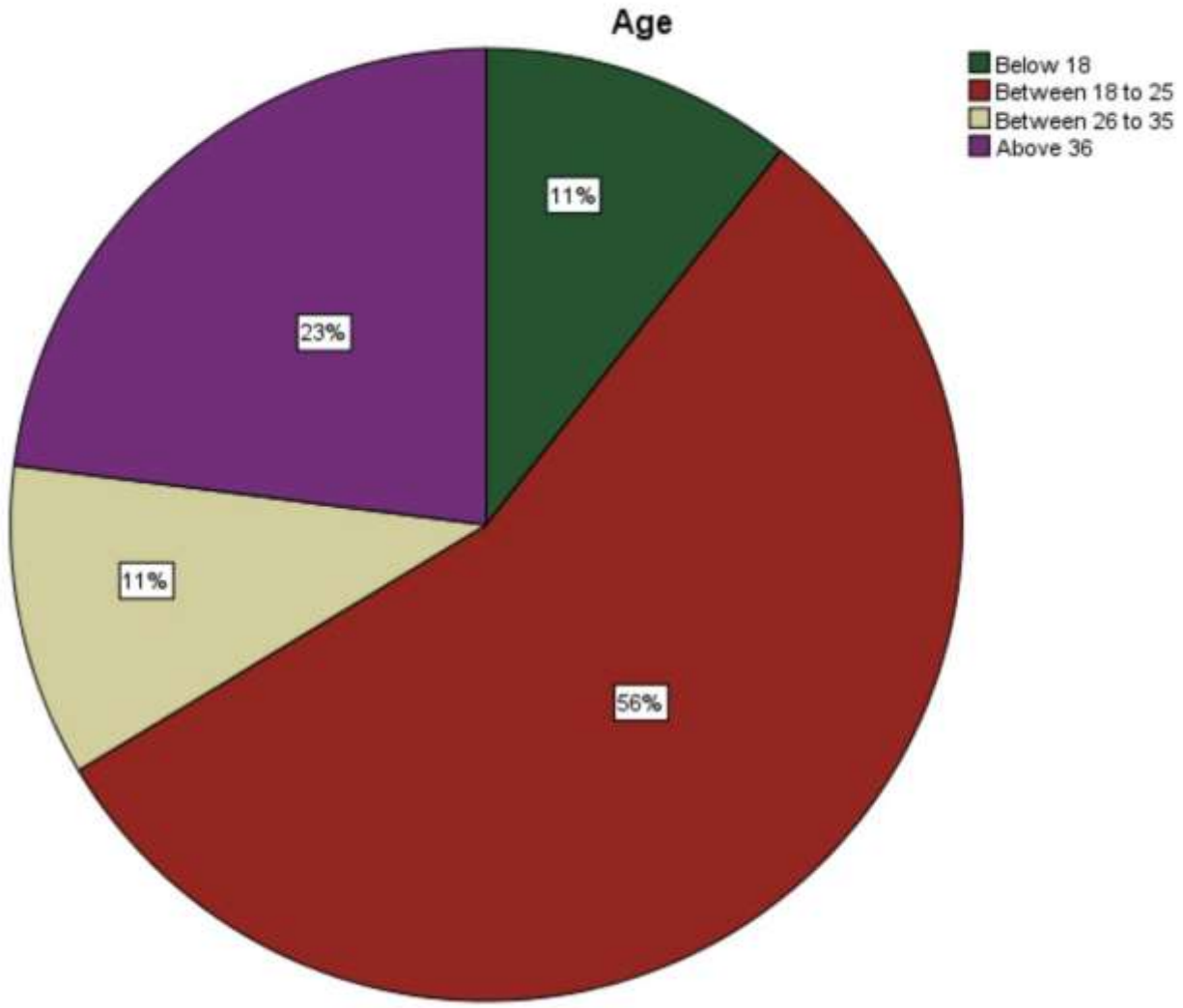

Figure2: Shows the percentage age chart of the participants. Maroon indicates the age group "Between 18 to 25", Dark green indicates people "Below 18" , Beige indicates people "Between age 26 to 35" and violet indicates people "Above 36". In which 56% were between the ages of 18 to 25, 23% are above the age of 36, 11% of responses were from the age group of below 18 and the remaining 11% were from the age group between35.

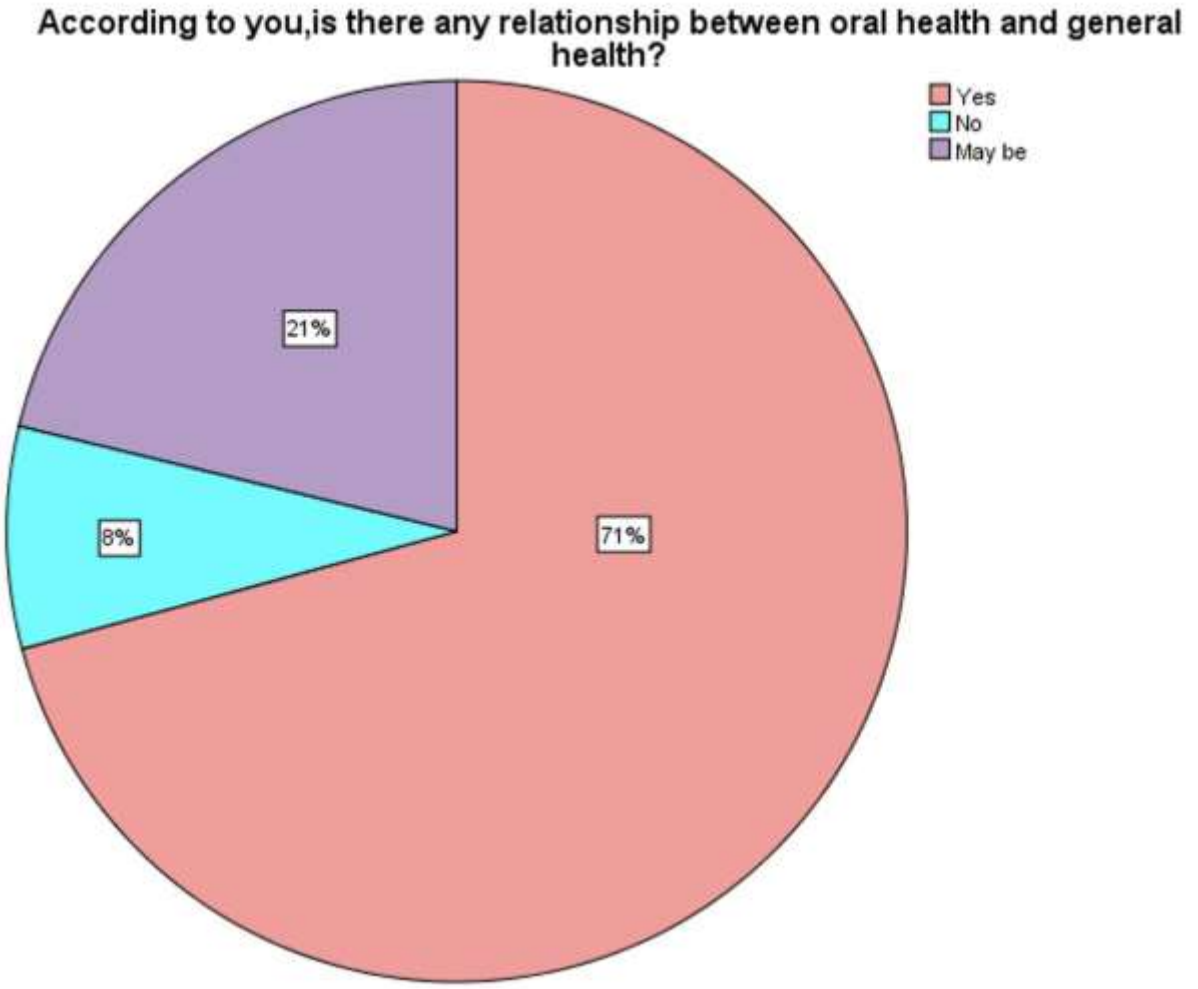

Figure3: shows the percentage of responses of the participants, for any relationship between oral health and general health.Pink indicates the “Yes”, aqua blue indicates “no” and light purple indicates “may be”. Majority 71% of the population were aware that there is a relationship between oral and general health, only a least number of participants nearly 8% were not aware and remaining 21% of the population were not clear about the relation between oral health and general health.

