

Original Article

Prevalence of dental caries among Jammu population

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ABSTRACT

Background: Dental caries is the most prevalent oral disease and has a very high morbidity potential. It not only causes pain and discomfort, but also places a financial burden on the patient. The present study was conducted to assess prevalence of dental caries among Jammu population. **Material & methods:** A present cross-sectional study was conducted to assess prevalence of dental caries among Jammu population. The sample size was 584. Two adult age-groups were included in the study 35-44 years and ≥ 60 years. WHO's standard oral health questionnaire was used in the survey. Data that was obtained was entered in an MS-Excel spreadsheet and analyzed using SPSS 10.0 software. **Results:** In the present study total participants were 584 in which 39.38% were males and 60.61% were females. Maximum participants were of age group 35-44 years. In age group 35-44 years 66.95% were males and 69.20% were females. In age group ≥ 60 years 33.04% were males and 30.79% were females. In age group 35-44 years 74.35% participants had caries and in age group ≥ 60 years 90.32% participants had caries. Overall, 78.59% participants had caries. **Conclusion:** The present study concluded that the prevalence of dental caries in Jammu population was 78.59%.

Keywords: Prevalence, dental caries, adult population.

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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} Dental caries is an irreversible microbial disease of the calcified tissues of the teeth, characterized by demineralization of the inorganic portion and destruction of the organic substance of the tooth, which often leads to cavitation.³ Dental caries is the major oral health condition in developing countries, affecting 60-90% of the school children and the vast majority of adults.⁴ In India, the prevalence of dental caries is reported to be 50-60%.⁵ Caries of the permanent teeth was reportedly the most common oral condition as per the Global Burden of Disease Study of 2017.⁶ Globally, around 2.4 billion people suffer from caries of the permanent teeth and 486 million children suffer from caries of the primary teeth.⁷ Untreated dental caries can cause pain and difficulties in eating and sleeping, pain, which in turn leads to emergency dental visit, hospitalization, need for invasive treatment, and systemic health problems thereby lowering the quality of life.⁸ The prevention of dental caries has for quite some time been considered as a significant errand for the wellbeing. Research keeps on gaining ground in recognizing the prescribed procedures for diagnosing, treating, and forestalling dental caries. Conventional

methodologies for treating carious are being supplanted by more up to date techniques that stress infection counteraction and preservation of tooth structure.⁹ The present study was conducted to assess prevalence of dental caries among Jammu population.

MATERIALS & METHODS

A present cross-sectional study was conducted to assess prevalence of dental caries among Jammu population. Before the commencement of the study, ethical clearance was taken from the ethical committee of the institute and informed consent was taken from the participants after explaining the study to them. The study was conducted over a period of 1 year. The sample size was 584. According to the recommendations by WHO for a basic oral health survey, we decided to take two adult age-groups for this study, i.e., 35-44 years and ≥ 60 years. WHO's standard oral health questionnaire¹⁰ was used in the survey. The questionnaire was administered by the investigators and was followed by a naked-eye oral examination for dentition status, using an oral probe and mirror. Data that was obtained was entered in an MS-Excel spreadsheet and analyzed using SPSS 10.0 software. The Chi-square test was applied to examine the association, if any, between dental caries and various factors. The DMF score and the DMFT index were calculated.

RESULTS

Mean age of the patients of group A and Group B was 43.5. In the present study total participants were 584 in which 39.38% were males and 60.61% were females. Maximum participants were of age group 35-44 years. In age group 35-44 years 66.95% were males and 69.20% were females. In age group ≥ 60 years 33.04% were males and 30.79% were females.

In age group 35-44 years 74.35% participants had caries and in age group ≥ 60 years 90.32% participants had caries. Overall, 78.59% participants had caries.

Table 1: Age and sex distribution of the study participants

Age groups (years)	Male	Female	Total
35-44	154(66.95%)	245(69.20%)	399(68.32%)
≥ 60	76(33.04%)	109(30.79%)	185(31.67%)
Total	230(39.38%)	354(60.61%)	584(100%)

Table 2: Distribution of individuals with and without caries by age

Age groups (years)	No. of individuals with caries N(%)	No. of individuals without caries N(%)	Total
35-44	319(74.35%)	110(25.64%)	429(73.45%)
≥ 60	140(90.32%)	15(9.67%)	155(26.54%)
Total	459(78.59%)	125(21.40%)	584(100%)

DISCUSSION

Among all oral diseases, dental caries is the most prevalent disease among the populace. Almost all regions of World exhibit one or the other form of dental caries. People of all age group are affected by dental caries irrespective of the gender and socioeconomic status. Dental caries is found in approximately 90% of school children worldwide and most adults, with the disease being most prevalent in Asian and Latin American countries.¹¹ In the present study total participants were 584 in which 39.38% were males and 60.61% were females. Maximum participants were of age group 35-44 years. In age group 35-44 years 66.95% were males and 69.20% were females. In age group ≥ 60 years 33.04% were males and 30.79% were females. In age group 35-44 years 74.35% participants had caries and in age group ≥ 60 years 90.32% participants had caries. Overall, 78.59% participants had caries. According to WHO recommendations, oral health surveillance of oral health conditions in adults should include the 35-44-year age group and the 65-74-year age group.¹² In a study conducted by Doifode *et al* in Nagpur the prevalence of dental caries was 48.6% in the age-group of 35-40 years.¹³ In a study conducted by Chakraborty *et al* in Siliguri the prevalence of dental caries was 57.03% in the age-group of 35-40 years.¹⁴ Patro BK *et al* found that the prevalence of dental caries in the 35-44 years age-group was 82.4% and it was 91.9% in those ≥ 60 years.¹⁵ Khapung A *et al* found that among 239 adults, 138 (57.74%) had dental caries.¹⁶

CONCLUSION

The present study concluded that the prevalence of dental caries in Jammu population was 78.59%.

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