

Knowledge and awareness about night brushing and its importance in oral health among the parents of their children

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Abstract

Introduction: Brushing teeth before going to sleep helps to remove bacteria and plaque in your mouth helping to eliminate any damage done by less saliva protection. This study is aimed to assess the knowledge and awareness of night brushing and its importance on oral health among the parents and their children.

Materials and methods: 64 parents visiting dental hospitals to seek care for their children were involved in this cross sectional study. A self structured pre-validated questionnaire was distributed among the parents. Statistical analysis was performed in SPSS software version-23. Descriptive and inferential statistics were performed.

Result: Among 64 parents, 56% parents are aware of night brushing and about 48.44% brush teeth for 2 minutes, 28.13% brush for less than 2 minutes and remaining brush for more than 2 minutes. About 65.63% have no idea how long bacteria can live in their mouth. This study increases the awareness of night brushing among parents. There was no significant difference in the knowledge, awareness of night brushing among parents of the children

Conclusion: The awareness of the importance of night brushing is an essential factor affecting oral health. This study shows that both parents and the child are aware of the fact that they have to practice tooth brushing twice daily but the extent of practicing in their daily life is questionable. This study was only an initial step towards evaluation of awareness regarding the importance of night brushing.

Keywords: Awareness, night brushing, oral health, questionnaire, novel method

Introduction

Oral health habits are a course of action which people need to learn and enact on a daily basis to maintain good oral hygiene and prevent oral disease. Night brushing prevents caries, improves gingival health. It is also an effective way to control plaque. Night brushing removes bacteria which multiplies during night and makes bad morning breath. It also brings down food particles decay and reduces

build up of acid level which makes stomach neutral (1). Maintenance of oral health is equally important in all ages, the pediatric age group is utmost important. It's understood all over the world that primary dentition lays as the floor for healthy permanent teeth (2).

Poor oral health conditions, poor oral hygiene and caries are major public health problems worldwide. For this, dental health status is significantly necessary which can be accomplished by regular brushing and flossing to limit bacterial growth. Good oral health behaviour is essential to prevent oral disease. It is a need that should adopt good oral health behaviour, prevent plaque accumulation and caries (3). Good oral health behaviour is an essential component for preventing oral diseases in children. There is a wide ranging harmony on the significance of introducing moral practices in younger age groups because they are more ready to listen (4). Lifestyle changes cause a disturbance in their regular routine cycle and have a bad influence on oral health behaviour. Found that after 45 years there is a high risk of getting periodontitis (5). In developing countries like India, various studies have reported poor parents' knowledge and awareness on oral health. However, in industrialised countries it is quite the opposite (6). Without having proper treatment, early childhood caries multiply rapidly and cause pain and dental infection. It also leads to tooth decay, cavity, bacterial multiplication and increase in acid level which causes gum disease (7).

Children learn most of their qualities and develop most of their attitudes and traits from their parents. So, if their parents are not aware and they themselves have poor oral health it is anticipated the child's oral health status (8). Inadequate knowledge of available preventive methods is related to non adoption of preventive practices (9). However, our team has extensive knowledge and research experience that has translated into high quality publications (10–29). Thus, this study aimed to assess the knowledge and awareness about night brushing and its importance in oral health among the parents and their children in Chennai city.

Materials and Methods

A cross sectional study was conducted among 64 parents and their children in Private Hospital, Chennai. A pre-validated and reliable questionnaire containing 10 questions both in English and Vernacular language (Tamil) was distributed to parents. The samples were selected based on inclusion and exclusion criteria. Parents were asked the standard self administered questions. All parents who were willing to participate in the study at the time of investigation had been included in the study. Oral consent from the participants had been obtained after explaining the need for the study.