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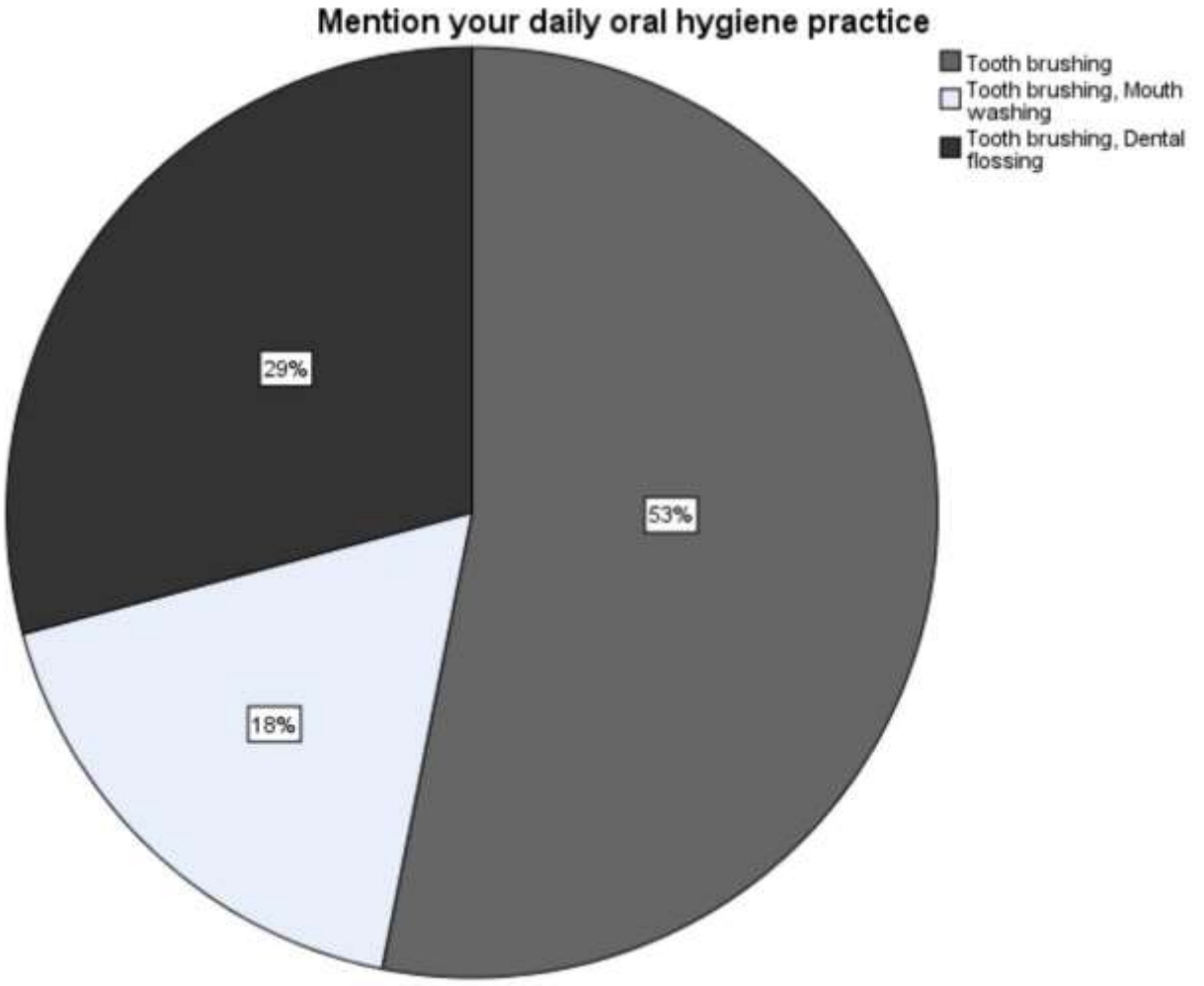

Figure4: shows the percentage of responses about the daily oral hygiene practice of the population.Grey indicates “tooth brushing” , white indicates “tooth brushing and mouth washing” , black indicates “tooth brushing ,dental flossing”.Majority 53% of the population only have tooth brushing as their daily hygiene practice,18% of the people brush their teeth as well as mouth wash and 29% of the people have both toothbrushing and dental flossing as oral hygiene practice which is good oral hygiene practice not followed by many of the population.

