Original Research Paper

University J Dent Scie 2024; Vol. 10, Issue 4

Assessment of Caries Experience and the Associated Factors Among the Patients Attending a Dental Hospital in Bhilai.

Abstract:

Aim: The aim of this study was to assess the caries experience and the associated factors among the patients.

Materials and Methods: This cross-sectional study was conducted in outpatient department ofRungta College of Dental Sciences and Research department of Community Dentistry among 429 patients (260 female and 169 male) between 18-60 years. The self-administered questionnaire consisted of two parts. The first part consisted of socio-demographic details of participants (age, sex, education, occupation, religion, marital status and residence). The second part consisted of six questions related to dental caries and associated factors. Data analysis was done by using SPSS 16 version ANOVA and t test were used.

Results: Out of total 429 participants, 67.1% know about dental caries. About 99.3%participants had tooth-brushing habit. Nearly 60.1% participants brushed their teeth once per day. Around 74.64% used tooth brush in morning before breakfast. Ninety-six percent consume sugary food and 44.4% consumed sugary food sometimes. Association between Gender and DMFT has not significant with p value .648 similarly consumption with sugary food and tooth brushing habits p value has not significant is .455 and .608.

Conclusion: Health promotion about oral hygiene and integration of services are important for the prevention of dental caries.

Key-words: Oral hygiene, dental caries, DMFT

Introduction:

Dental caries is one of the oral health problems, which cause the destruction of the hard parts of a tooth by the interaction of bacteria and fermentable carbohydrates[1, 2]. Now a days dental caries is on the rise and has become major public health problems worldwide, Nearly 60–90% of children and about 100% of adults have dental cavities, often leading to pain and discomfort[3].Dental caries is affected by the consumption of dietary sugars, salivary flow, exposure to fluoride and preventive behavior[4]. According to the World health organization (WHO), dental caries (tooth decay) is defined as the destruction of the enamel layer of the tooth by acids produced by the action of bacteria on sugar[5]. The experience of pain, problems with eating, chewing, smiling and communication due to missing, discolored or damaged teeth have a major impact on people's daily lives and well-being. Furthermore, oral diseases restrict activities at school, at work and at home causing millions of school and work hours to be lost each year throughout the world[6].

Access this article online

Website: www.ujds.in

Quick Response Code

DOI: https://doi.org/10.21276/ujds.2024.10.4.5

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Received : 3 Dec., 2024, **Published :** 31 Dec., 2024

How to cite this article: Yadav, K. yadav, Yadav, P. K., Sumit Kumar, Yadav, P., Gaur, B., & Dhamala, P. (2024). Assessment of Caries Experience and the Associated Factors Among the Patients Attending a Dental Hospital in Bhilai. UNIVERSITY JOURNAL OF DENTAL SCIENCES, 10(4).

Dental caries is highly prevalent and has a negative impact on children's quality of life.[7]. Due to lack of health education and insufficient preventive measures, there is a high prevalence of morbidity that highly affects the health status of children [8].The dental community has prided itself on efforts that have reduced dental caries including use of systemic and topical fluorides, toothpastes, sealants, improvements in diet, oral health education and dental care [9,10]. Even though the overall prevalence of dental caries decrease in developed countries, caries continues to be an important public health problem in most developing countries[11].Prevalence of schoolchildren in Indiais around 50%[12]. Hence, the purpose of the study was to determine the dental caries and the associated factors among the adult people visiting of Rungta College of Dental Sciences and Research Bhilai, Chhattisgarh.

Materials and Methods:

A cross-sectional descriptive study was carried out over a period of five months (June to October 2024) in outpatient department of Rungta College of Dental Sciences and Research, Department of Community Dentistry. Institutional Research Committee (IRC) approval was take before carrying out the study and written consent were obtained. A total number of 429 patients belonging to age group 18-60 years and who were willing to participate in the study were included in the study. Convenience sampling technique was used.

Data was collected by interview method by using questionnaire. The questionnaires were adopted from previous studies and modified after consultation with the experts related to the filed. The self-administered questionnaire consisted of two parts and was translated from English to Hindi language. The first part consisted of socio-demographic details of participants (age, sex, education and address, occupation, marital status and religion). The second part consisted of six questions related to dental caries and associated factors. Exclusion criteria included disabled people with limited manual dexterity and illiterate people. Data analysis was done by using SPSS 16 version and descriptive statistics, mean and standard deviation by using Anova and t test.