A pre-validated questionnaire with demographic details and close-ended questions for obtaining information about knowledge, attitude, practice of oral hygiene was used. A non-probability convenience sampling technique was adopted. Questions were intended to assess the awareness regarding night brushing including the basic information about their brushing habit. The internal consistency of the questionnaire using Cronbach's alpha was 0.78. Statistical analysis was performed in the Statistical Package for the Social Sciences (SPSS) software version 23.0 (IBM, Chicago, USA). Descriptive statistics were performed to present the frequency distribution of the options of the question items. Chi-square test was done to find the difference in knowledge and awareness of night brushing among male and female participants.

Results

The study was conducted to create awareness on night brushing and its importance in oral health among the parents and their children. Among the study participants equal number of children and parents were included with almost equal sex distribution among the study groups. Among 64 parents, 65.63% responded that their children brush their teeth once a day [Figure 1]. Among 64 parents, 56% parents are aware of night brushing [Figure 2]. Among 64 participants 48.44% brush teeth for 2 minutes 28.13% brush for less than 2 minutes and remaining brush for more than 2 minutes [Figure 3]. Among 64 parents, 67.19% parents and their children sanitise their toothbrush regularly [Figure 4]. About 65.63% have no idea how long bacteria can live in their mouth [Figure 5]. About 76.56% participants think it is better to brush both morning and night. Among 64 parents and their children 56.25% are aware that skipping brushing leads to gum disease [Figure 6]. About 57.81% of parents and their children are not visiting dental clinics regularly [Figure 7]. About 67.19% are aware about plaque building up. Among 64 respondents 79.69% use fluoridated toothpaste. Among 64 parents, 32.81% females and 32.81% males mentioned that their children brush teeth Once a day [Figure 8]. Among 64 parents, about 28.13% female parents were aware of night brushing while only 20.31% of male parents were aware of night brushing [Figure 9]. Among 64 parents, about 23.44% female parents and 25.00% male parents mentioned that their children brush teeth for 2 minutes [Figure 10].

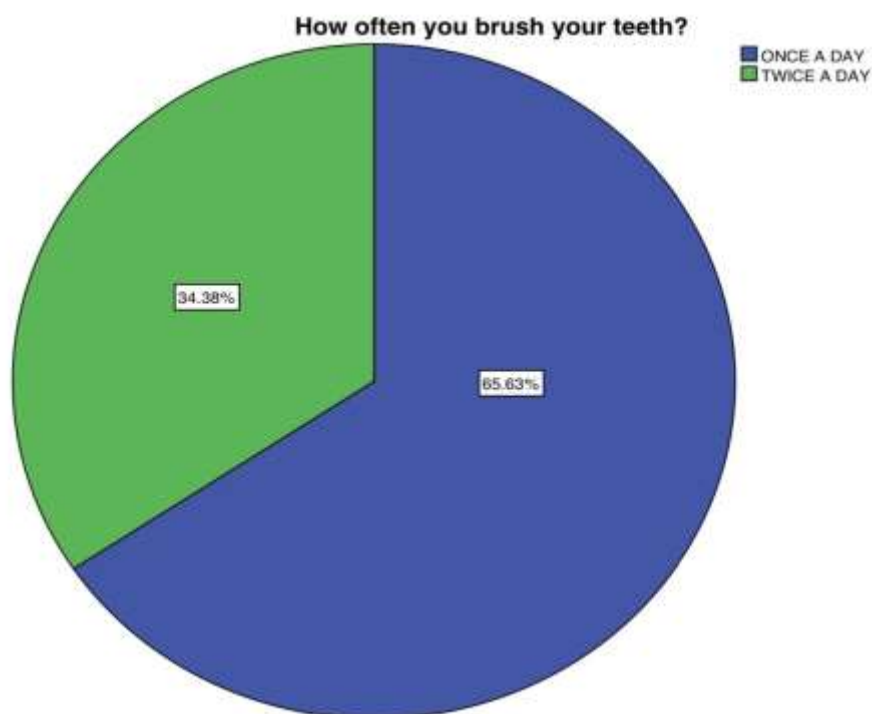


Figure 1: Pie chart represents the percentage distribution of parents on how often their children brush teeth. Majority of the parents 65.63% mentioned that their children brush Once a day which is represented by Blue. Green colour represents 34.38% of parents who mentioned that their children brush Twice a day.