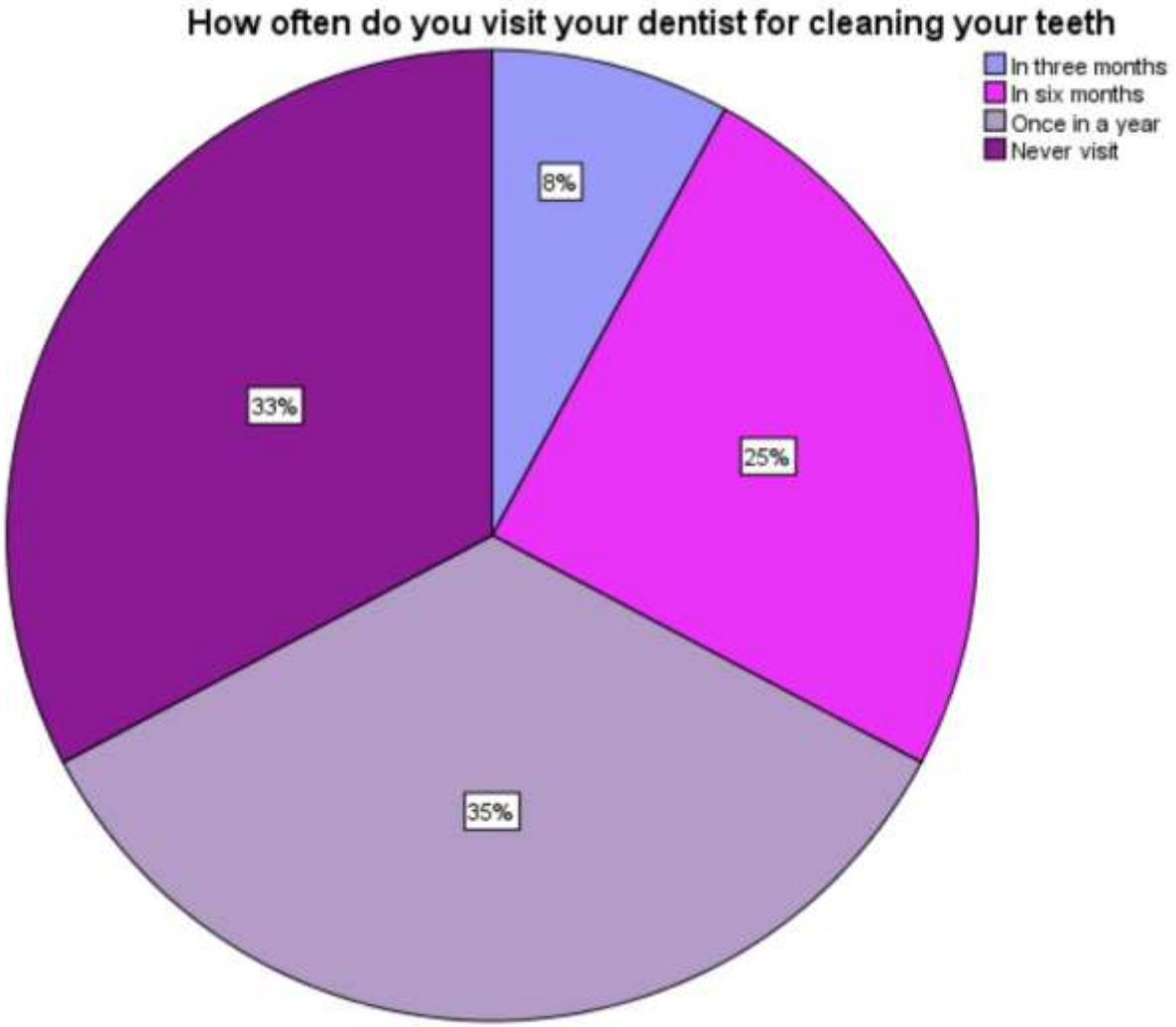

Figure 5: shows the percentage of responses about the visit to the dentist for tooth cleaning. Blue indicates “in 3 months”, purple indicates “time duration of 6 months”. Heather indicates the people who visit “once in a year”and violet are people who “never visit dentists”. Only of 8% of the population were aware that they should visit dentists once in 3 months for regular check up, 25% of people visit dentists every 6 months, 35% of the population visit dentists once in a year for tooth cleaning and the remaining33% of the people never visit dentists unless they have tooth related problems.

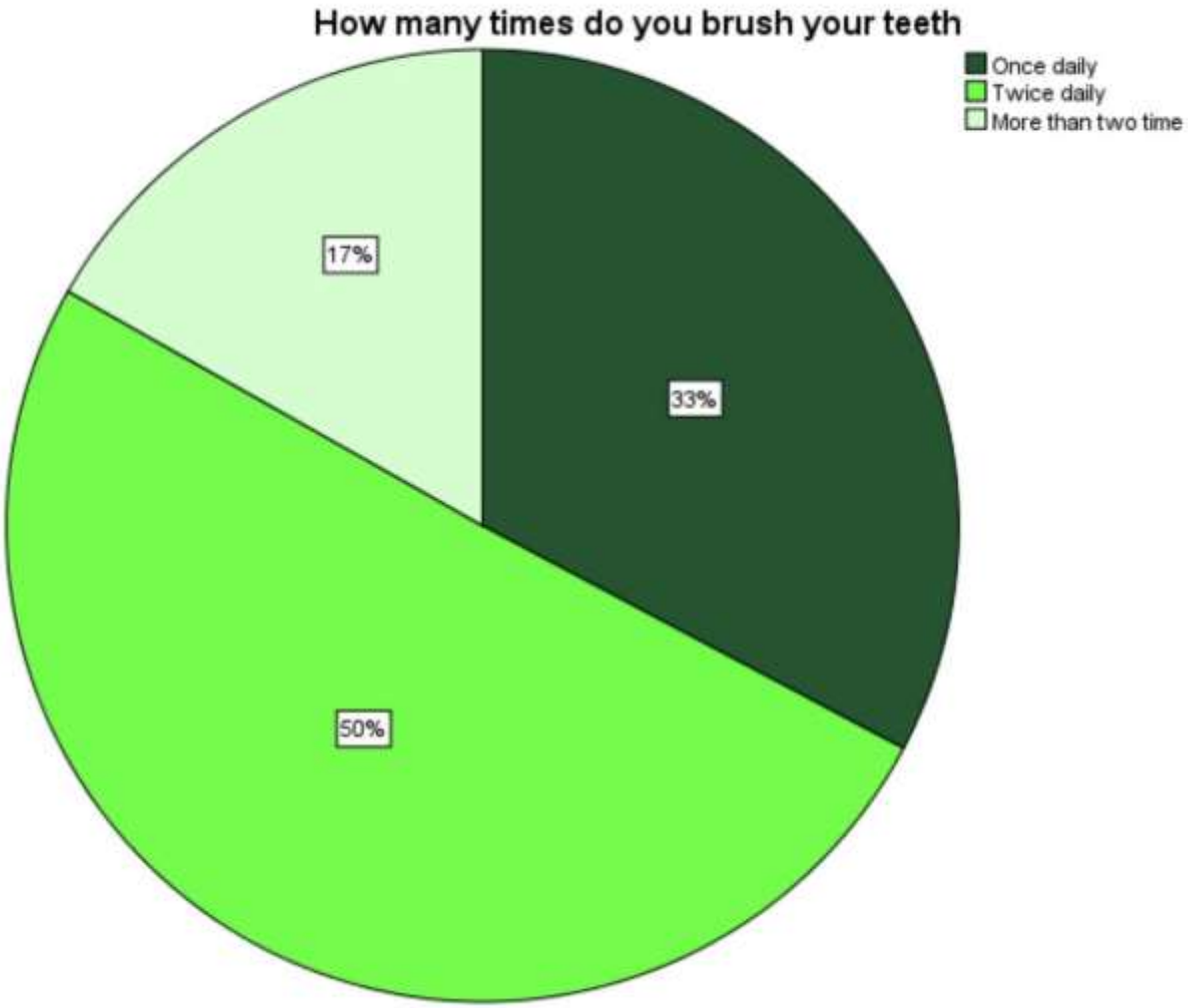

Figure6: shows the percentage of responses for the number of times people brush their teeth. Amazon green colour indicates brushing the teeth “once daily”, parrot green indicates brushing teeth ``twice daily” and jade green indicates brushing teeth “more than two times”. The majority 50% of the population were aware of brushing their teeth twice daily, nearly 33% of people brush their teeth only once in a day and the remaining 17% brush more than two times daily.

