

Assessing The Knowledge Of Dietitians Regarding Diet And Oral Health In Ghaziabad City

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ABSTRACT:

Objective: To evaluate dietitians' knowledge of food and dental health in Ghaziabad.

Materials and Methods: A cross-sectional survey was carried out among the Ghaziabad dietitians of the Indian Dietetic Association's life members. After 10 minutes, a 23-item, closed-ended survey was distributed and collected. Statistics were used to analyze the data.

Results: Only 12.4% of respondents knew that drinking water with high fluoride content causes atypical tooth defects, while about 36.2% believed dietary supplements can prevent oral mucosal disorders. Dietitians' general understanding of food and oral health was 56.38%.

Conclusion: The study demonstrates how little dentists know about oral health. It is important to clearly define the complex relationships between nutrition and dental health in practice, instruction, and research in both dietetics and dentistry.

Key words: Diet, dietitian, knowledge, oral health

INTRODUCTION

The distinctive oral cavity is a diet's gatekeeper and is referred to as a reflection of general health. [1] Since the mouth cavity connects to the rest of the body, any issues there can have a significant impact on hunger and, ultimately, diet. Diet may have an impact on the growth and health of the oral cavity as well as the development of oral illnesses. [2,3] Diet has an impact on teeth during development, and malnutrition may make infectious disorders of the mouth worse. [4,5]

Diet and oral health are mutually supportive in their relationship. Dietetics and nutrition now encompass all areas of medical care as a body of knowledge. A lifelong synergy between diet and the integrity of the mouth cavity in health and disease is suggested by scientific and epidemiological evidence.

Practitioners from both disciplines must learn to screen patients, provide baseline education, and refer patients to one another as part of comprehensive client/patient care as we learn more about the connections between dental and nutritional health.[6-8] To promote integrated, comprehensive practice, collaborations between dietetics, dental, and other health professionals need to be found, established, improved, and increased.

It is important to outline the complex relationships between diet and dental health in practice, research, and education in both dietetics and dentistry. For the promotion of oral health and the prevention and treatment of disease, a partnership between dietetics and dental specialists is advised. A shift in the healthcare system toward a coordinated team care strategy, which

necessitates cooperation among healthcare practitioners, runs parallel to this cross-disciplinary trend. Consequently, the investigation was started.

MATERIALS AND METHODS

In Ghaziabad, a cross-sectional study was done among dietitians. The study comprised all of the life members (337) of the Indian Dietetic Association. 42 of them were unavailable during the study period for a variety of reasons. Consequently, the study included all 295 of them. Two months were invested on the study.

The Indian Dietetic Association's Ghaziabad chapter granted permission for the study to be carried out. The study was carried out in accordance with the declaration of Helsinki's rules, and all procedures involving people were authorized by the institutional ethics committee. Written informed consent was obtained from the dietitians after they had been told of the study's goal and specifics.

34 dietitians participated in a pilot trial. The questionnaire's validity was evaluated. The questions' face validity was verified by asking experts to review them, and the questions' content validity was verified by making sure they covered all the subject areas outlined by the primary objective. The obtained Cronbach's alpha was 0.83. The obtained internal reliability coefficient was excellent. We individually contacted dietitians who operate in a variety of fields, including multi-specialty hospitals, private clinics, and educational institutions. After 10 minutes, questionnaires were given out and properly collected.

In the current study, descriptive statistical analysis has been done. The data was analyzed using the statistical software SPSS No. 13 statistical package, SPSS Inc. Chicago, Illinois, and graphs and tables were created using Microsoft Word and Excel. By frequency and percentage, descriptive statistics have been conducted. There are no known inferential statistics.

RESULTS

The average percentage of knowledge was 56.38%. Regarding trace elements that have a preventive impact against dental caries, about 32% of dietitians chose selenium, 22% agreed with molybdenum, 15% felt fluoride, and 31% thought vanadium [Table 1].

Table 1: Distribution of knowledge among dietitians about trace elements which protect against dental caries

Trace elements	(%)
Selenium	32%
Molybdenum	22%
Fluoride	15%
Vanadium	31%

In this study, 39% of the dietitians felt confectionaries among nonmilk extrinsic sugars are the greatest threat to dental health of children, and only 1% opted for fruit juices and 4% for honey and syrups and 55% were having correct knowledge about nonmilk extrinsic sugar and dental health [Table 2].