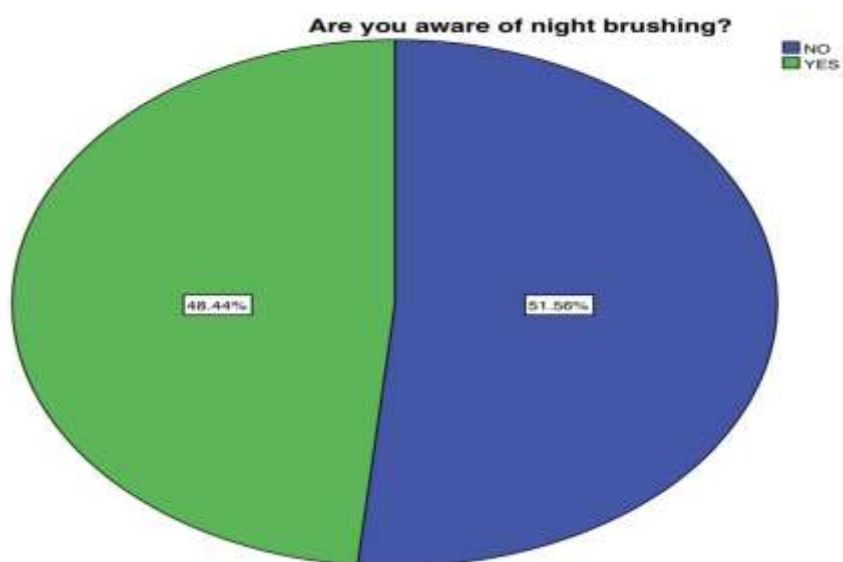


Figure 2: Pie chart represents the percentage of distribution of parents and their children who are aware of night brushing. Majority of the parents 51.56% are not aware of night brushing which is represented by Blue. Green colour represents 48.44% of parents with awareness of night brushing.

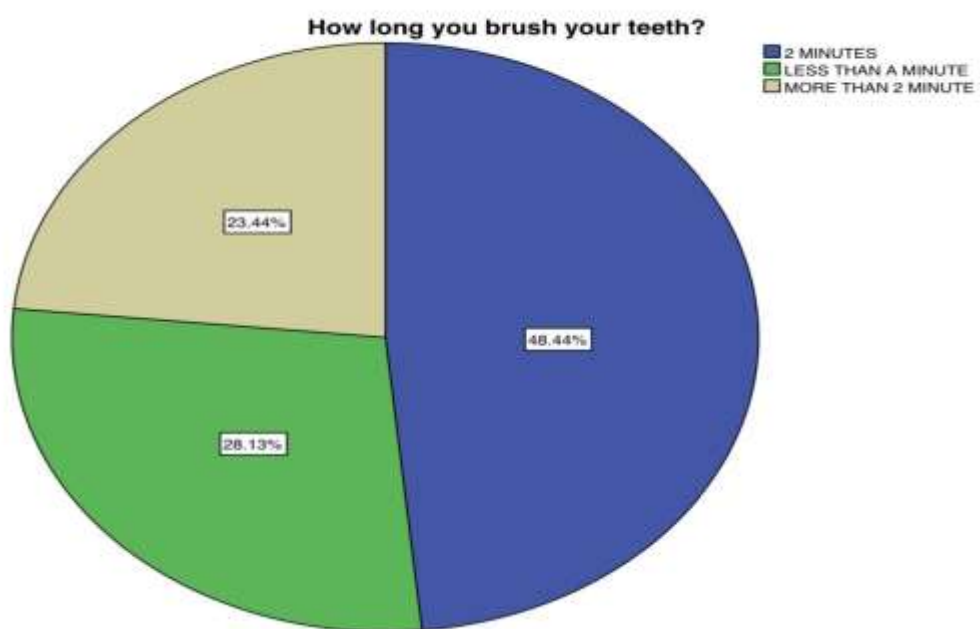


Figure 3: Pie chart represents the percentage of distribution of parents and their children on how long their children brush teeth. Majority of the parents 48.44% mentioned that their children brush for 2 minutes which is represented by Blue. Green colour represents 28.13% of parents who mentioned that their children brush for Less than 2 minutes, Beige colour represents 23.44% of parents who mentioned that their children brush for More than 2 minutes.