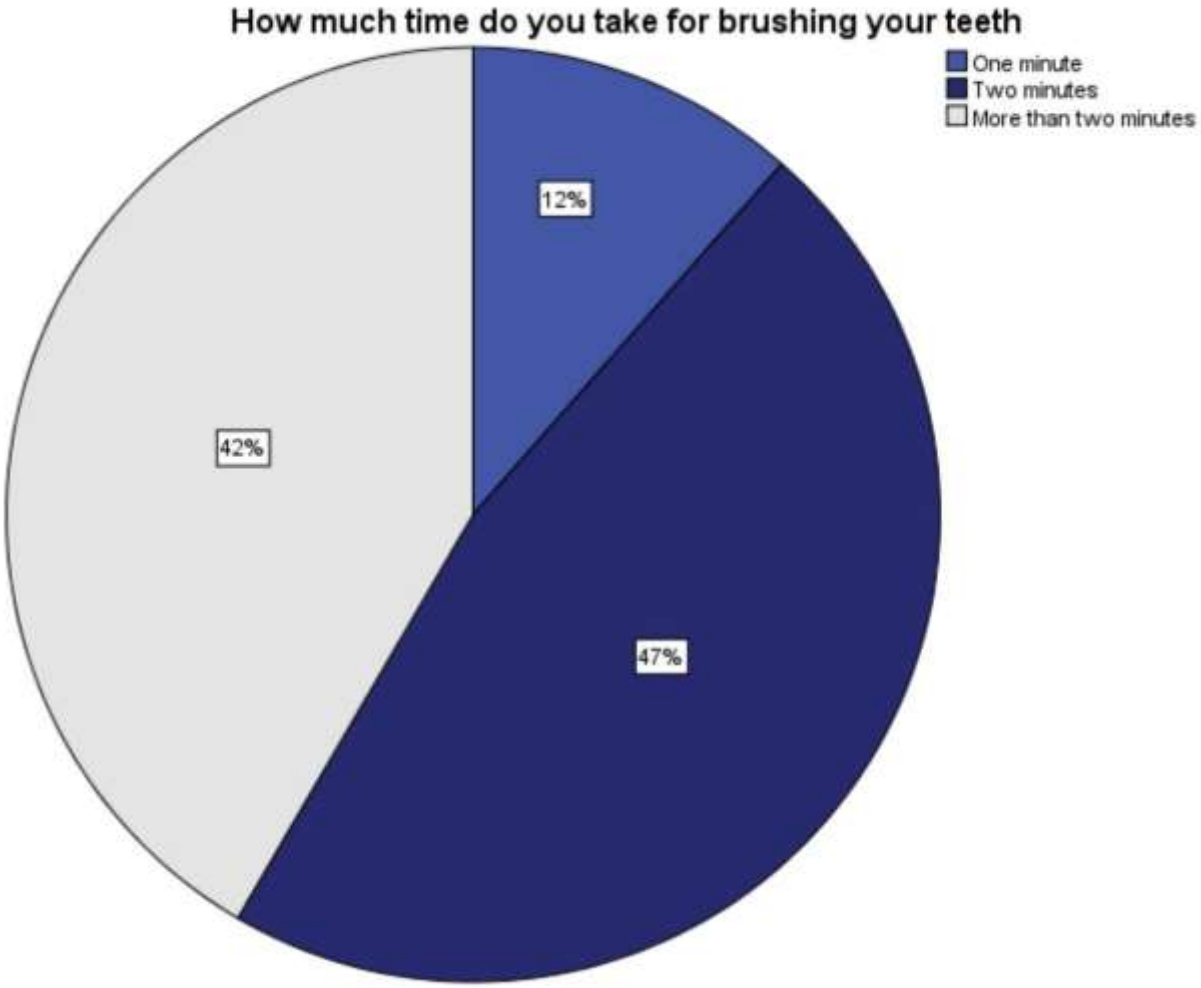

Figure7: shows the percentage of responses for the time taken to brush the teeth.Navy indicates “2 minute of brushing'', Indigo indicates “1 minute of brushing” and light grey colour indicates brushing for “more than 2 minutes”.Majority 47% of the population were aware about brushing their teeth for 2 minutes daily ,only 12% of population brush their teeth for a minute and the remaining 42% of the population brush their teeth more than 2 times which may wear off their enamel .

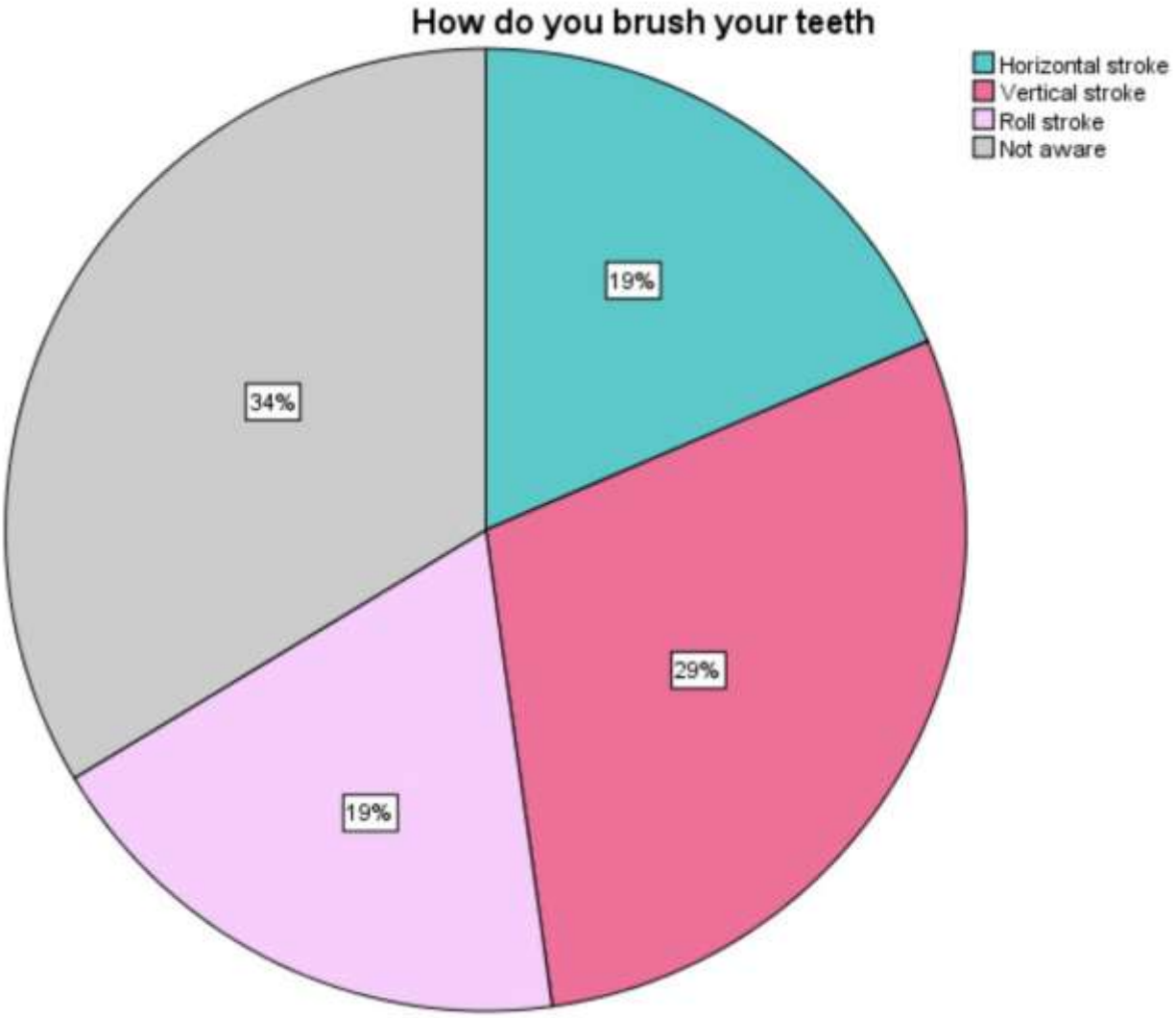

Figure8: shows the percentage of responses for the method of brushing the teeth.Baby Blue colour indicates “horizontal stroke”, pink stroke indicates “vertical stroke” , light orchid colour indicates “roll stroke” and grey colour indicates people who are “not aware” of the way they brush their teeth. Majority 19% of the population brush their teeth using horizontal stroke,29% of people brush using vertical stroke,19% of the population brush their in roll stroke and the remaining 34% are not aware of the way of brushing.

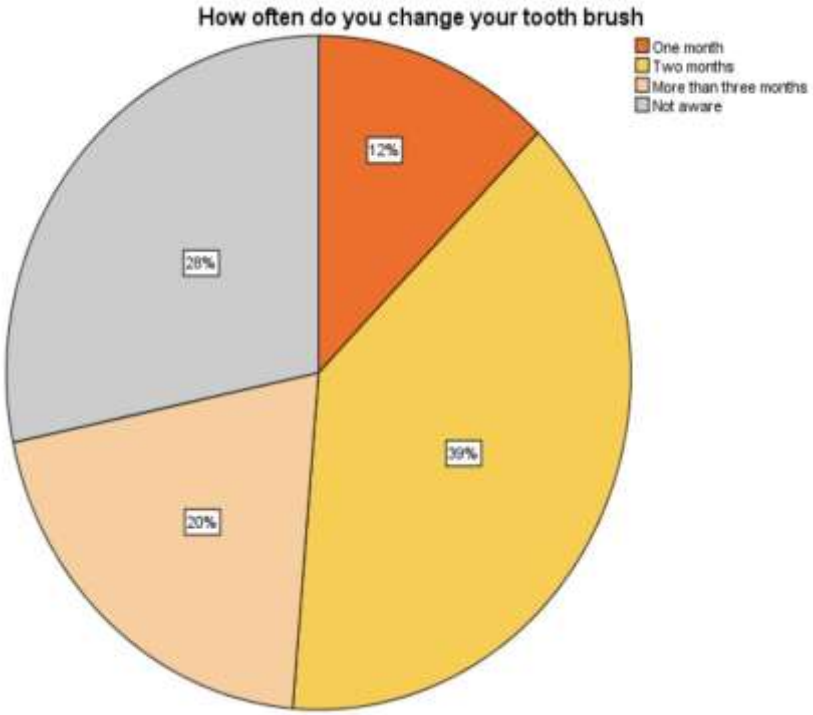

Figure9: shows the percentage of responses for the duration taken to change the tooth brush.Orange colour indicates “1 month” , yellow colour indicates “once in 2 months' ', melon colour indicates “more than 3 months” and grey colour indicates the people who are “not aware”12% of the population change their toothbrush once in a month,39% people change it once in two months,20% of the population take more than 3 months to change the brush and the remaining 28% of the population are not aware about it.