Results:

This research revealed out of total 429 participants more than half were female 260 (60.6%) and the remaining were male 169(39.4%). Majority of them had attended a high school 214(49.9%), followed by primary school level of education 100(23.3%), 89(20.7%) graduate and 26 (6.1%) post-graduate. As to the occupational status out of 429, just under half of the subjects were unemployed 211(49.2%), and 198(46.2%) had private job and, 20(4.7%) had a government job. Maximum subjects were residing in Urban area 407(94.9%). **Table 1**

Out of total 429 participants,288 (67.1%) had knowledge about dental caries whereas 141(32.9%) didn't know about dental caries. Majority of the participants had tooth brushing habit 426(99.3%) and 3 (.7%) did not have brushing habit. Maximum participants brush their teeth once per day 256(60.1%) and 170(39.9%) brushes twice a day. **Table 2**

Out of 426 participants most of them usebrush in the morning before breakfast 318(74.64%) followed by after breakfast 66(15.49%), after dinner 32(7.52%) and after lunch 10(2.35%).Among 429 participants 412(96%) consumed sugary food were as 17(4%).Out of 412 participants 183(44.4%) consumed sugared food sometimes, 118(28.6%) consumed sugared food twice per day whereas once per day 111(26.9%). The association between the gender andDMFT was not significant with p value .648 similarly consumption with sugary food and tooth brushing habits was also not significant with respectively p value is .455 and .608. **Table 3**

Discussion:

Life in a modern world has been improving very fast in now a day. Despite great improvements in the oral health of population in several countries, in India still several oral diseases have decreased the quality of life [13]. This study was conducted to determine the dental caries and the associated factors among the adult people. Several studies have shown association between the relationship of the frequency of sugar consumption and caries. In some of them, there has been no association at all[14, 15]. The association between gender and tooth brushing habits in our study were not significant. Possible reason might be multiple factors like fibrous food consumption, fluoridated toothpaste, awareness regarding oral hygiene, rinse after every meal and better monthly income.

Conclusion:

Mass campaign regarding oral health on regular basis provide health education in adequate amount to young adult and community people. Integrating oral health promotion service with other health services at the grass root levels have a significant role in the field of the dentistry.

Table 1. Demographic status of the subjects

Gender	Frequency (%)
Female	260(60.6%)
Male	169(39.4%)
Education	
Primary school	100(23.3%)
High school	214(49.9%)
Graduation	89(20.7%)
Postgraduation	26(6.1%)
Occupation	
Unemployed	211(49.2%)
Government	20(4.7%)
Private	198(46.2%)
Marital status	
Married	312(72.7%)
unmarried	116(27.0%)
Widow	1(.2%)
Residence	
Urban	407(94.9%)
Rural	22(5.1%)

Table 2: Oral Hygiene Habits

Knowledge about dental caries	**Frequency (%)**
Yes	288(67.1%)
No	141(32.9%)
Tooth brushing habit	
Yes	426(99.3%)
No	3(.7%)
Frequency of tooth brushing	
Once per day	256(60.1%)
Twice a day	170(39.9%)
Time of tooth brushing	
Morning before breakfast	318(74.64%)
After breakfast	66(15.49%)
After lunch	10(2.35%)
After dinner	32(7.52%)
Sugar Food Consumption	
Yes	412(96%)
No	17(4%)
Frequency of consumption sugared food	
Once per day	111(26.9%)
Twice per day	118(28.6%)
Sometimes	183(44.4%)

Table 3: Association between Gender, Consumption of sugared food and Tooth brushing habits

Gender	Mean and SD	
Male	4.27 ± 3.052	.648
Female	3.53 ± 3.262	
Frequency of consumption ugared food		
Once per day	3.66±2.654	.455
Twice per day	4.16±2.82	
Sometimes	3.99±3.47	
Frequency of tooth brushing habits		
Once per day	3.77±2.74	.608
Twice per day	4.10±3.21	

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