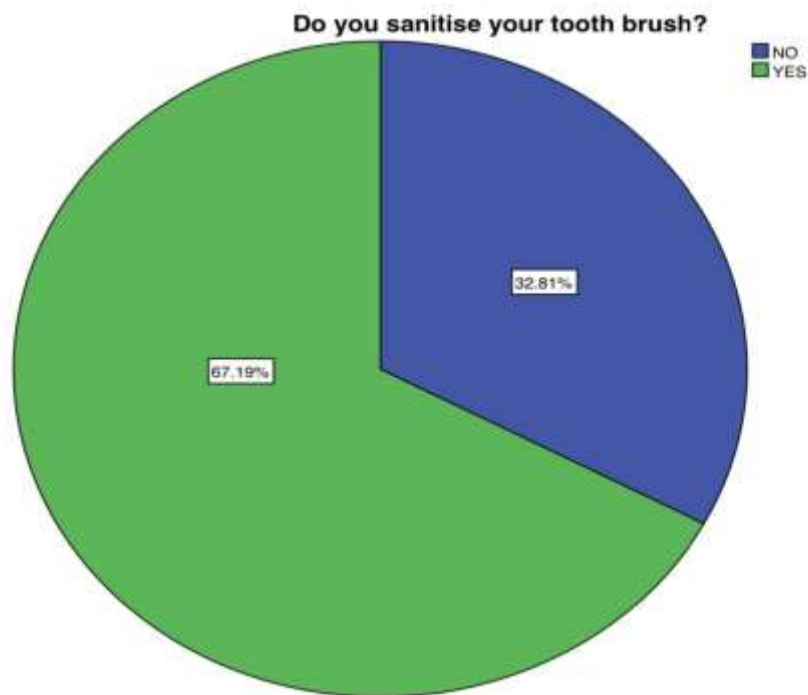


Figure 4: Pie chart represents the percentage of distribution of parents and their children who sanitise their toothbrush. Majority of the parents 67.19% mentioned that they sanitise their toothbrush regularly which is represented by Blue. Green colour represents 32.81% of parents who mentioned that they don't sanitise their toothbrush

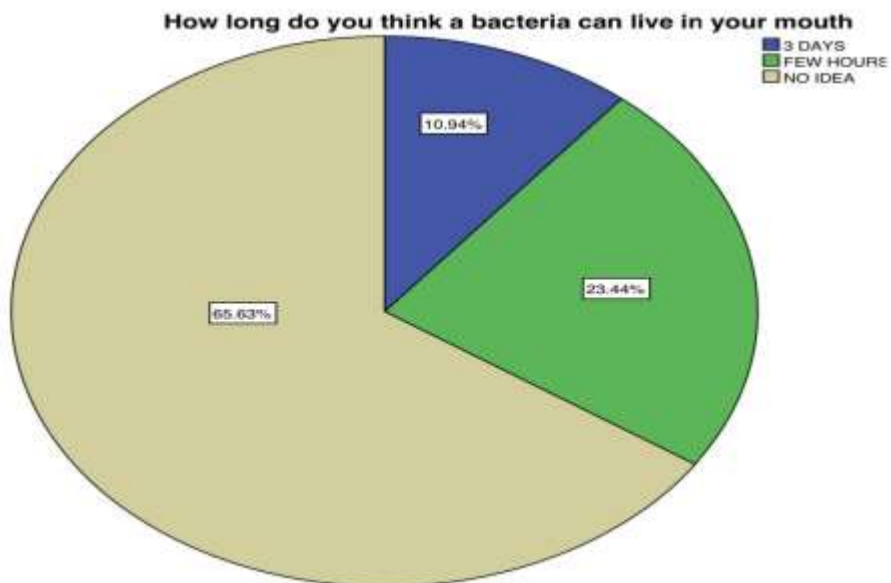


Figure 5 : Pie chart represents the percentage of distribution of parents and their children's knowledge of how long bacteria can live in the mouth. Majority of the parents 65.63% have No idea which is

