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Impact of Sweet and Bitter Taste Sensitivity On Oral Health In Relation To ABO Blood Type Among Female Dental Students Aged 19-21 years in Al_Kufa University/Iraq

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Abstract

Background: Blood group system and the ability to taste phenylthiocarbamide (bitter taste) are the most studied traits in human genetics in addition to the large Individual variation in the capability to perceive sweet taste among human populations around the world that may had an effect on oral health.

Aims of the study: The aims of present study were the assessment of sweet and bitter taste sensitivity in relation to oral health status among different blood types.

Subjects, Materials and Methods: The total subject sample composed of 170 females dental students aged (19-21) years in Al-Kufa University, Iraq.

Sweet taste detection was measured according to forced choice procedure (Wasalathanthri *et al* 2014) while bitter taste sensitivity was measured according to PTC (phenylthiocarbamide) test.

The diagnosis of dental caries was done according to the criteria of (Manjia *et al*, 1989) recording decayed lesion by severity. Oral cleanliness, was assessed using plaque index (PlI) of Sliness and Loe (1964) and gingival index (GI) described by Loe and Silness (1963) while concerning blood types, depending on the identity card of the students.

Results: The frequency distribution of the sample according to sweet taste concerteration were showed that group 5gm and group 10gm were formed the higher percentage (32.94, 32.35% respectively) while according to bitter taste were showed that medium taster was the most predominant (44.12%).

The differences in caries experience represented by (decay, missing, filled) surfaces and its components among students with different sweet taste threshold were found statistically not significant mean although the higher mean values of them except the decay components were higher among students with 2.5gm taste threshold while the lower mean value of them were among students with lower taste threshold.

Also, the differences in caries experience among different bitter taste threshold were found statistically not significant. Furthermore, the higher mean value of (decay, missing, filled) surfaces with its component decay and filled surfaces were among medium students while the lower mean value of them were found among supertaster students apposite result found among missing component as the lower mean value among supertaster and higher mean value among medium.

Concerning difference in caries experiences represented by (decay, missing, filled) surfaces and its components among students with different sweet and bitter taste threshold for blood types were not significant.

The present study showed plaque index and gingival index among students with different sweet and bitter taste threshold were not significant.

Regarding plaque index among students with different sweet taste threshold for each blood type were illustrated only a significant difference in plaque Index for students with A blood type, as well as for bitter taste threshold as only a significant difference in plaque Index for students with O blood type.

Conclusion: Sweet and bitter taste threshold have some effect on oral health condition among different blood types in this current study.