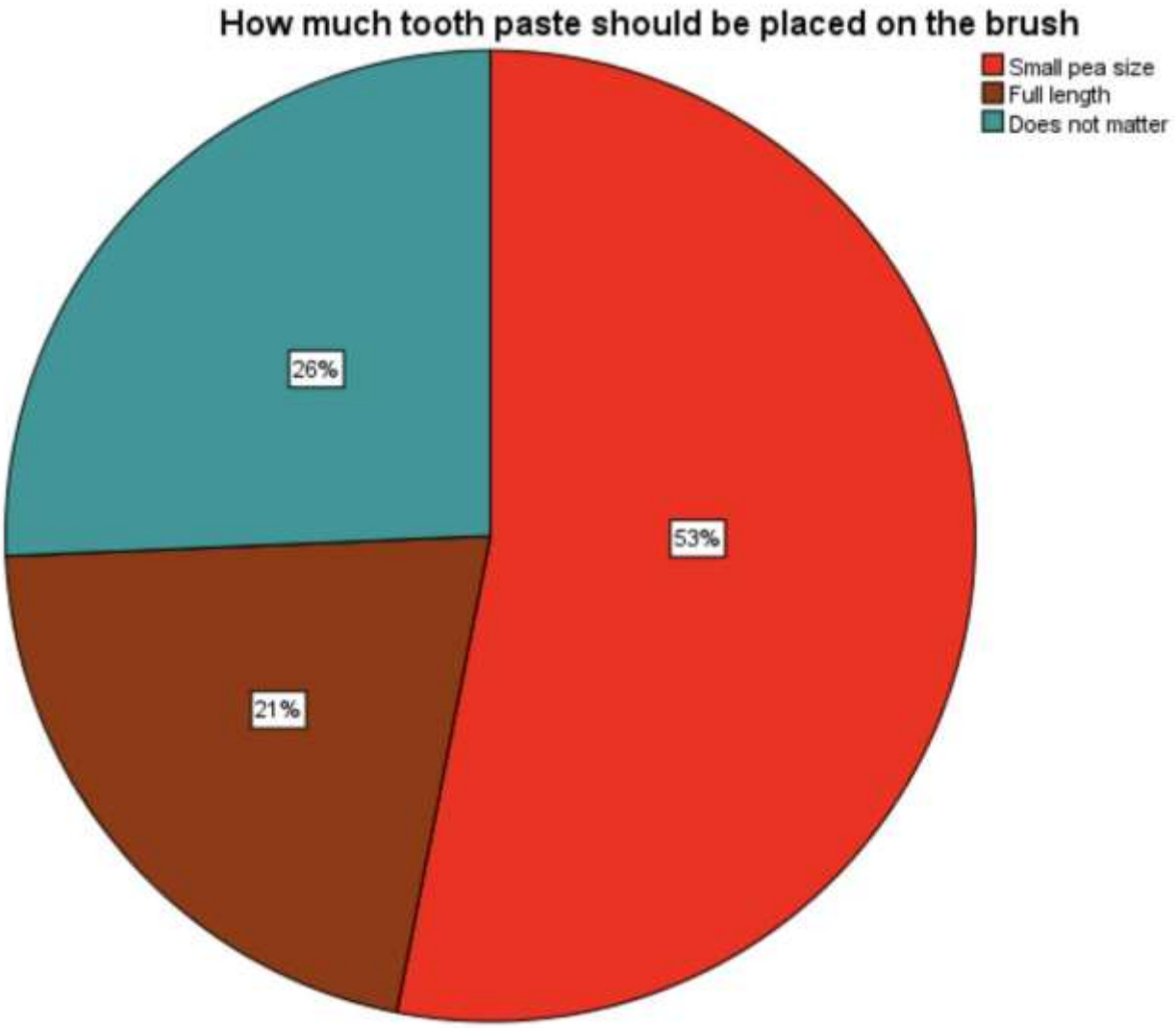

Figure10: shows the percentage of responses for the amount of toothpaste placed on the toothbrush.Red colour indicates “small pea-size of paste”, brown colour indicates “full length of paste” and Turkish blue colour indicates “does not matter”. Majority 53% of the population were aware that small pea size paste should be placed on toothbrush ,21% responded that they keep the full length of paste on the brush and remaining 26% were not aware of the size of paste.

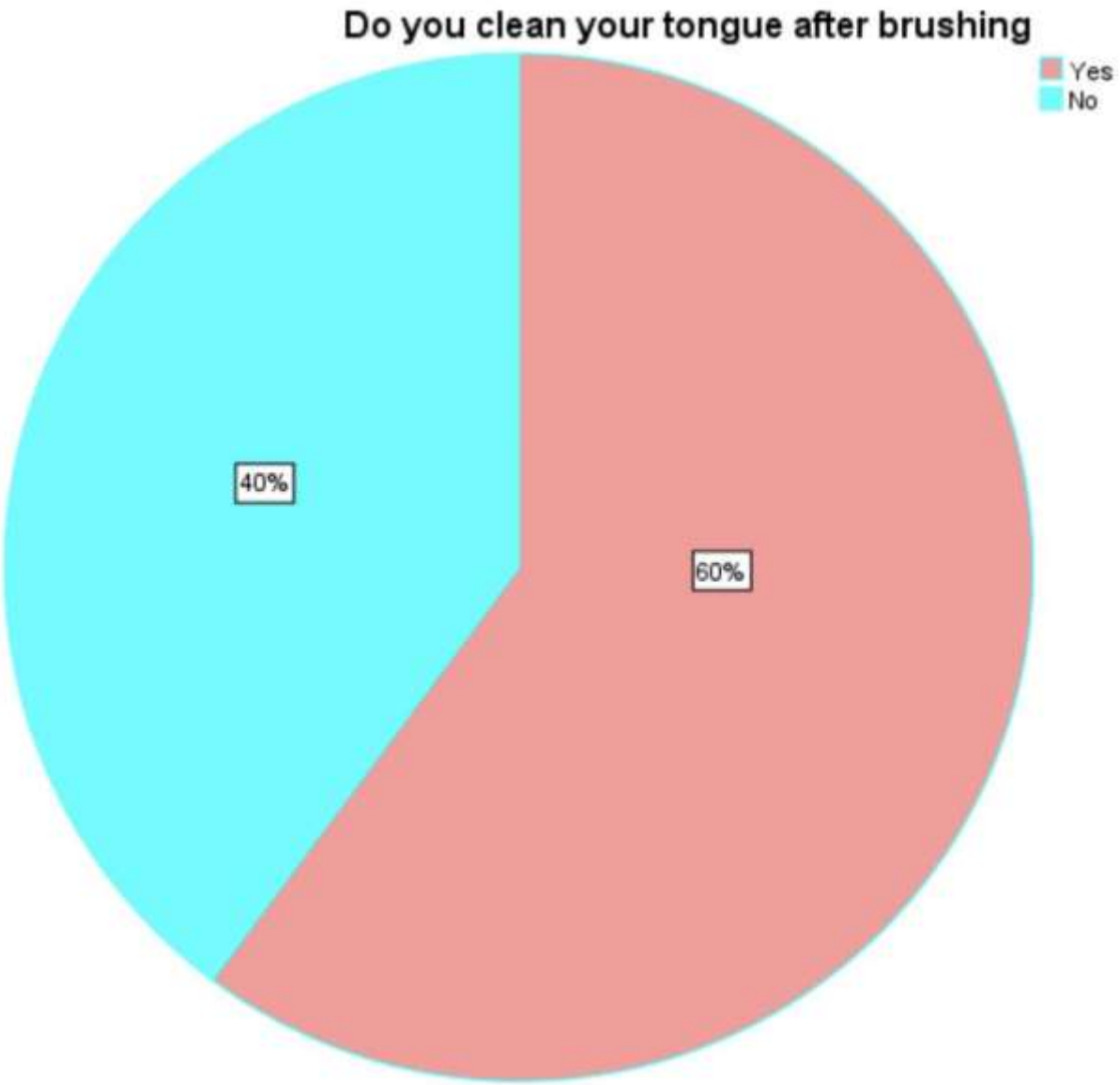

Figure 12: shows the percentage of responses for tongue cleaning after brushing.Pink colour indicates "the people who clean their tongue after brushing" and blue colour indicates the number of people who do not clean their tongue after brushing.Majority 60% of the people are aware of cleaning their tongue after brushing which can help from Halitosis for a short period of time and the remaining 40% of the population do not clean their tongue after brushing.