represented by Beige. Green represents 23.44% of parents who mentioned Few hours. Blue colour represents 10.94% of parents who mentioned 3 days.

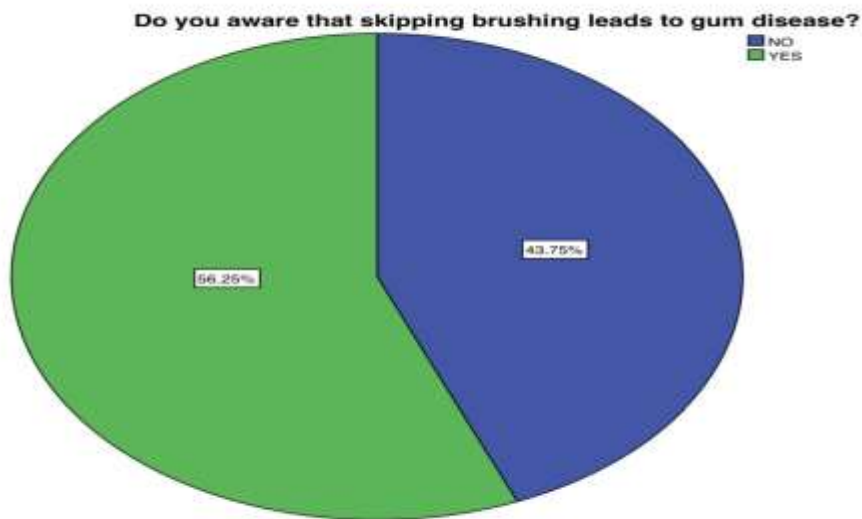


Figure 6: Pie chart represents the percentage of distribution of parents and their children's knowledge that skipping brushing leads to gum disease. Majority of the parents 56.25% are aware that skipping brushing leads to gum disease which is represented by Green colour. Blue colour represents 43.75% of parents are not aware that skipping brushing leads to gum disease.

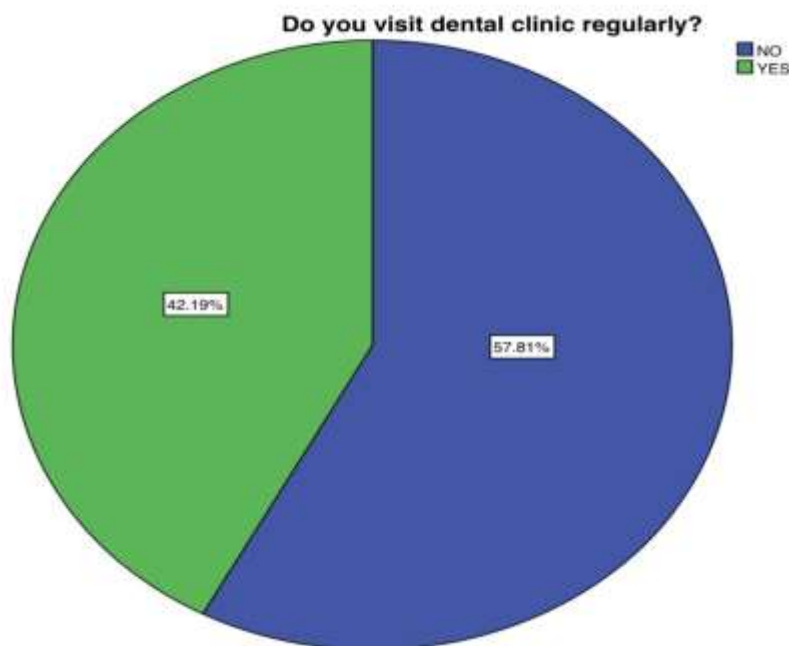


Figure 7: Pie chart represents the percentage of distribution of parents and the children who visit dental clinics regularly. Majority of the parents 57.81% mentioned No which is represented by Blue colour. Green represents 42.19% of parents who mentioned Yes.

