CAN FUNGIFORM PAPILLAE PREDICT THE RISK OF DENTAL CARIES?

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INTRODUCTION

Fungiform papillae are believed to influence the taste perception and dietary preferences and hence, the caries experience in different individuals.

AIM

To determine the correlation between the number of fungiform papillae and the occurrence of dental caries in 18-21 years old age group.

MATERIALS AND METHODS

Simple random sampling

115 undergraduate students of a dental college in 18-21 year-old age group

Self administered questionnaire related to brushing habits, ethnicity, socioeconomic status, and taste preferences

Clinical examination (DMFT index)

Filter paper of 6 mm diameter with brown dye (Brilliant Blue FCF- E133) placed on anterior part of tongue for 3s

Area photographed with a digital camera

Number of fungiform papillae in 6mm stained area counted

Spearman's Correlation test





Stained filter paper

RESULTS

Factors	Mean	Standard deviation
Number of fungiform papillae	6.87	2.315
DMFT	2.21	2.315
Decayed teeth	1.57	2.035

papillae	
)95
Number of fungiform Decayed papillae teeth -0.242** 0.0)09

** p<0.05 (statistically significant)

DISCUSSION

PRESENT STUDY	COMPARATIVE STUDY	INFERENCE
A higher prevalence of	High numbers of fungiform	There is an inverse
dental caries was	papillae are commonly found	correlation between the
observed among	in supertasters than non-	number of fungiform
individuals having a	tasters.	papillae and dental
lesser number of fungiform papillae	An increase in the caries experience and S.mutans levels were found among the group of non-tasters as compared to tasters.	caries.

CONCLUSION

•The DMFT score is higher in individuals having a lesser number of fungiform papillae. The taste buds on the fungiform papillae determine the taste threshold and dietary preferences, which in turn influence caries experience.

Limitation: Study sample included only students of a dental college, who may have better oral hygiene than the general population, although the mean DMFT of this age group (2.5) is close to that obtained in this study.

PUBLIC HEALTH SIGNIFICANCE

•A higher prevalence of dental caries is observed among individuals having a lesser number of fungiform papillae. Hence, the number of fungiform papillae could be used as an effective tool in caries risk assessment.



Photographs of stained areas

REFERENCES

•Verma P, Shetty V, Hegde A. Propylthiouracil (PROP)-A tool to determine taster status in relation to caries experience, streptococcus mutans levels and dietary preferences in children. Journal of Clinical Pediatric Dentistry. 2007 Jan 1;31(2):113-7.

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