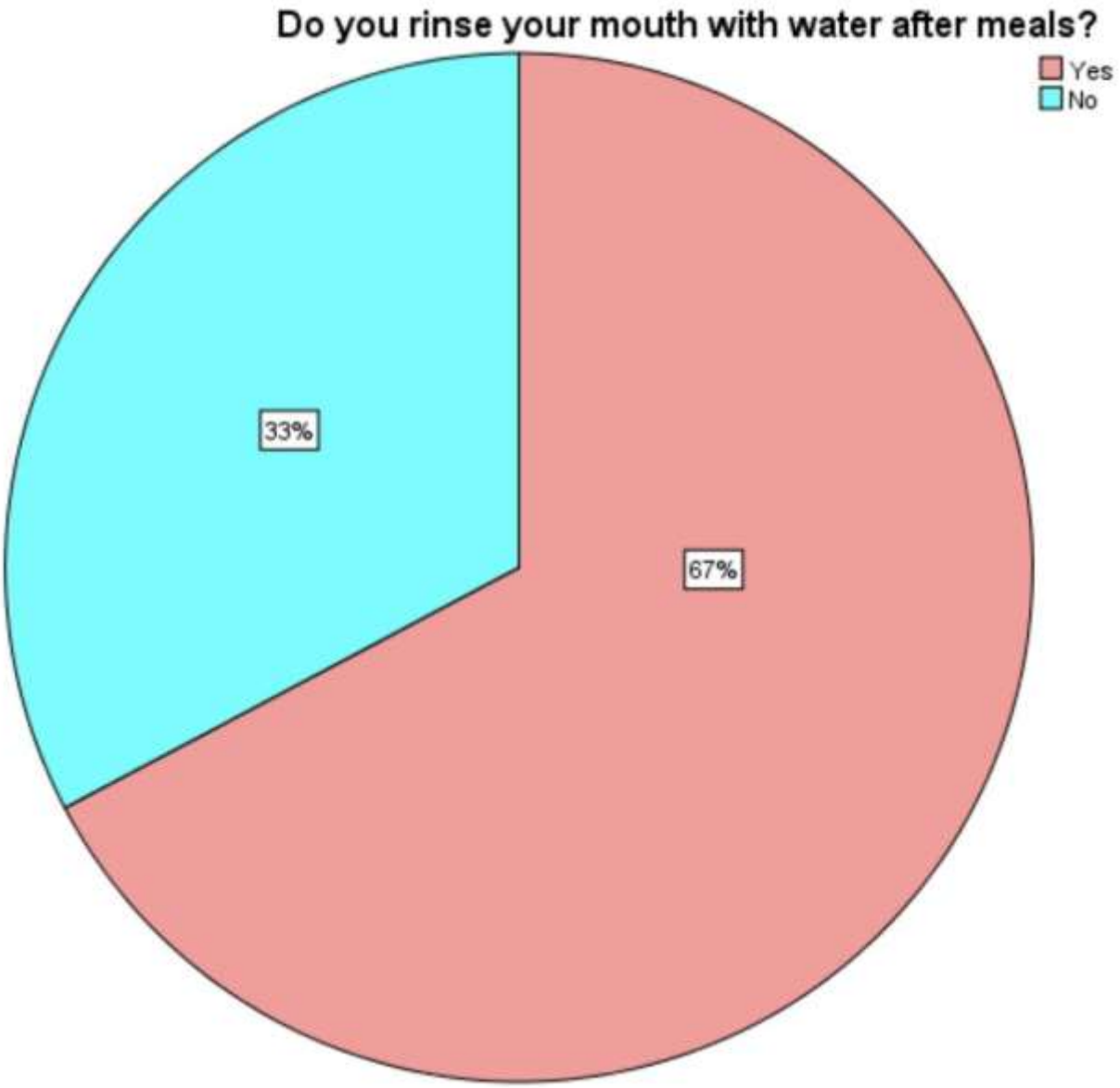

Figure 13: shows the percentage of responses for rinsing mouth after every meal. Pink colour indicates "yes" and blue colour indicates "no". Majority 67% of the people rinse their mouth after every meal and the remaining 33% of the population do not rinse their mouth after every meal .

