

Knowledge and awareness on role of diet in dental caries among parents of primary school children of Khowai town: A cross-sectional survey

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Type of Publication: Original Research Paper

Conflicts of Interest: Nil

ABSTRACT

Aim: The aim of this study is to assess the knowledge and awareness among parents of primary school children towards the role of diet as an etiological factor of dental caries. **Materials and Methods:** Educational level and knowledge of the parents, method of oral hygiene maintenance, and their awareness on dental caries and food habits of their children were measured by a closed ended self-structured questionnaire. A survey was conducted among 100 parents in Khowai town, Tripura, India. **Background:** Maintaining a good oral hygiene in children depends on a number of factors but dietary habit can be considered as the most important factor among them as far as children are considered. The inclusion of fermentable carbohydrates in diet is known to cause dental caries in all ages; however, children are more prone to dental caries as they are fond of taking such fermentable carbohydrates in the form of chocolates, toffees and candies. The objective of this article is to review the awareness of the parents regarding the association between diet and dental caries in their children. **Results:** Survey population consisted of both parents (50 fathers and 50 mothers). Based on the survey conducted an average of 40% of the parents had an awareness regarding the association between sugary diet and the incidence of dental caries.

Keywords: Dental, Caries, Knowledge, Awareness

INTRODUCTION

Dental caries is a multifactorial disease but today it is generally related to diet. A timely prevention against dental caries is necessary otherwise it affects the general health especially in children. Changing lifestyles and food habits are the causes of dental caries in the general population. Prevalence of dental caries among primary school children is due to lack of awareness about dental caries and diet among parents, care takers and primary teachers. Dental health education begins from footsteps of awareness¹. It is necessary to create awareness about the dental caries and oral hygiene. As oral diseases are largely preventable, it is hoped that with the early exposure to oral health care activities, the prevalence of dental diseases will be reduced². It is recommended that national health authorities and decision-makers formulate country-specific and community-specific

goals for reducing the amount of free sugars, aiming towards the recommended maximum of no more than 10% of energy intake. In addition, the frequency of consumption of foods containing free sugars should be limited to a maximum of 4 times per day. It is the responsibility of national authorities to ensure implementation of feasible fluoride program for their country³.

Materials and Methods

A cross-sectional survey was conducted among 100 parents of primary school children based on close ended self-structured questionnaires. Both the genders were included, male (50%) female (50%). After obtaining the informed consent; they were made to answer the self-structured questionnaire (Figure 1). The questionnaire consists of questions to assess

their personal bio-data, knowledge about dental caries, their daily dietary habits, attitude toward its prevention and practice guidelines and opinions. All the data were entered and a statistical analysis was made.

Results

It was analyzed that 40% parents know that sweetened food causes dental caries, 58% people take sweetened food multiples times and 42% once regularly. Among them 91% of parent brush their teeth once a day while only 9% brush their teeth twice a day. Among the parents 86 % know that

chocolate, toffee and sweets may cause dental caries but remaining 14% did not know about this information. 76% of the parents are indulge in-between meal snacking and taking tea. 2% parents know that dental sealants and fluoride application can be used in caries prevention and 98% were unaware of this information. Among the parents 32% had never visited the dentist before and 68% had visited the dentist when necessary. The common reason why they had not visited the dentist, for a regular dental check-up was due to perception that caring teeth is not much important as other body parts.

Name_____ Age_____ Sex_____ Educational qualification_____

1. Number of sweets taken per day?
 - a) Once a day
 - b) Many times a day
2. Dental caries development and frequency of sweets consumption are related?
 - a) Yes
 - b) No
3. Do you take snacks and tea between meals?
 - a) Yes
 - b) No
4. Number of brushing per day?
 - a) Once
 - b) Twice
5. Do you know that fluoride and pits & fissure sealants can prevent dental caries?
 - a) Yes
 - b) No
6. Do you agree that sugary diets cause dental caries?
 - a) Yes
 - b) No
7. Have you ever visited dentist for teeth problem?
 - a) Yes
 - b) No