Table 2: Distribution of knowledge among dietitians about dental health of children and non milk extrinsic sugars

non milk extrinsic sugars	(%)
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Confectionaries Fruit juices	40%
Honey and syrups	5%
Fruit juices	2%
All of the above	52%

When it came to dietary recommendations for geriatrics that would promote oral health, 65% were certain, 27% chose calcium and vitamin supplements, 7% chose fibrous food, and 0% chose legumes and grains. 54% possessed the necessary knowledge regarding the prevention of oral cancer, while 14% felt micronutrients, 23% thought antioxidants, 9% felt beta-carotene, and 23% thought antioxidants.

93% of the participants believed that it was crucial to rinse one's mouth out with water after consuming sweets or drinks that were sweetened. Only 41% of people were aware that eating foods high in fat and protein enhances the oral clearance of carbs. When questioned about the reasons of dry mouth, 32% chose a shortfall in vitamin A and vitamin B6, 12% chose an iron deficiency, and 9% chose a lack in essential fatty acids [Table 1].

Questions	Response	Frequency	(%)
Dental history and oral health advice are important aspects in dietary counseling	Yes	198	67
	No	8	3
	Maybe	88	30
	Don't know	0	0
Importance of rinsing mouth with water after the intake of sweet or sweetened drinks	Yes	274	93
	No	4	1
	Maybe	17	6
	Don't know	0	0
Protective effect against oral cancer is provided by	Micronutrient	40	14
	Antioxidants	69	23
	Beta-carotene	27	9
	All of the above	159	54

DISCUSSION

The education and training of dietetics specialists have significantly changed as a result of the shifting social and economic realities of the modern healthcare system. The foundation for achieving a number of the competencies is the core understanding of nutrition and diet principles and their clinical application in practice.

Dietitians were 81% knowledgeable with fiber foods and their ability to prevent dental caries. Fibrous foods preserve teeth mostly because they mechanically promote saliva production. [9-11] In contrast to the current study, where 11% of dietitians believed that eating dried fruit causes dental caries, a study [12] by K. Shah found that just 4% of dietetic and nutrition students believed that eating dried fruit might cause oral health concerns. Due to the fact that the drying process causes the fruit's cellular structure to break down, releasing free sugars, and because dried fruit often has a longer oral clearance, they may be more cariogenic. [12,13]

14% and 23%, respectively, chose vitamins and antioxidants as preventative methods against oral cancer. Oral cancer incidence has been demonstrated to be negatively correlated with dietary intakes of micronutrients. [14,15]

A new study reveals a connection between gingivitis and preterm, low birth weight infants. Bacteria that cause gingivitis in large amounts can get into the bloodstream. If this takes place, the bacteria may enter the uterus and begin to produce "prostaglandins," which cause uterine contractions that lead to early labor. Other investigators have shown a link between low birth weight and maternal gingival health. [16-18]

About 33% of dietitians are aware that selenium, a trace element found in food, does not protect against dental caries. The apatite microcrystals in enamel may change in terms of their physical characteristics and therefore their susceptibility to deterioration due to the incorporation of trace amounts of selenium. [19]

Tobacco use and vitamin deficiencies, according to about 71% of dietitians, increase the incidence of precancerous lesions. The preconditioning of the oral mucosa by a protracted, chronic deficit of iron and/or vitamin B complex is a crucial second factor that must be taken into account. [20]

39% of dietitians said that tooth crowding is a result of malnutrition. Numerous researchers have noted the connection between malnutrition and stunted growth and the development of the facial bones in the context of dental health. This association has been related to a decrease in the length of the skull base and jaw height. Therefore, it is thought that malnutrition may also be linked to malocclusion, especially dental crowding, which is defined as the misalignment of teeth as a result of a lack of room for them to emerge in the proper location. [21]

For the purpose of providing relevant, unbiased, and secure information on food and oral health, dietitians must acquire the abilities necessary for interpreting, translating, and applying nutritional science. With the knowledge and skills that put this paradigm into practice, dietetics and dental educators must take on responsibility for integrating oral health/diet and nutrition topics and clinical/community experiences. Dietitians should be able to provide frontline consultations for individuals and groups as well as training and supporting other members of the health care team to provide informed, realistic, and practical dietary advice.

CONCLUSION

Study highlights the deficiency of knowledge of dietitians regarding oral health. Consistent with the current climate of health care delivery, which stresses collaboration between health care providers, qualified dietetics, and dental professionals should pursue opportunities to create a health care paradigm that will mesh optimum oral and nutrition health care with improved oral, nutritional, and systemic health status.

To prepare practitioners with the skills and knowledge that exemplifies this paradigm in practice, dietetics and dental educators must assume responsibility for integrating oral health/diet and nutrition topics and clinical/community experiences in education, respectively. As a body of knowledge, dietetics, and nutrition has expanded to touch all the segments of health care. Multi-skilling on basic levels of care, including risk identify and referral for intervention, will foster successful strategies related to oral health and diet.

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