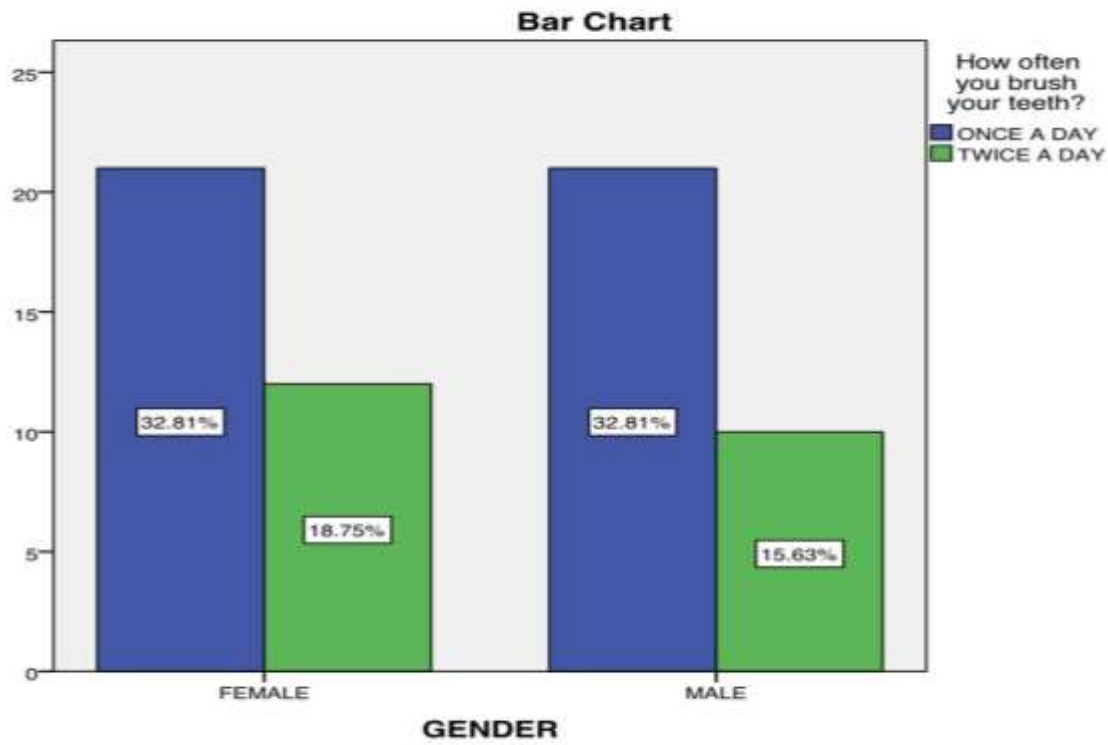


Figure 8: Bar graph depicts the association between the parent’s responses based on how often their children brush their teeth with gender. The X axis represents the gender and the Y axis represents the count of how often their children brush their teeth. Blue colour represents Once a day and Green colour represents Twice a day. Most of the male and female participants brush once daily. This difference was not significant (Chi-square; $p = 0.43$ - not significant)