Figure1. Questionnaire on knowledge and awareness of diet and dental caries

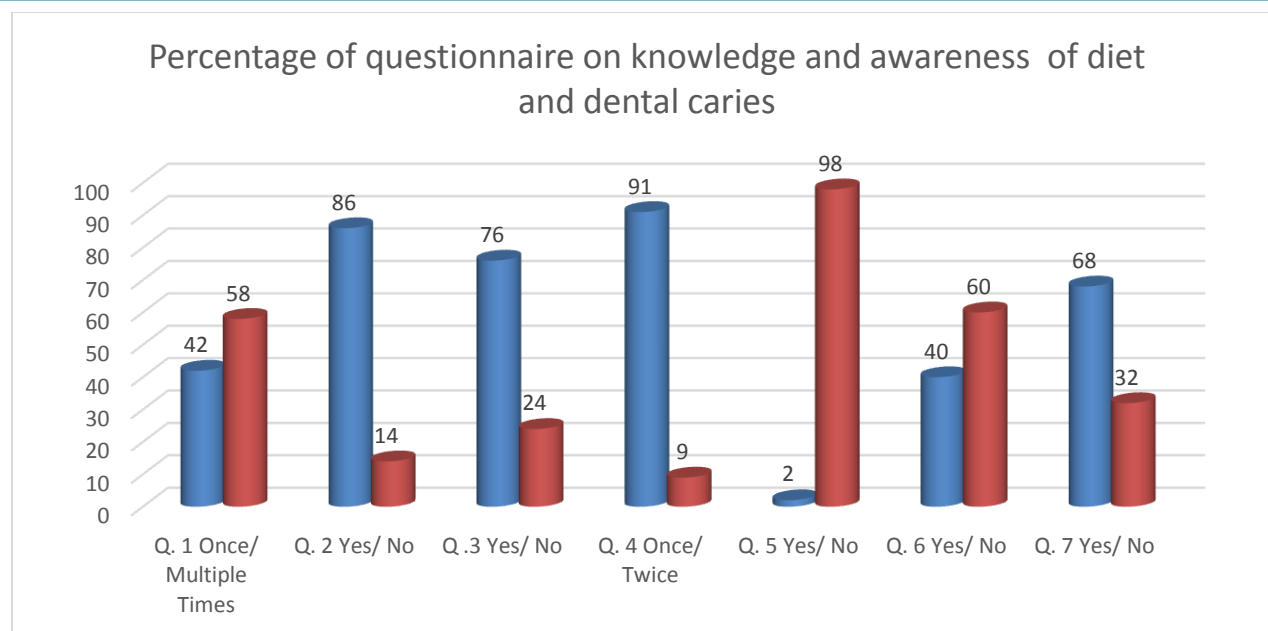


Figure 2: Percentage of questionnaire on knowledge and awareness of diet and dental caries

Discussion

From the above survey it was noticed that maximum parents of Khowai town have knowledge that dietary habits has play an important role in the oral health. The occurrence of dental caries is more among those who has more intakes of sweetened foods. Therefore the need for diet counseling and awareness on prevention of dental caries is demanding and should be implemented by dentist and oral hygienist.

The relation between sugars and dental caries is difficult to measure because of inherent limitations. Konig and Navia⁴ noted that 1) variability in patterns of sugar consumption affects

the duration of exposure of the teeth to sugars, 2) dietary recalls or food diaries only provide an approximation of actual sugar and food consumption patterns, 3) patterns of sugar consumption are reported on an annual basis but caries formation can take several years, and 4) caries prevalence is influenced by several factors that are difficult to control for, including the dietary mineral content (fluoride, calcium, and phosphorus), health care, oral hygiene habits, and education level.

Vipeholm study⁵ concluded that sugars in sticky foods consumed between meals were associated with high caries activity. These findings have resulted in development of non-fermentable sweeteners such as xylitol that do not cause fall in pH of oral cavity⁶.

Fluoride application and pits & fissure sealants are used as a preventive measure against dental caries. People should be educated and must be aware of all the preventive measures that are available for a comprehensive oral health care. Importance must be given to evaluate the dietary habits as a preventive measure against dental caries in children. Restriction of soft and sticky sugary foods should be advised as a part of counseling to prevent dental caries since diet is a common risk factor for other chronic diseases such as obesity and diabetes. One must remember that dental caries is a multifactorial disease, and other factors such as oral hygiene and access to fluoridated products are also determinants of the carious process and should be addressed for caries prevention and treatment⁷.

Conclusion

From the survey it can be concluded that diet plays an important factor in the occurrence of dental caries among general population. Sugar containing foods is not only the source for causing dental caries but also a common risk factor for obesity and diabetes. Therefore it is necessary to evaluate the dietary habits and counseling should be given on proper dietary habits to prevent dental caries and other systemic diseases.

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