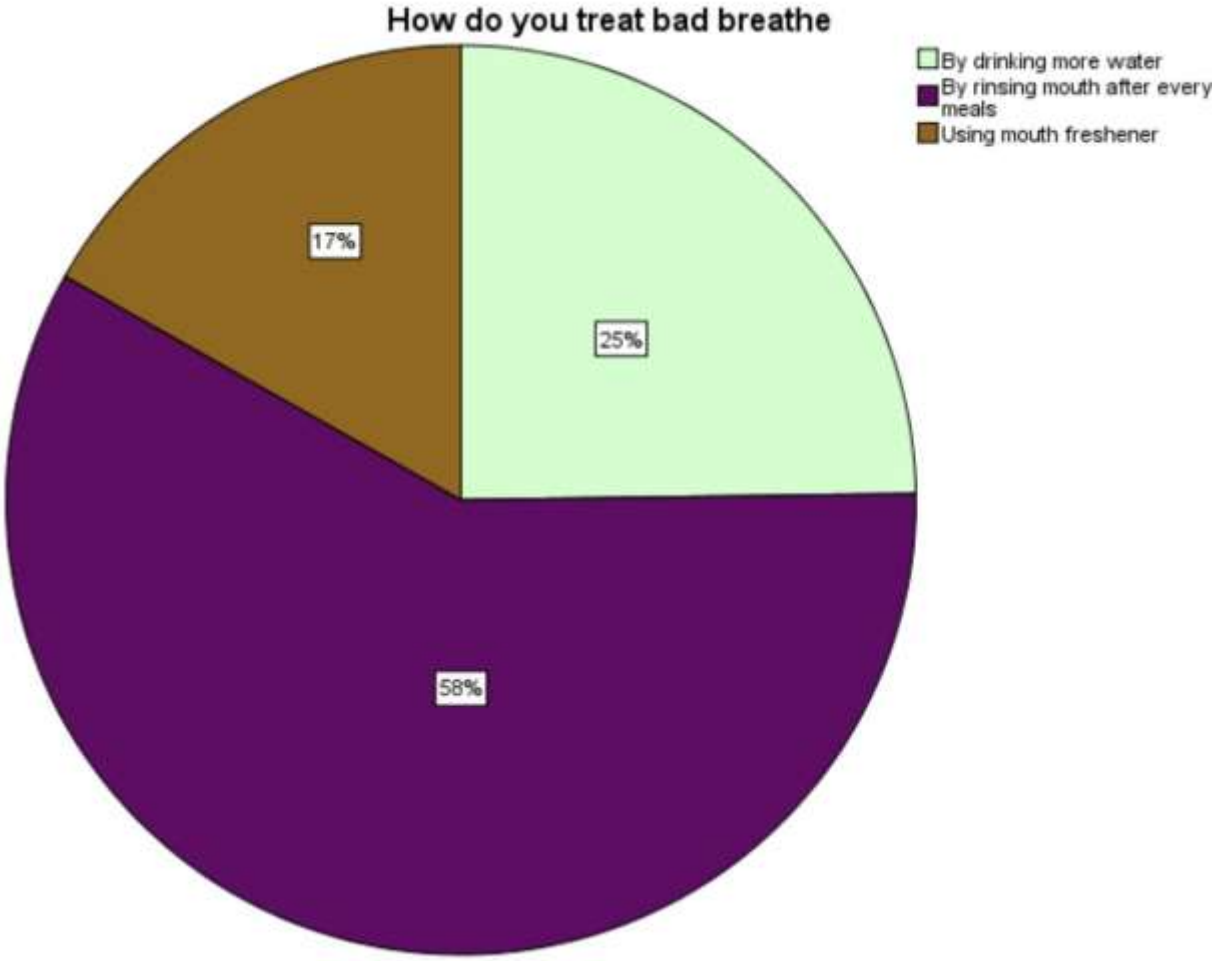

Figure14 : shows the percentage of responses for the methods used by the people to treat bad breath. Mint indicates “by drinking more water”, brown colour indicates “using mouth freshner ” and dark purple colour indicates “by rinsing mouth after every meals ”.Majority 58% treat bad breath by drinking water,25% responded that they rinse their mouth after every meal and remaining 17% use mouth freshner.

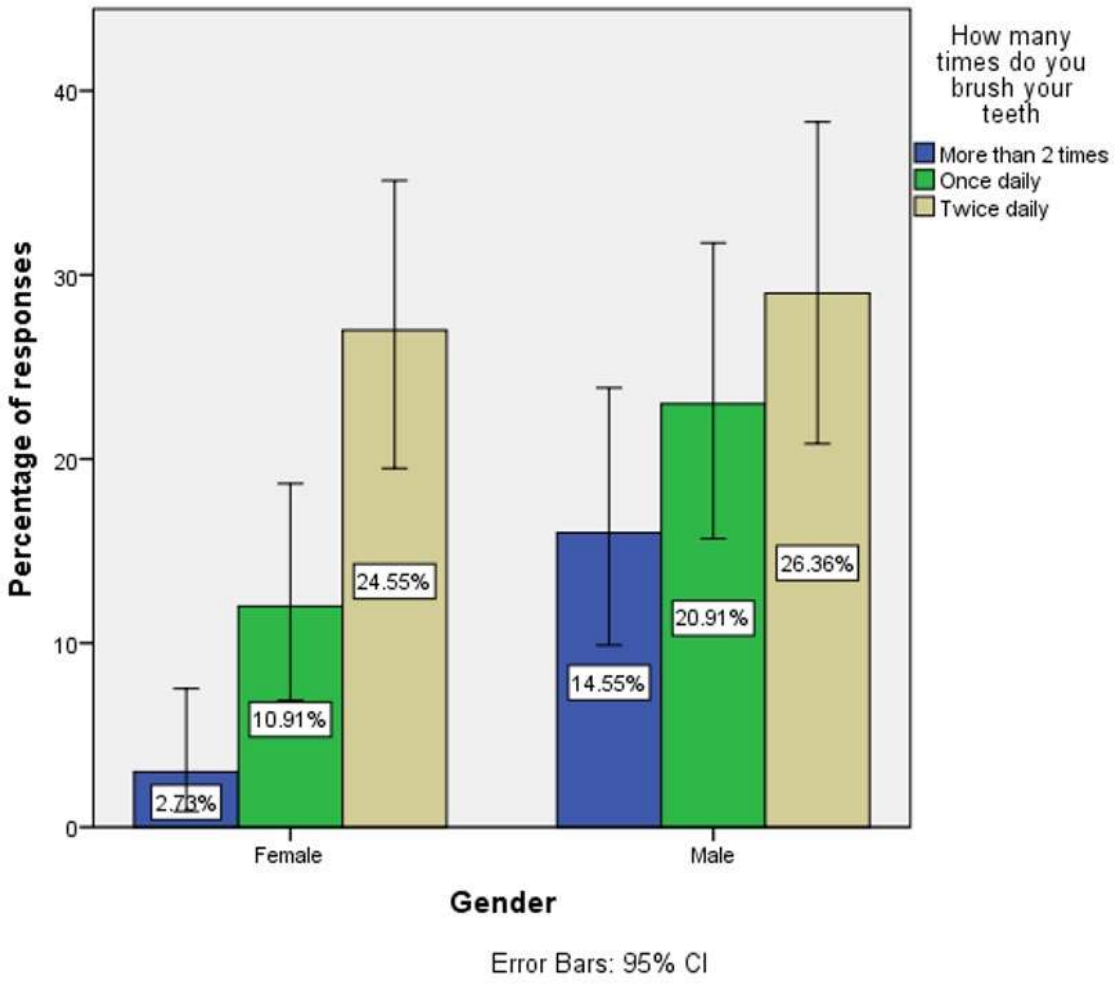

Figure 15: The bar graph depicts the association between the gender and the knowledge regarding how many times they brush their teeth. The X axis represents the gender and the Y axis represents the percentage of response of the participants.The green colour represents “Once daily”, beige colour represents “twice daily” and blue colour represents “more than two times”. Majority of the males (26%) were aware that they should brush their teeth twice daily to avoid dental related problems than females (25%). Pearson Chi-square test was done, Pearson chi-square value-6.994, df:2, p value:0.030(<0.05) hence statistically significant. There is a statistical significance between the gender and the knowledge regarding how many times they brush.