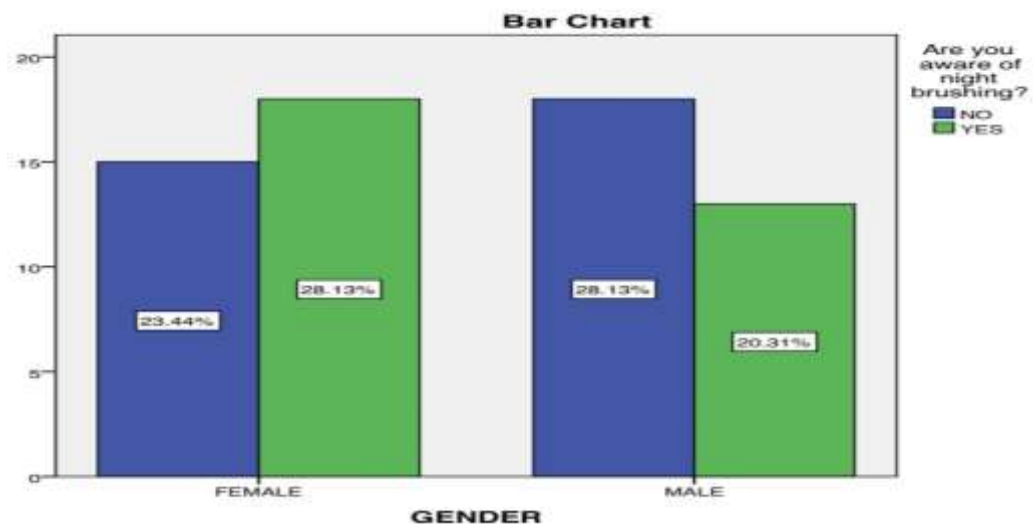


Figure 9: Bar graph depicts the association between the parent’s responses based on awareness of night brushing with gender. X axis represents the gender and Y axis represents the count of participants with awareness of night brushing . Blue colour represents No and Green colour represents Yes. Most of the male and female participants were aware of brushing at night time. This difference was not significant (Chi-square; $p=0.38$ - not significant)

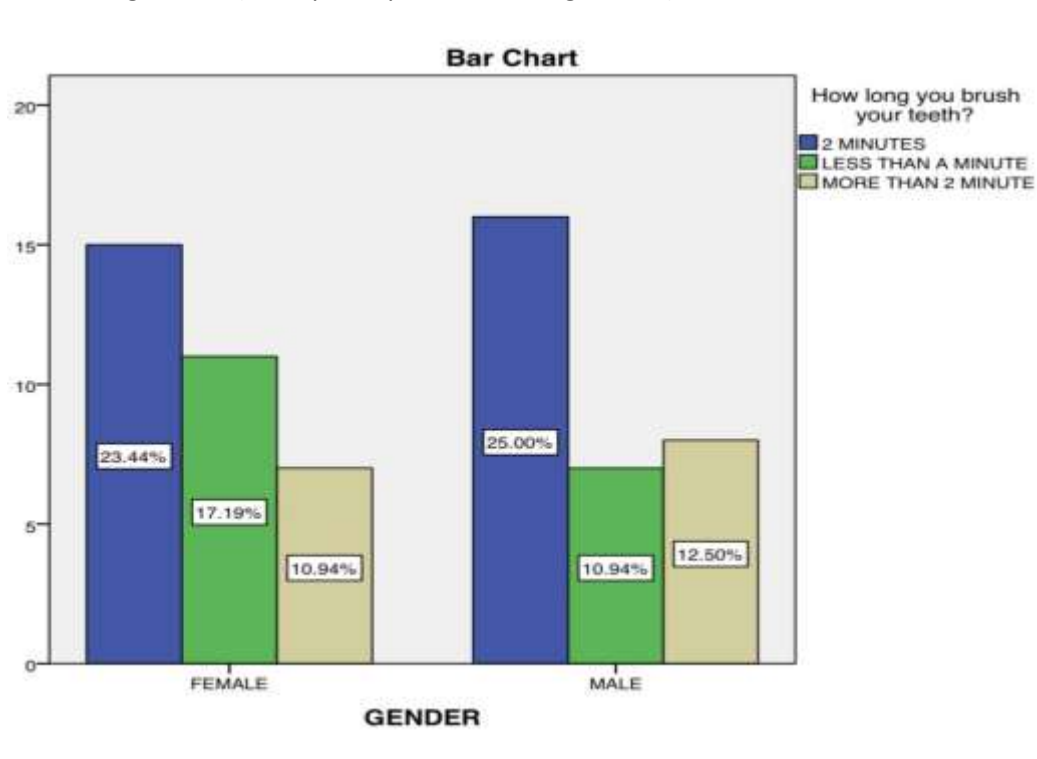


Figure 10: Bar chart depicts the association between the parent’s responses based on how long their children brush teeth with gender. X axis represents the gender and Y axis represents the count of participants of how long their children brush teeth. Blue colour represents 2 Minutes, green colour represents less than a minute and Beige colour represents more than a minute. Most of the male and female participants brush their teeth for 2 minutes. This difference was not significant (Chi-square; $p = 0.09$).

Discussion

The present study aimed to assess the knowledge and awareness about night brushing among parents and their children. Night brushing knowledge of parents was found to be moderate and their practices need modifications. Toothbrushing is a simple routine which everyone follows. The importance of toothbrushing was very significant in the oral hygiene and health of every individual. The awareness of night brushing was crucial yet much underrated and often neglected. This study was an attempt to evaluate the same and encourage further research in this regard. It pointed out that not every sample was oriented to the topic of interest or completely ignorant as the same.

Various studies had been done on tooth brushing habits of children and their parents but the importance of night brushing sadly was an unturned stone. The results similar to the study regarding the difference in awareness among various SES were noted by (30). One important aim of oral health

education of children and adolescents is to enable them to employ proper oral hygiene until they come of age (31).

Parents from low SES need to be educated more in the aspect of their role in the importance of oral health of their children and it seems to agree with the reports of the study by (32). Similarly, one more study correlates between parents awareness and oral hygiene of their children as seen in a study on the relationship between children's dental health and parental knowledge about oral hygiene by (33,34) In preschools, children should be educated and given orientation toward personal hygiene and toothbrushing through rhymes and action songs which probably makes them better aware. This study assessed the night brushing knowledge and awareness among parents and their children.

The only limitation is that this study used a convenience sampling technique. Further cohort studies need to be directed to extrapolate the results to the population with different races and cultures. The limitations of this survey lies in the fact that cross-sectional survey was done among a restricted population. Parents need guidance in supporting their children and adolescents subjected to the importance of night brushing and surveys among the general population helps to provide more knowledge and awareness to know about night brushing.

Conclusion

This study shows that both parents are aware of the fact that they have to practice tooth brushing twice daily but the extent of practicing in their daily life is questionable. This study provides a wider perspective on the maintenance of oral health knowledge and behaviour, and the relevant short- and medium-term outcomes. Additionally, the impact of repeating the intervention is also an important issue that must be studied further in order to understand its true importance. This study was only an initial step towards evaluation of awareness regarding the importance of night brushing.

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CONFLICT OF INTEREST:

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

AUTHORS CONTRIBUTIONS :

Deepasakthi J: Literature search, data collection, analysis, manuscript drafting .

Arthi Balasubramanian: Data verification, manuscript drafting.

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Annexure 1:

1. Name:
2. Age:
3. How often does your child brush their teeth? (Once a day / Twice a day)
4. Are you aware of night brushing? (Yes / No)
5. How long does your child brush their teeth? (2 Minutes/ Less than a minute / More than 2 minutes)
6. Do your children sanitise their toothbrush? (Yes / No)
7. How long do you think a bacteria can live in your mouth? (3 days/ Few hours/ No idea)
8. Is it better to brush your teeth in the morning or night? (Both morning and night/Morning/Night)
9. Are you aware that skipping brushing leads to gum disease? (Yes / No)
10. Do you visit dental clinics regularly? (Yes / No)
11. Are you aware that plaque builds up when you don’t brush? (Yes / No)
12. Use of toothpaste (Fluorinated/ Non-fluorinated)