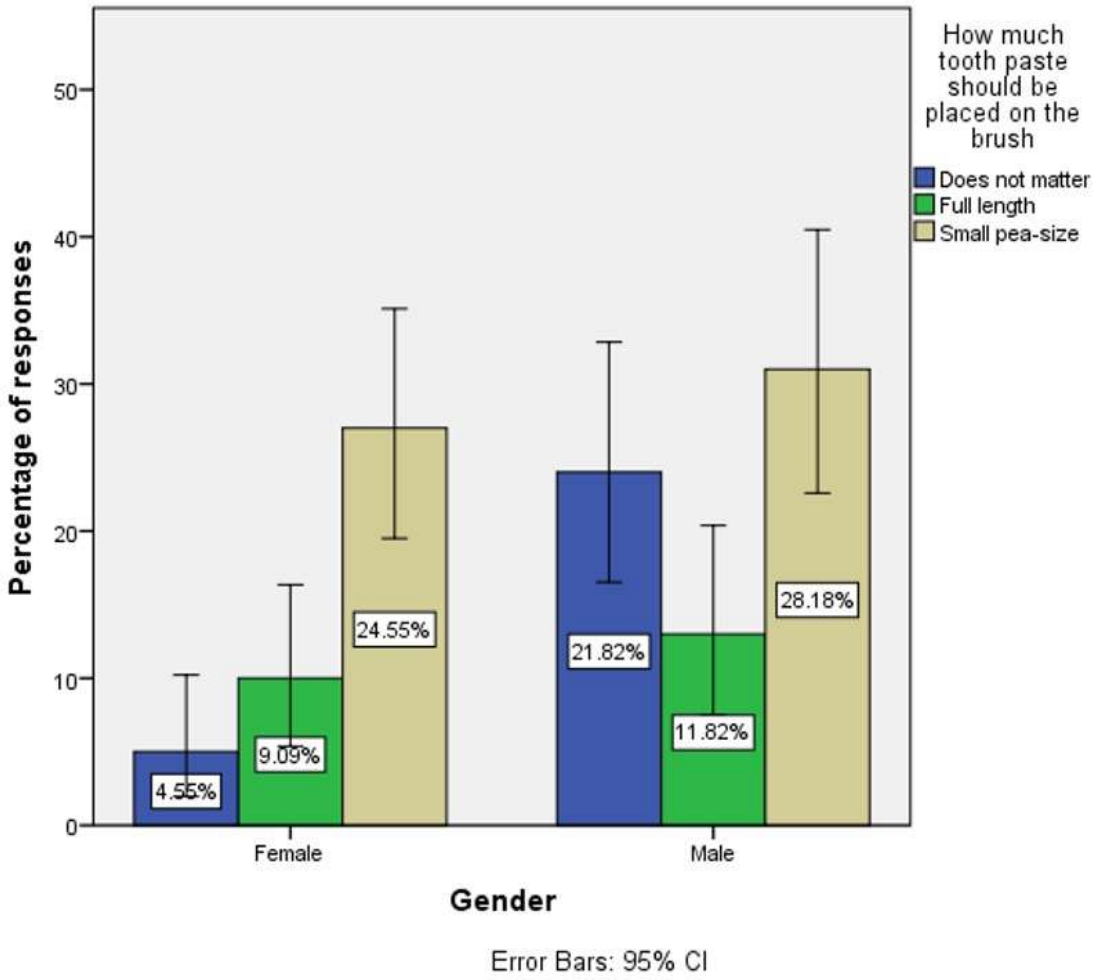

Figure 16: The bar graph depicts the association between the gender and the knowledge regarding how much toothpaste should be placed on their brush . The X axis represents the gender and the Y axis represents the percentage of response of the participants.The beige colour represents “Small pea size”, Green represents “full length ” and blue represents “Does not matter”.Majority of the males (27%) were aware of the size of toothpaste the placed on brush tham females (26%). Pearson Chi-square test was done, Pearson chi-square value-8.044, df:2, p value:0.018(<0.05) hence statistically significant. There is a statistical significance between the gender and the knowledge regarding how much toothpaste should be placed on the brush.

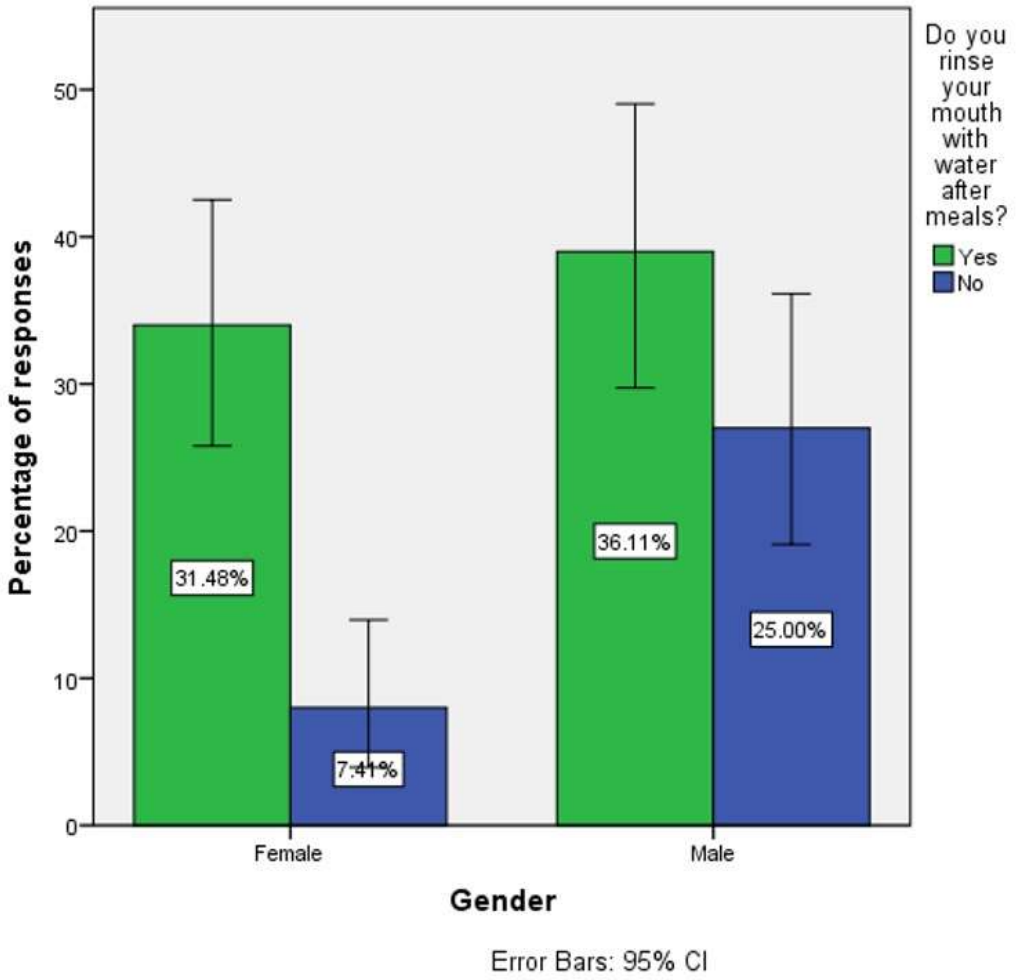

Figure 17: The bar graph depicts the association between the gender and they rinse their mouth after every meal. The X axis represents the gender and the Y axis represents the percentage of response of the participants.The Green colour represents “Yes” and Blue represents “No”. Majority 67% population were aware that they had to rinse their mouth after every meal to treat themselves from bad breath. Pearson Chi-square test was done, Pearson chi-square value-6.938, df:1 ,p value:0.008(<0.05) hence statistically significant. There is a statistical significance between the gender and the habit of rinsing mouth after every meal.

DISCUSSION:

In the present study, it has been observed that males had more awareness of oral hygiene which is contradictory with the study done in eastern India where female participants had a higher score in terms of knowledge and practices of oral health(27). Although brushing was the commonly used method of

cleaning, Nearly 51% of the population brush their teeth twice a day whereas in another study only 23% of people brushed their teeth as their daily oral hygiene methods to keep their gums healthy and prevent themselves from periodontal problems like plaque formation(28).

In the present study early, 60% of the population clean their teeth daily and almost 67% of them rinse their mouth after every meals which shows that there is proper method for daily practice whereas in previous studies, only 20% of the population showed that they clean their tongue either with toothbrush or tongue cleaner and only 29% of the sample population rinses their mouth after eating food. It shows that there is a lack of awareness in the way of maintaining proper oral hygiene in most of the places (29).

Majority of the population are not aware that they should replace their toothbrush every 2 months as worn out bristles will tend to be more abrasive on gums and cause inflammation as omly 39% of the population change their toothbrush once in two months which more or less coincides with the previous studies where 30% of the people change their toothbrush once in 3 months(30). In the present study, majority 58% of the people rinse mouth after every meal and one 17% of population use mouth freshner as to reduce halitosis,in comparison to other study in which majority of people clean their tongue with scraper which is the most important hygiene procedure to reduce morning mouth breath in periodontally healthy people and should be a part of daily home oral hygiene procedures(31).

Generalisations cannot be made as the total study sample taken was only 113 in which more males had oral awareness whereas in other study males had less awareness in a study which had more sample population (32). This study must include a larger population with clinical evaluation for the better understanding of oral hygiene among the general population.

This study was done on a small scale population, in the future such study should be done on a large scale population, so that the results can be more accurate. Also covid-19 is ongoing; the data obtained in this study must be again investigated in future.

CONCLUSION:

In this study, most of the males had more awareness on oral hygiene compared to females.Tooth brushing and dental flossing is the most common self-care behaviours for the preservation of oral health which can be practised daily.Oral hygiene problems can easily be prevented by simply providing awareness,which is a more cost effective alternative than expensive dental procedures. Periodic oral health awareness at schools,colleges,universities and community levels can be done to ensure proper oral hygiene is maintained by the society.

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CONFLICT OF INTEREST:

All the authors declare that there was no conflict of interest in present study

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AUTHORS CONTRIBUTION:

R. Neha: literature search, data collection, analysis, manuscript drafting
Dr. Suganya.P : Data verification, Manuscript drafting
Dr.Priyadharshini : Study design

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